# Digital Screening Kit

User Guide

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# 1 Camera Matching Device

Front-end matching：C-mount microscope or C-mount lens

# 2 Camera Installation Instructions

1.Digital Screening Kit camera connect with C mount lens.

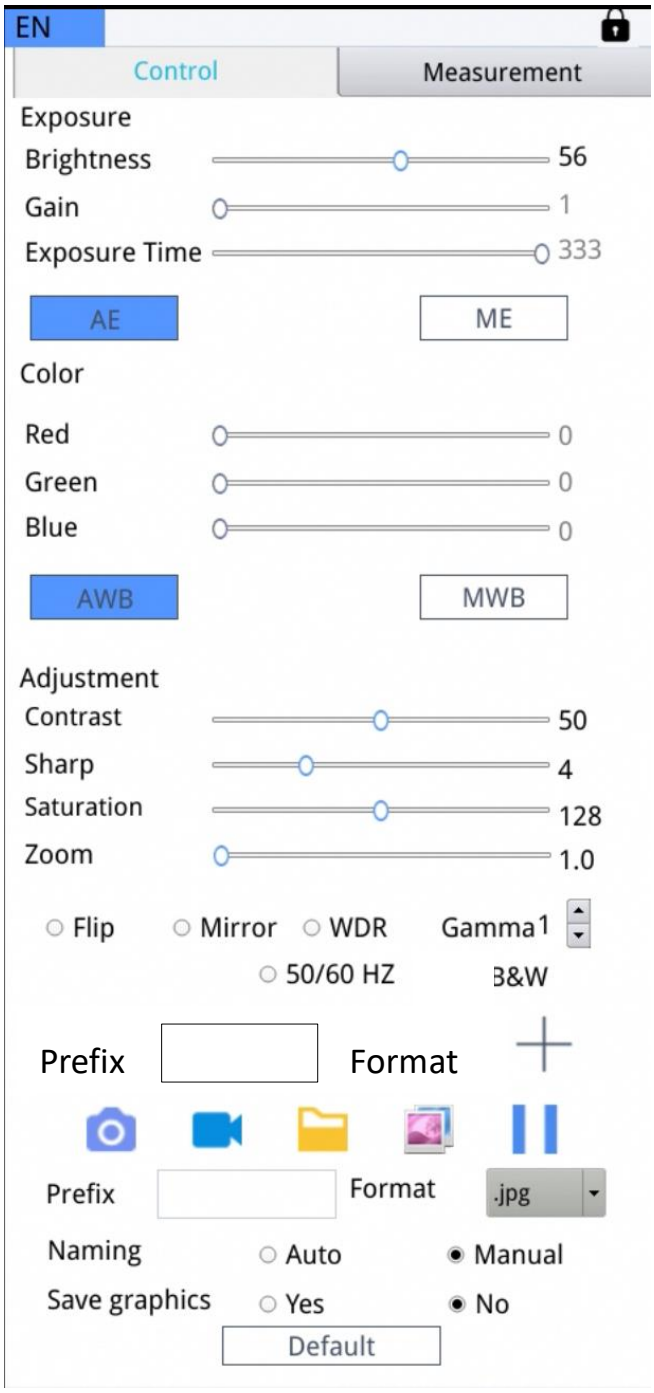
2.Connect the monitor and camera with HDMI cable.

3.Connect mouse.

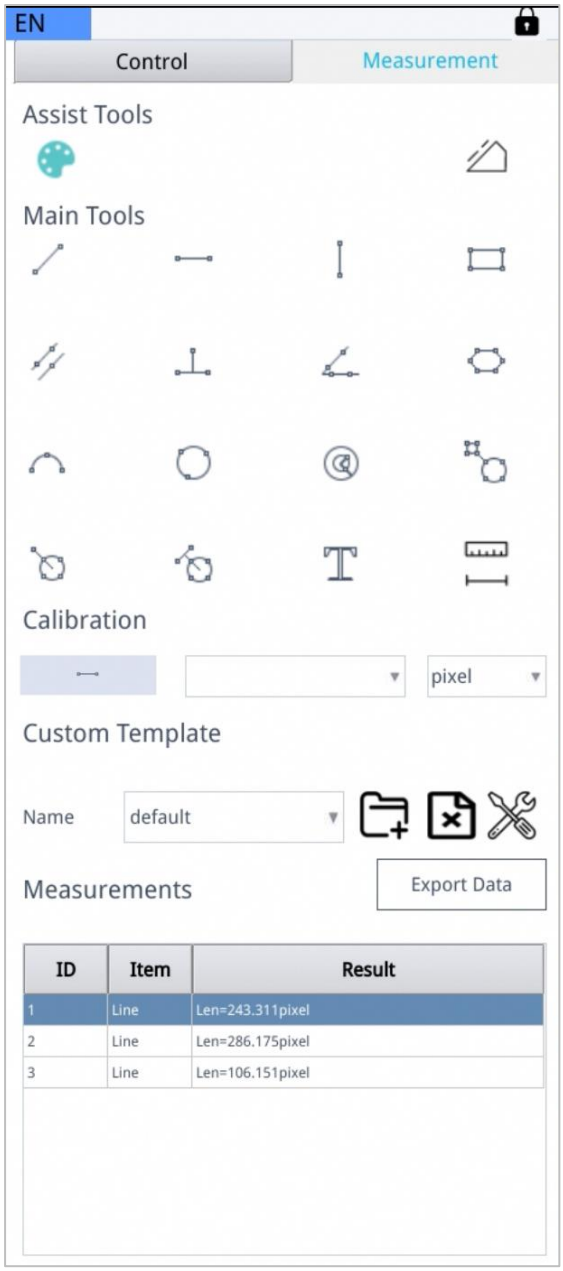
4.Please use the power provided by our company to power the camera.

# 3 Menu Interface

## 3.1Control



## 3.2Measurement



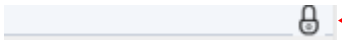
# 4 Detailed Control Interface

## 4.1 Language Mode

Click the upper left corner of the menu to select the language mode.Simplified Chinese,English,Traditional Chinese, Japanese and Russian are available.

## 4.2 Lock Menu

Click the lock icon in the upper right corner of the menu to switch the menu display status.

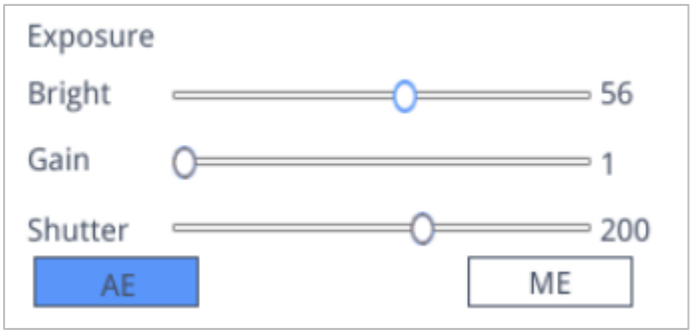


Always show menu when "blocked".

When "Open", move the mouse to the upper left area menu display, move out of the upper left area menu to hide.

## 4.3 Exposure

Exposure: Auto \ Manual



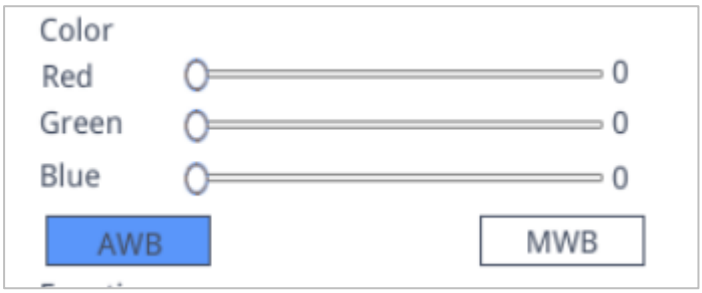

When click "AE" , you can drag the "Bright" progress bar to adjust the brightness.

When “ME” is click, the “Gain” progress bar can be pulled to adjust the gain， Pull the "Shutter" progress bar to adjust the shutter.

Default: Default auto exposure.

## 4.4White Balance

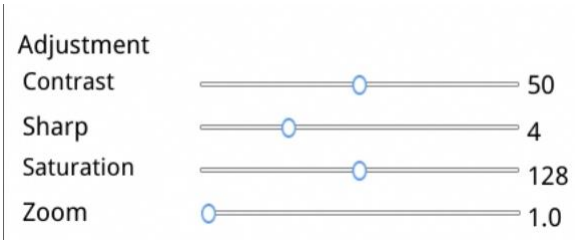
White Balance： Auto \ Manual




AWB: automatic white balance can be achieved under different color temperatures.
MWB:You can pull the "Red Green Blue" progress bar to adjust the "Red Green Blue" color value.

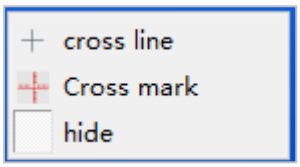
## 4.5Function

Function： Contrast\Sharp\Saturation\Ezoom




Contrast： 0-15 value adjustable， Reset the default value 0；
Sharp： 0-15 value adjustable， Reset the default value 4；
Saturation： 0-254 value adjustable， Reset the default value 128；
Ezoom： 1-6 value adjustable， Reset the default value 1.0.

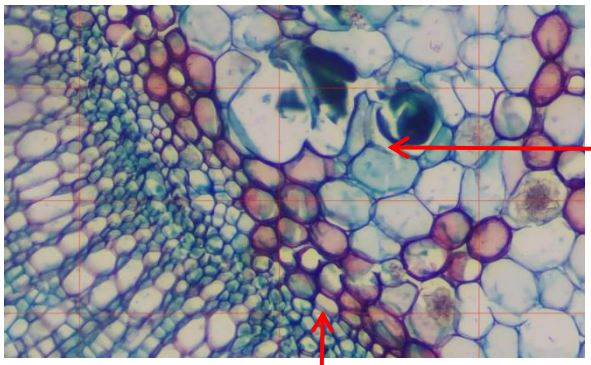
## 4.6Cross hair Tool



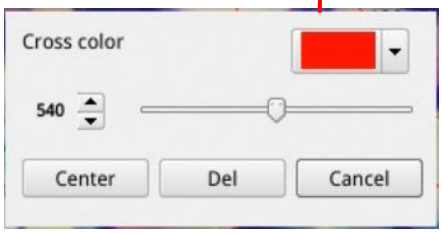

1.Click Cross hair tool ， Select“cross line”， Display cross hair to set the number of horizontal and vertical lines. After the setting is complete, select "Display" to display the set cross hair in the image display area, and select "Delete" to not display cross hair.

Set the number of horizontal and vertical lines.

Display crosshairs：

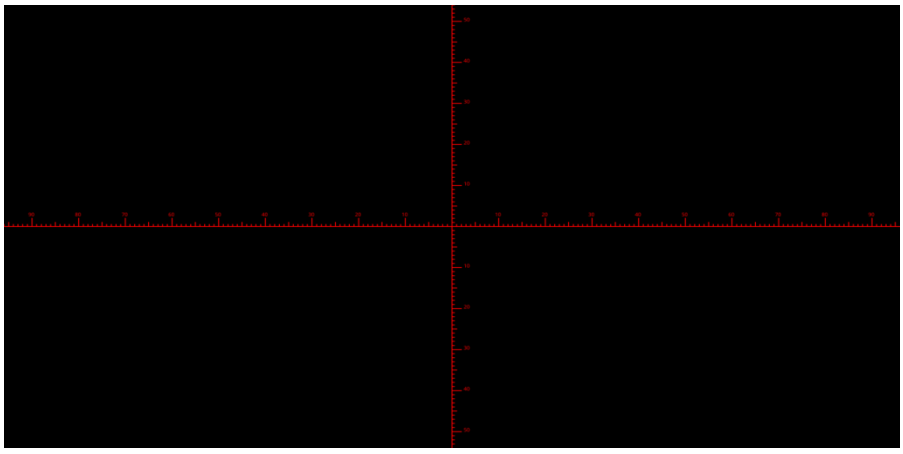


Hold the left button, you can drag the crosshairs. Note: Do not press and hold at the intersection of the horizontal and vertical lines.




Double-click a single crosshair to set its color and position, center and delete

2.Click Cros shair tool ，Select“Cross Mark”，Image area display cross tick marks.



3.Click Cross hair tool ，Select“Hide”，All cross lines or cross tick marks will be hidden in the image area.

4.Click on the set cross hair color tool , Pull down to set the cross hair color. After the color is set, draw the cross hair again to take effect, the color of the cross hair drawn before does not change.

## 4.7Photograph

### 4.7.1 Photograph Operation

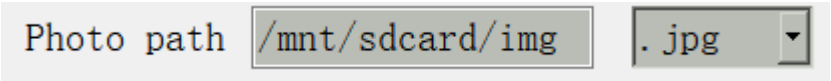
First confirm whether the U disk is inserted successfully.

After inserting the USB flash drive for a few seconds, the icon of the successful insertion of the USB flash drive is displayed in the upper right corner of the display. At this time, you can click to take a photo.

Click the "Capture" icon, and the icon will be displayed in the center of the screen. After about 3 seconds, the icon disappears and the picture is automatically saved in the /mnt/sdcard/img folder of the U disk.

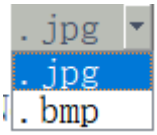
### 4.7.2 Prefix

When the "Naming" is "Auto", the prefix of the file name can be added, and the file is named and saved with "prefix + serial number".



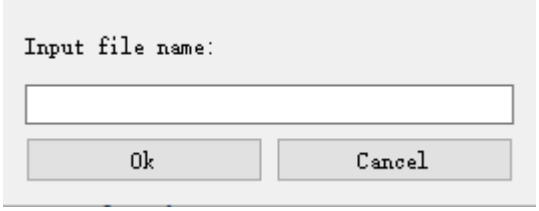

### 4.7.3 Photo Format

Click on the photo format drop-down to select the photo format. There are two formats to choose from: .jpg/.bmp.



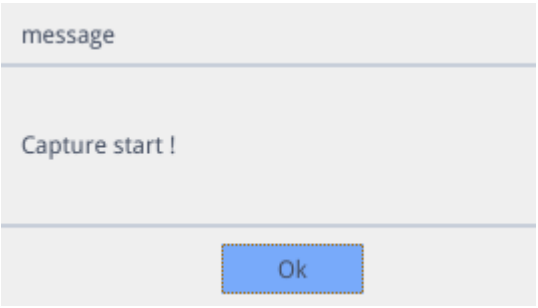

### 4.7.4 Photo Naming Rules

Select "Auto" to name the photo according to the time, select "Custom" to enter a name to save.




## 4.8Recording

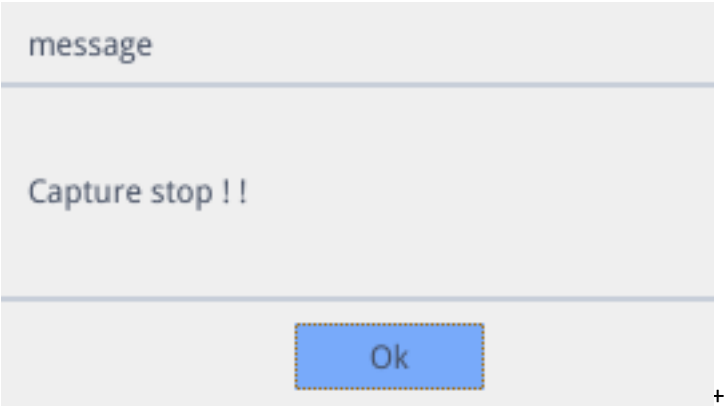
Click on“record” icon，The interface prompts "Capture Start!", click "OK" to start recording；




During recording, the icon in the lower right corner of the screen flashes during recording

.

Click on“Record” icon again， the interface prompts "Capture Stop! ", click "OK" to stop recording

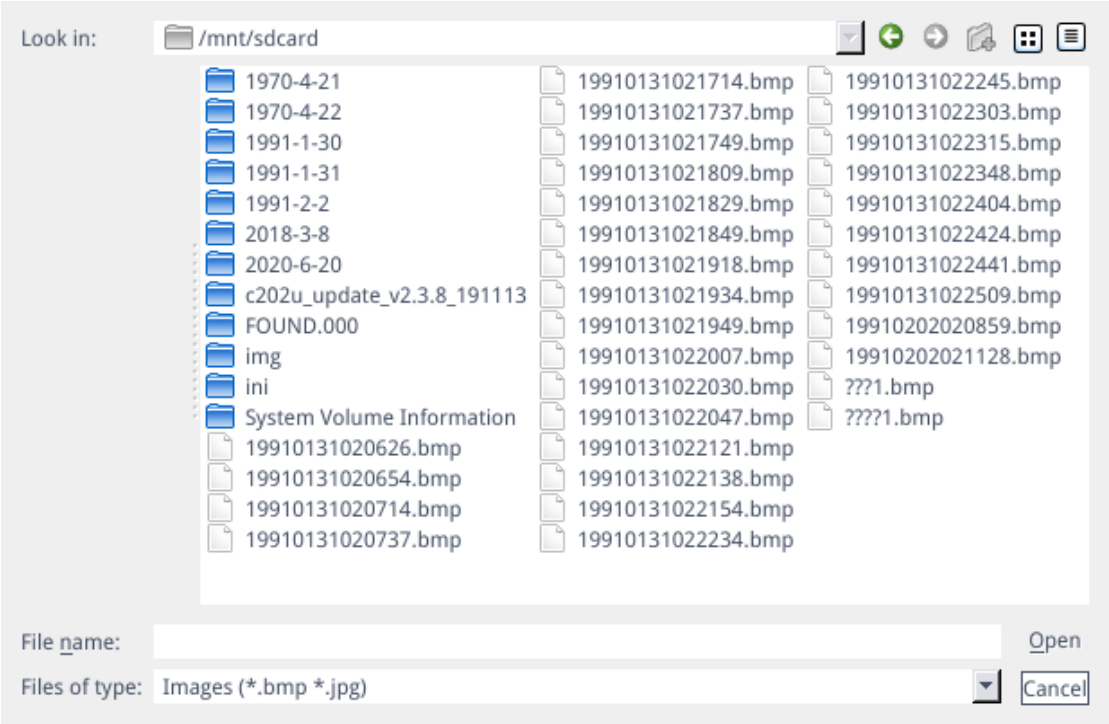


+

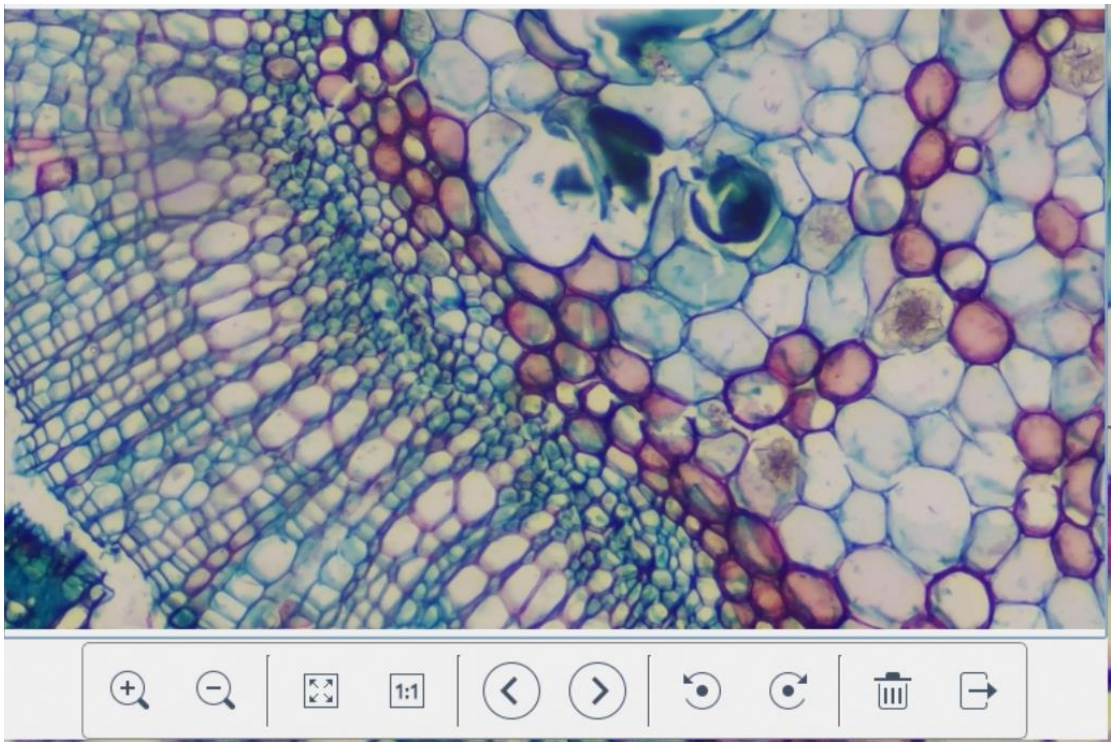
**Remark：** The recorded videos are named according to the date, and are automatically saved in the U disk with the format of .H264. The maximum length of a single recording is about 2 hours and the size is about 4G. If it exceeds 2 hours, it will automatically stop recording

## 4.9Open Picture

Click on “Open” icon， The interface pops up to select the picture interface.




Select the picture you want and pop up the picture interface.




1.Click the“ scaling” tool， you can zoom in and out of pictures

2.Click the“Full Screen” tool， the picture interface displays the entire picture；

3.Click“1:1” tool， The picture interface displays part of the picture. Press and hold the left mouse button to move the picture position,

4.Click“Browse” tool， browse the previous and next pictures；

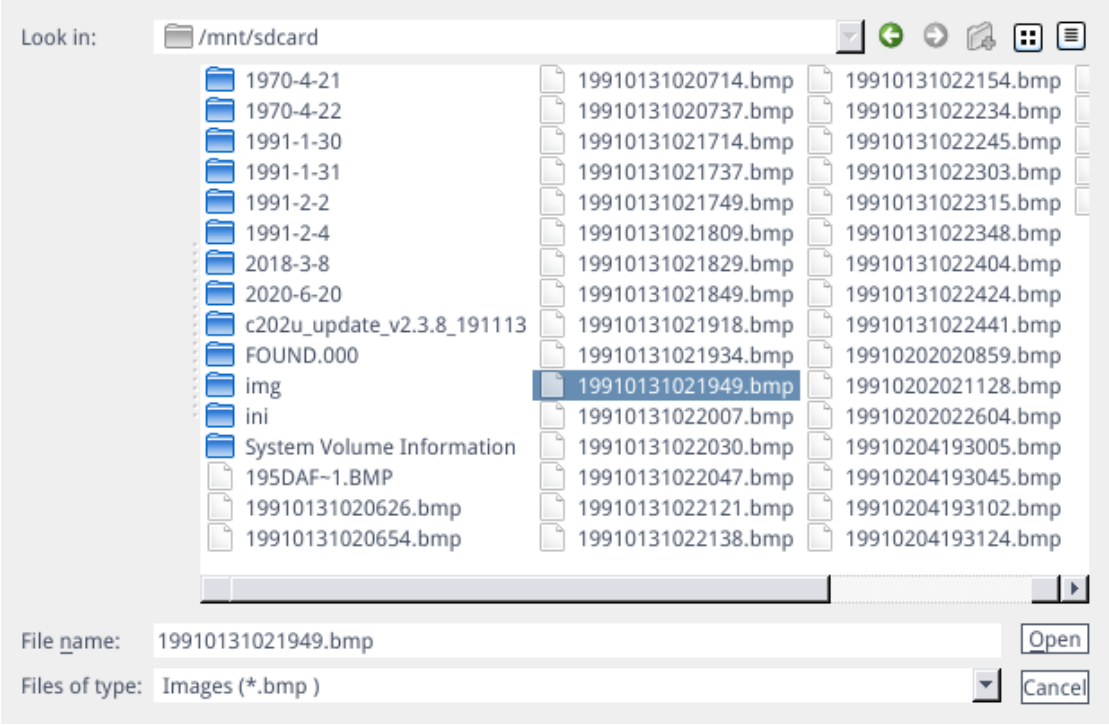
5.Click“Rotate” tool， you can change the picture direction clockwise or counterclockwise；

6.Click“Delete” tool，delete current picture；

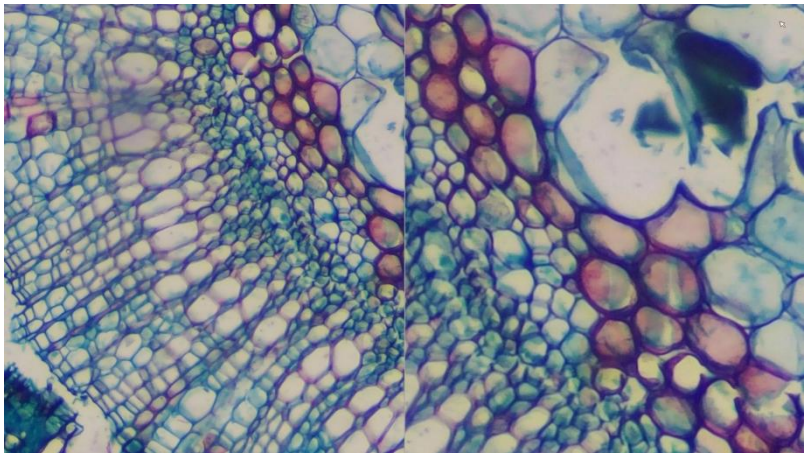
7.Click“Return” tool， close the current picture interface.

## 4.10 Compare Pictures

Click the “Compare Picture” icon， and the interface pops out to select the picture interface




Select the picture you want to compare, pop up the comparison picture interface, the left side of the screen is the real-time video interface, and the right side is the selected picture



realtime picture compare picture

Click“compare picture” icon again， closed Compare picture function

**Remark：** Compare pictures, only pictures in .bmp format are supported

## 4.11 Freeze

Click“Freeze” icon， The current image interface can be frozen, and the image window remains static, which makes it easy to observe the measured object； After freezing， The icon become ， Click icon， restore to the real-time display interface.

## 4.12 Save Graphics

When "Yes" is checked, the upper measurement line is saved in the picture, while "No" is not saved.

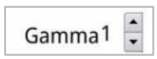
## 4.13 Flip/ Mirror

Check Filp: the vertical direction of the video on the screen is the opposite of the actual; check Mirror, the horizontal direction of the video on the screen is the opposite of the actual.

## 4.14 WDR

After opening， Especially bright parts and particularly dark parts of the scene can be particularly clearly seen at the same time.

## 4.15 Gamma




Gamma：0-3 value adjustable， Reset the default value 1.

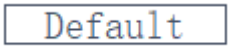
## 4.16 Anti-screen Flicker

Anti-screen flicker effect is achieved after ticking.

## 4.17 Black and White Mode

Checked for black and white mode, default is color mode.

## 4.18 Default




Click”Default”to restore various parameters to factory settings.

## 4.19 Version Number

You can view the current software version number.

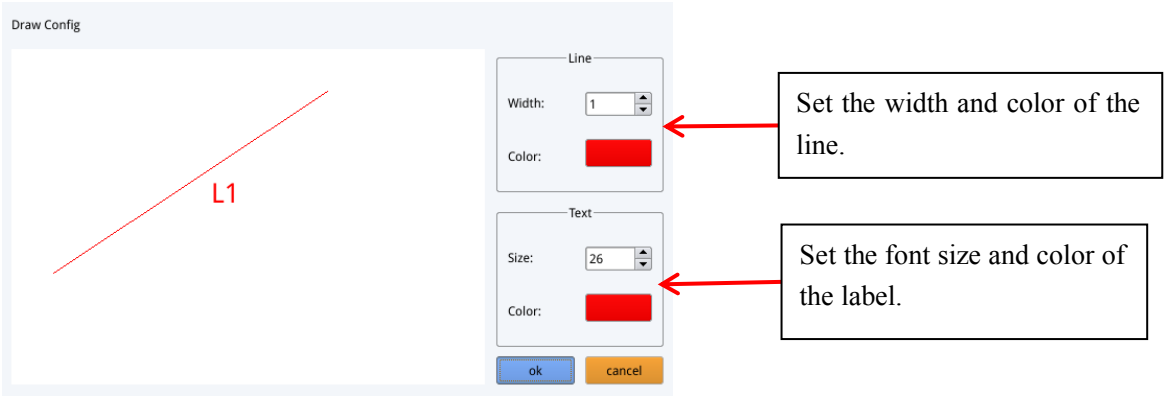
# 5 Detailed Measurement Interface

Click Measurement to carry out the measurement operation .After the measurement operation is completed, if you want to display the menu, click the right mouse button in the image area and move the mouse to the menu area to display the menu.

## 5.1Assist Tool

### 5.1.1 Color Setting

Click“color setting” icon， Pop-up setting interface.




### 5.1.2 Edge Detection

Click“Edge Detection” icon， When selected, the icon turns blue ， When measuring a picture, it will automatically find the edge.

## 5.2Measurement Tool

straight line  Horizontal line  Vertical line rectangle

parallel lines Perpendicular Angle Polygon Arc

circle Concentric circles Double circle line-circle

Perpendicular-circle Text

## 5.3Scan Data

This function requires a scanner. After the scanner scans the barcode, the scanned data box displays the scanned data. A folder named after this data is automatically saved in the USB flash drive, and the picture is saved in this folder.

## 5.4Custom Template

After drawing the primitives in the image area， Click“New”icon， and the window "whether Convert primitives to a template" pops up, and click "OK" to create a new template；

After entering a name in the name window， click“save” icon to save the template

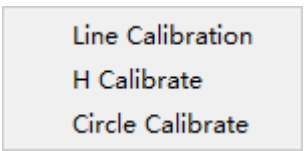
Click“Delete” icon， Can delete this template；

Clcick“Edit”icon to modify the template,， click“save” icon again， Save the modified template， Click“Back” icon， will not save the modified template.

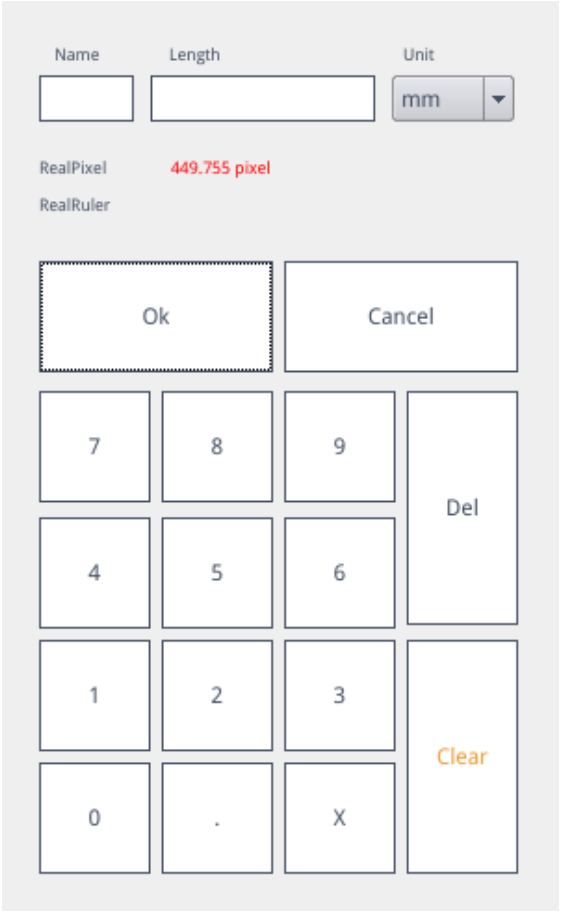
## 5.5Measurement Operation

### 5.5.1 Calibration

1.Click on the calibration tool drop down， Line Calibration,H calibrate or Circle Calibrate can be choose.



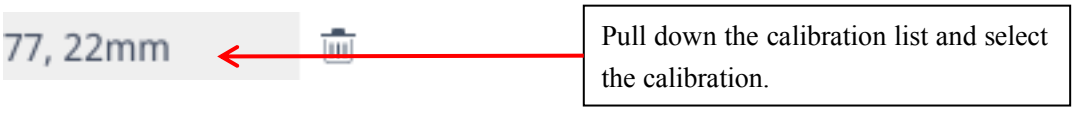

2.Drag the marking line to align with the engraved line of the scale， input name and length ， select the unit, and complete the calibration.



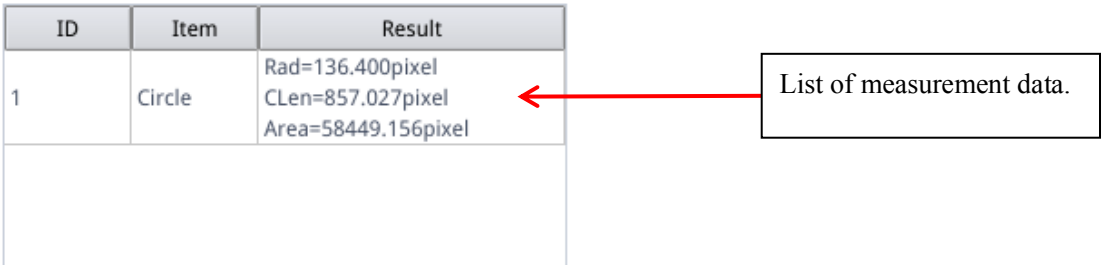

✦**Delete calibration:** Click the drop-down calibration list, select the calibration group to be deleted, and click the delete icon to delete this group of calibrations.

## 5.5.2 Measuring

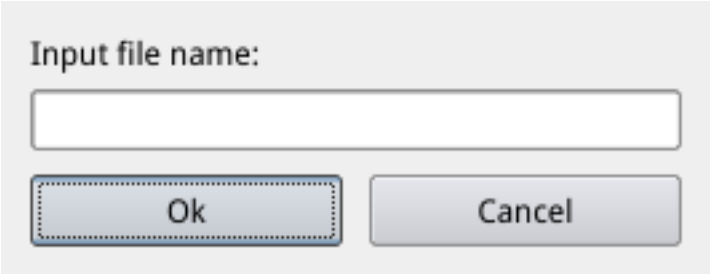
The measurement tool includes a variety of stitch measurements.Depending on the specific application, you can first select the appropriate calibration and unit.



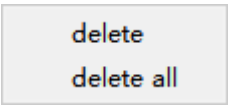

Then select the appropriate tool for measurement; when measuring, you only need to click the anchor point of the measurement. After you click and release the mouse, the measurement data is displayed in the measurement data list area.




After the measurement is completed, you can export the data in the measurement data list. Click ‘‘Export Data’’, and the data will be automatically saved in the .csv file in the USB flash drive. The user can input the file name.

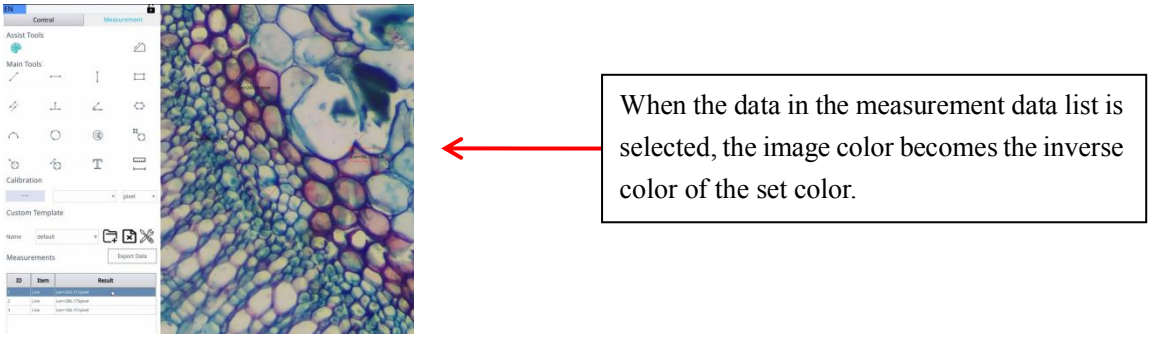



✦**Delete measurement data：** In the measurement data list, select the data you want to delete, right-click, you will be prompted to delete a group of data, or delete all data, and select according to your needs.



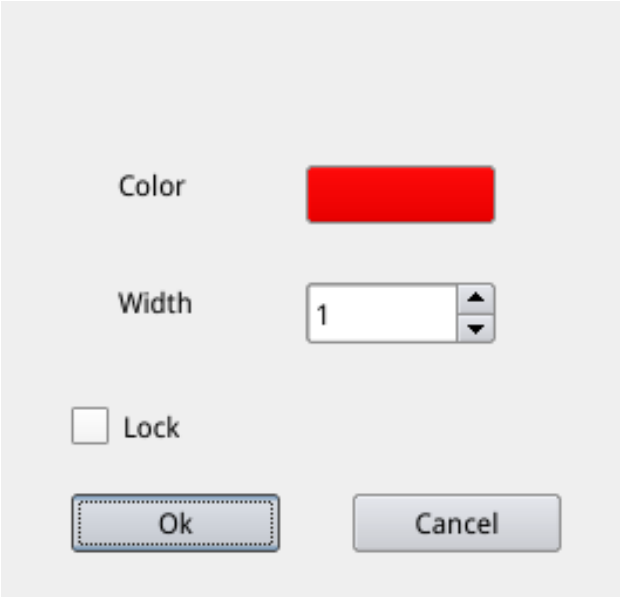

## 5.5.3 Select Measurement Data

1.Click the data in the measurement data list with the left mouse button. The selected graph data is displayed in shades of gray. The color of the selected graph in the image display area becomes the reverse of the set color.



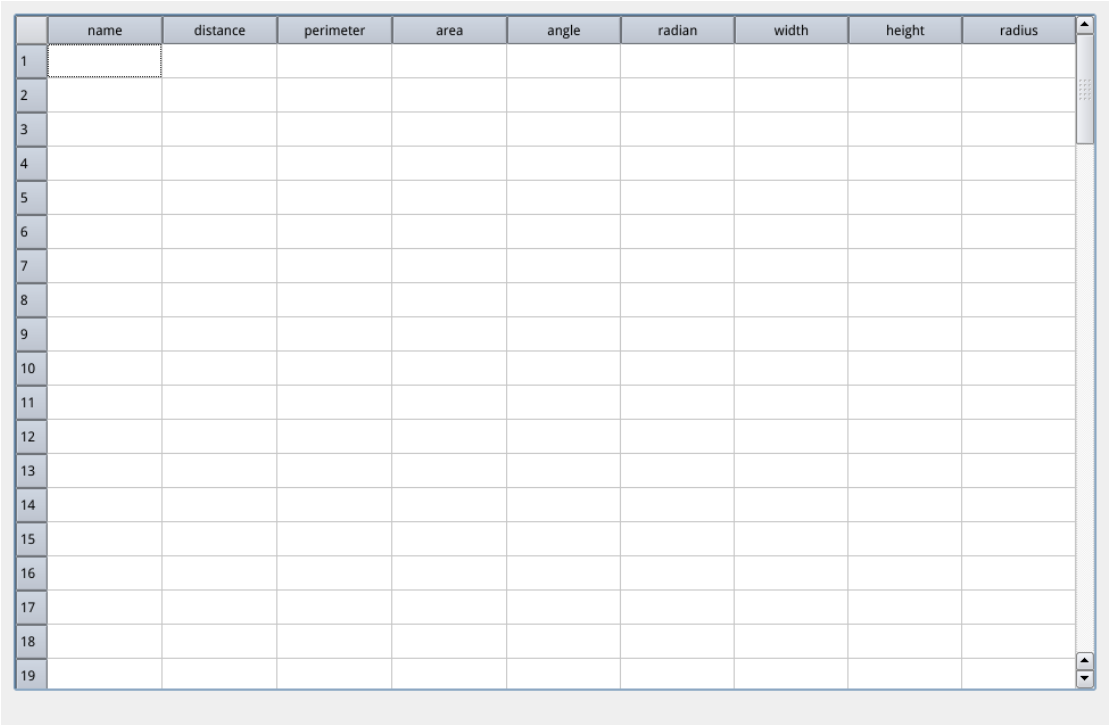
## 5.5.4 Selected Graph

Double-click the data in the measurement data list with the left mouse button, and the selected graph data will pop up a dialog box.， You can modify the color and line width of the line, and lock the selected graph. The locked graph can no longer be operated.




## 5.5.5 Detailed Data

Double-click the“list Show” List Show icon with the left mouse button to pop up the detailed data dialog box to view all the current detailed measurement data.



### 5.5.6 Mark Tool

Click“Text” icon， Draw the position to be marked in the image area, enter the comment content in the pop-up window, and click "OK" to complete the marking.