SOUTHERN SCIENCE SUPPLY

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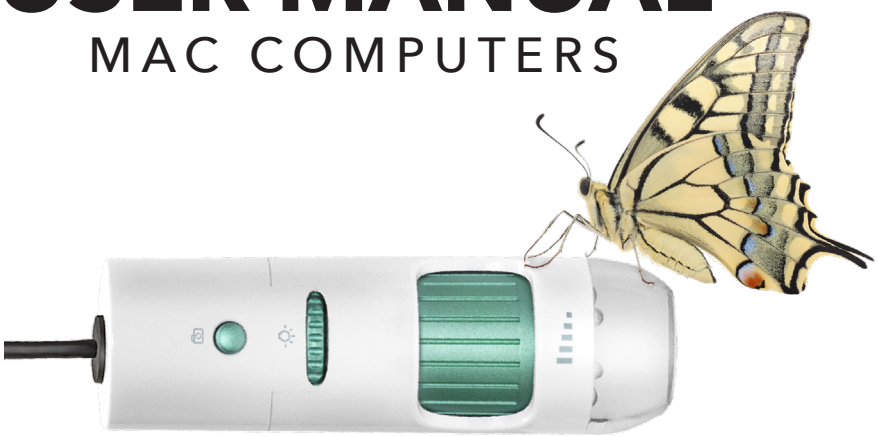
MicroSight 1.3MP & MicroSight 5MP

MICROSCOPE

USER MANUAL

MAC COMPUTERS



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OVERVIEW

The 10-200x digital MicroSight Microscope provides an adjustable magnification range anywhere from 10-200x and comes in two megapixel options, the 1.3MP and the 5MP. The 5MP is considered high definition and will make a difference when printing, enlarging, and cropping. All MicroSight microscopes are USB supported.

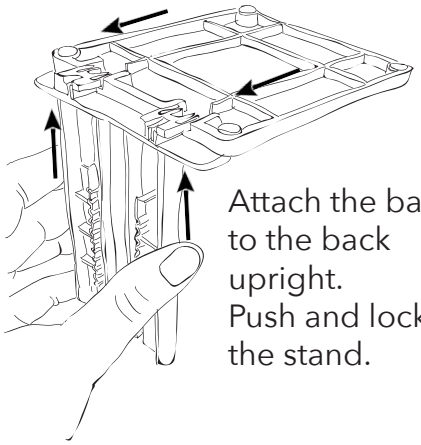
The built-in high-performance LEDs can illuminate an object without the need for any auxiliary lighting. The light is dimmable should you be viewing something reflective. By adjusting the focus knob on the camera, the magnified image can be viewed, captured as a JPEG or BMP, or recorded as a video directly from the computer screen.

These MicroSight microscopes can be used in a variety of situations. Education is probably the most widely used application, however, they are often used in skin exams, scalp exams, circuit boards, printing inspection, textile inspection, paper money and coins, stamps, jewelry inspection, rock and mineral inspections, and so much more.

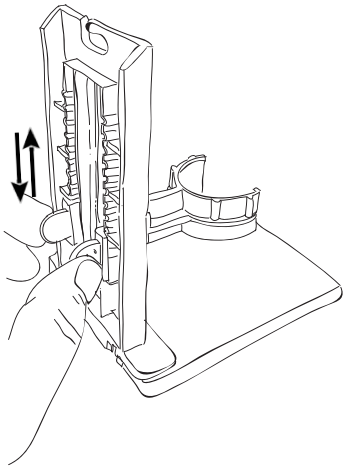
The software is always included with these microscopes and is designed for Mac and Windows. MicroSight microscopes are also compatible with Chromebook as external cameras and can be used with little iPEVO Visualizer, a free download from the Google store. All microscope purchases include a full sight license.

The MicroSight microscope comes with:
Microscope with tip that focuses at 100/200x.
Additional microscope tips that focus at 15x, 30x, 50x (always included)
Plastic Stand
Software
5 Year Warranty

HOW TO ASSEMBLE THE PLASTIC STAND



Attach the base to the back upright. Push and lock the stand.



Insert a holder at the bottom of the back of the stand. Press the holder, pull up and down to adjust the distance between the microscope and the object. Place the microscope in the stand.

A variety of sturdy metal stands are available through our website under the Accessories Tab.

INSTALL THE SOFTWARE

There are two ways to install the MicroViewer software for Mac or Windows. The disc is included inside the box for both Mac and Windows. If you find yourself with a computer that doesn't have a disc drive, an external drive may be used or the direct download is available from our website at the bottom of the home page in the footer under **Downloads** tab.

1. Install the MicroViewer program and restart the computer.

2. The serial number is located on the paper sleeve of the disc inside the box. There is a Mac number and a Windows number. They are both case sensitive. There are no letter Os, use zeros.

3. Serial numbers may be used more than one time. If you misplaced the disc sleeve, MAC OS X 10.6 or above S/N: W37YJ5WJNS04F4T

4. After entering the serial number, press OK, not evaluate. The evaluate button is for a trial period and will stop working after a given amount of time. If this happens, simply reinstall again.

START THE PROGRAM

1. Plug the microscope into the USB port BEFORE opening the program.

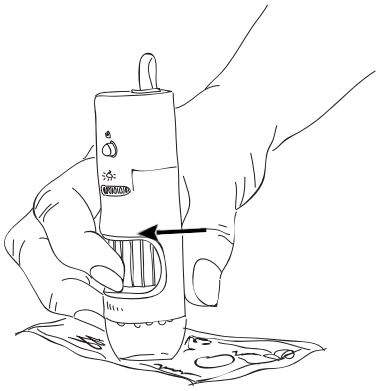
2. Double click the MicroViewer software and the image above will show up and you will see a live image.

3. Place the microscope on or above the object to be viewed.

4. You will be asked if you want to calibrate. Unless you are planning to measure something during this use, just say okay and move on. You can read more about how to calibrate and measure later in this user guide.

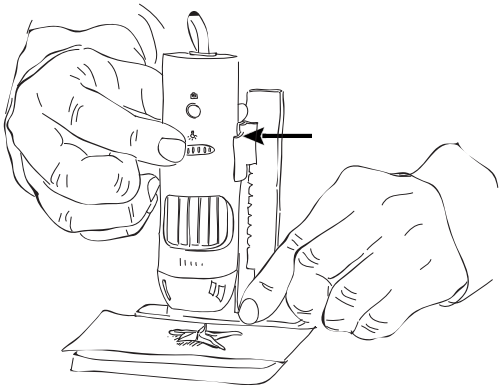
FOCUS THE MICROSCOPE

The MicroSight microscope is easy to use. The closer you put the microscope to the specimen the bigger the image will appear. Don't hesitate to touch the clear tip to the surface of what is being viewed. It is calibrated at the tip and it helps you be steady when you are viewing a specimen.



*CURVED LENS

The curved tip on your microscope has two focal points when touching the surface of the specimen to the specimen being viewed. Turn the focus wheel to the right and view the specimen at 100x. Keep turning the wheel and the next time if focuses the specimen will be magnified to 200x.



*MICROSCOPE ADJUSTABLE LIGHT

Adjust the light intensity by turning the thin wheel on the microscope.

*ADDITIONAL FOCUS TIPS

All of the Southern Science Supply microscopes include additional focus tips. They are pre-calibrated at the rim of the tip to match the measurement on the magnification sticker.

Remove the curved tip to the microscope by pulling or popping it off and replace it with any of the additional focal tips as desired. NOTE: The first time the additional tips are used, it may be necessary to adjust the LED lightbulbs gently inward to allow the focus tip to be placed on the microscope. Make certain the focus tip is seated firmly and completely on the microscope before viewing.

FUNCTION KEY LIST

You will see the function keys in a **Tool Bar** near the software screen. This toolbar can be moved to anywhere on your screen.

Below is a quick overview of the keys.

ICON	*Function*	*Function Instruction*
	Preview	Enable the live image of the microscope.
	Snapshot	Take a picture. (saved as a Jpg file) Images would be saved in the picture saving location.
	Record	Capture a movie.(saved as an AVI video file) Videos would be saved in the video saving location.
	Freeze	Freeze the live image on the screen. Click Freeze icon again to back the live image.
	Zoom in	Select the zoom-in and zoom-out function on a live image or on captured pictures. The maximum magnification is 6x. The arrow keys on the keyboard will move the image.
	Zoom out	
	Preference	The setup window. Click the icon, the Video Setup window will show up.(See the Video Setup Chapter for more detail).
	Full Screen	Click "Full screen icon" or double click the live image, it will switch to full screen mode.
	Exit	Close MicroViewer.
	File Browser	Open / Close the file browser.
	Draw	You can input words, draw lines, draw circles, draw freehands.
	Measure	Measure lines, circles, angles, rectangles, triangles or radii. It's necessary to calibrate before making a measurement.
	Crosshair	Click "Crosshair icon" to add a crosshair to the live video. You can position the crosshair by clicking the button.
	Print	Print the saved picture.
	Save	Click this button to save as a new file.
	Delete	Double click a file in the list bar, and click this button to delete it.
	Compare	Compare a live image with a picture or video, compare two pictures or compare two live image from two microscopes.
	Manual	Click the button to read the user's manual of MicroViewer.

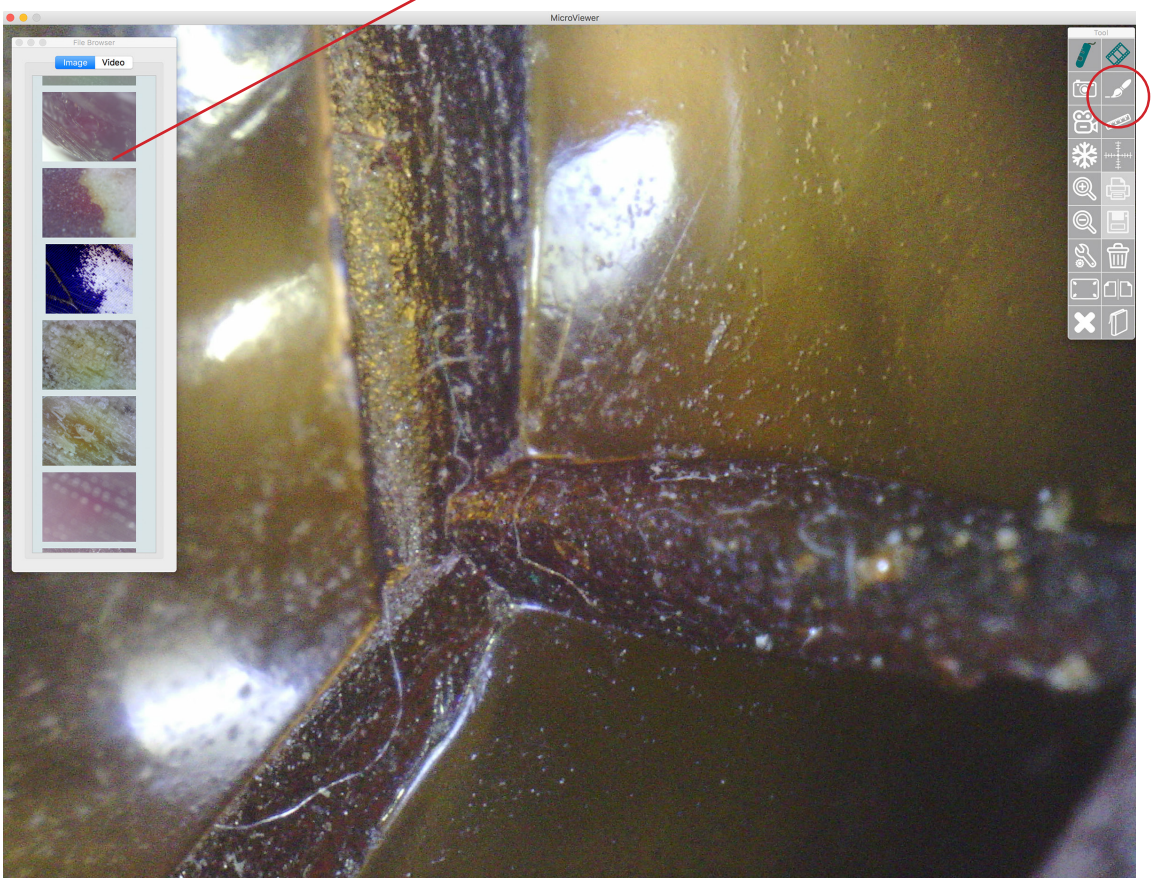
HOW TO TAKE PHOTOS

To take a picture, click on the **Camera** icon. The button on the microscope device is no longer compatible on the latest Mac OS upgrades. We are working to fix that. Any image captured will show up as a thumbnail in the bottom section of the software screen.

If you don't see the thumbnail images, simply click on the icon. Double click the picture to open it in the microscope window. The image is now ready for editing.

*HOW TO VIEW AN IMAGE I HAVE ALREADY TAKEN

Make sure the MicroSight microscope is plugged into the USB port and the software is open. Click on the icon. The photos **File Browser** will open.



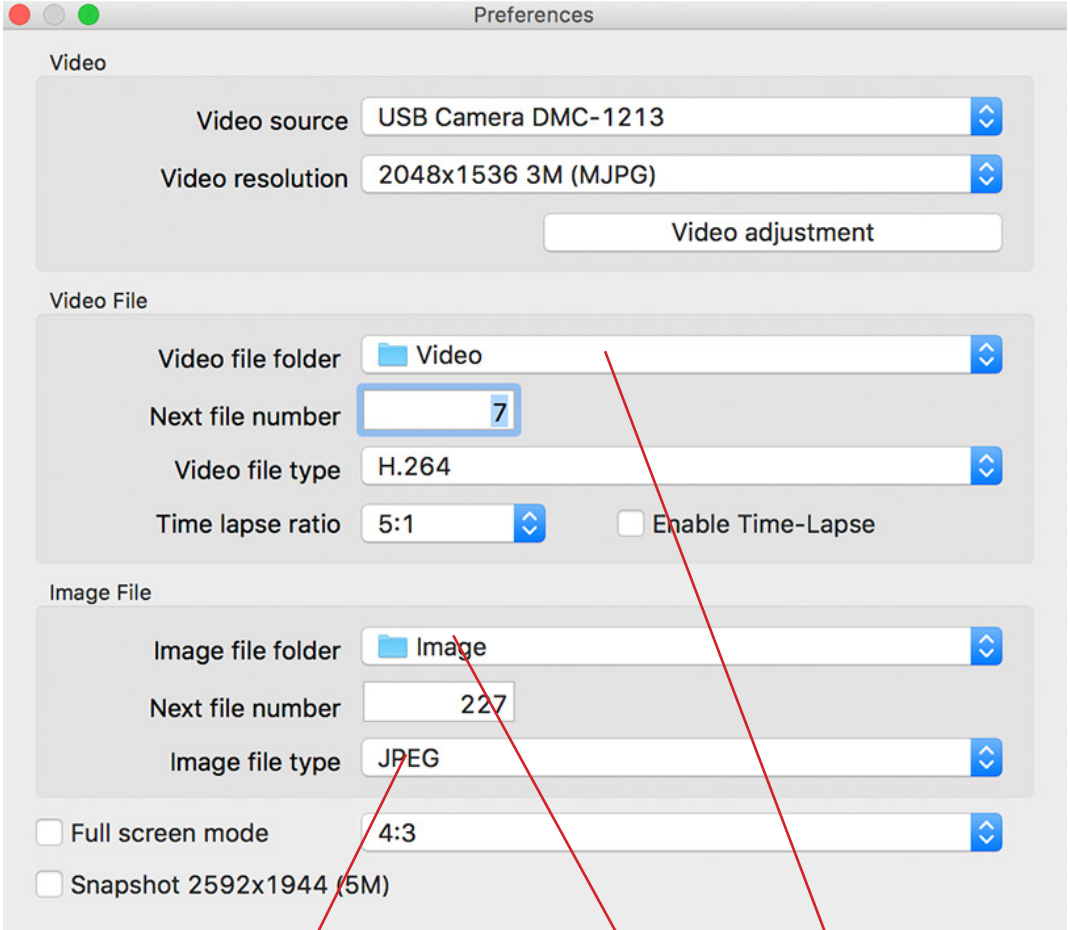
Double click on the picture you want to preview, and it will appear in the microscope screen. To preview a second picture, simply double click on the new image and it will appear in the microscope screen.

To return to live viewing, click the **Microscope** icon.

HOW TO SAVE PHOTOS AND VIDEOS

Make sure the MicroSight microscope is plugged into the USB port and the software is open.

Begin by clicking on the **Preference Tool** icon in the function keys. The Preferences screen will appear.



You will see where your videos and images are stored.

VIDEOS To change the location of where your videos are, click on the **Video File Folder** drop down menu and select "Select Other Folder". You can choose individual student folders, class folders, subject folders etc. You can choose to save all videos to your desktop and then move them into the appropriate folders or redirect the software to send them directly to a specific folder each time you take a video.

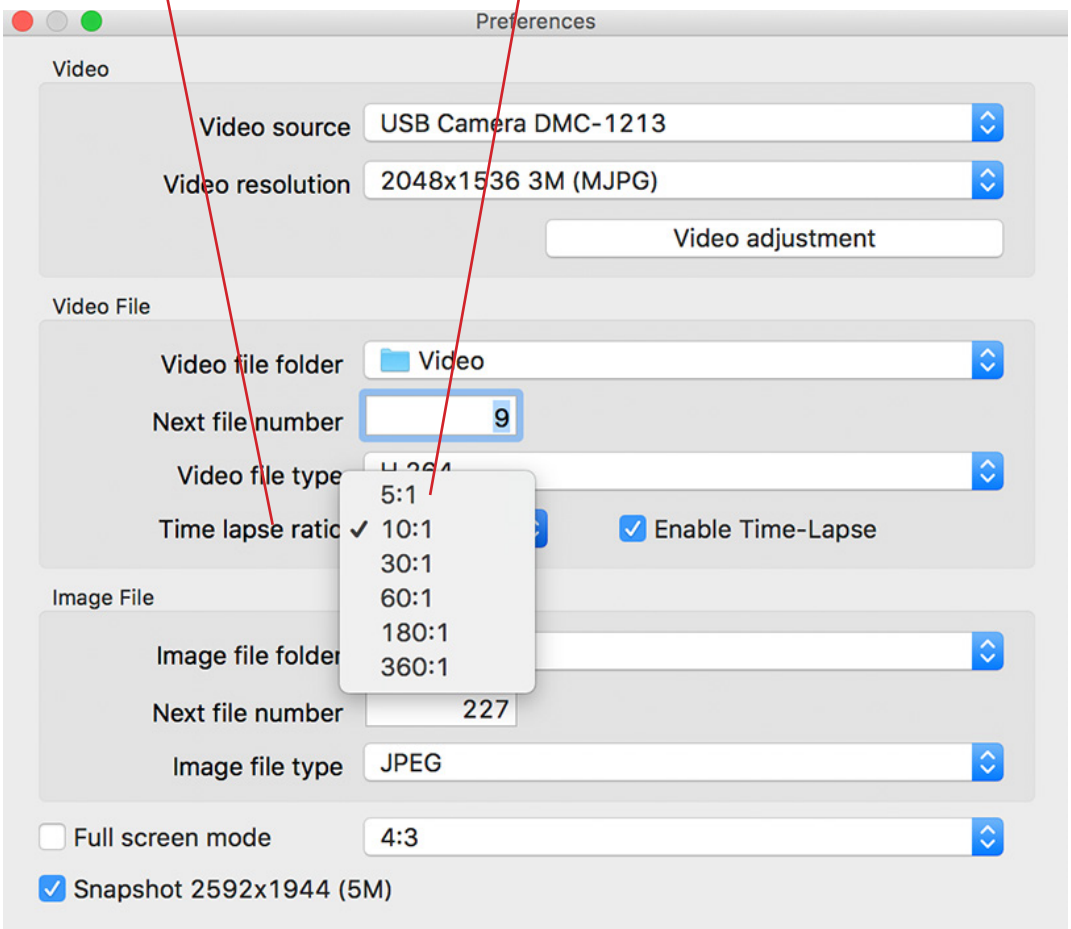
IMAGES To change the location of where your images are, click on the **Image File Folder** drop down menu and select "Select Other Folder". You can choose individual student folders, class folders, subject folders etc. You can choose to save all images to your desktop and then move them into the appropriate folders or redirect the software to send your images directly to a specific folder each time you take a video. Images may be saved as JPEG or PNG by selecting the Image **File Type** drop down menu.

HOW TO CREATE TIME LAPSE VIDEO

Select the **Time Lapse** option, then click on the drop down menu to choose your setting.

To select the time-lapse ratio, you may find this helpful. If you choose “5:1” only one second of every 5 seconds will be recorded. If you choose “60:1” only one second of every 60 seconds will be recorded, and so on.

WARNING: If you choose the time-lapse function, please make sure the recording time is longer than the ratio time. EX: Choose “60:1”, the real recording time must be longer than 60 seconds. Exit the screen, to save settings.



UNDERSTANDING THE PREFERENCES WINDOW

Video resolution supports different resolutions:
1.3MP Microscope: 640x480/1280x1024
5MP: 640x480/1024x768/2048x1536
Note: The Snapshot and Record format will change at the same time.

Video source allows a user to choose or switch the image source if there is more than one microscope connected.

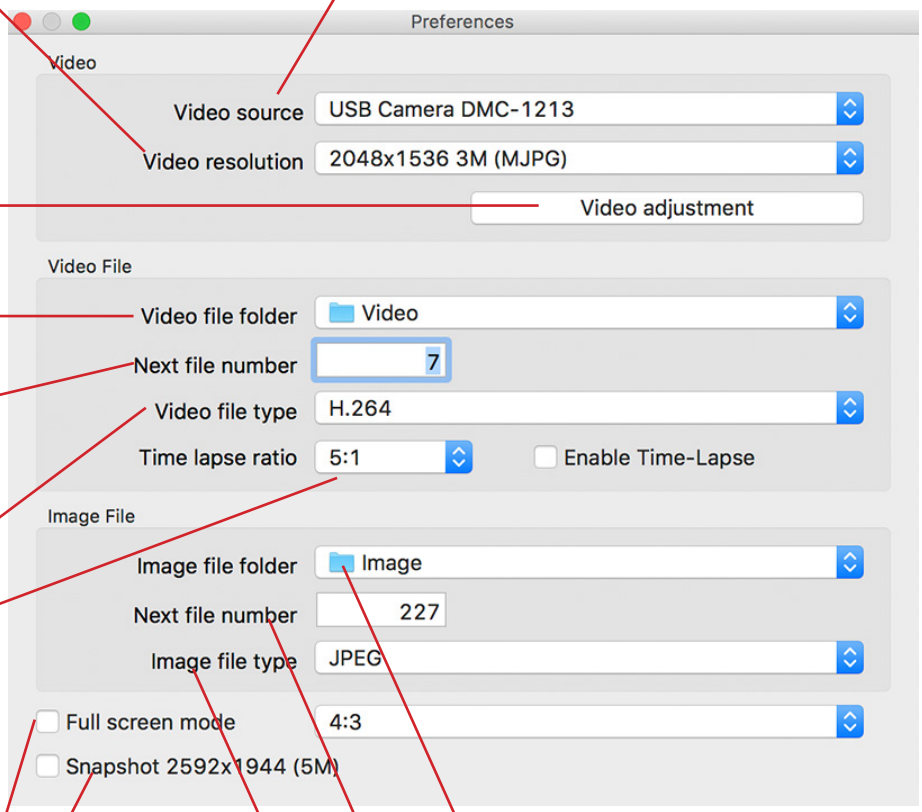
Video adjustment changes the Video values for Exposure time/Brightness/ Contrast/Saturation/ Sharpness.

Video file folder - Set up the video saving location.

Next file number - Set up the file name of the next video.

Video file type - set up the compression type of video.

Time lapse ratio - Enable time lapse function by selecting the ratio. See in-depth ratio tips on p. 9



Full Screen Mode - If the full screen mode box is marked, MicroViewer will start on full-screen mode automatically with *Live Video Zone* at 4:3 aspect ratio. This mode is necessary for the measurement function.
FULL: The entire screen will display live video. The aspect ratio may not be correct, so live images may appear distorted.
ICON: The Screen will be filled with the MicroViewer window, so all function buttons will be visible. In this mode, the video image will be expanded and it is not correct for the measurement function.

Snapshot 2592x1944 - (For Digital Microscope 5MP ONLY) Mark the box and you can save the picture with maximum resolution of 2592x1944 (5MP) when you click the hardware snapshot button. NOTE: It will take 5-6 seconds to save a picture, do not move the microscope.

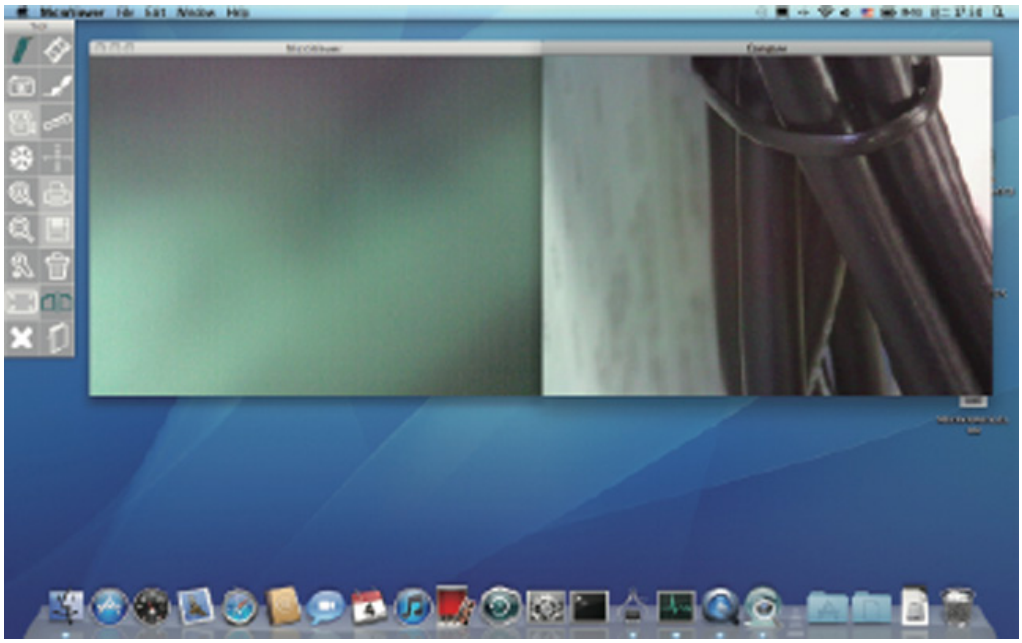
Image file folder - Set up the picture saving location.

Next file number - Set up the the file name of the next picture.

Image file type - Set up the compression type of video.

HOW TO COMPARE TWO IMAGES

Click on the **Compare** icon in the Tool Bar. You will see a wide black space appear on the screen. Select the image you would like to view from the File Browser. The first image you select will appear on the left when you double click the image. Next click in the right side of the compare screen (It's still black) and then double click on the second image you want. It will appear on the right.



You can choose to save by selecting the **Save** icon or print by selecting the **Print** icon.

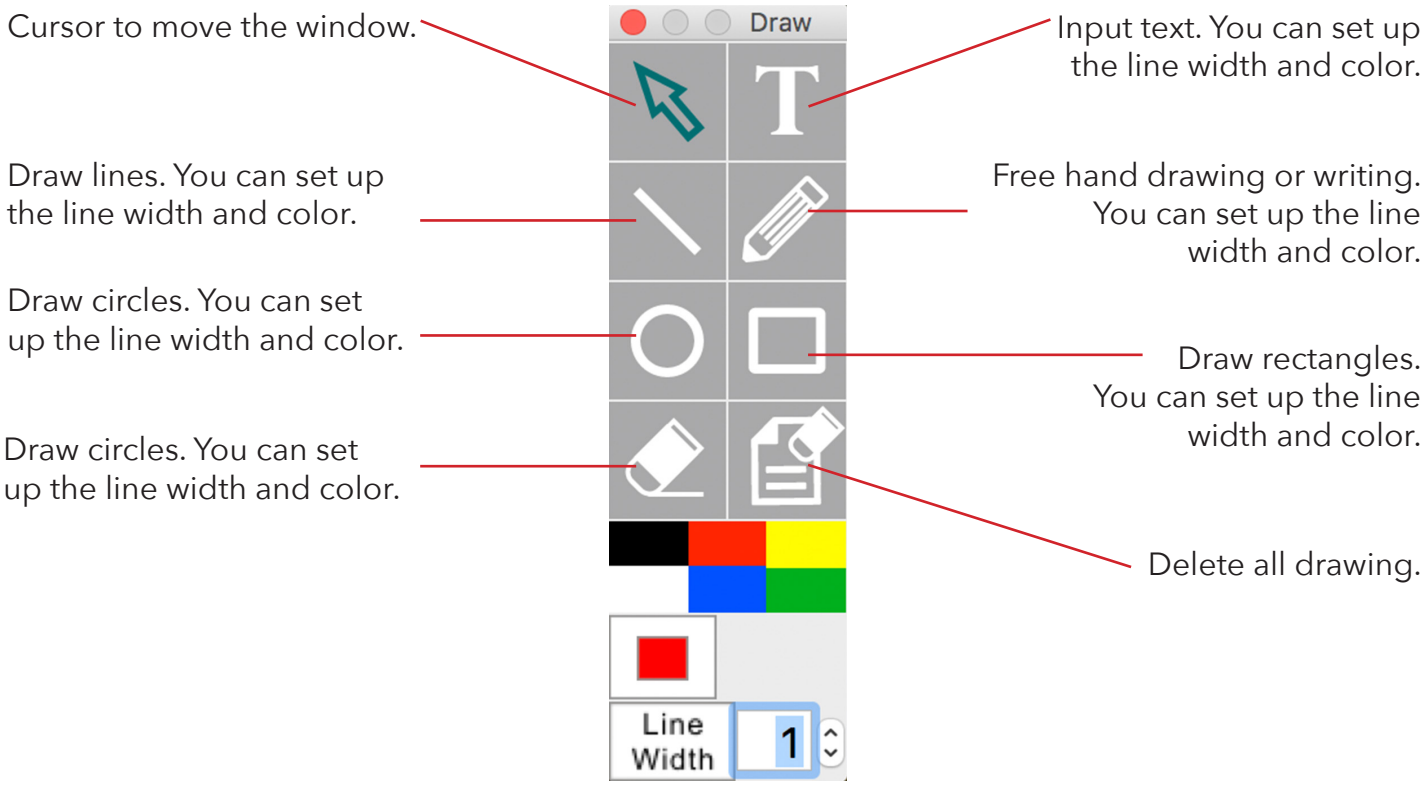
You can plug **two** digital microscopes into the USB ports to compare images from two microscopes or to compare **two live** images. This can be very interesting when you are comparing a lower magnification on the 10-200x MicroSight microscope with a larger magnification on the fixed 500x MicroSight microscope. The scopes must be the same megapixel model (both either 1.3MP or both 5MP).

NOTE: **BOTH** microscopes must be plugged onto the USB ports **BEFORE** the program is opened for this live feature to work.

To return to normal viewing, click on the **Microscope** icon, or the **Compare** icon.

HOW TO USE THE DRAW TOOL

Click the **Draw** icon, and the following **Tool Bar** will apppear.

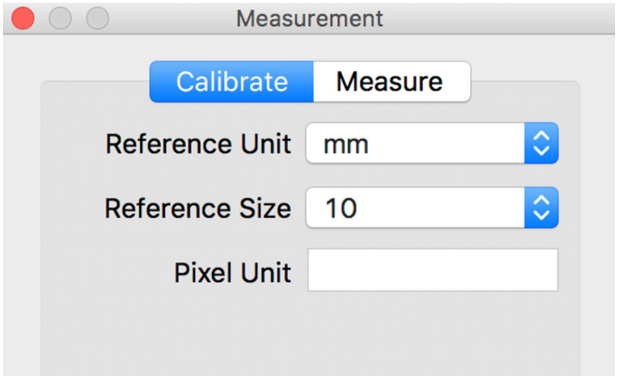


HOW TO CALIBRATE FOR MEASUREMENT

You must calibrate your microscope for accuracy before you can begin to measure.

Make sure the MicroSight microscope is plugged into the USB port and the software is open.

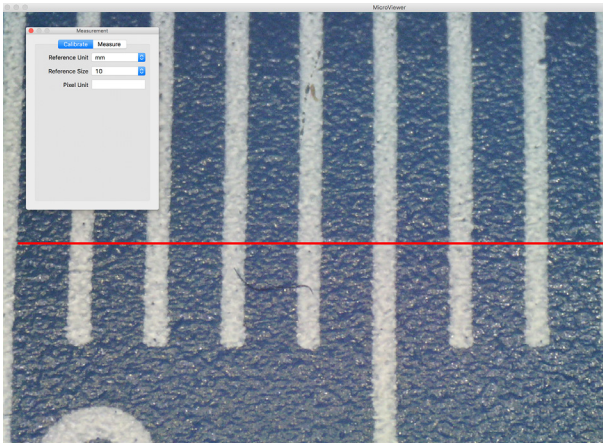
Click on the **Measurement** icon, this window will appear.



Place the camera down on any ruler and adjust the focus knob until the image is sharp.

Click the **Measurement** button, and the Measurement window will appear.
NOTE: You must calibrate again if you change the distance, magnification, or resolution. (Step 3)

Check **Calibrate** option and choose the **Reference Unit** and **Reference Size**, which is the largest dimension visible on your snapshot. Ex: The largest dimension available between 3 centimeters and 4 centimeters is 10 millimeters. Therefore, choose the **mm** as the **Reference Unit** and choose **10** as the **Reference size**.

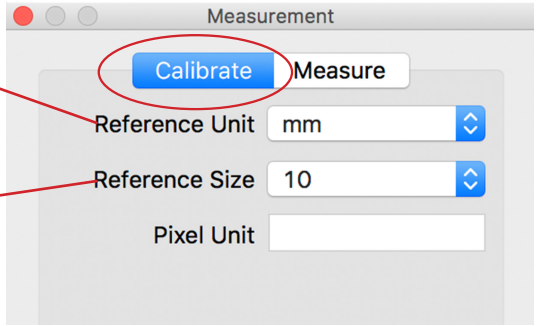


Click the **Measurement** icon to go back. It's time to begin measuring!
Double click the saved picture in the list bar or just place the microscope on a specimen and click the **Measurement** button.

NOTE: This calibration must be done at the beginning of each microscope session before you can measure accurately.

UNDERSTANDING THE MEASUREMENT WINDOW

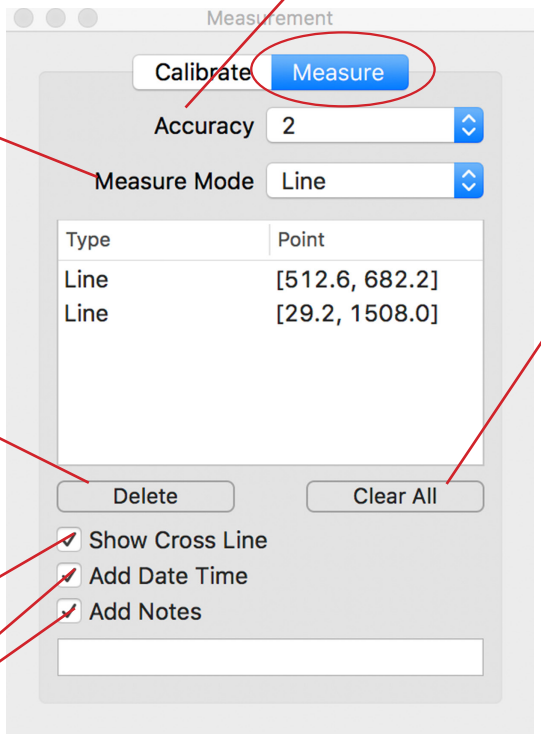
Reference Unit - Select a unit for calibration and measurement. Choose from three units: mm/inch/mil



Reference Size - Select the reference size for calibration.

Measure Mode - Select a measurement mode from the following options: Angle/Circle/Ellipse/Line/ Rectangle/Triangle/3DotsRadius.

Accuracy - The number is accurate up to nine decimal points. measurement. Choose from three units: mm/inch/mil



Clear All - Delete all measurement data.

Delete - Click the measurement data and click the delete button to delete the data.

Show Cross Line - Check the Cross Line if you want this function for accurate measurement.

Add Date/Time/Notes - Add notes and data times in the image.

IMPORTANT

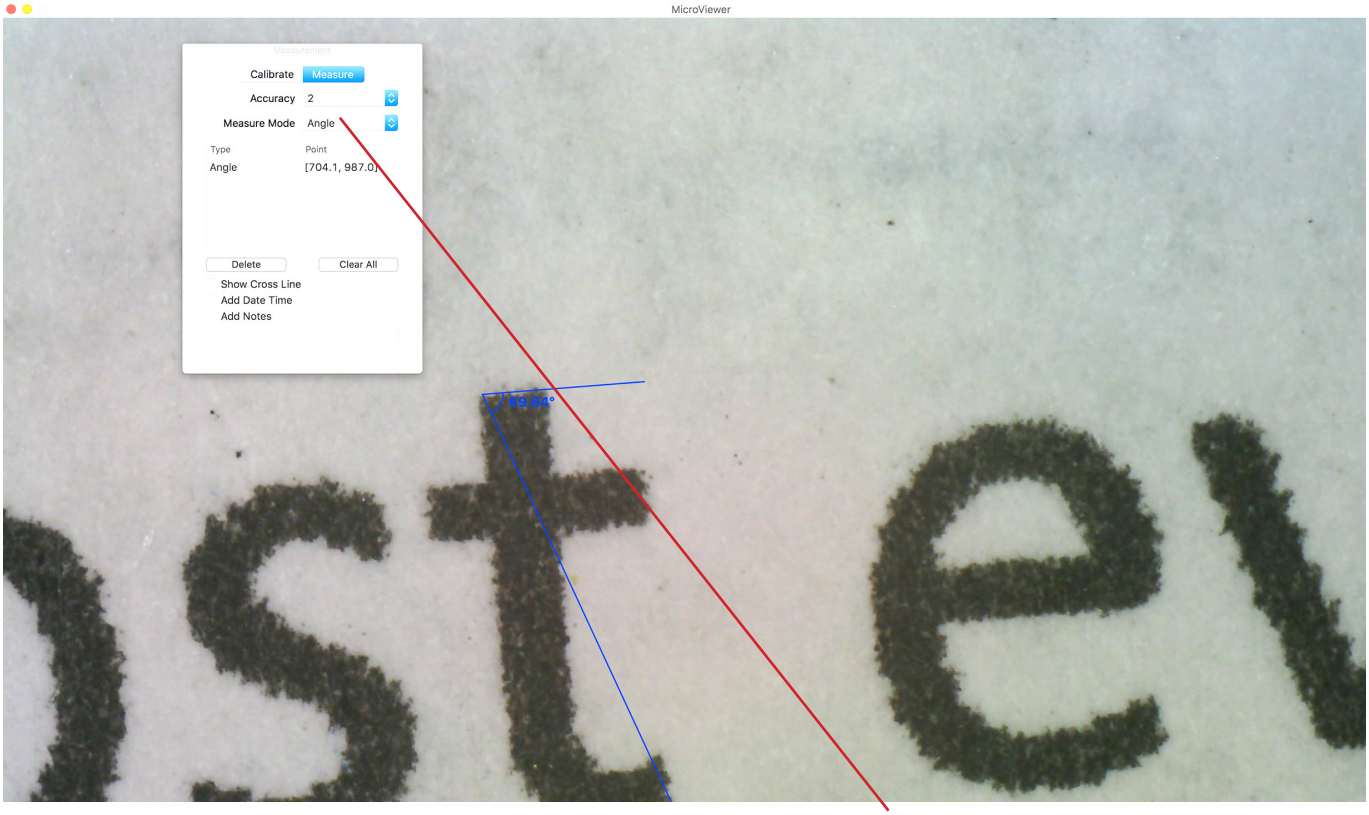
After you take a measurement, remember to take a snapshot of the image to save the measurements.

Use the **Camera** icon on the **Tool Bar** to take the photo.

HOW TO MEASURE AN ANGLE

After calibrating you can begin measuring.

Follow the full calibration directions on page 13. Click the **Measure** button.



Select the **Measure Mode** drop down menu and choose **Angle** for the Measure Mode.

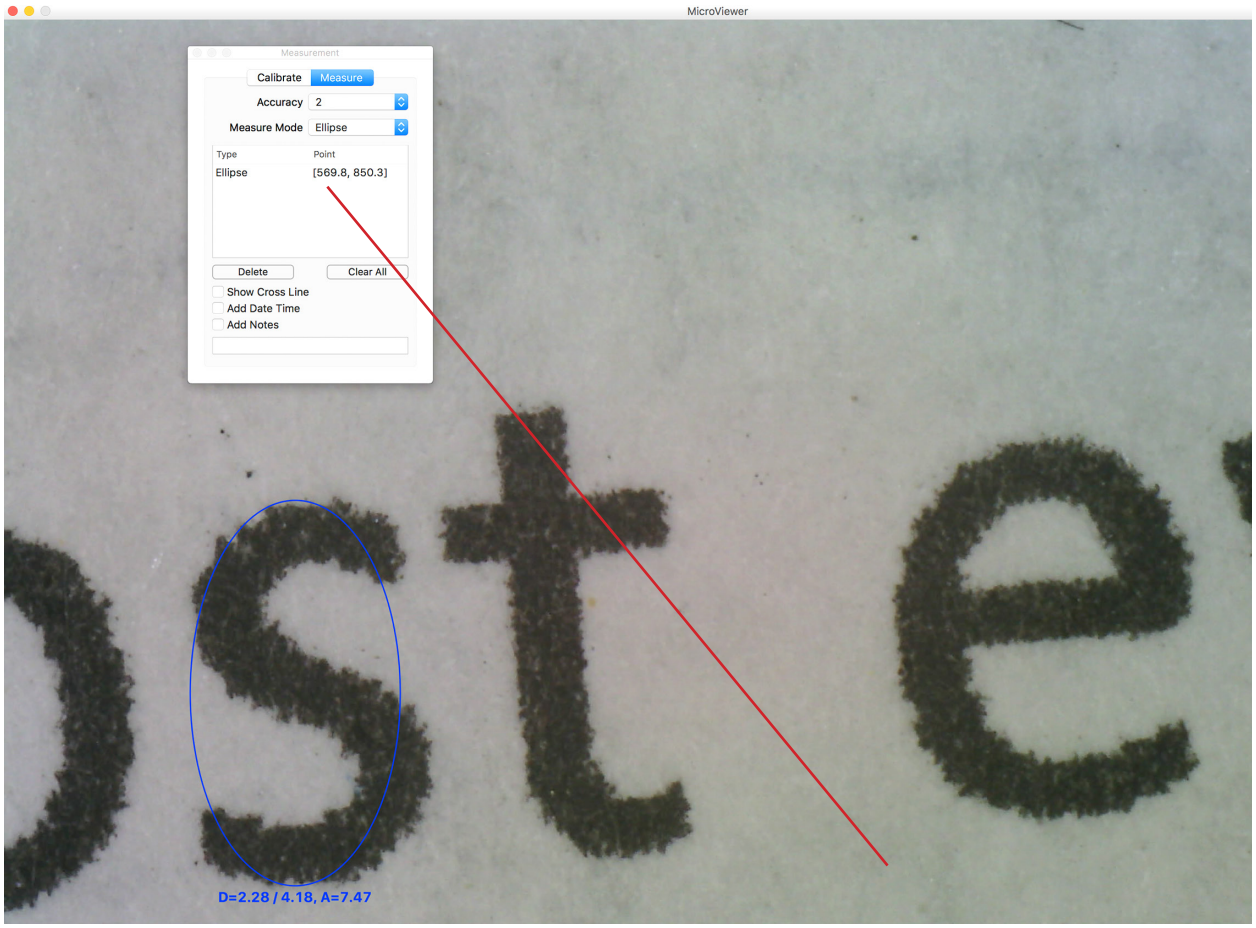
1. Hold the button of the mouse at the point A of the angle.
2. Drag to point B of the angle and release the button of the mouse.
3. Click the button on point C on the angle and the angle measurement will appear.

To return to the live screen, click on the **Measure** icon button in the **Tool Bar**.

HOW TO MEASURE AN ELLIPSE

After calibrating you can begin measuring.

Follow the full calibration directions on page 13. Click the **Measure** button.



Select the **Measure Mode** drop down menu and choose **Ellipse** for the Measure Mode.

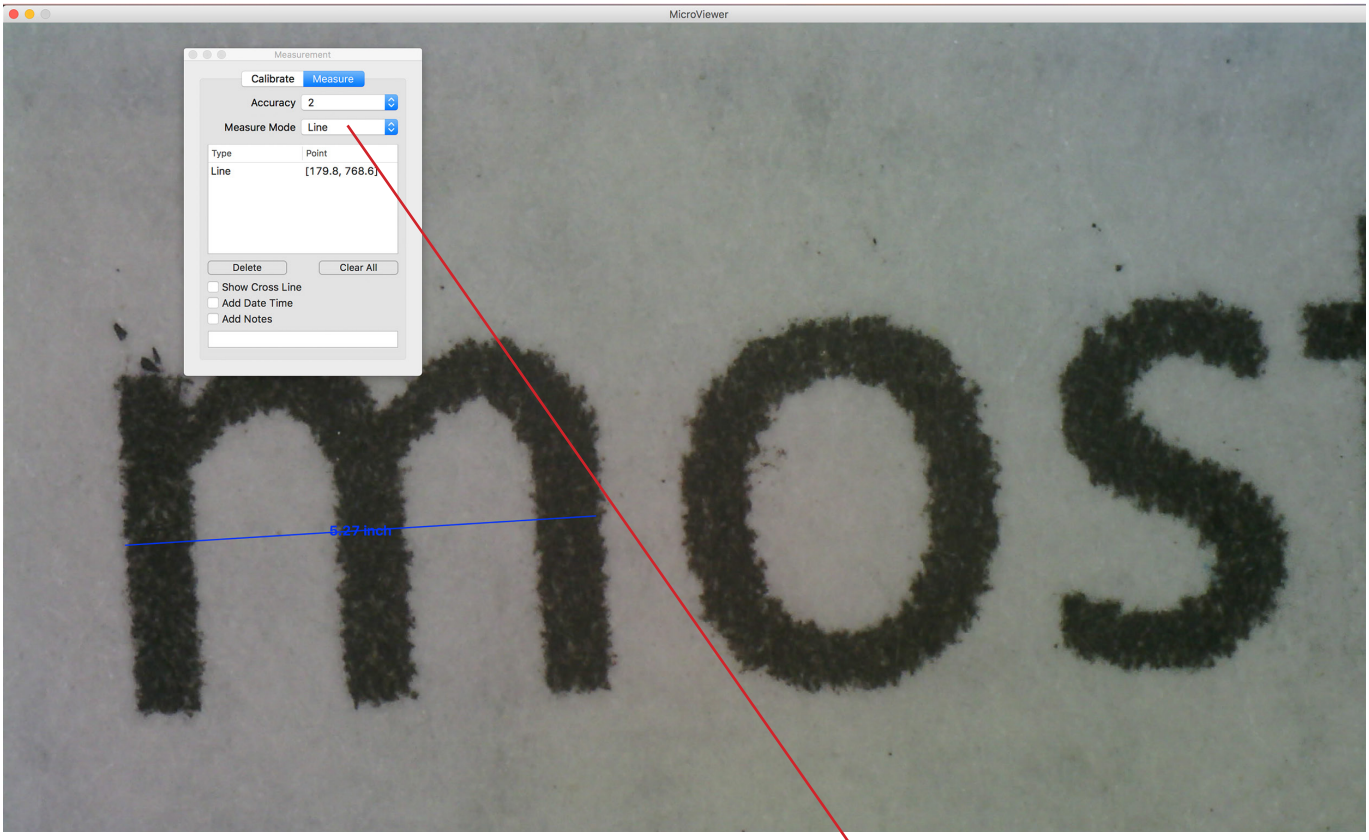
1. Select the "Ellipse" option in the Measure Mode. Hold the button of the mouse at the upper left of the object.
2. Drag to the lower right of the object.
3. Release the button of the mouse, and the ellipse measurement will appear. The "D" means diameter and the "A" means area.

To return to the live screen, click on the **Measure** icon button in the **Tool Bar**.

HOW TO MEASURE A LINE

After calibrating you can begin measuring.

Follow the full calibration directions on page 13. Click the **Measure** button.



Select the **Measure Mode** drop down menu and choose **Line** for the Measure Mode.

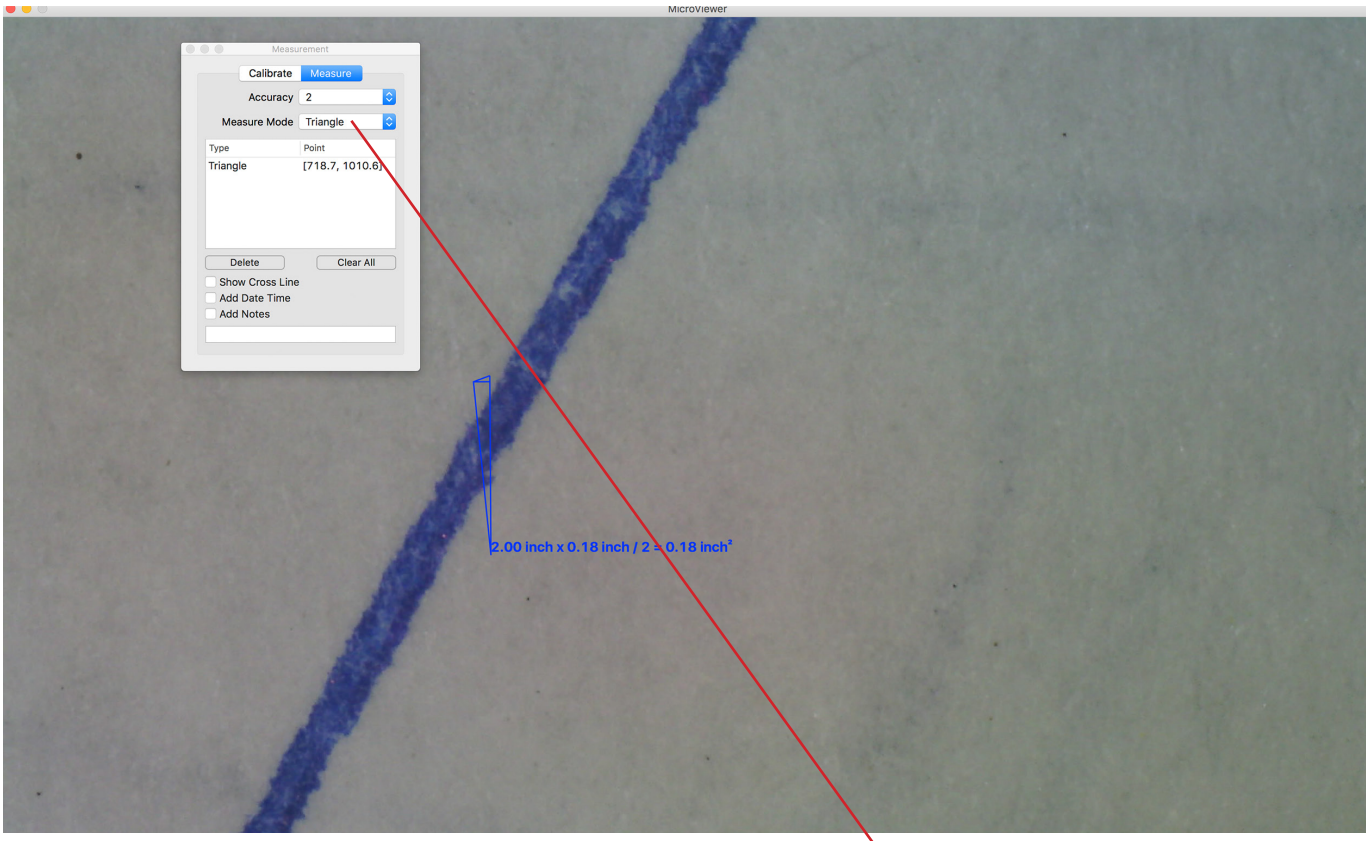
1. Hold the button of the mouse at the starting of the line. Drag to the finishing point of the line.
2. Release the right button of the mouse, and the line measurement will appear. The number represents the length.

To return to the live screen, click on the **Measure** icon button in the **Tool Bar**.

HOW TO MEASURE A TRIANGLE

After calibrating you can begin measuring.

Follow the full calibration directions on page 13. Click the **Measure** button.



Select the **Measure Mode** drop down menu and choose **Triangle** for the Measure Mode.

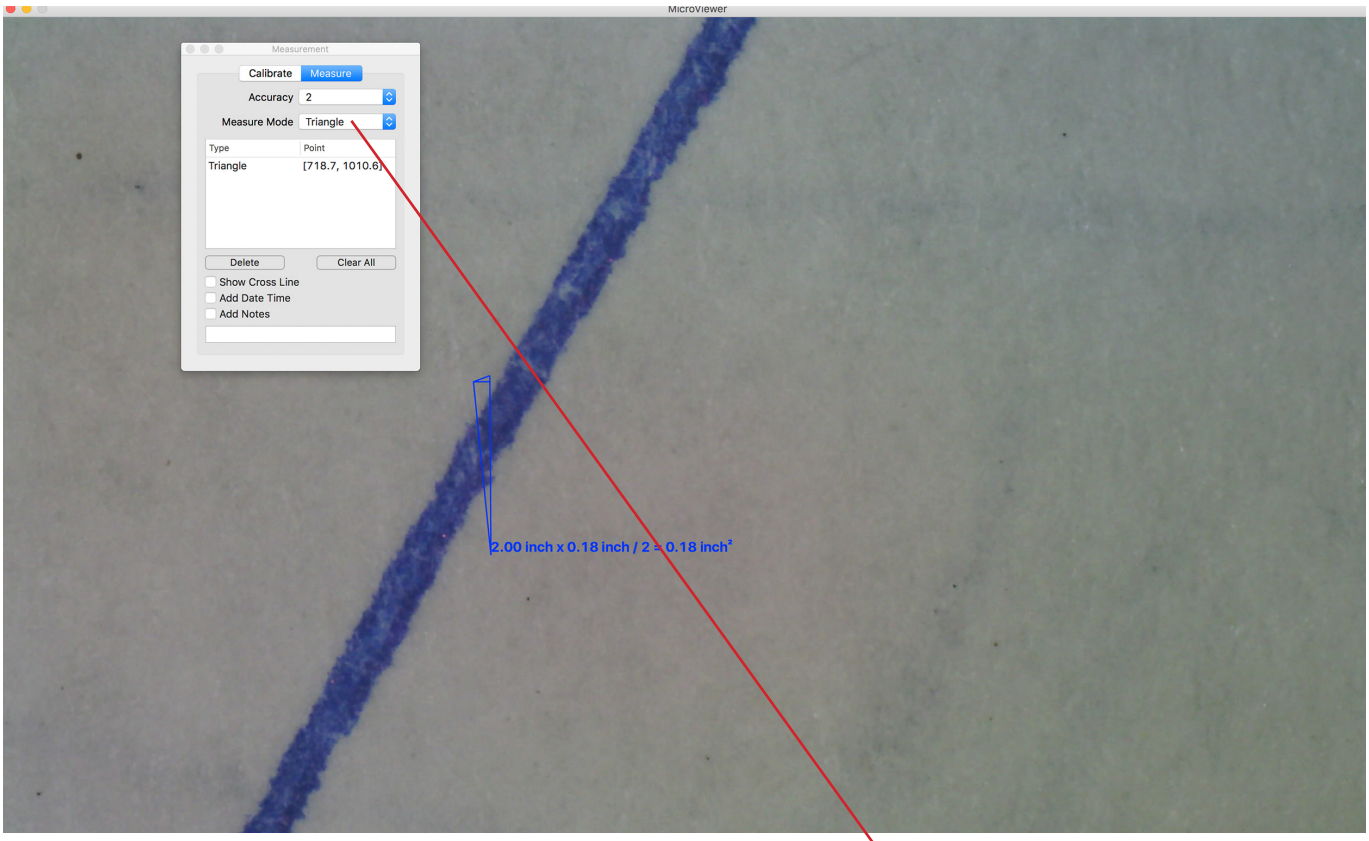
1. Hold the button of the mouse at the first point of the object.
2. Drag to the second part and release.
3. Immediately hold the right button on the mouse again at the second point of the object, then drag to the third point of the object.

To return to the live screen, click on the **Measure** icon button in the **Tool Bar**.

HOW TO MEASURE A RADIUS/ARC

After calibrating you can begin measuring.

Follow the full calibration directions on page 13. Click the **Measure** button.



Select the **Measure Mode** drop down menu and choose **3DorRadius** for the Measure Mode.

1. Hold the button of the mouse at the first point of the arc.
2. Drag to the second point and release.
3. Click the mouse button at the third point of the arc, and the arc measurement will appear. The "R" means radius, "A" means area, and the "L" means arc.

To return to the live screen, click on the **Measure** icon button in the **Tool Bar**.

TROUBLESHOOTING

QUESTIONS & ANSWERS

For technical questions, compatibility issues,
or other wonderings, please reach out to us.
We pride ourselves on supporting you 110%.

carol@southernsciencesupply.com
877.968.7522
(cell)210.887.0479

www.southernsciencesupply.com