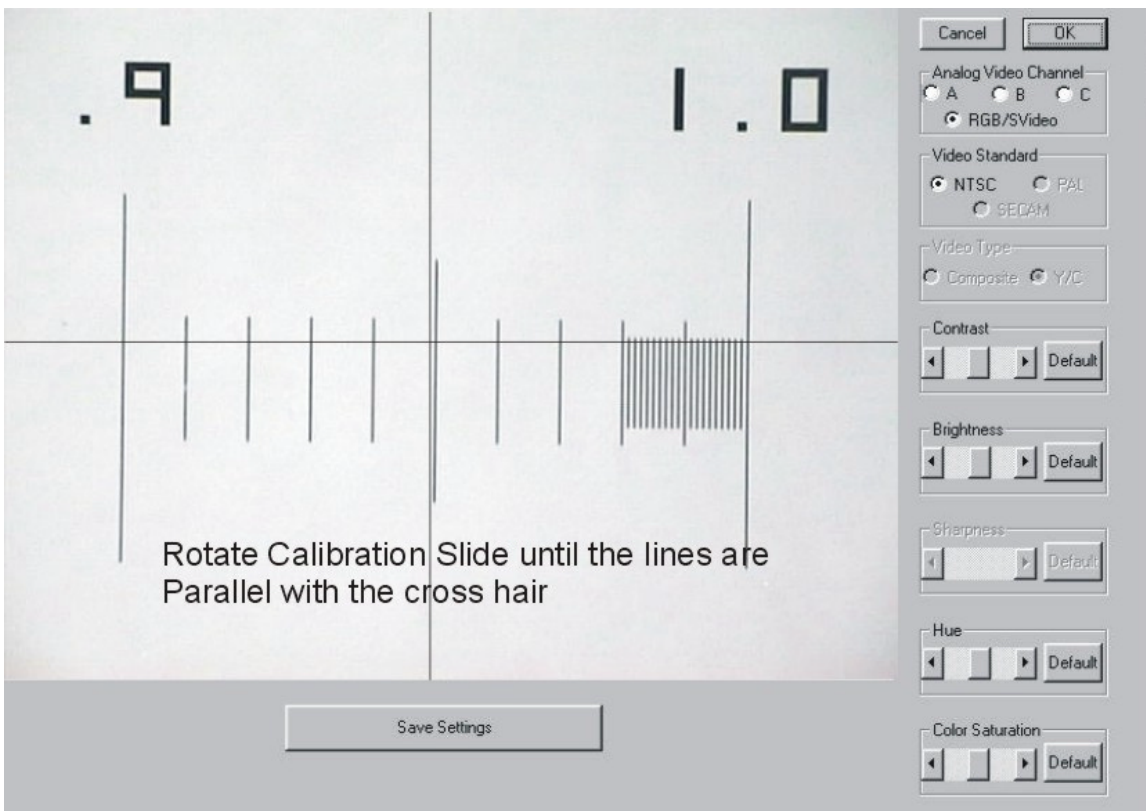


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DJH View 32 Calibration Procedure

Checking Calibration

1. Log onto the system using the administrator ID and Password,
2. Go to the unit of measure menu and select the correct unit for you calibration tool. You must also turn off the X10 factor. (i.e. if the calibration tool is in inches as shown in the illustration below then you would select inch from the unit of measure dialog and also make sure to turn off 10x factoring)
3. From the View Menu click on Line Measurements.
4. From the menu bar (not the shortcut icons) select Live Video and click on Black Cross Hair, this will take you to the live capture window and will overlay a black cross hair on the screen. At this point it does not matter what zoom level you are at, for ease of use in alignment and for checking use a high magnification around 4 to 5 works well.
5. Locate the appropriate markers and align the calibration slide to the cross hair, see illustration below

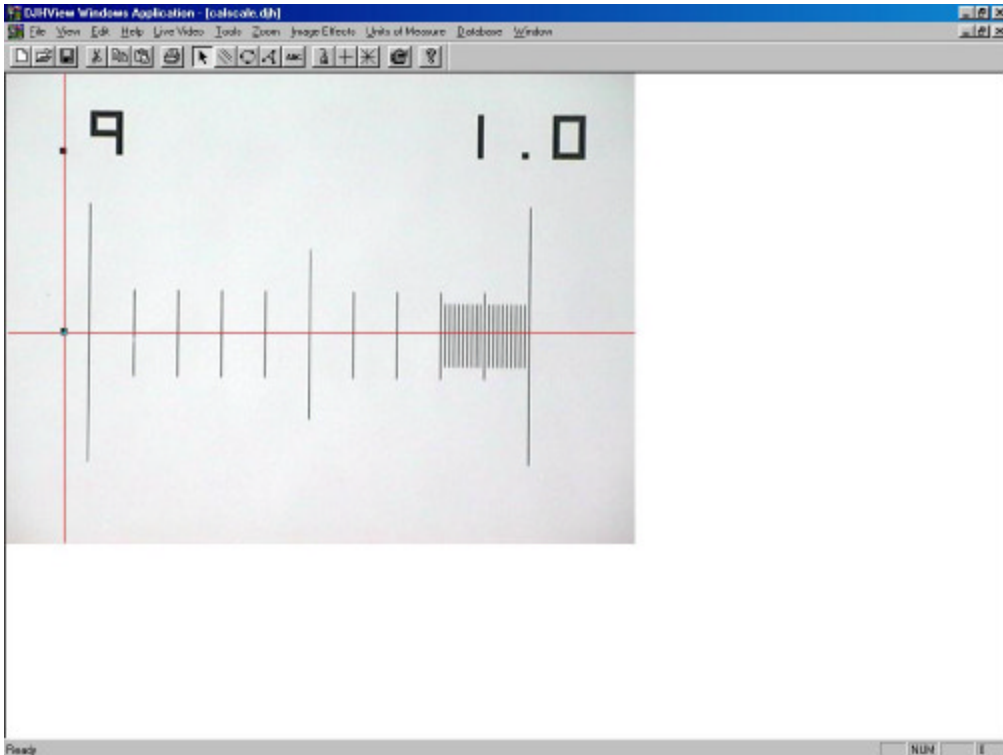


In the illustration you can see that the slide is not aligned to the cross hair, rotate the slide until the vertical lines are parallel to the vertical line of the cross hair.

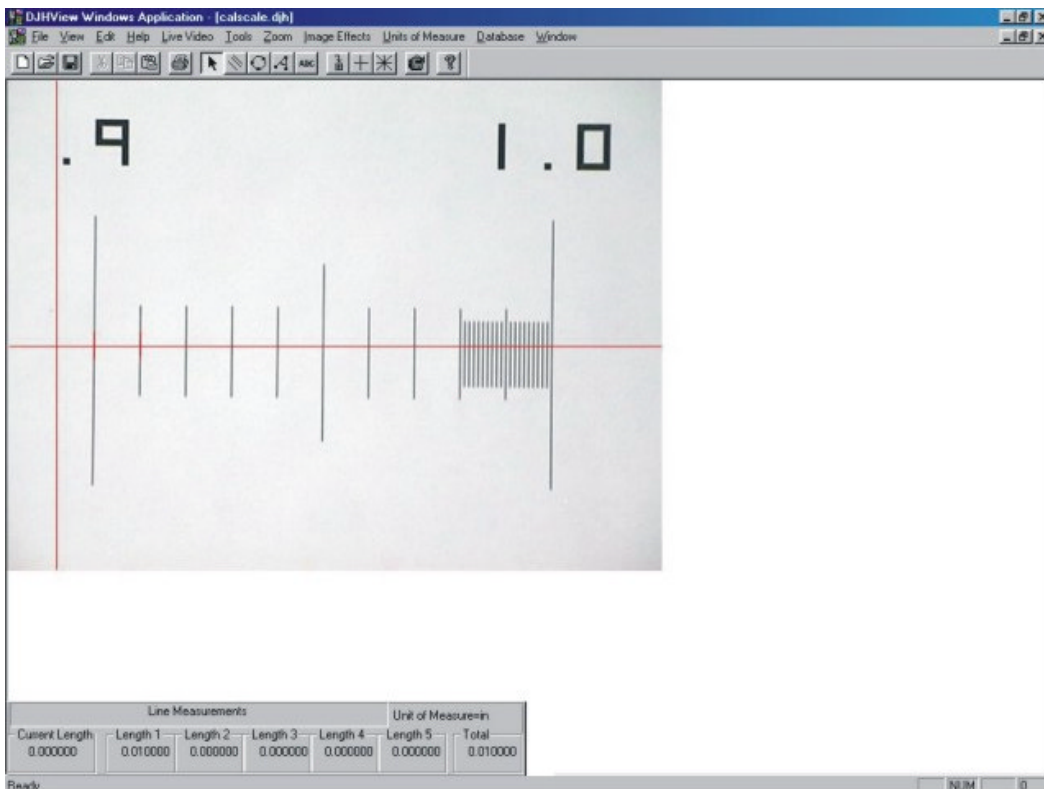
6. Click OK to capture the image (the cross hair will not be captured with the slide).

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7. Click on the 4 point tool and drop the cross hair on the image as shown below



8. Holding the ctrl key down, (the mouse will change to a cross hair) click on the first line to the right of the vertical line of the cross hair tool, now click on the next division to the right of the line you just selected as shown in the illustration below.



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9. The measurement will be displayed in the line measurements dialog box, if the dimension matches the stage micrometer scale then calibration is ok and does not need to be changed. If the calibration is not correct then proceed with the calibration procedure as outlined next.

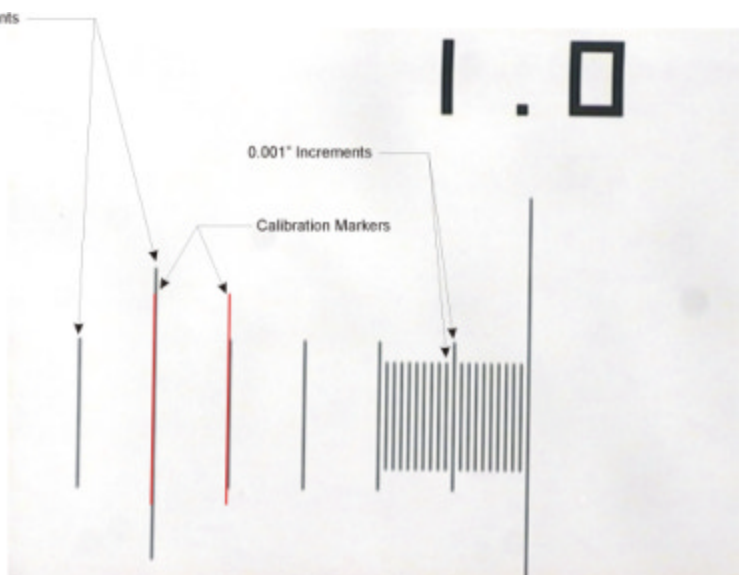
Calibrating the system.

Calibration is a multi step procedure. To calibrate your system please follow the procedure as outlined below. It is important to follow all the steps and complete the procedure.

Calibration is normally performed using a stage micrometer. (Stage micrometers can be obtained by calling DJH Designs, stage micrometers are available in both inch and mm standards) If you do not have a stage micrometer you can still calibrate the system using the certified standard or any sample that has a known value.

1. If you are calibrating using the stage micrometer, skip to step 3. If you are using any other known standard such as the certified standard, place the bored hole on the stage and go the live camera view. Adjust the hole in your field of view at the lowest setting of the MonoZoom, slowly turn the zoom towards the maximum setting. You must be able to get the side of the crater that you will use for calibration in the field of view throughout the zoom range. (it is not require to see the entire crater as long as you can get the area to be measured in view. If the area is to large go back and drill a smaller diameter hole in the sample. Use the Certified standard chart to determine the film thickness of the sample. This will be your calibration tool size that you enter into the tool value of the lens setup. The Calibration Tool UOM is inch. With this done go back and capture an image at the lowest zoom setting. Expand the capture to full size with the full page icon on the corner of the image page.
2. Before proceeding with the calibration you must go to the unit of measure menu and select the correct unit for you calibration tool. You must also turn off the X10 factor. It is also a good idea to change the line color to a contrasting color such as red before you begin from the 0.010" Increments tools/colour menu.

3. Open the zoom menu, click on calibrate position 1. The computer will prompt you to rotate the zoom to position 1 and click on OK. Adjust the image and click on OK. Draw your first line on the main division. Using the example shown at the right. Calibration tool size is 0.010", draw the first line on the major division by place the cross hatch on the line near the top of the line,



hold down the left mouse button and drag the line down over the division to mark it. You can hold down the left button while you align the marker to the division. Release the button to drop the marker. Next while holding the ctrl key click the mouse on the

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position where you want the second line to appear). You can adjust the position of the lines by clicking and dragging the line to align the segments up with the divisions. Right click on the image to complete the calibration.

4. When you are ready to proceed select the zoom menu and choose calibrate position 2. You will be prompted to rotate the zoom to the required position. The program will automatically place you into the screen capture mode, capture the image (the system is now in calibration mode) place your calibration marks down on the image.
5. Choose Zoom, calibrate position 3, follow the prompts and repeat as above for the remaining calibration levels.
6. Once it is complete you should be able to take the sample and capture the image at any zoom level. By calibrating the zoom at the seven levels the computer has created a profile of the microscope. The zoom table is then used by the system to calculate the correct calibration values any where along the zoom curve.

Should you have any question or have any difficulty in setting up your system please contact DJH Designs for assistance.