FEIN OPTIC

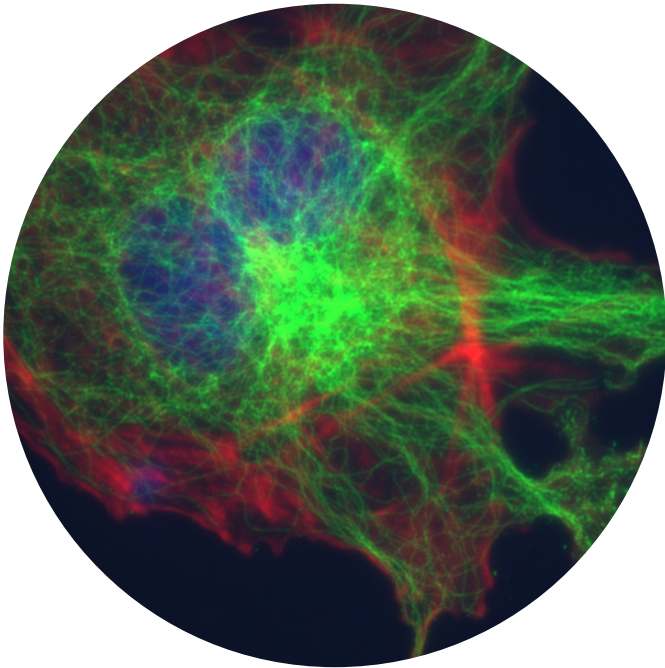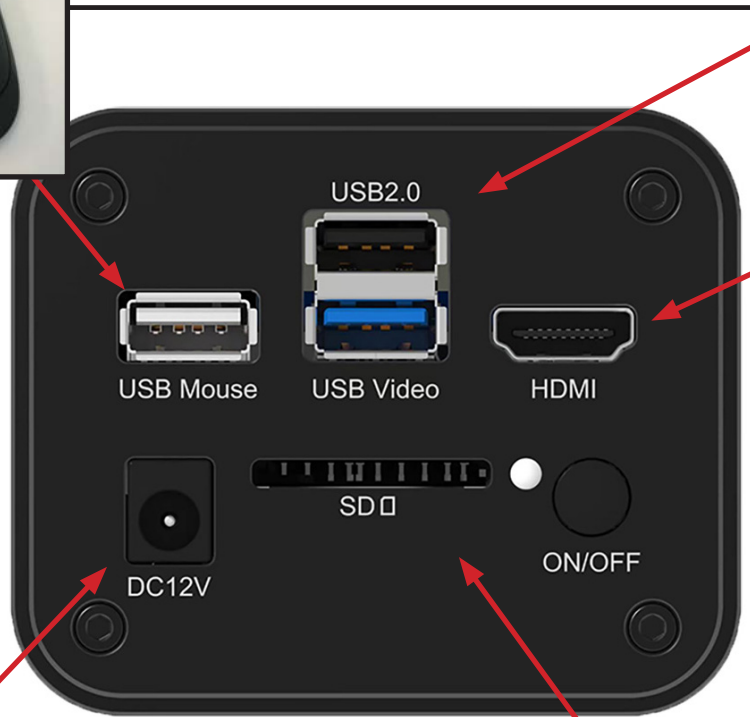# HDCAM7
High Definition Microscope Camera
Manual

Attach the HDCAM7 to the C-Mount on the Microscope.

Plug one end of the HDMI cable into the HDMI slot on the camera and the other end into the HDMI slot on your monitor. (If your HDCAM7 includes the 13" HD Monitor, please refer to pages 2,3 and 4.)

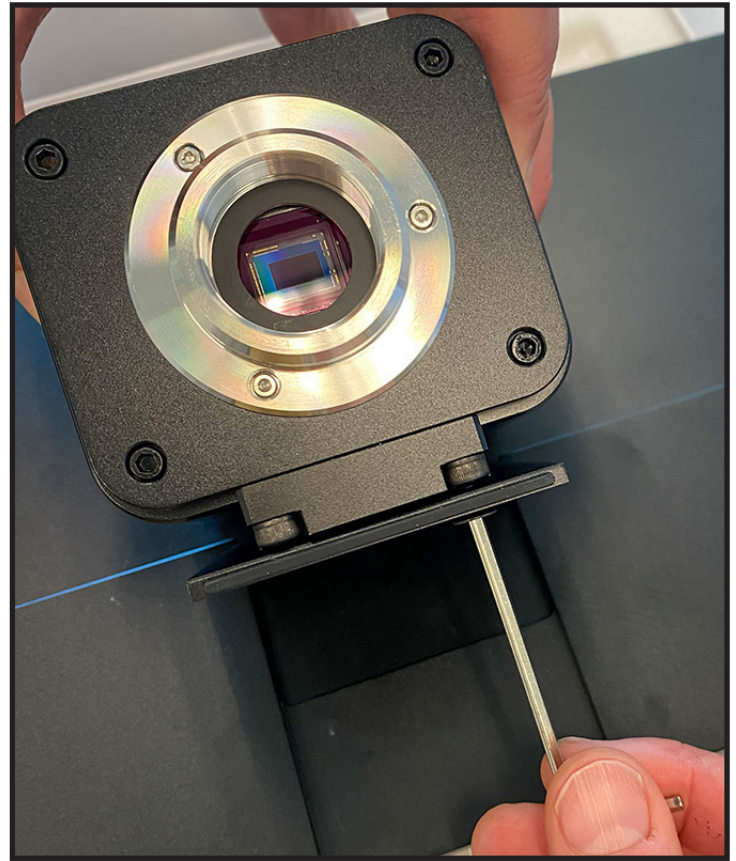USB Flash Drive can be inserted here to capture images.

USB2.0

USB Mouse   USB Video   HDMI

DC12V   SD□   ON/OFF

Plug the power adapter into the DC12V power adapter input on the camera.

SDHC Card

8 GB

SanDisk

Insert the SD card into the SD card slot.

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Attach the HDCAM7 to the C-Mount on the Microscope.

Locate the 2 holes on the camera and the 2 holes on the monitor mount. Line the holes up with each other.

Fasten the screws to the mount using the allen key (included in the monitor box).

The allen key and screws required to attach the camera are located beneath the monitor and the foam in the camera box.
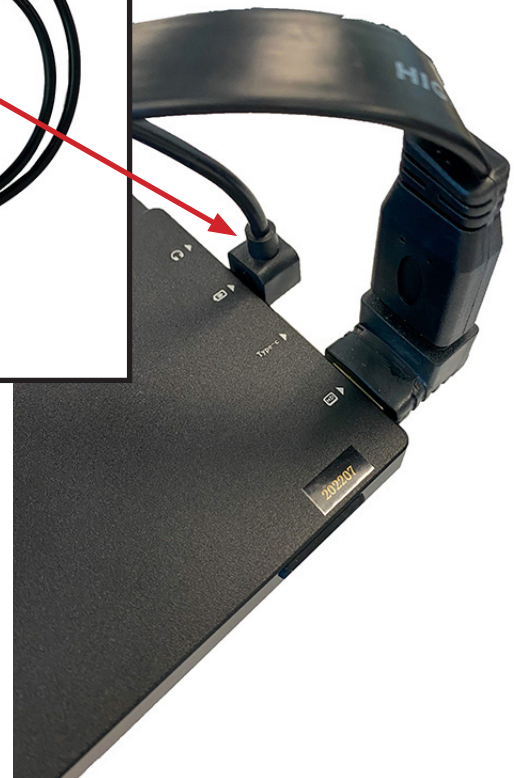
Insert the main power adapter into the remaining connection of the power adapter splitter.

Attach one end of the power adapter splitter to the DC12V power adapter input on the camera.
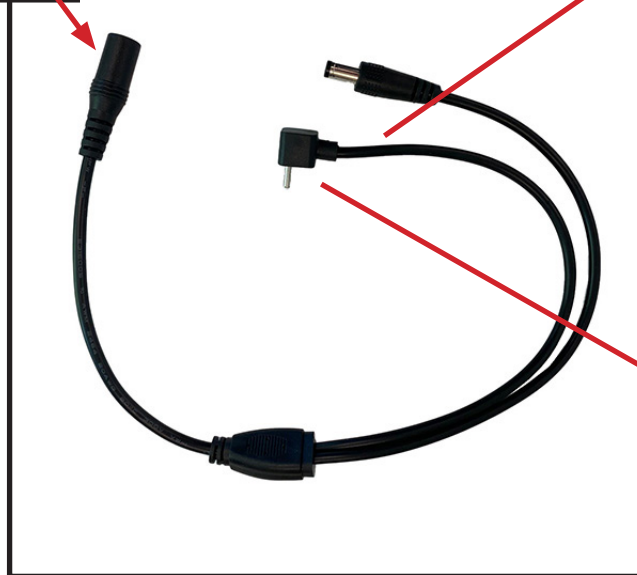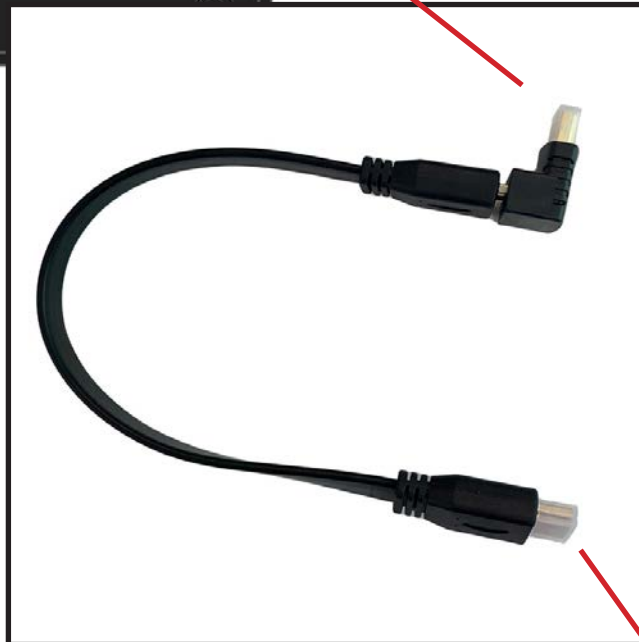

Attach the other end to the DC12V power adapter input on the HD monitor.

Insert one end of the HDMI cable into the HDMI slot on the camera.

Insert the other end of the HDMI cable into the HDMI slot on the monitor as shown below.

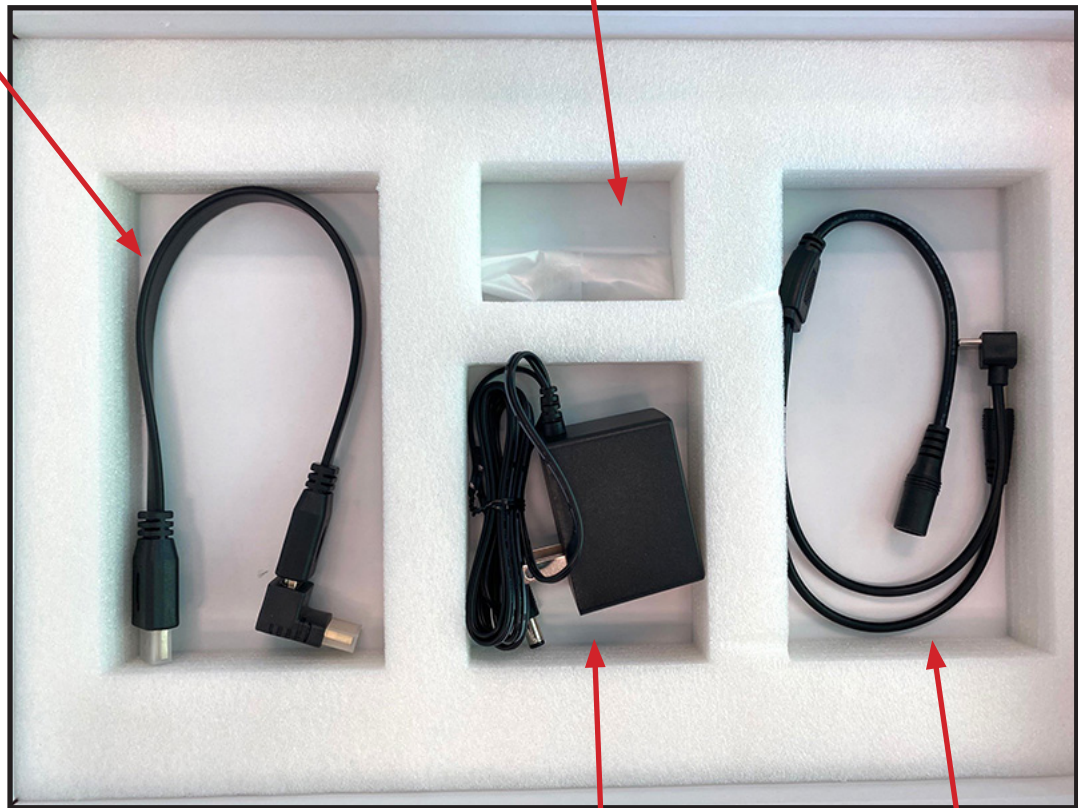Camera and 13" HD Monitor fully assembled.

The following items are found beneath the 13" monitor in the box.

Allen key and screws to mount camera to monitor

HDMI cable to connect monitor to camera

Power Adapter   Power Adapter Splitter

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Once the camera is properly set up to the monitor and microscope, turn on the camera by pushing the ON/OFF button. A blue light will begin to blink directly above the ON/OFF button. Once this light has stopped blinking and is fully illuminated, a live image of your stage/specimen will appear on the monitor.
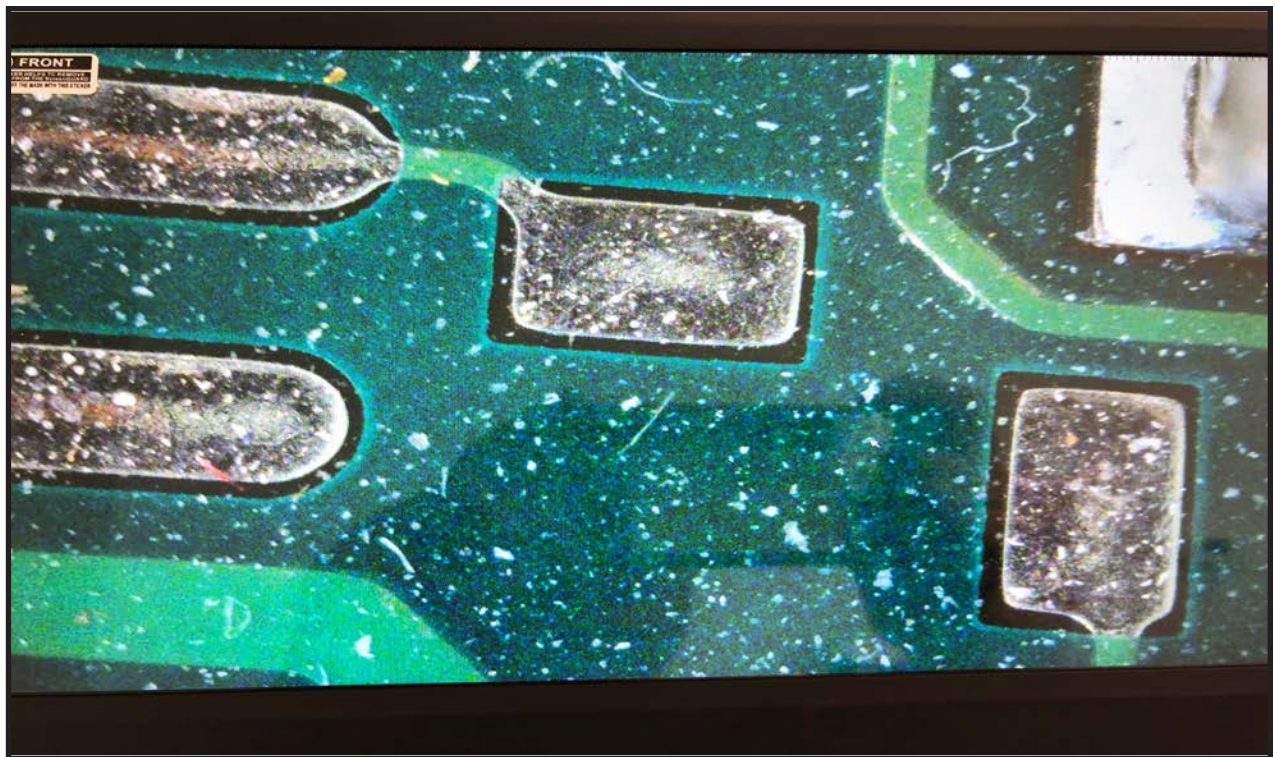
- Hover the mouse cursor on the left hand side of the monitor.
- A control panel will appear.
- Here you can enhance the appearance of your image by adjusting the settings.
- To capture an image click the Snap button. The image will be saved directly to the SD card.
- To begin recording a live image, click the Record button. To stop the recording, click the Record button again.
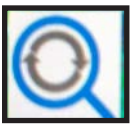- This tool bar can be pinned by clicking on the thumb tack.
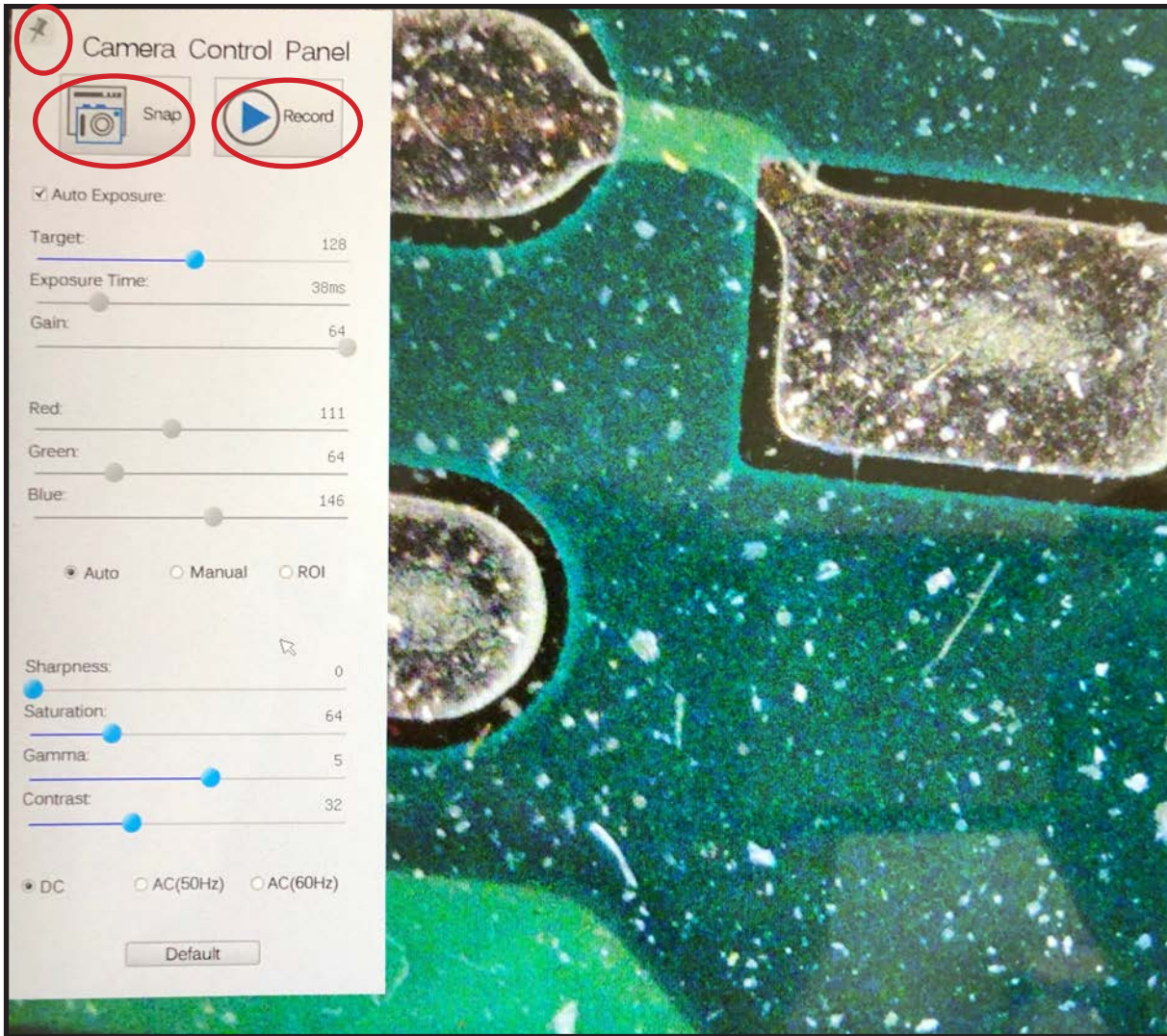
- Hover the mouse cursor in the lower center portion of the monitor.
- A tool bar will appear with additional options.
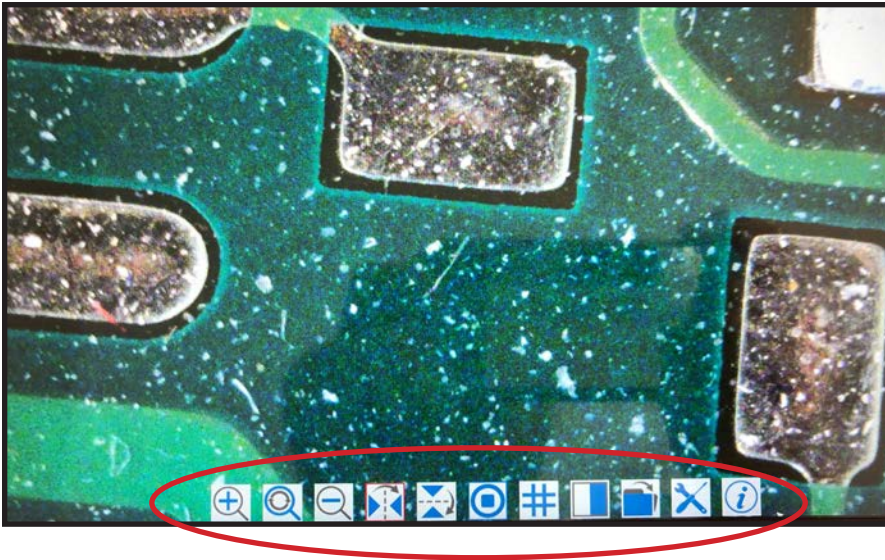
Zoom In- Select this button to zoom in on the image.

Reset Zoom- Select this button to reset the zoom on the image back to the default zoom setting.

Zoom Out- Select this button to zoom out on the image.

Horizontal Flip- Select this button to horizontally flip the image.

Vertical Flip- Select this button to vertically flip the image.

Freeze / Resume- Select this button to freeze or resume.

Grids- Select this button to create a grid overlay on your live image.

- A grid box will appear with options to select the number of rows and columns.
- There is also an option to change the color of the grid lines. By selecting the "Color" button. A "Select Color" box will display allowing the grid color to be customized.
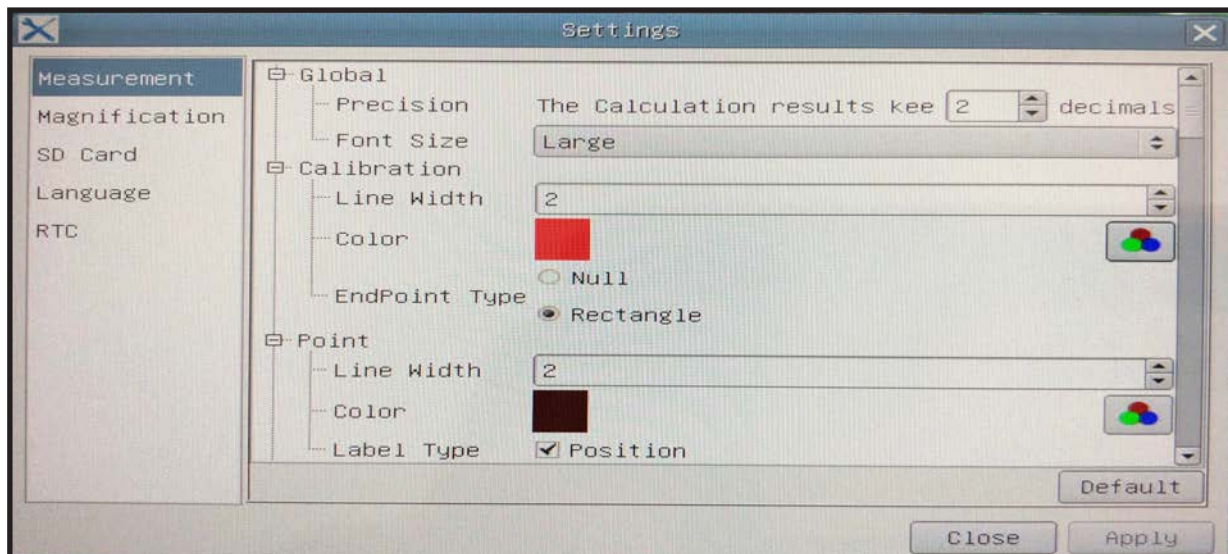- To remove the grid overlay, uncheck the "Visible" box.
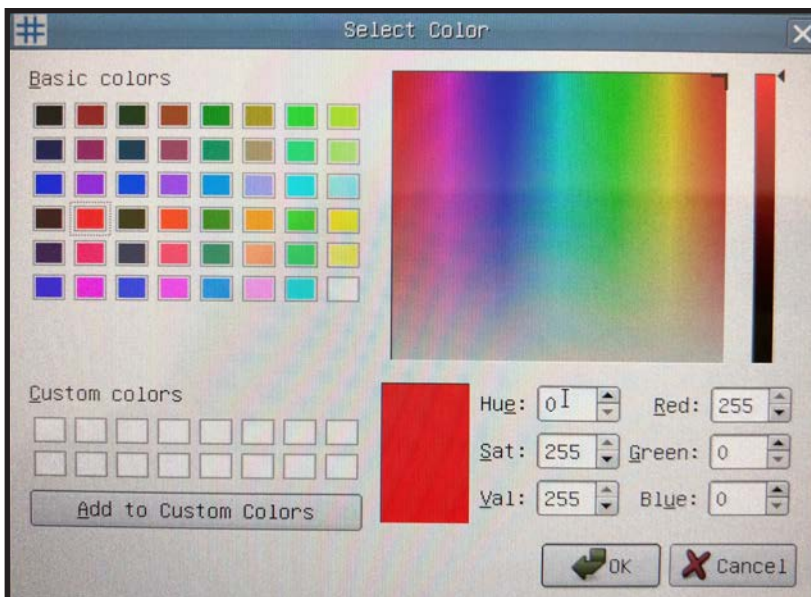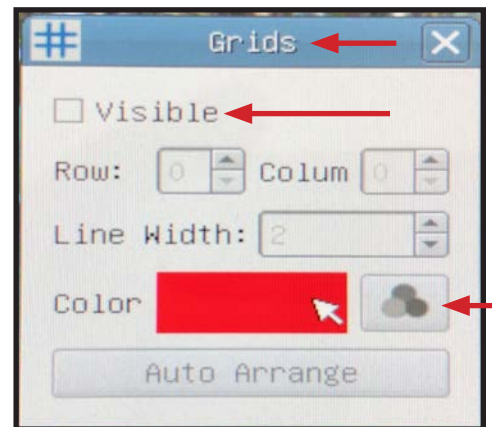
Compare image- will split the monitor allowing for a side by side comparison of a chosen captured image and the live image.

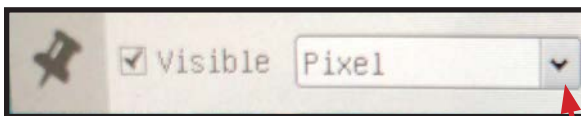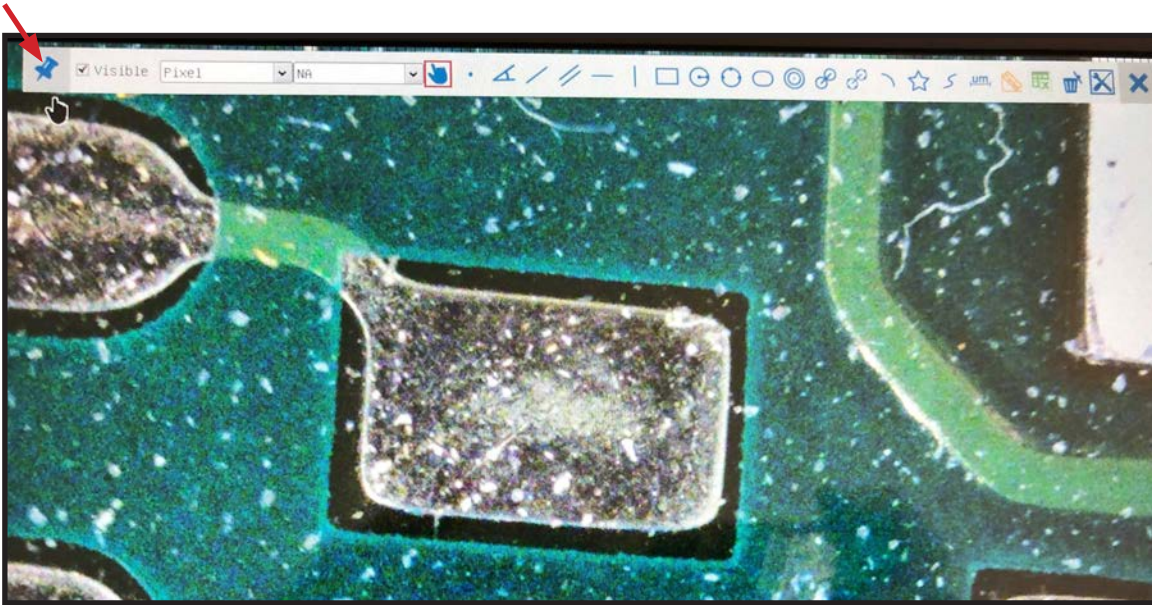Browser- Allows access to the captured images saved to the SD card.

Settings- Access camera and feature settings to customize preferences.

Info- Displays the software version.

- Hover the mouse cursor in the upper center portion of the monitor.
- A tool bar will appear with additional options.
- The tool bar can be pinned by clicking on the thumb tack.

Select the drop down arrow to select the unit of measure.

- This tool bar offers many options for different measurement methods.
- The microscope and camera must first be calibrated for accurate measurements.

Place a stage micrometer on the specimen stage and bring it into focus. Hover over the top tool bar and select the calibration icon.
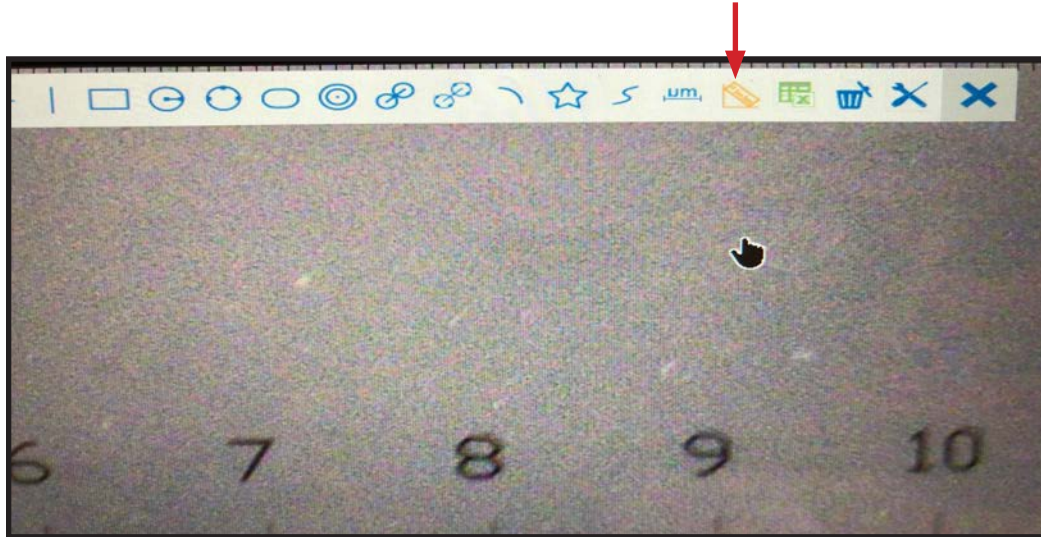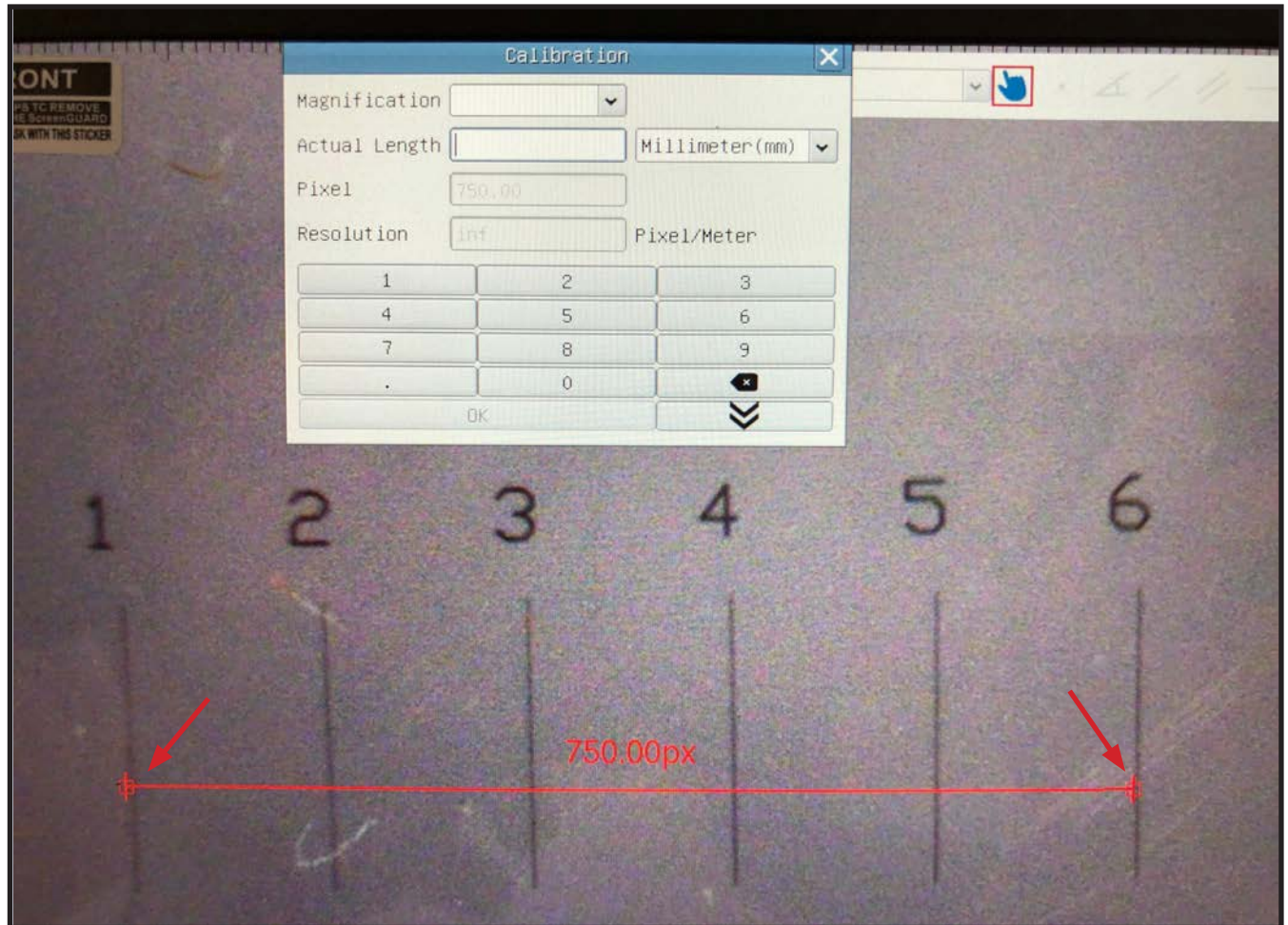

A calibration box and a measurement line will appear.
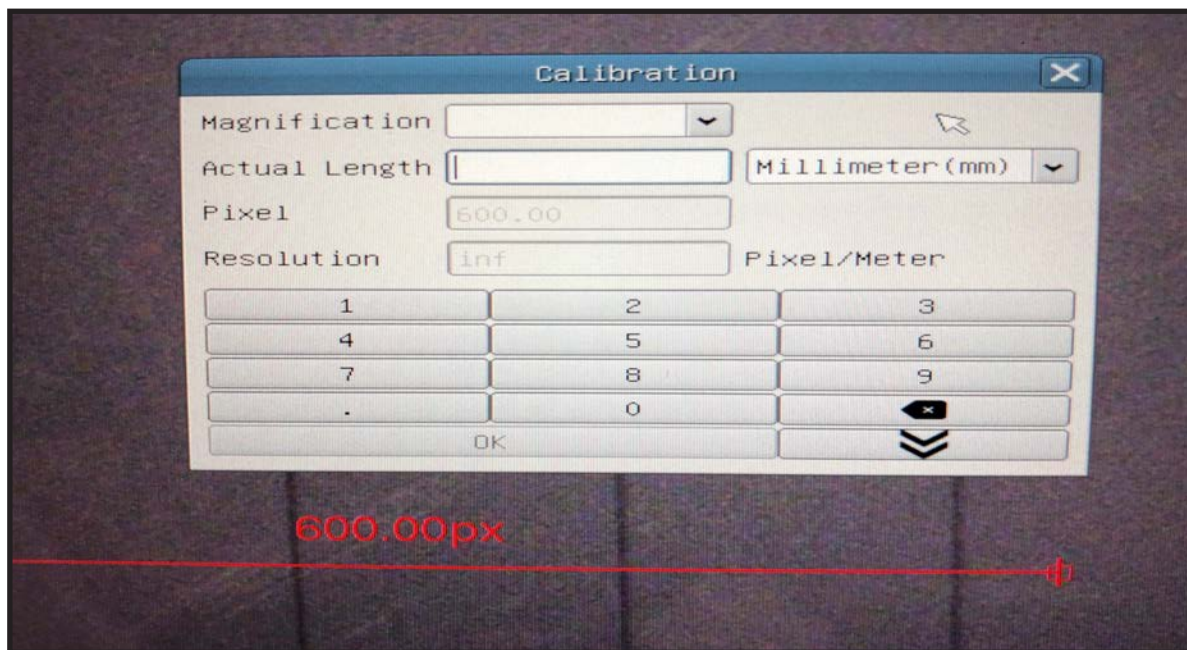
- Use the mouse cursor to place the left side of the measurement line on the leading edge of the stage micrometer. In this case it is the 1 mm line.
- Then move the right side of the measurement line to the inside edge of the furthest visible line. In this case it is the 6 mm line.

- Input the total magnification by using the drop down box or the mouse to select the magnification with the numbers provided in the keypad.
- In this example the total magnification is 6.7x (10x eyepieces with .67x detent on the stereo microscope)
- Next input the actual length which appears above the measurement line. In this example it is 5 mm.
- Click OK and the calibration is complete.
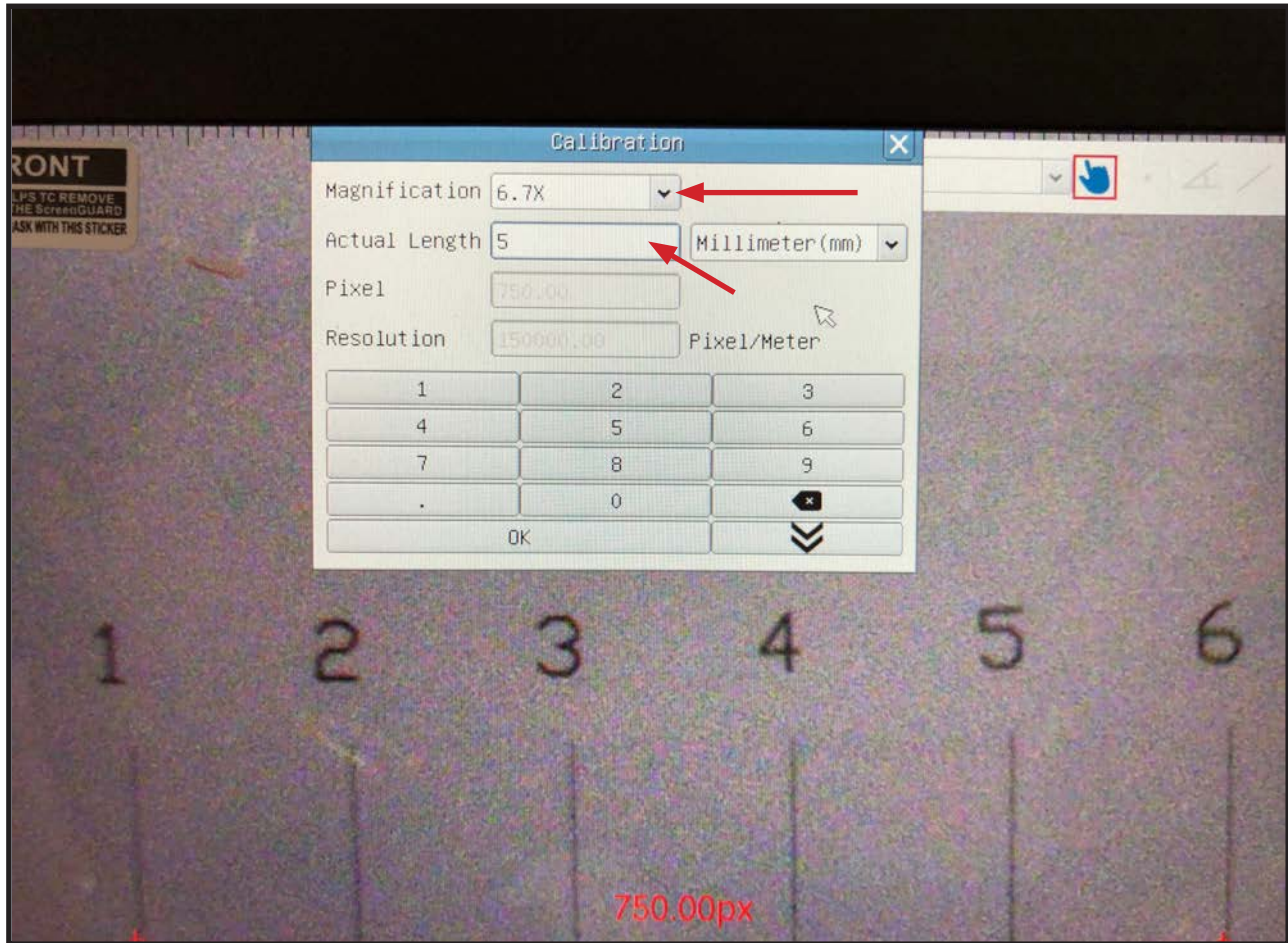
- Test the calibration by selecting the horizontal line option from the top tool bar.
- Using the cross-hair cursor that appears, click on the leading edge of the stage micrometer line.
- Then move the measurement line to the inside edge of a stage micrometer line.
- The measurement of the line will appear in the unit of measurement that was initially selected when the calibration was performed.
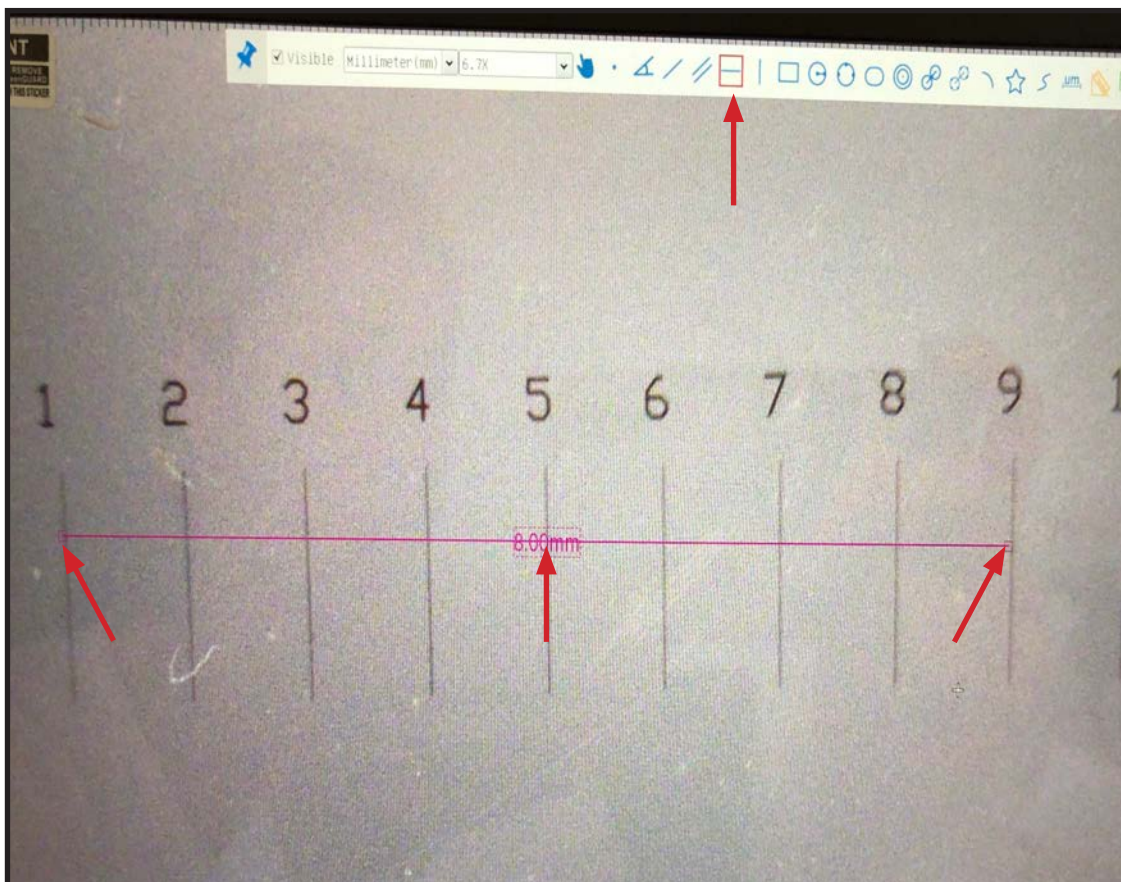
Problem	Solution
No live image displayed	Beam splitter is not in the proper setting. Check the beam splitter setting.
Live image is dark	Adjust the illumination on the microscope. Use the white balance option on the control panel.
Live image is upside down or backwards	Use the Rotate and Flip features on the tool bar.
Dust or dirt is visible in the live image.	Clean the sample Clean the objective Clean the eyepieces Clean the C-mount Clean the lens on the camera