llumins™

Introduction to Llumins MAC camera software:

Before you are able to take good quality pictures you will first need to learn and understand how your camera and software works. Unfortunately c-mount cameras do not offer instamatic solutions as normal cameras and take a bit of experience to perfect. That said, the Llumins Mac compatible software offers three automated settings for your benefit.

Getting Started:

Use the three "auto" settings in the following order:

1. **Auto white balance:** Select a blank area in the image then click the **"one push"** button.
2. **Auto exposure:** First select a large area on the image, enable the **auto exposure tick box** and then select the require brightness level on the scrollbar.
3. **Auto Histogram:** Push "**auto**" button whenever required

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Note: The auto exposure and white balance features uses the same rectangle space. So whenever you set the white balance you have to reset the area for the auto exposure again. We recommend that you start by:

a) First disabling the "auto exposure".
b) Setup the white balance.
   a. Drag mouse in rectangle shape on white open space and click "one push"
c) Re-enable the auto exposure tick box. **But FIRST:**
   a. **Select as large an area as possible on the image** by dragging your mouse from the top left corner of the image to the bottom right corner of the image**.**
   b. This will tell your auto exposure to calculate its exposure level according to the entire selected area on the image and not just a small portion selected in the white balance before (which may totally underexpose your photo). However if you intend to crop your picture afterwards, for best image exposure you simply have to select the area you will crop.
   c. Wait for the autoexposure to adjust to the proper exposure, it takes a few moments. If the image continues to flicker, wait for the right exposure and deselect your autoexposure. It will then stop flickering.   Now you are ready for scrolling or moving your slide on the microscope.
   d. Adjust the preferred brightness of your auto exposure (i.e move the slider bar).
d) Set the HISTOGRAM: Finally select the "auto" button on the histogram section.

Tips to reduce shadows on picture edges:

To reduce/prevent shadows on the edges:

a. Ensure the aperture on the condenser (microscope) are fully opened.
b. Centre the condenser correctly **on the screen** and not via the eyepieces.
c. Enable and adjust the Vingette function below the exposure function. This may also help to reduce the shadow on "low power" photo's.

Slow speed or blurred video:

1. Ensure that your microscope is set to full brightness (the brighter the microscope, the less exposure time is required by the camera, thus reducing the "drag" or blur on image movements).
2. Decrease the camera resolution to the slightly lower setting. We recommend the middle setting. High resolutions require computer processing power. Super computers will be able to cope with any resolution without drag, but slower PC's will not. Viewing in the highest resolution is not always required as most medium resolutions are more than sufficient for most scenarios and will just slow down your image scrolling.

Colour correction tips:

1. **Saturation:**   Saturation can be seen as making the colour either more or less vibrant or colourful.   Using this feature is recommended as it ensure that little image quality is lost. Sometimes CCD cameras can be slightly over saturated (colourful) so you may want to decrease the saturation to make the picture more "realistic".

2. **Gamma:** Is also an excellent tool to use instead of brightness. It increases or decreases the "intensity" of each pixel thereby also allowing less deterioration in the quality of the picture than brightness or contrast. Try to use brightness or contrast lesser if possible.

3. **Histogram:** Can be a useful tool for changing colours. After using the "auto" button you can select the colour you want, then adjust and drag the side line on either side of the graph to the preferred colour adjustment.

4. **Temperature:** *(not so important) A*djusts the colour ratio between **yellow and blue**. Aimed more at photos which use our main two types of light sources; warm coloured or natural yellow light (candles, fire etc.) and; unnatural or bright light which is more blue. The temperature setting therefor allows you to compensate for whatever light source you are using when taking a picture. However, with c-mount cameras this should not be used often.

5. **Tint:** *(not so important)* Mixes the colour between either **magenta and green**

Resetting your image:

If your picture looks unnatural and you don't not know how to fix it you can restart by resetting your system:

1. Select the "defaults" button at each feature then
2. Use your three "auto" features again in the recommend order above.
3. Alternatively quit Toupview and restart.