

1080P HDMI Digital Microscope

User's
Manual

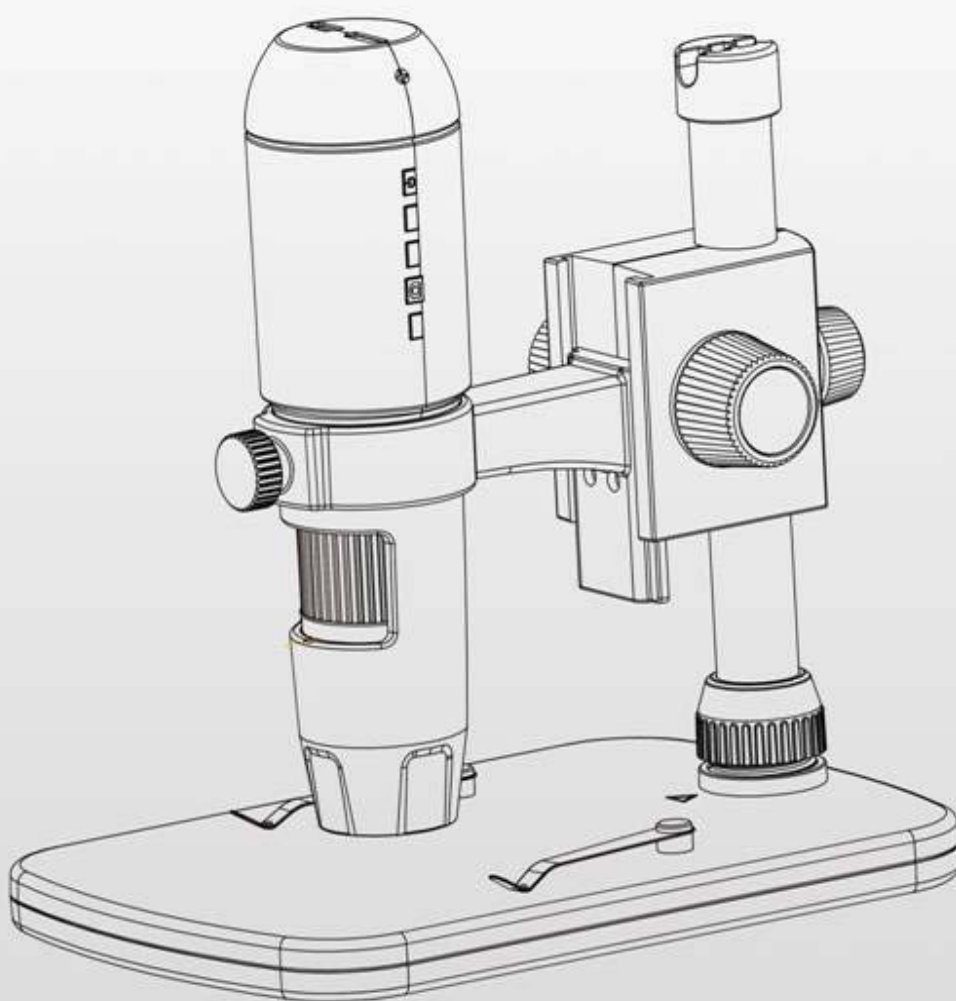


Table of Contents

Preparation.....	4
● Standard accessories.....	4
● Parts Names & Functions.....	5
● System requirements.....	6
● Technical Specifications.....	6
How to use the microscope.....	7
● Connect to Monitor.....	7
● Capture photo.....	7
● Play back.....	7
● Mass storage on PC.....	8
● Menu Introductions.....	8
● Set Resolution.....	9
● Time-lapse capture.....	9
● Quality.....	10
● Sharpness.....	11
● Exposure	11
● Date Stamp.....	12
● Date/Time.....	13
● Auto Power Off.....	14
● Language.....	14
● TV Mode.....	15
● Frequency.....	15
● Format SD Card.....	16
● Default setting.....	16
● Version.....	17
● Preview on PC.....	17
How to use the stand.....	17
How to get focus.....	20
PC Software Introduction.....	21

Install Software on PC.....	21
Start Microscope.....	22
Software functions.....	23
● Capture Photo.....	23
● Capture Video.....	24
● Timer.....	25
Calibration and Measurement.....	26
● Calibration.....	26
● Measurement.....	30
● Change Calibration.....	31
● Draw and text.....	34
Software Interface Instructions.....	35
● Main Interface Icons.....	35
● Main Menu.....	36
● Options.....	36
● Capture.....	37
● Measurement Interface Instruction.....	37
● Instruction for Mac software.....	38
● How to Install the Software.....	38
● How to use PortableCaptureHD.....	38

Welcome

Thank you for your choice of our product - it is a high-tech while easy to use HDMI Digital Microscope. With this unit you will see a unique and “bigger” world via external monitors with HDMI input.

It’s easy to zoom in on stamps, coins, paper currency, plants, insects, skin, fabrics, rocks and minerals, and so much more.

We recommend reading this manual first to get the best out of this unit.

1. Precaution

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

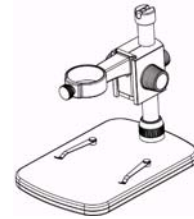
- The Microscope is not waterproof, so keep it dry.
- Do not use it in a humid place like bathrooms. A dry environment will maintain its life to maximum.
- Use the Microscope only at -5°C - 50°C .
- Sudden temperature change may form dew inside the Microscope like entering a warm room in cold winter. Put it inside a handbag or plastic bag to slow down temperature changes.
- Do not point Microscope lens to the sun or strong light for a long time. Powerful light may hurt the light-sensitive electronics.
- Avoid touching the lens.
- The white LEDs which illuminate the Microscope target field are very bright. Do not stare directly into these LEDs as it may damage your eyes.
- The clear plastic distance shell sometimes picks up dirt or toxic material from a microscopically observed surface. Be careful that this doesn't get in contact with the human skin. Always wash carefully or disinfect as needed.

2. Preparation

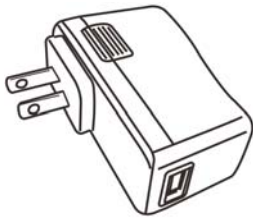
■ Standard accessories



Microscope



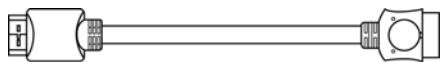
Stand



AC adaptor



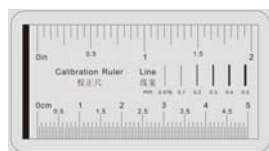
USB cable



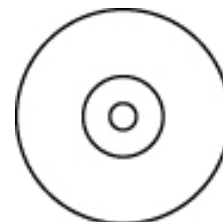
HDMI Cable



Manual

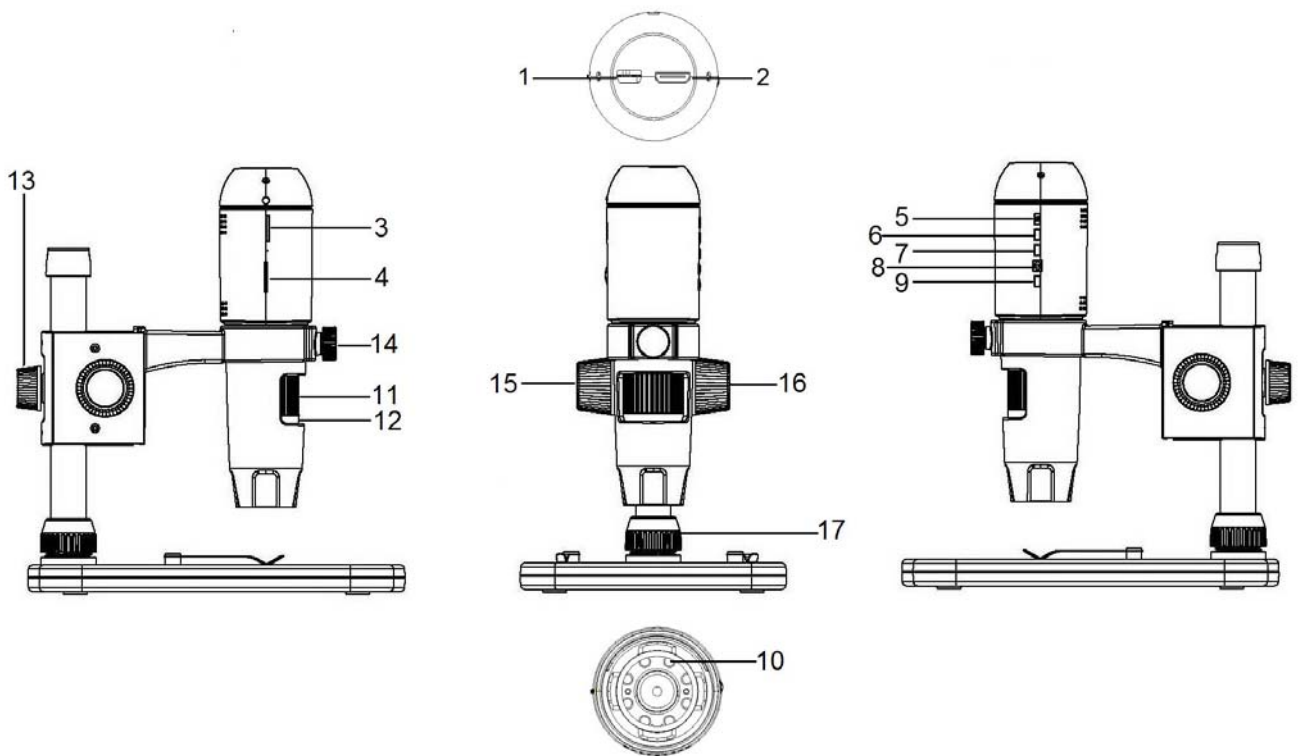


Calibration Ruler



PC Software CD

■ Parts Names & Functions



Part	Meaning	Part	Meaning
1	DC-in & USB port	10	LED
2	HDMI port	11	Focus wheel
3	Micro-SD slot	12	Magnification ruler
4	LED Dimmer	13	Screw
5	Power on/off	14	Screw
6	Mode (Playback/Photo)	15	Screw
7	Menu	16	Screw
8	Capture/OK	17	Screw
9	Down		

■ System Requirements

1. Monitor

- * Any monitor with HDMI input

2. PC

- * Windows XP / WIN7 /8 /10, Mac 10.7 and above
- * P4 1.8 or above
- * RAM: 512M
- * Video Memory: 64M
- * USB port: 2.0
- * CD-ROM Drive

■ Technical Specifications

Image sensor	3 Mega Pixels (true resolution)
Magnification	10X~230X
Live video to monitor	1920x1080
Still capture resolution	14M, 8M, 5M, 3M, 2M, WVGA (On HDMI Monitor only)
Video capture resolution	1280x720 (720P), 640x480 (VGA) / on PC
Focus Range	Manual focus from 0mm to 35mm
Video format	AVI /30 fps
Photo format	JPEG
Light source	8 LED (adjustable by control wheel)
Power source	5V DC
PC interface	USB2.0
PC Software	PortableCaptureHD (with measurement)
PC Software Language	English, Deutsch, Spanish, Russian, Italian, French, Portuguese, Dutch, Polish, Japanese, Korean
PC OS Supported	Windows XP/Vista/Win7/ 8 / 10; Mac 10.7 and above
Size	Microscope: 154mm (L) x 42mm (Diameter) Professional Stand: 170mm(L) x120mm(W)x12mm (H)

■ How to Use the Microscope

1. Connect to TV/Monitor with HDMI input

- 1) Connect the microscope with TV/monitor with HDMI input by the HDMI cable. Turn on the power of your TV/monitor and select the setting to HDMI.
- 2) Power the microscope by the supplied power adaptor. Turn on the power of the microscope by pressing the Power on/off button-5 if the device is not turned on, and then you can start the preview on the screen.

2. Capture Photo

- 1) Insert a Micro-SD card into the Micro SD slot-3.(Max. card size: 32GB SDHC)
- 2) Turn the Focus Wheel-11 to focus the image of your object to its best focus
- 3) Press Capture/OK button-8 and the captured photo will be Captured and saved in the Micro-SD card.

3. Playback

- 1) With Micro-SD card in slot.
- 2) Press Mode button-6 to switch to playback mode.
- 3) Press Down button-9 to watch the previous captured photo. Press Mode Button-6 again will return to preview

4. Mass Storage on PC

- 1) With Micro-SD card in slot.
- 2) Connect the microscope with PC by USB cable for downloading images from card to your computer.

5. Menu Introductions

5.1 Main Menu I

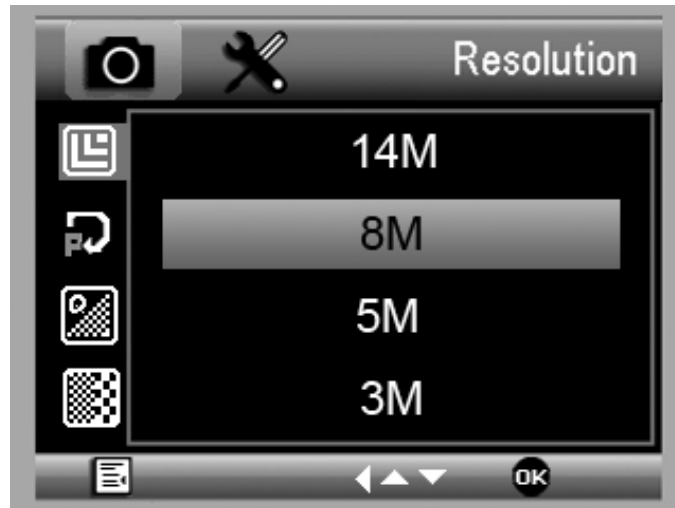
Press Menu button-7 to enter main menu I as follows:



Here you can select Resolution/Timer/Quality/Sharpness/Exposure/Date Stamp by pressing the Down button-9, then press Capture/OK button-8 to confirm your selected item.

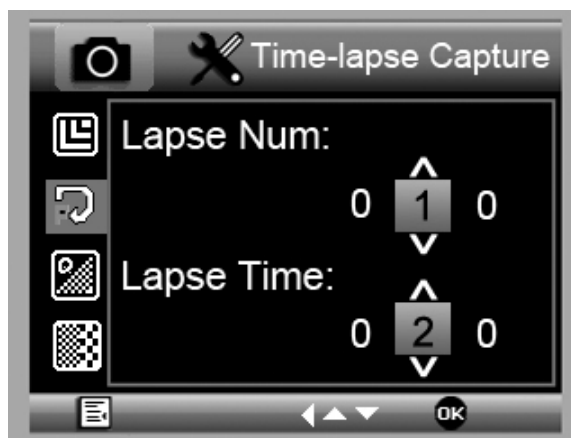
5.1.1 Set Resolution

From the main menu I , choose Resolution and select a resolution between WVGA/2M/3M/5M/8M/14M, by pressing the Down button-9 then confirm by Capture/OK button-8.



5.1.2 Time-lapse Capture

1) From the main menu I , choose Time-lapse Capture and then enter Timer setup:



Lapse Num: input quantity of frames you want to take by Down button-9 and change the block by pressing Mode button-6. The maximum number is 999, which means 999 pictures will be automatically captured during

the Lapse Time set, after the capture function is activated later.

Lapse Time: input interval time between frame capture by Down button-9 and change the block by pressing mode button-6. The maximum number is 999, which means the time interval for each capture is 999 seconds.

The above picture setup shows 10 frames, and interval is 20seconds as an example.

2) Press Capture/OK button-8 to confirm selection and press Manu button-7 back to preview status. Then press Capture/OK button-8 to start auto capture. When at auto capture status, the image quantity will be cown down on the right up corner.

3) When all frames are captured, microscope will return to normal preview.

For Time-lapse capturing the auto power off time should be longer than the time lapse set. 30 minutes setting is recommended. Please refer to section 5.2.2

5.1.3 Quality

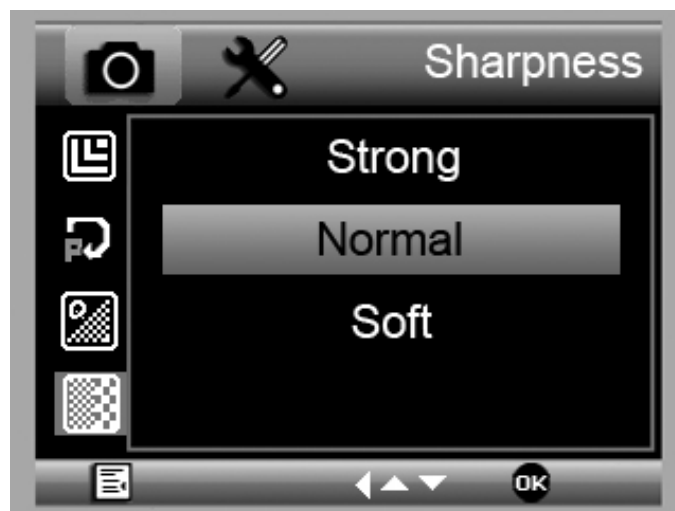
From the main menu I , choose Quality and then select among Fine /Normal/Economy, by pressing the Down button-9 then confirm by Capture/OK button-8.



The three selections will result in different image compression ratio.

5.1.4 Sharpness

From the main menu I , choose Sharpness and then select among Strong/Normal/Soft, by pressing the Down button-9 then confirm by Capture/OK button-8.



5.1.5 Exposure (Brightness)

From the main menu I , choose Exposure and then select a target value, by pressing the Down button-9 then confirm by Capture/OK button-8.



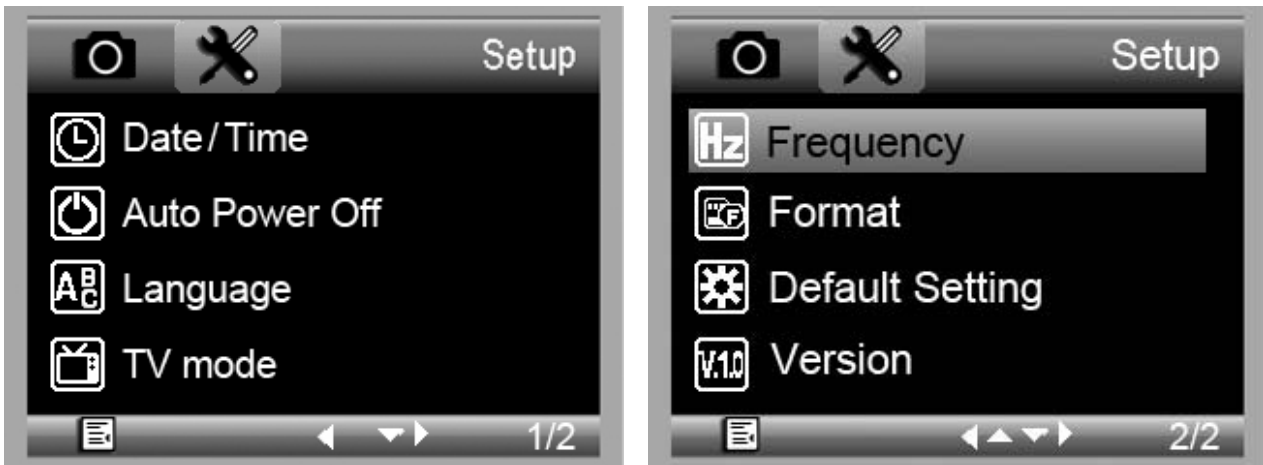
5.1.6 Date Stamp

From the main menu I , choose Date Stamp and then select a target option, by pressing the Down button-9 then confirm by Capture/OK button-8.



5.2 Main Menu II

Press Menu button-7 to enter main menu I, and then press it once more to enter Main Menu II as follows:



Here you can setup Date/Time, Auto Power Off, Language, TV mode, Frequency, Format, Default Setting, and Version.

5.2.1 Date/time

From the main menu II, choose Date/Time to setup date and time.



- 1) Setup date and time by Down button-9 and changing set block by Capture/OK button-8
- 2) Setup date mode among YY/MM/DD, DD/MM/YY, and MM/DD/YY by Down button-9
- 3) Press Manu button-7 to return to preview mode.

5.2.2 Auto Power Off

From the main menu II, choose Auto Power Off and then select among the following a target time by Down button-9 then press Capture/OK button-8, for the microscope to off the power automatically at the set time, when it is not in use for a period of time.



5.2.3 Language

From the main menu II, choose Language and then select a target language by Down button-9 then confirmed by Capture/OK button-8.



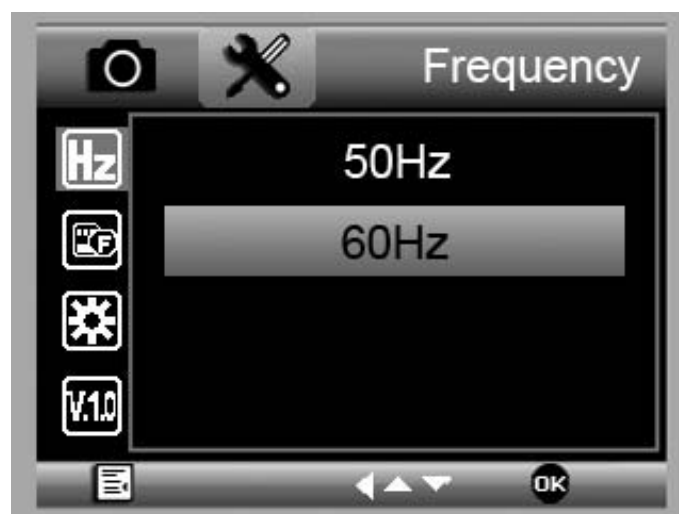
5.2.4 TV Mode

From the main menu II, choose TV Mode and then select, between NTSC and PAL, the correct mode compatible with your TV, by Down button-9 then confirmed by Capture/OK button-8.



5.2.5 Frequency

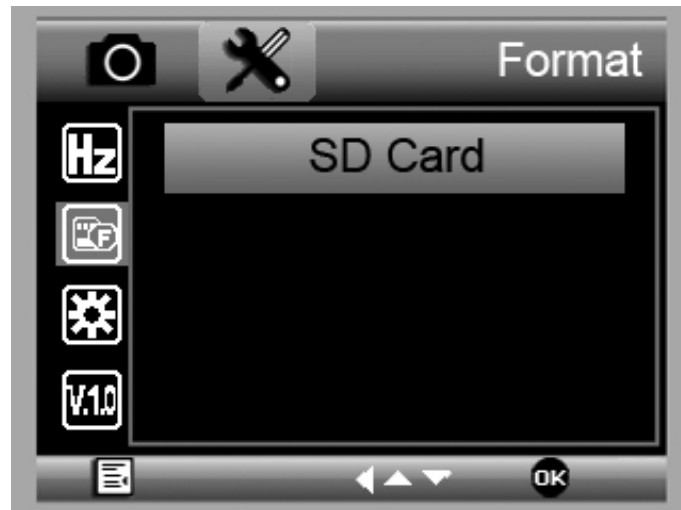
From the main menu II, choose Frequency between 50Hz and 60Hz. by Down button-9 then confirmed by Capture/OK button-8.



5.2.6 Format micro SD card

From the main menu II, choose Format SD to format the MicroSD card inserted. **All the files in the card will be deleted after card formatting**

Normally card formatting is not necessary, unless your card is not able to store the captured image.



5.2.7 Default Setting

From the main menu II, Default Setting to reset the system back to original factory preset.



5.2.8. Version

From the main menu II , choose Version to view the current machine version.

5. Preview on PC

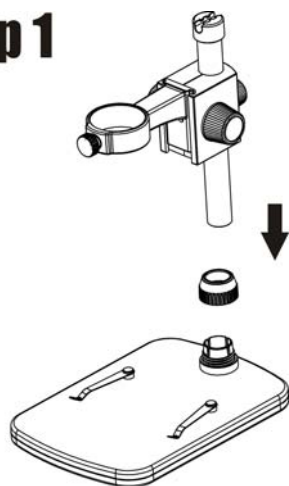
- 1) Only works with supported software installed,
Please see:
PC Software Introduction on page 12 and onward.
- 2) Remove Micro-SD card from the slot.
- 3) Connect the microscope with PC by USB cable.

■ How to Use the Stand

1. Install the Microscope to the Stand

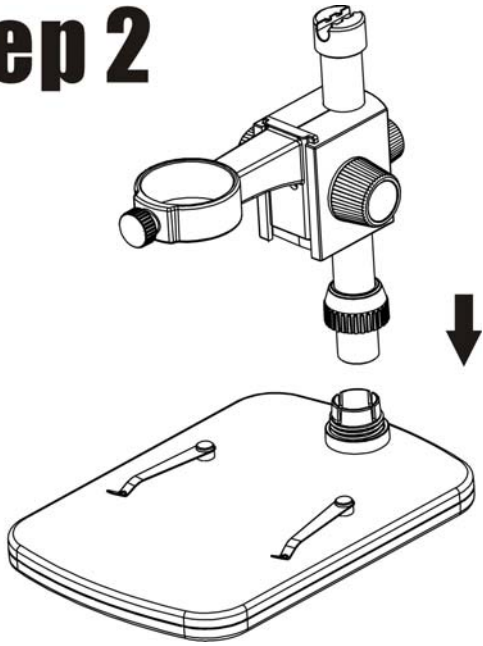
- 1) Take the microscope out from gift box gently; put the carriage stage on a flat surface.
- 2) Follow the below steps:

Step 1



Put the metal pole through Screw 17!

Step 2



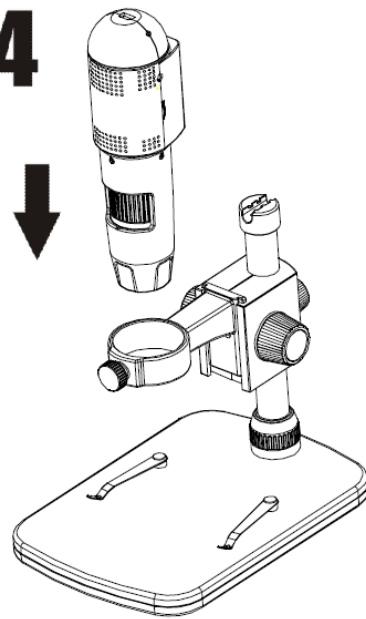
Put the metal pole into the female part of the stage!

Step 3



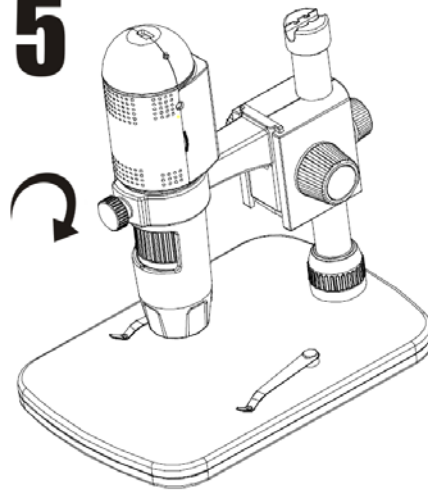
Rotate Screw 17 to fix the pole on the stage!

Step 4



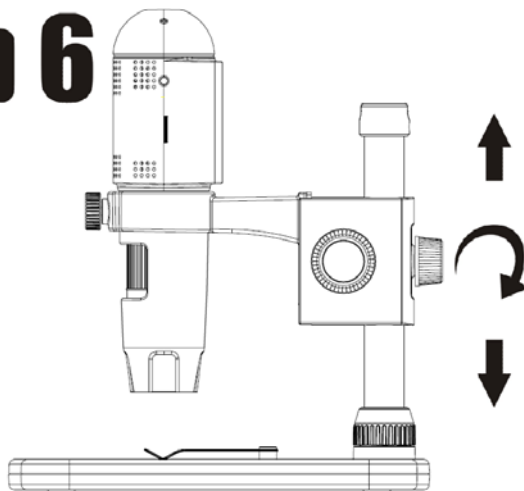
Put the microscope into the ring of the stand!

Step 5



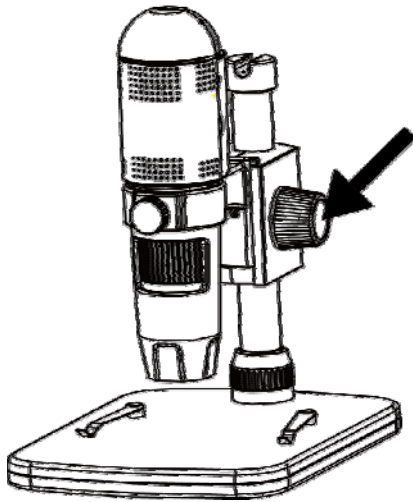
Rotate Screw 14 clockwise to fix the microscope on the ring.

Step 6

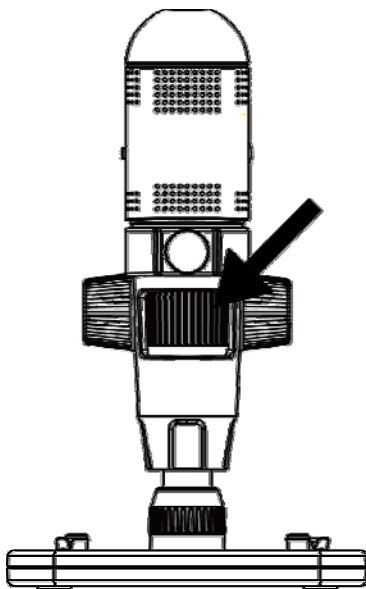


(1) Adjust the upper part of the stand to get a proper height.
(2) Rotate Screw 13 clockwise to fix the upper part.

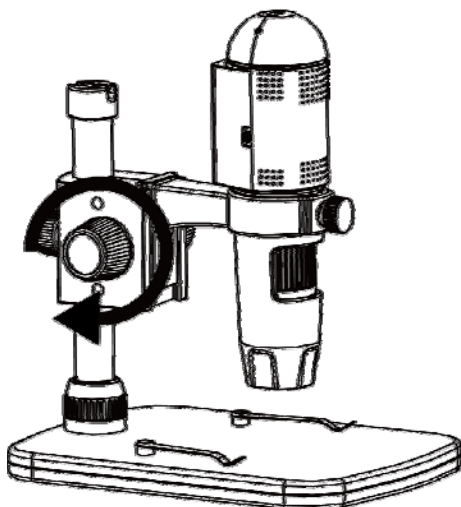
2. How to get focus



Rotate Screw 16 to get a rough focus!



Rotate Wheel 11 to get a fine focus!



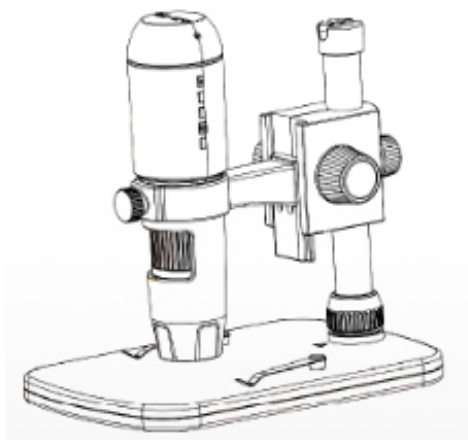
Rotate Screw 15 to lock or release the movement!

■ PC Software Introduction

1. Install the Software on PC (Windows)

Insert the driver CD into CD-ROM Drive and this will automatically display the following interface:

1080P HDMI Digital Microscope



Install PortableCaptureHD

User's manual

Browse the CD

Exit




1) Install PortableCaptureHD

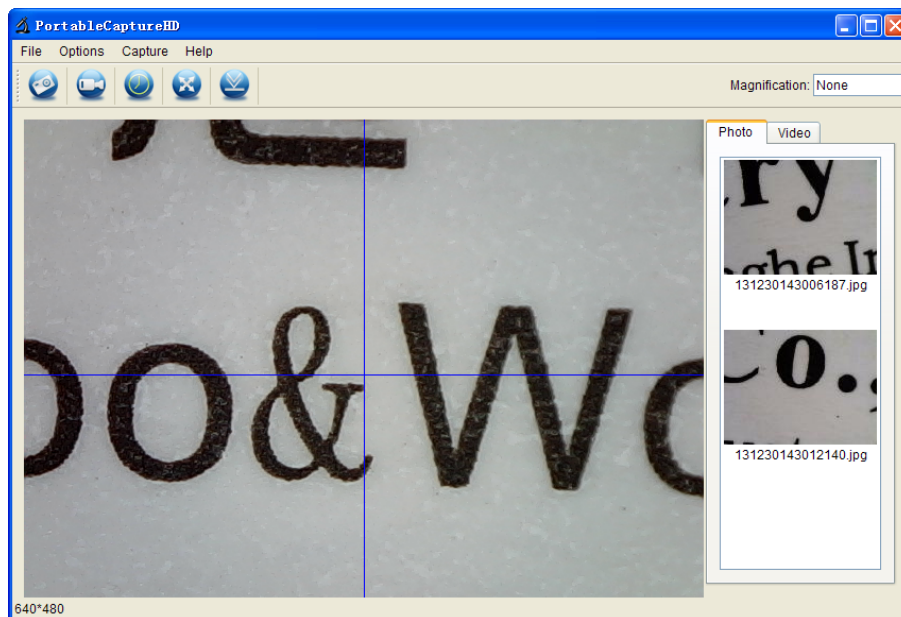
Click Install **PortableCaptureHD** and the installation wizard will guide you through the whole process.

2) Full user's manual can be viewed by clicking **User's Manual**

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.

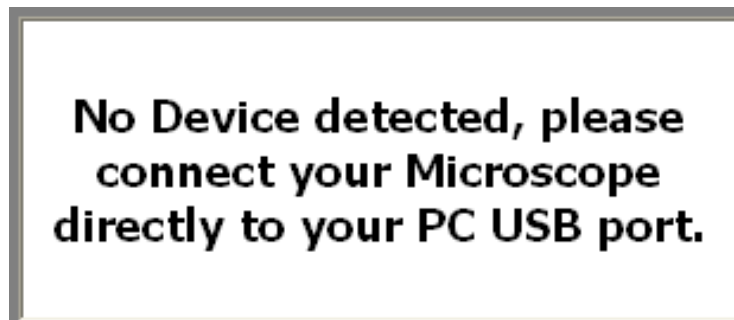


Note:

Please remember to take the micro SD card away from the card slot before connect to the personal computer via USB cable, so that enable you to capture & taking the video on the PC.

If the micro SD card keep in the microscope, then when you connect to the PC it will default as mass storage for you to download your images from the card.

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



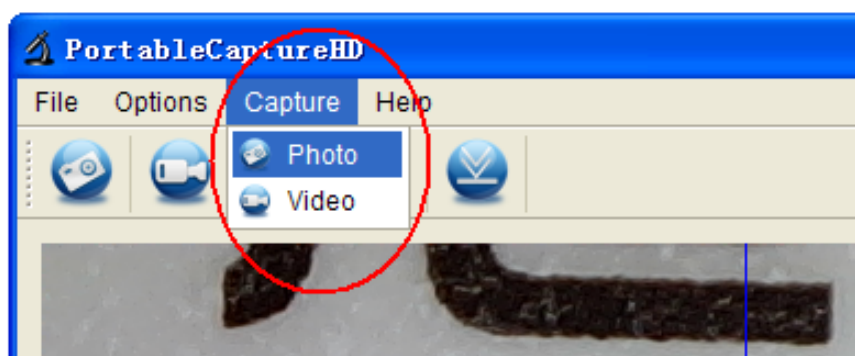
3. Software Functions

■ Capture Photo

a. Click 'Photo' shortcut icon  in the main menu bar.

OR

b. Click 'Capture > Photo'.

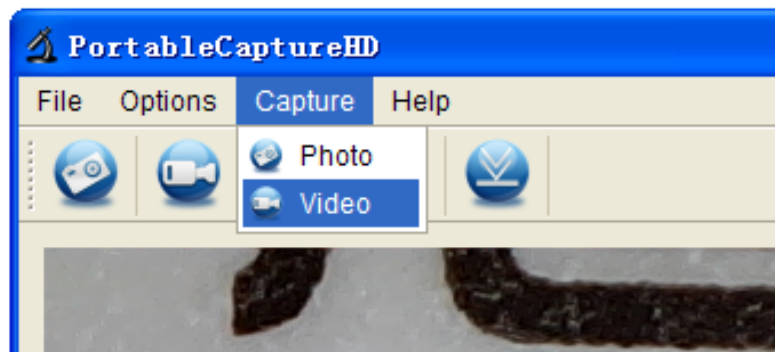


■ Capture Video



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

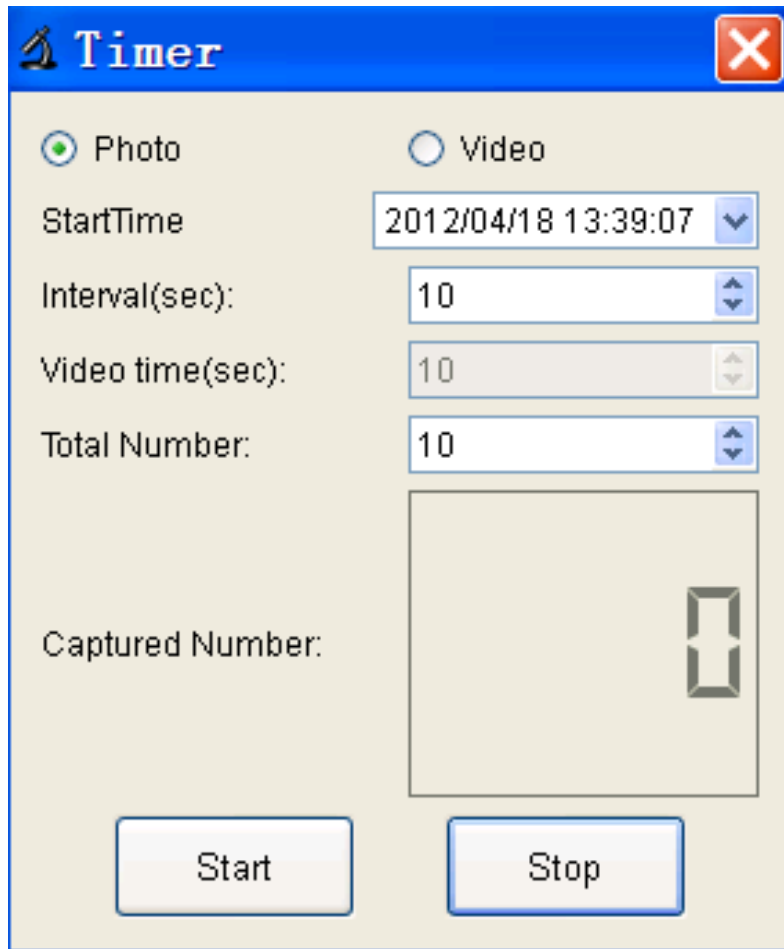
Click once again to stop video capturing.



■ 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, video time and total video number.

Note:

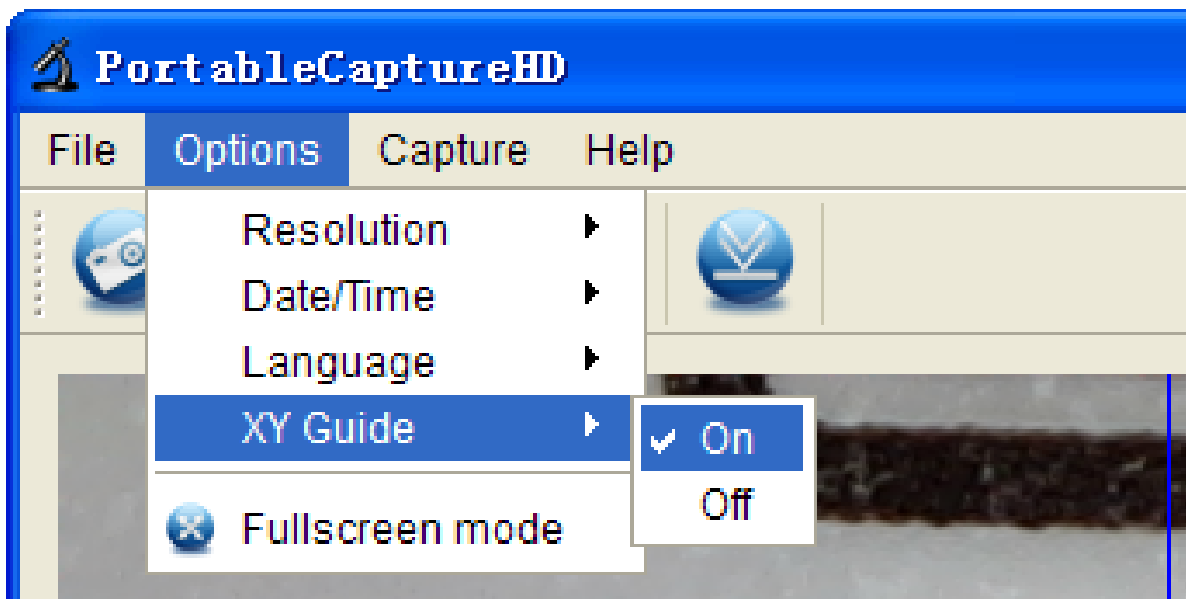
The file size of the video is quite large, you have to consider the memory space of your computer if a long video recording time is needed.

■ Calibration and Measurement

Please make calibration before measurement

Calibration

Display Crossing from 'Options>Crossing'.



Microscope default at crossing “on”

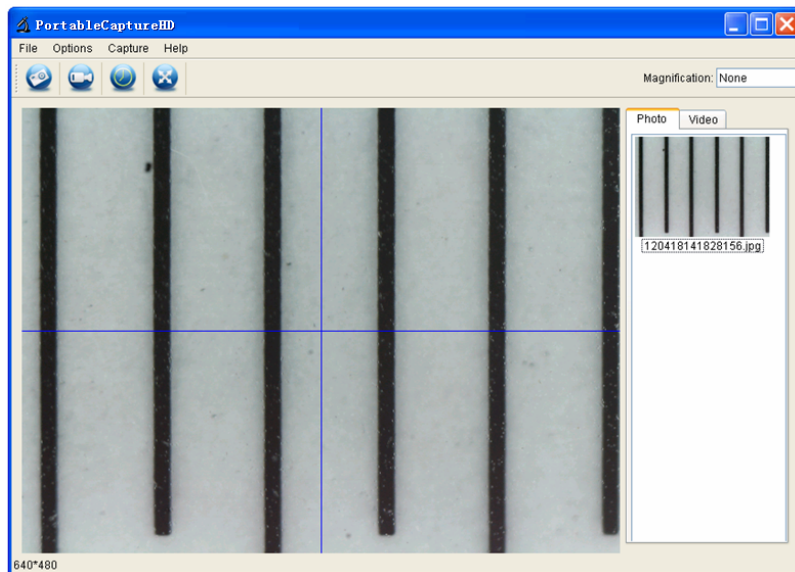
It's used to check the dial on the calibration ruler.

1. Focus microscope on the attached calibration ruler

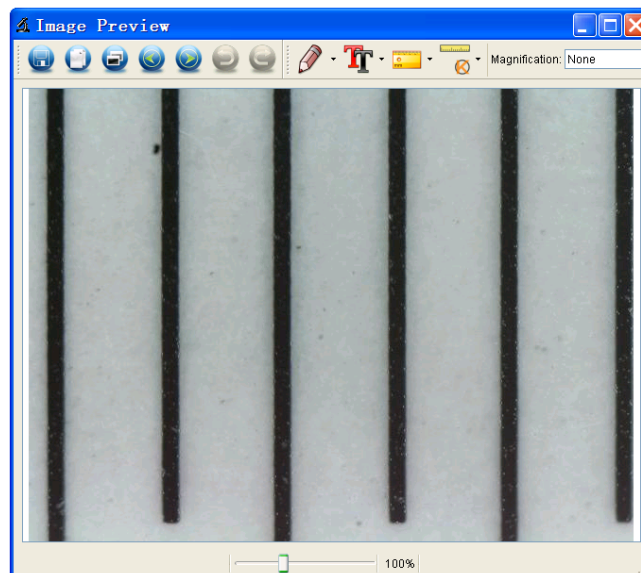



at the same height(place) of your object to be captured from the lens, and then adjust the Focus

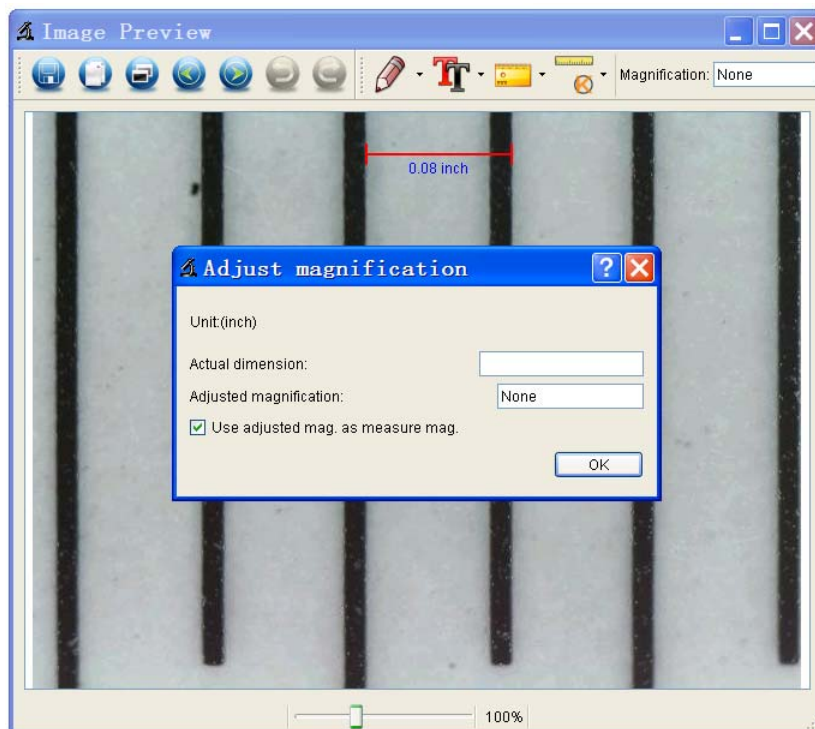
Wheel-11 till the picture is clear. Take a picture for the selected area when the dial is parallel to the crossing as below.



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

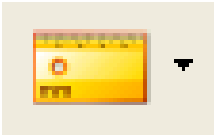


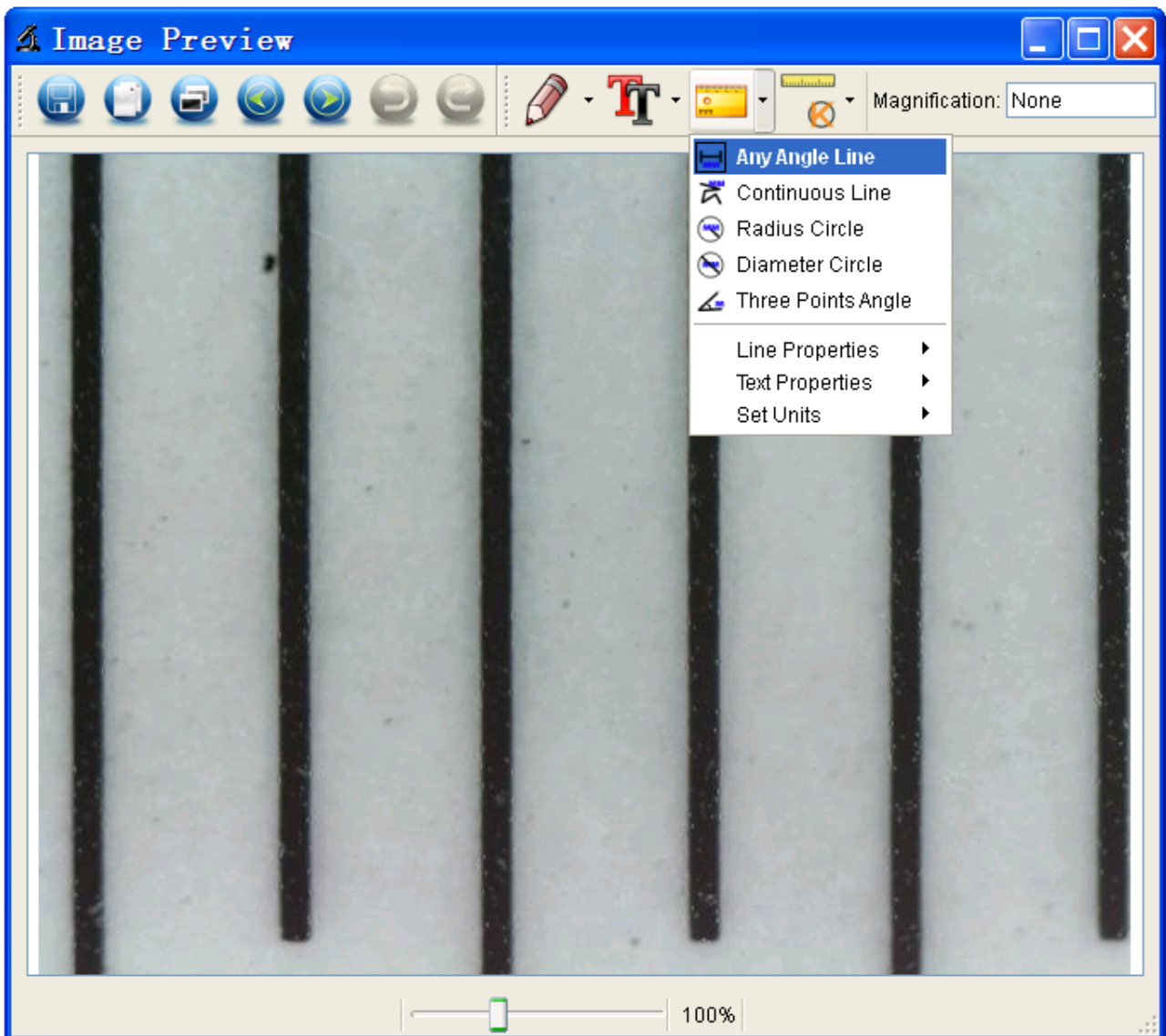
3. Click Calibration icon , and then move mouse to the picture. Click on the beginning and ending points across a known value. Now a dialog will popup as below and you need to enter the exact value of the measurement sample into 'Actual dimension'. Then the software will automatically calibrate the magnification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

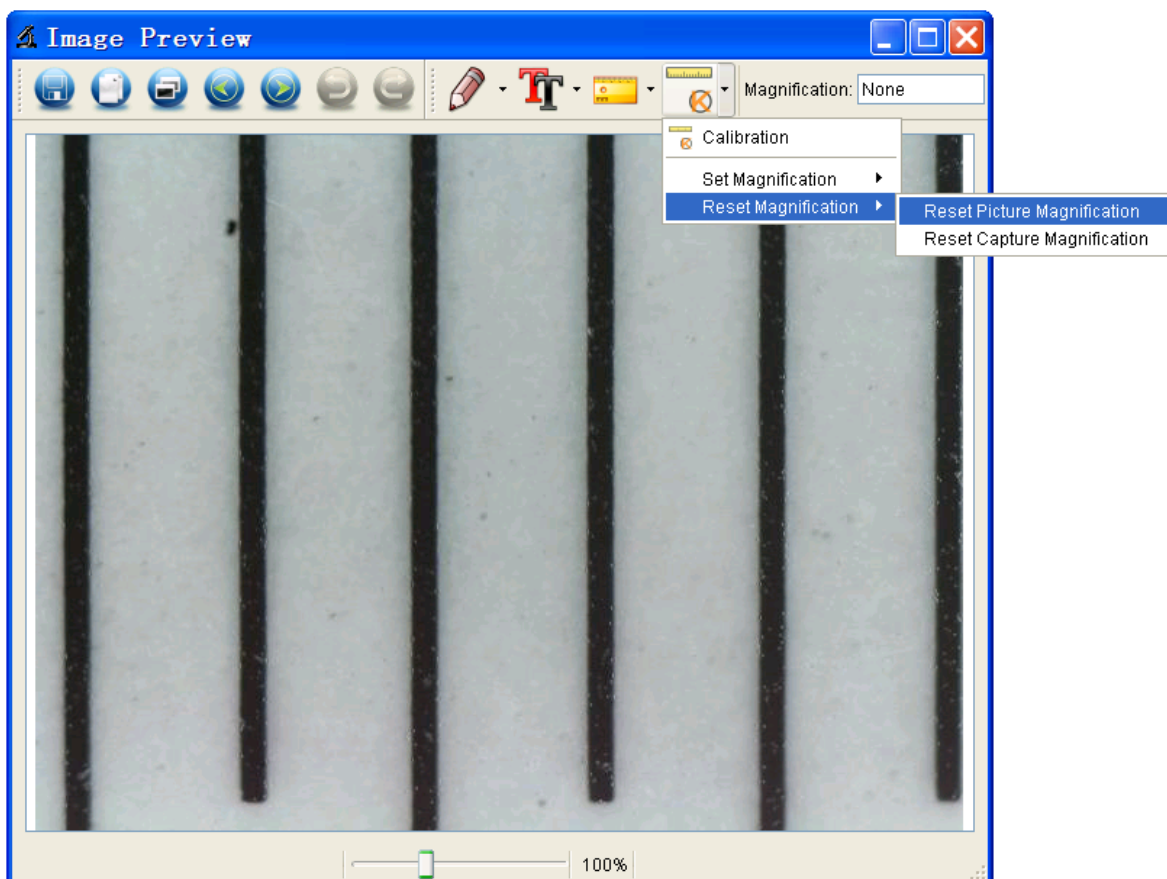
Simply define any three points angle and click, the angle value will then display.

Change Calibration

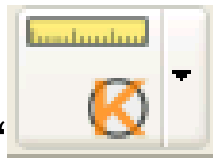
If you need to change the magnification rate and adjust focus to capture picture, please calibrate the magnification rate again.



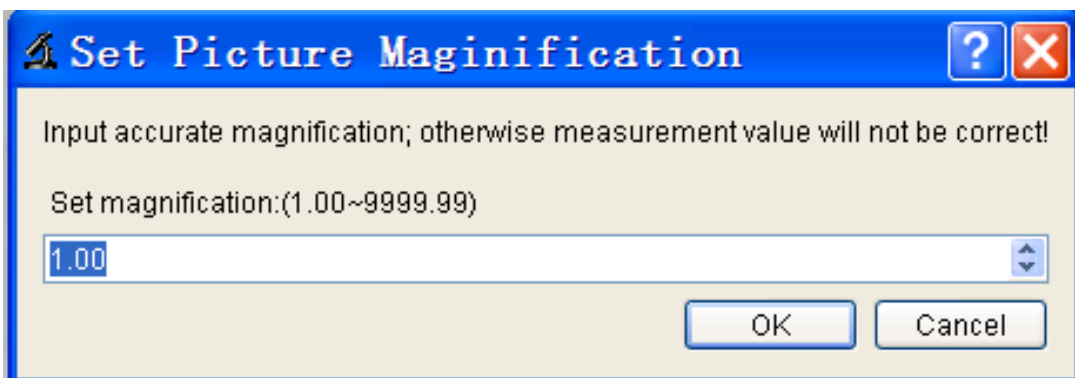
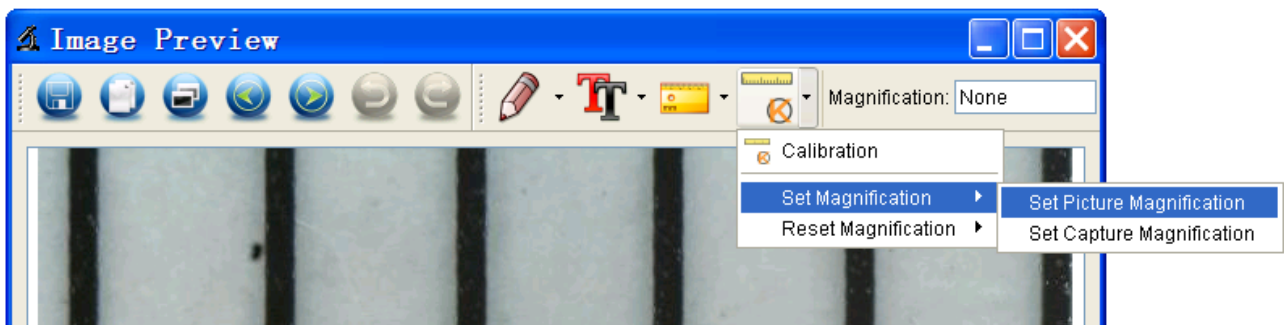
1. Double click to open the picture, Click 'Reset magnification > Reset picture magnification' as below. And then start calibration again (Calibration details please refer to page28).



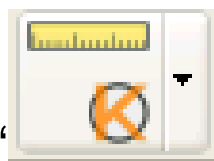
2. Change the magnification rate and capture several pictures, click on the picture to enter into measurement



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'.

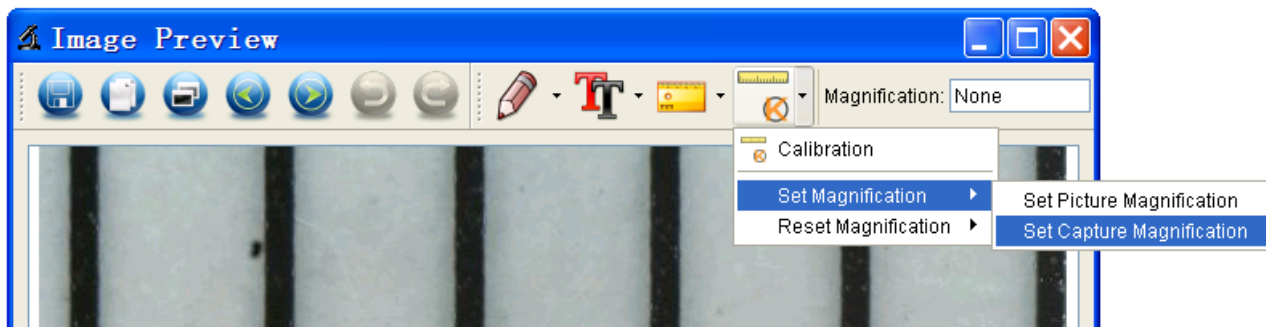


3. If you want to use the same magnification rate to




capture pictures, just click 'Set

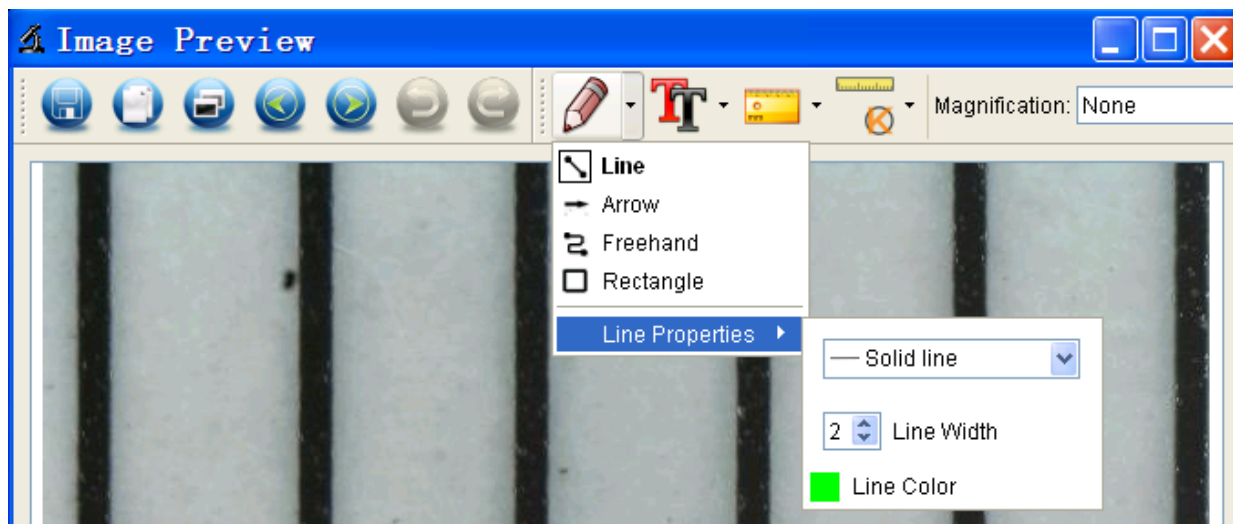
magnification >Set capture magnification'. Now all pictures will use the same magnification rate and you can start measurement directly.




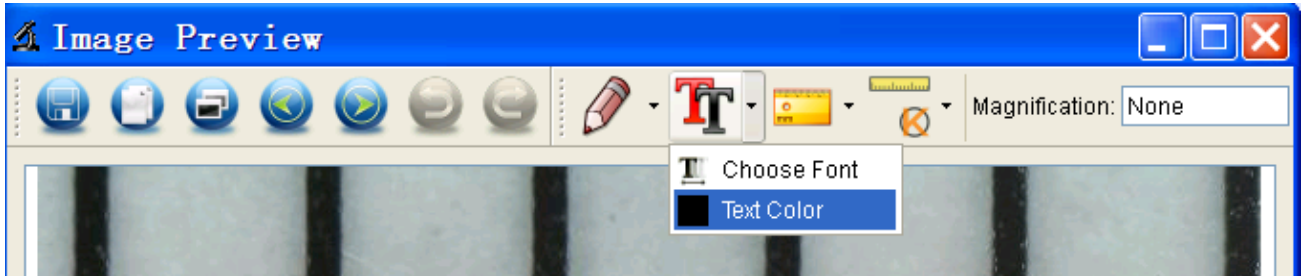
Draw and Text

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

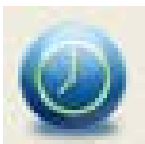
Main Interface Icons



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



Start / Stop record video.



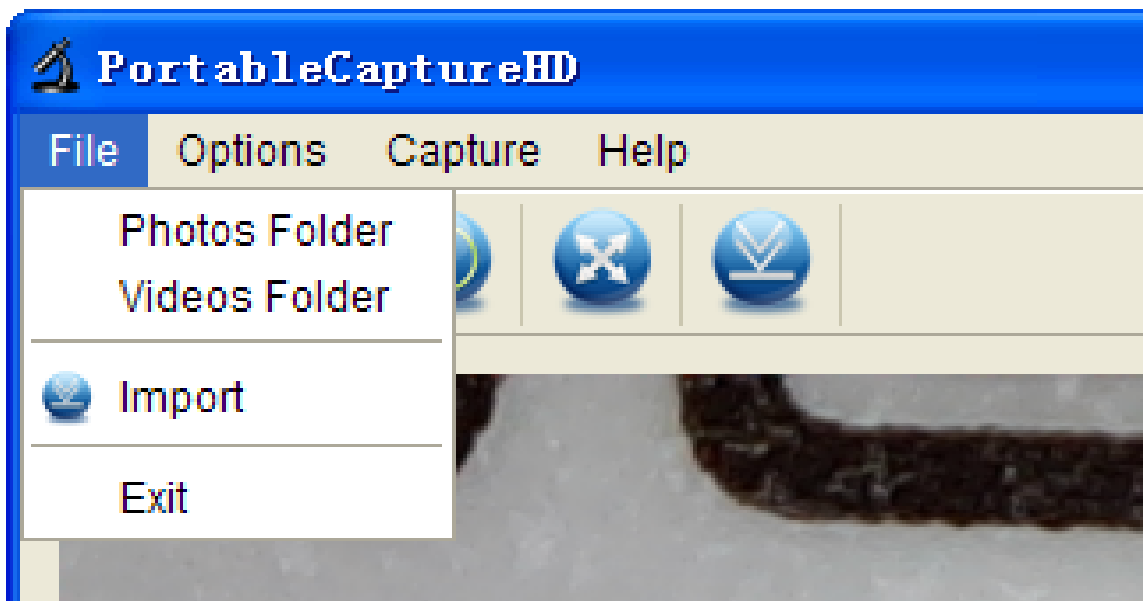
Timer for photo / video – Set the start time, interval time and total photo/video number.



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

Main Menu

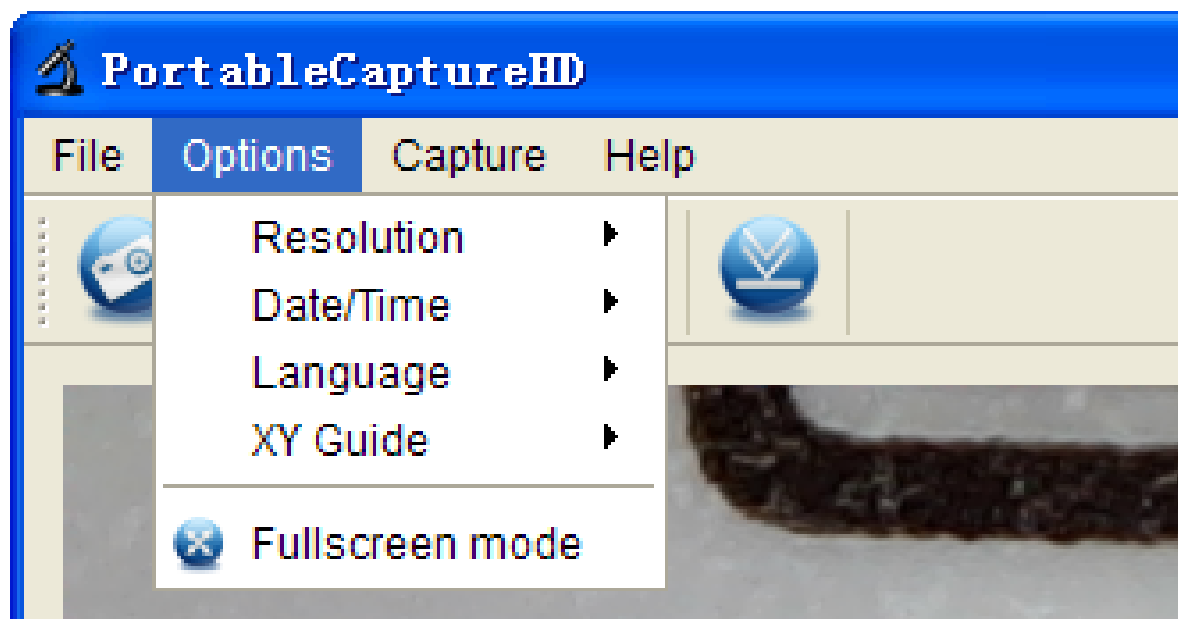
File



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

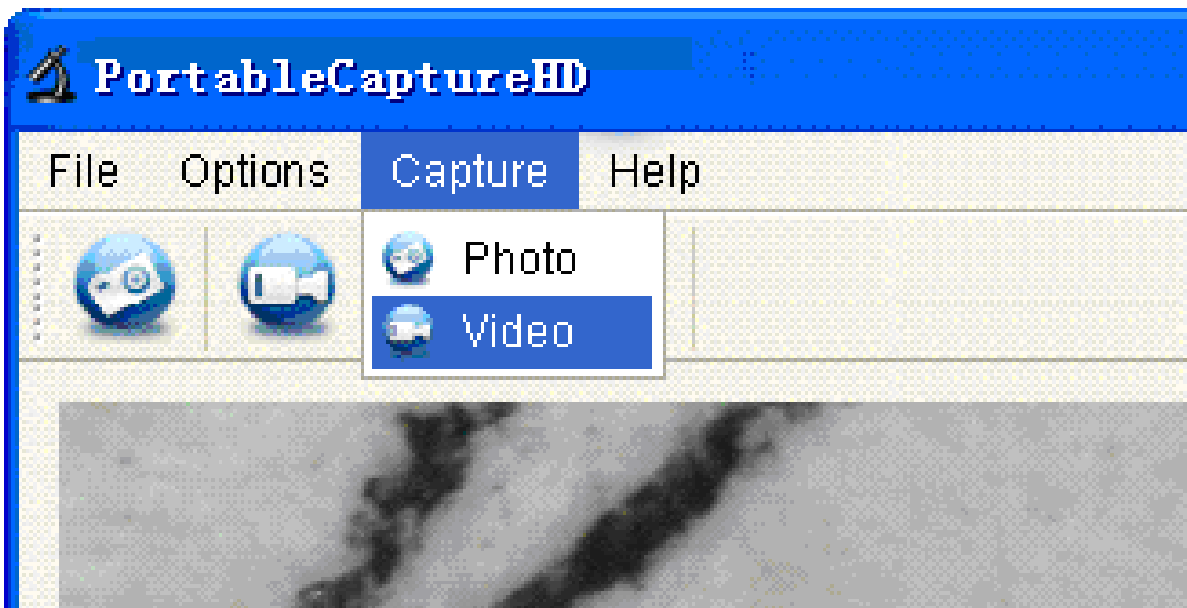


Photo: take a photo

Video: record a video clip

Measurement Interface Instructions



Save as



Redo



Copy to
clipboard



Draw



Copy file



Text note



Previous



Measurement



Next



Calibration

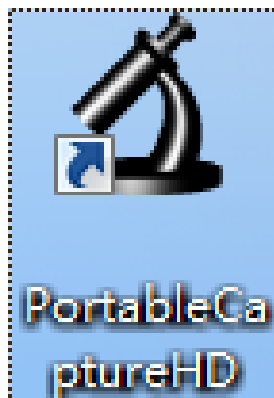


Undo

Instructions for Mac software

Part I How to Install the Software

Open *mac* folder from the disc and copy **PortableCaptureHD.pkg** onto your desktop for daily use.



Part II How to use PortableCaptureHD

1. Plug Microscope into PC USB port.
2. Double click **PortableCaptureHD** icon to open the **PortableCaptureHD** window. The microscope is now ready to use.



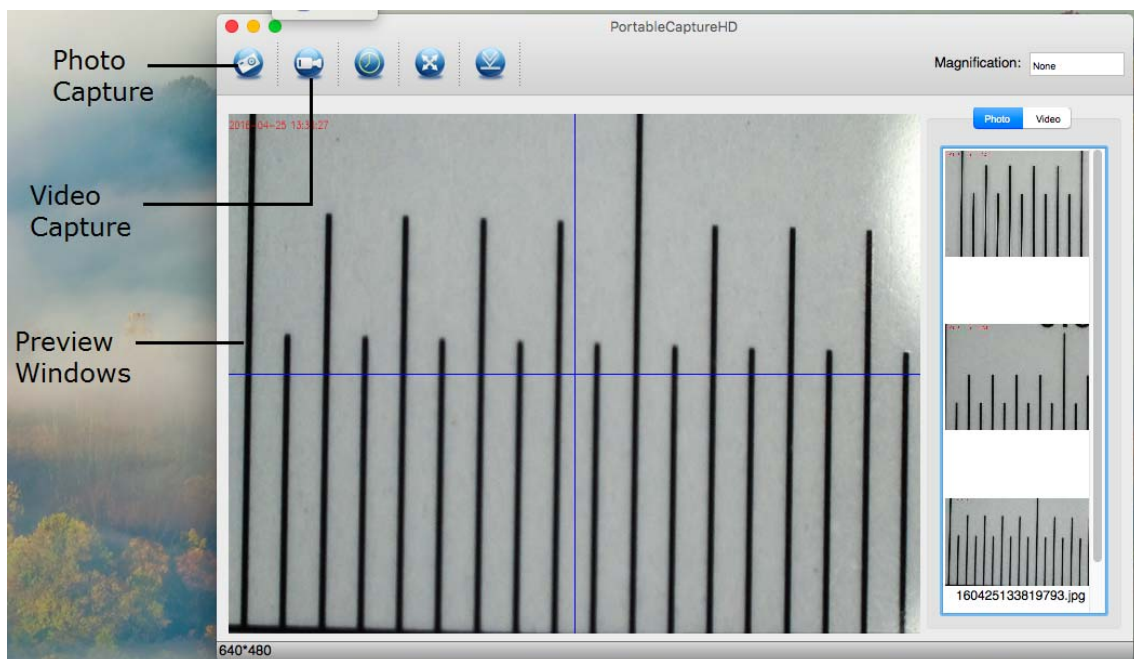
Note:

Please remember to take the micro SD card away from the card slot before connect to the personal computer via USB cable, so that enable you to capture & taking the video on the PC.

If the micro SD card keep in the microscope, then when you connect to the PC it will default as mass storage for you to download your images from the card.

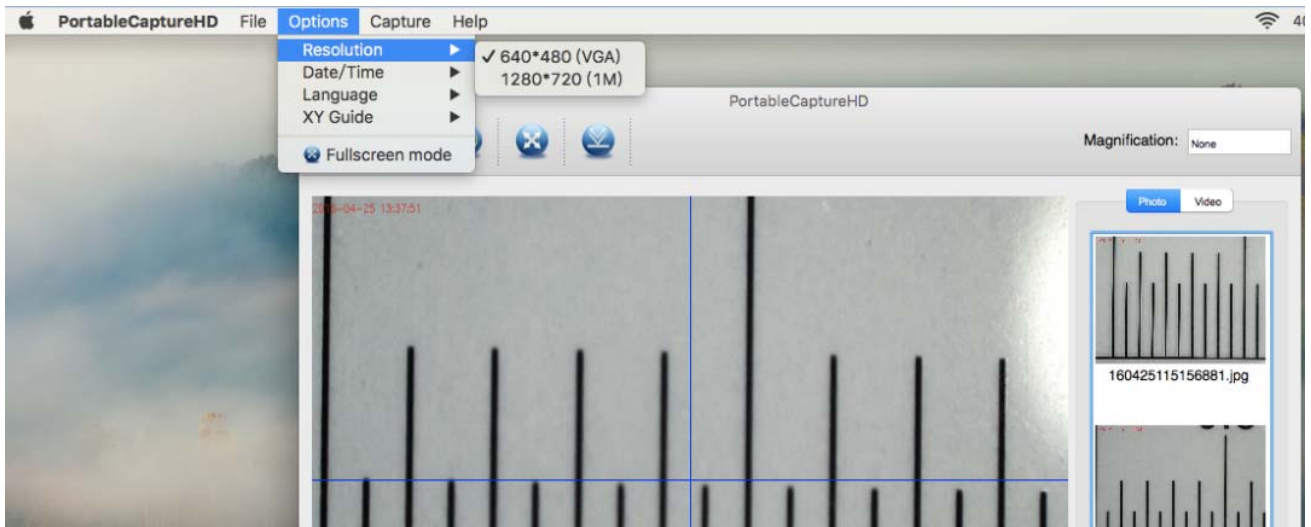
3. Preview

At the central window, you can preview the magnified subject.



4. Change preview resolution

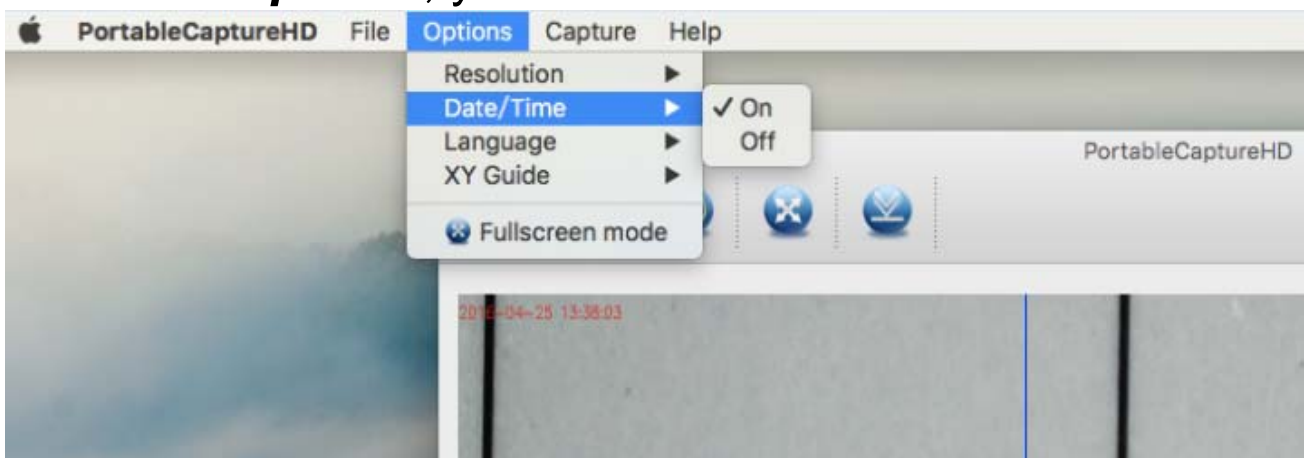
From **Options**, you can choose the preview resolution. The current resolution will be displayed at the left bottom corner of the preview window.



Please note that the preview window size always remains at 640x480 but the current resolution will show at the left bottom corner.

5. Date/Time

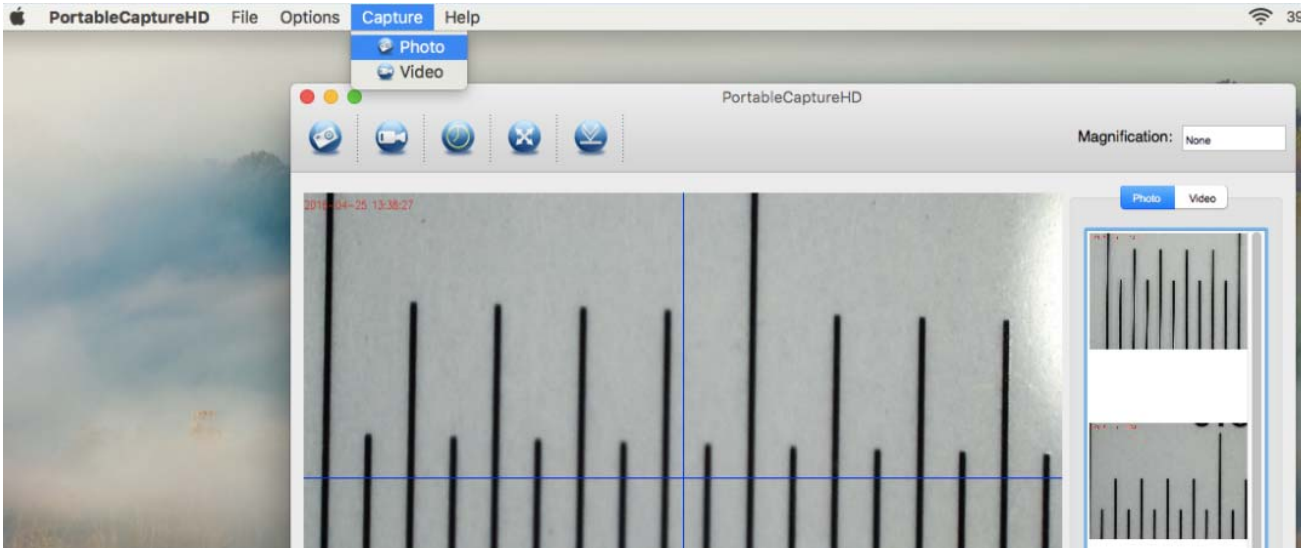
From **Options**, you can turn the date/time on or off.



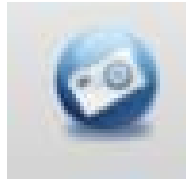
6. Photo capture

You can capture photo by:

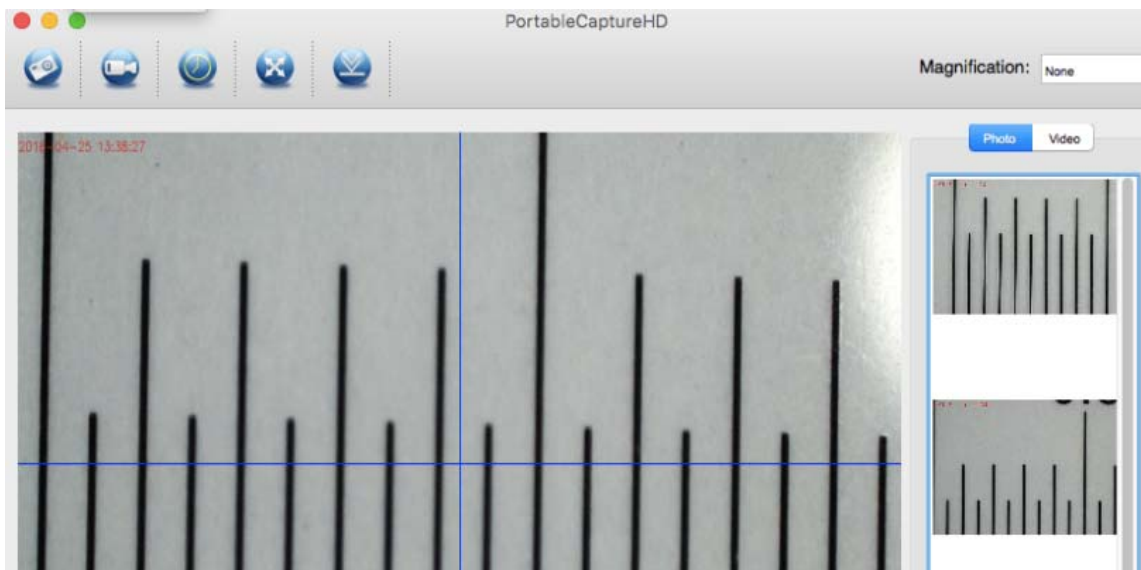
- Choosing **Capture/Photo**



- clicking photo capture icon



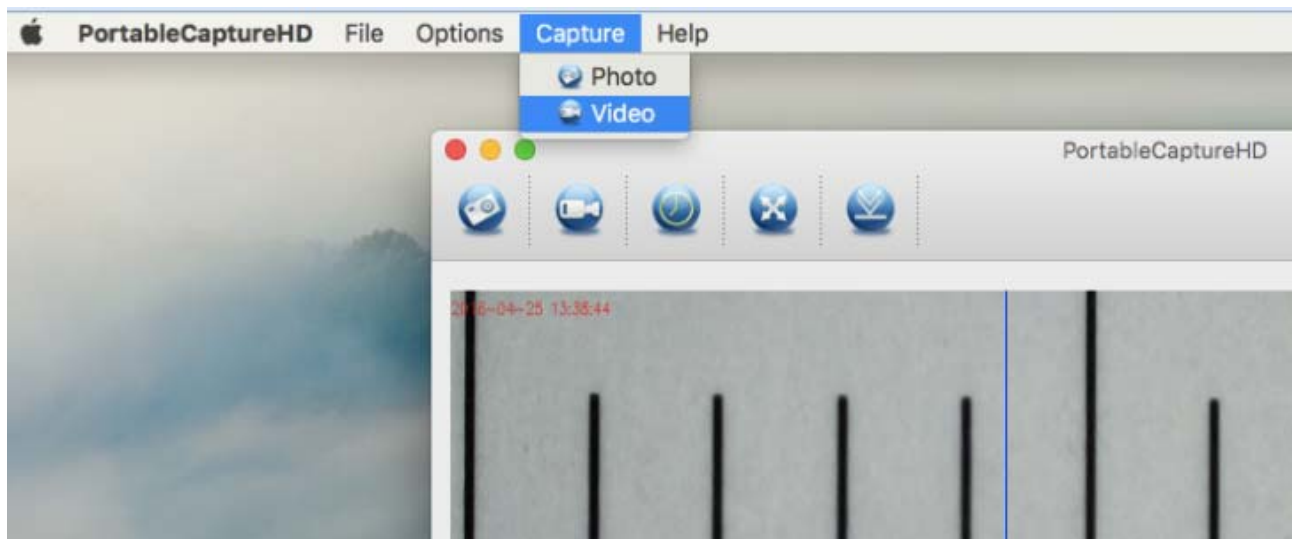
The captured photos will appear as thumbnails on the right side of the preview window.



7. Video capture

You can capture video by:

- 1) choosing **Capture/Video**



- 2) clicking video capture icon

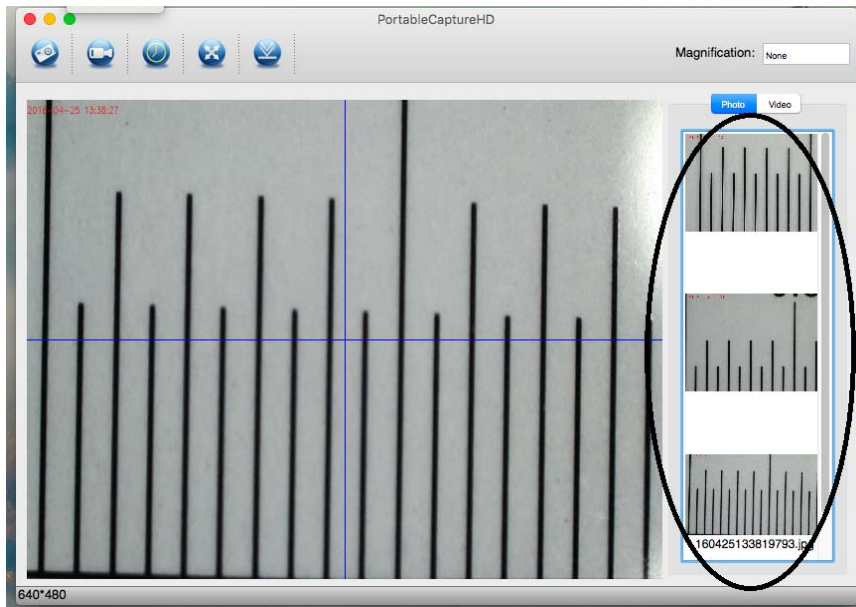


Note: After clicking on the icon, the video capture icon will turn red to indicate video clip recording. Click the red icon again, to stop recording!!

The captured videos will be appearing as thumbnails on the right side of the preview window under Video tab.

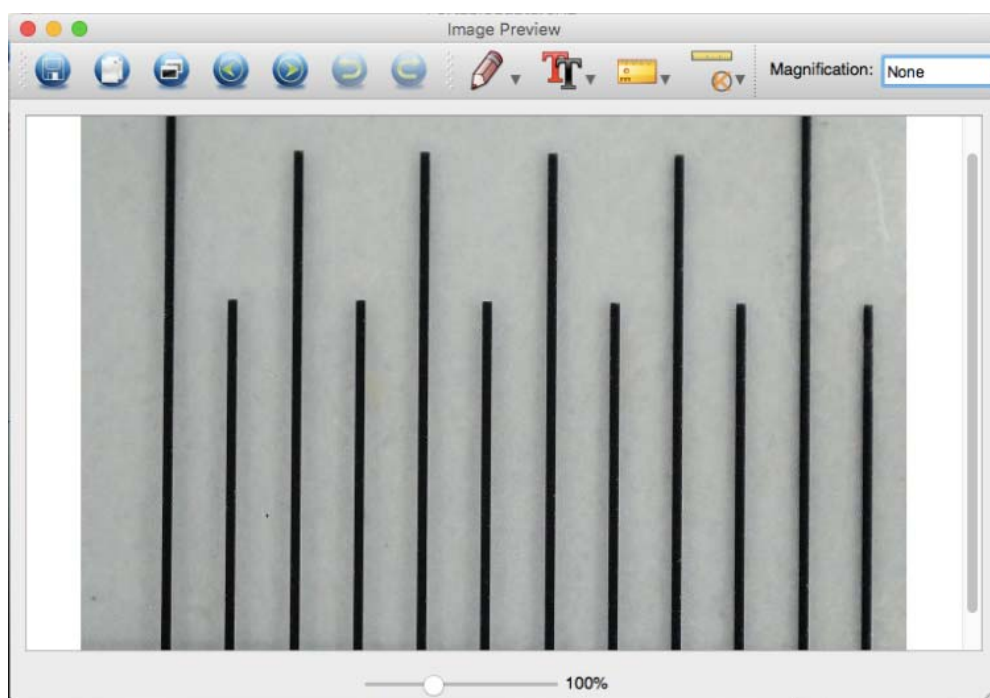
8. Photo & Video editing

Captured photo & video appear as thumbnails on the right side of the preview window.



1) Photo

Double click a photo thumbnail to open in the main preview window



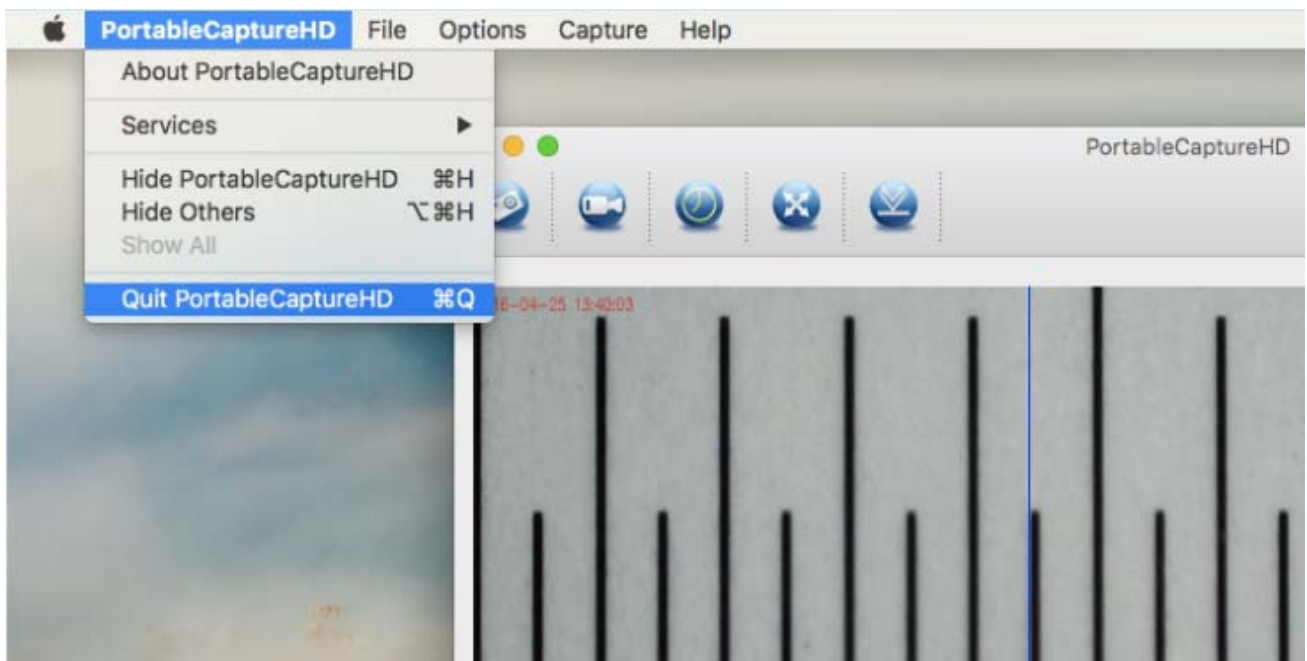
You can then carry out operations as you normally do on Mac system.

2) Video

Click a video clip thumbnail, the video will play automatically.

9. Quit MicroCapture

Choose **Quit MicroCapture** as follows, you can quit the software.



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.

