

Moticam - User Tips #1

Precise Calibration

Calibration of your Moticam is an easy and simple procedure that once mastered can be applied when using your camera on any microscope or in macroscopic mode, taking just a few moments.

1. Choose either the glass calibration slide for a microscope or the large 7500um circle for calibration using the camera in macro mode, i.e. off the microscope. Both units are supplied in the camera kit.
2. For the purpose of demonstration we will use the 7500um circle and macro attachment. First attach the Moticam focusing lens to the camera body, and then fit the clear macro cup to it. Now place the assembled unit over the calibration circle.
3. Open your Motic Images Plus 2.0 software, then click on **File** at the top left of your screen, then click **Capture Window**. Your capture window should now be open, now click **Auto** on the left of your screen. This will give you a base line setting for your colour and contrast. Now use focusing lens on camera to bring the dot into focus.
4. This step is probably the most important part of the procedure. Use your **Exposure** and **Gain** sliders as well as the **White Balance** function to give the image a bright white background with a black dot. (The software uses the contrast between light and dark to determine the calibration distance.)
5. Click on the camera icon on the top left of the screen, then click **Capture** to save the image. Now click on the red cross at the top right of the screen to close the real time image. Your captured image will now appear as a thumbnail at the top right of the screen. Take note of the capture number.
6. Now click on **Measure** at the top of your screen, then **Calibration Wizard**. Click on **Load Image**, this will open your **Capture Folder**, then load the captured image of the calibration slide (remember the image number you just captured located at the right of your screen.) by double left clicking on the appropriate capture number.
7. Choose the appropriate objective lens, in this case **1x (object lens)**. Now choose the 'external diameter' which is **7500um** as printed on the calibration slide.
8. A **Save Sign** box will now appear. You can either type in a custom calibration name under **Sign Name** or choose an objective from a list on the left. For this exercise click on the **1x (objective lens)**. Don't worry about the other settings as the software will auto compensate for these details. Now click Save and close sign box.

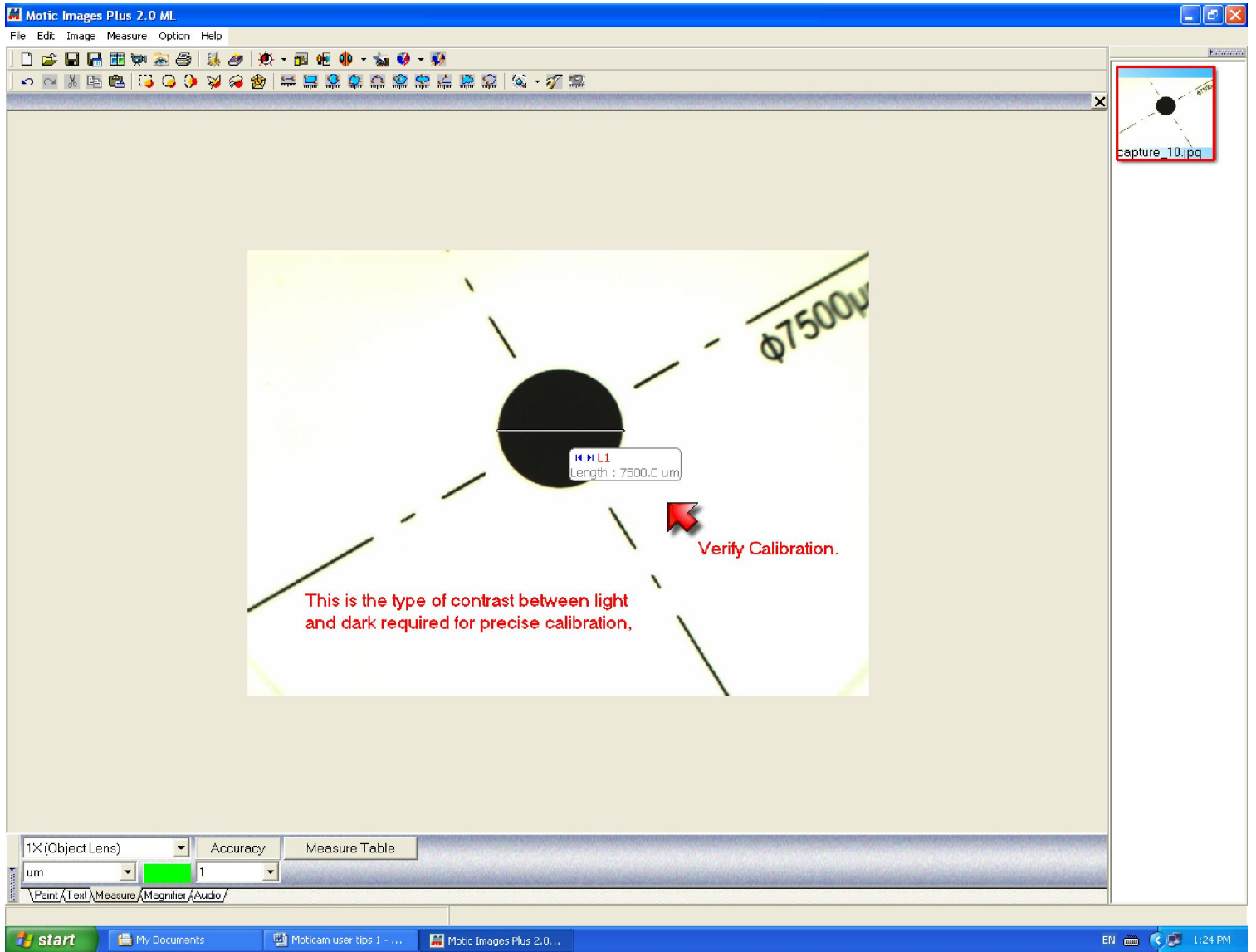
Congratulations your calibration is now finished. We can now verify if your calibration was successful.

1. Open your capture window and capture the calibration dot again as in steps 3-5. Double left click on your small image on the right of your screen to bring the captured image into centre screen for analysis.
2. Click on **Measure** at the top of the screen, then click on **Line**. Now click on **Measure** at the bottom of the screen and choose the **1x (object lens)** from the list. Choose the measure format you wish to use, in this case **um** from the box on the bottom left of the screen.
3. Now for the moment of truth. Move your cursor to one side of your captured dot, now hold down your left mouse button and drag a line to the opposite side of the dot, then let the button go. Your measurement of 7500um should now appear on the screen.
 - This method can be applied to either a biological or dissection microscope using the same technique. Just remember to choose the magnification you are working at from the bottom left of the screen.
 - When using non **Motic** microscopes you will have to do a calibration for each magnification point on a dissection microscope or each objective on a biological microscope.

Your Moticam can be used to measure objects at a longer distance than your standard macro attachment allows by using our optional Gooseneck Stand to make your Moticam even more versatile.

MA-SWO1-O9FO Optional Gooseneck Stand





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