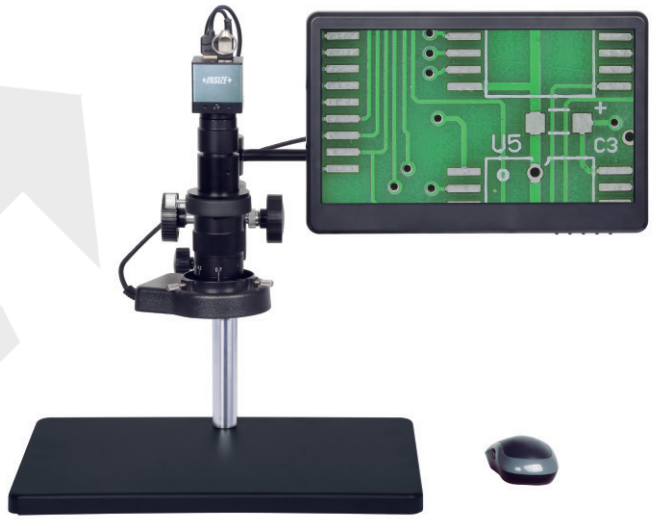


INSIZE

www.insize.com

5318-MD60
DIGITAL MEASURINGMICROSCOPE (BASICTYPE) OPERATIONMANUAL

INSIZE

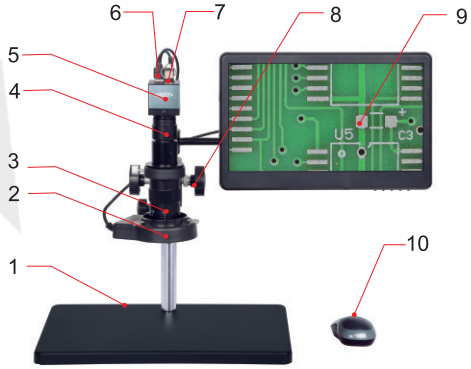
V0

Attention

- To avoid danger or damage incurred to the lens, do not touch the lens or sensor directly with your fingers.
- To avoid failure or electric shock hazard and so on, do not disassemble or modify the internal structure of the device.
- Do not plug in or unplug the anything port when hands are wet.
- If the lens or sensor is dirty or damp, you should better use dry and non-linen fabric or professional lens tissue to wipe them. To avoid scratches on the surface, do not touch the lens with your fingers. Wipe the lens or sensor lightly.
- The products are not specifically designed for an outdoor use. Do not expose it to outdoor environment without any protection. Excessive temperature and humidity will damage the lens. Please avoid using the product under the following environment: high temperature or high humidity environment, places with direct sunlight, dirt or vibration and places near heat source.
- Please use and store in the following environment:
  Operating temperature：0°C~ 40°C
  Storage temperature：-20°C~ 60°C
  Operating Humidity：30~80%RH
  Storage Humidity：10~60%RH
- If any foreign matter, water or liquid enter into the device by accident, disconnect the power cable immediately. Please send it to the maintenance center and do not use the hair dryer to dry it by yourself.
- To avoid electric shock by accident, please power off microscope before you move your computer or laptop.
- The cleanliness of the device lens will directly affect clarity degree of contents from the computer screen during preview. Problems like various circles or spots on the screen may mostly be incurred by dirt on the lens. When cleaning, please use professional lens tissue or other professional detergent to clear the dirt on the lens.
- Please do the confocal adjustment after changing camera adapter or auxiliary objective.

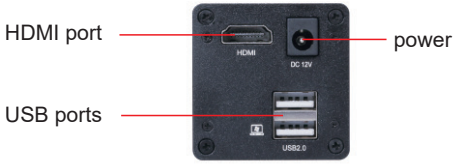
Structure

1 Name：



1. Stand;
2.LEDlight: Adopts many fill lamps, display a circle with even and abundant light.Therehave a controller with control the light power;3.Zoomlens: 0.7X- 5X;
4.Cameraadapter;
5.Camera:1/2.8"CMOSsensor, Pixel 2M;
6.HDMIports;
7.USBports;
8.Focus hand wheel: Focusadjustmentishand-actuated;
9.High-definition screen: 13.3"LCD;
10.Mouse.

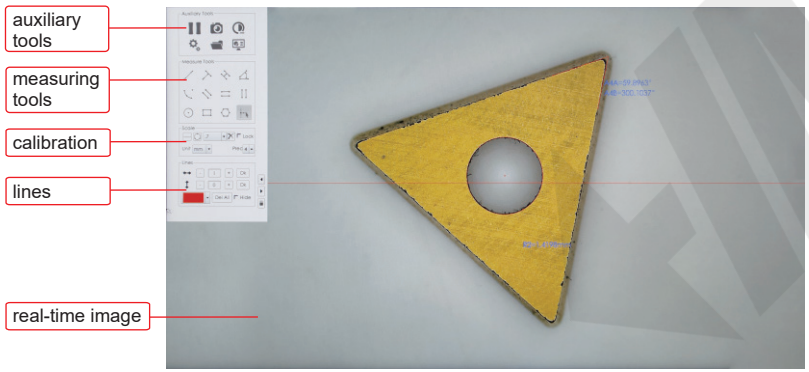
② Camera:



Camera Top

- The microscope has the function of taking pictures, The workpiece that is used for observation can be captured in real time. Pictures will be saved in the USB flash disk. You can reading the USB flash disk by computer.
- Camera can transmit the video signal for screen by the HDMI port and HDMI cable. The display is in real time.
- Microscope can be connected the controller by mouse.
- Power port connecting a power adapter.

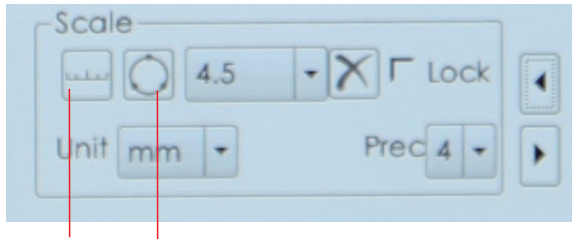
③ Software:



Operation

① Calibration:

- Click the icon in the upper right corner of the menu. You can choose the line segment calibration or the three-point circle calibration.The line segment calibration is that you can choose two dots to demarcate the lens.
  The calibration is based on the circle selected on the calibration board.Users can choose according to the type of the calibration board.Choose three-point circle calibration methods, for example, place the circular calibration plate at the bottom of the lens, the image adjust after clear, freely choose three points on the outside perimeter of the circle, can draw a circle, check drawn and calibration plate coincidence degree, if not satisfied can draw circles until satisfied. Then in the dialog box enter the current lens of the multiplier, calibration of the actual size of the circle and other information. At this point in the menu "Scale" dialog box will appear the current calibration information.



line calibration circle calibration

Notes:

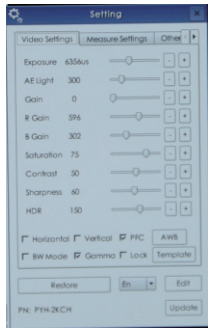
ⓐ Confirm to do calibration before doing measurement.

ⓑ Measure different objects in same magnification after doing calibration.

ⓒ After calibration, rotate focus adjustment to focus the object. If rotating themag-nification adjustment, docalibrationagain.

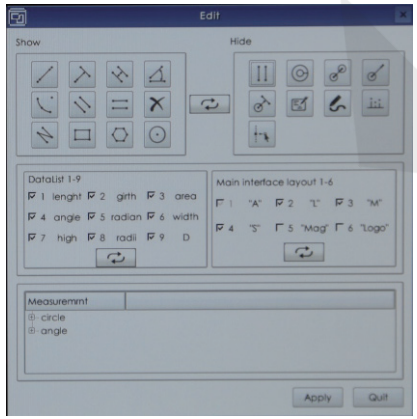
2 assist tools:

◆ Adjust the camera Parameters. Select the camera Parameter key and appear as shown below. The current image can be set appropriately.



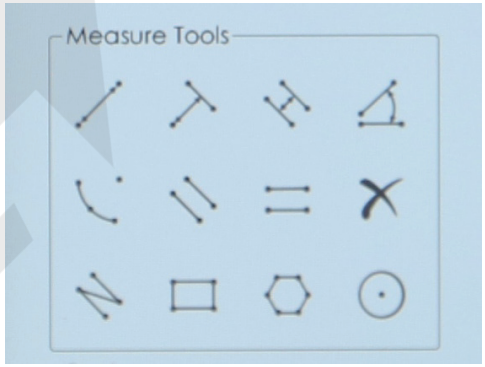
◆ Horizontal：Flip the picture horizontally
◆ Vertical：Flip the screen vertically
◆ PFC：Remove the influence of purple edge on the picture
◆ AWB：Please put a piece of white paper or other white objects under the lens first,and then press this key. The system will automatically，perform the white balance operation until it is completed
◆ BW Mode：Set the picture to black and white mode
◆ Language settings：Click on the language to switch between Simplified Chinese, English, and Traditional Chinese.

3 edit:



◆ edit：
1.The measurement elements can be displayed and hidden
2.Adjust the display and hide of data list and interface layout
3.Adjustment of the display of circle and angle measurement results

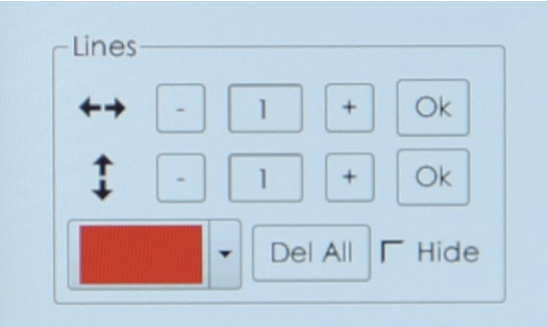
4 Measure tools：
Select the required measurement items in the measurement tool.



◆ Point to point---Measure the distance between two points
◆ Point to line---Measure the distance from point to line
◆ Line to line---Measure the distance between lines
◆ Angle---draw a line through two points, then draw another line through.two points and then the system automatically calculates the Angle between the two lines.
◆ Arc---You can draw an arc through three points and measure the radius, length and angle of the arc.
◆ Parallel lines---draw a line through two points, and then find another line, thesecond line will be automatically drawn, and the system will automatically measure the distance between the two lines.
◆ Horizontal parallel line---Measure the distance between two parallel lines
◆ Delete---Delete all survey data
◆ Polyline---Measure the total distance of multiple segments
◆ Rectangle---You can select two points, and the system will draw a rectangular box based on these two points.

- circle---A circle can be drawn at three points to measure the radius.
- polygon---Depending on the location of the polygon click the point, the system will automatically connect each point. When selecting the last point, press the right mouse button so that the system will automatically connect the last point after the first point to form a closed graph. Measure the perimeter and area of the polygon.

5 Lines:



- Lines: Click "+" to set the number of horizontal and vertical lines.
  After setting the horizontal and vertical lines check "Hide" to not display lines, and select "Delete All" to delete all lines.Hold down the right mouse button to drag the tick mark.
  Click the Set Scale Line Color tool and drop down to set the scale line color.After setting, draw the scale line again to take effect. The previously drawn scale line does not change. Right click on the tick mark in the screen to open the tick mark adjustment bar.

Parameter

1 Specification:

Magnification	12.5x-80x
Sensor	1/2"CMOS
Pixel	2M
Resolution	1920x1080
Frame rate	60fps
Measuring accuracy	±0.02mm
Output	HDMI
Power supply	Power adapter
Dimension (LxWxH)	380x260x350mm
Weight	4.5kg

2 Magnification and View field:

Auxiliary objective	Specification	Camera adapter
		0.5X(included)
0.5X (optional)	Magnification	6.2-40X
	View field	47x26-7.4x4mm
1X (included)	Magnification	12.5-80X
	View field	23.5x13-3.7x2mm
2X (optional)	Magnification	25-160X
	View field	11.8x6.5-1.8x1mm

3 Standard delivery

Main unit	1PC
0.5X camera adapter	1PC
1X auxiliary objective	1PC
Calibration plate	1PC
16G USB flash disk	1PC
White/black plate	1PC
Mouse	1PC
HDMI cable	1PC
Power adapter	3PCS