

Getting Started with an Altair Astro Camera

This is a quick start guide to help owners ensure that the Altair Camera is working with the capture laptop. The information presented has been influenced by support questions asked in the Altair Forum at <https://groups.google.com/forum/#!forum/altair-astro>.

The latest version of the *AltairCapture* software can be downloaded from <http://cameras.altairastro.com/>. This software contains both the image capture program and the camera drivers.

[Note to existing camera owners: a new model or version upgrade of an existing model will require newer drivers. Although AltairCapture may already be installed, the software should be upgraded to the latest version to ensure up to date drivers are on the capture machine.]

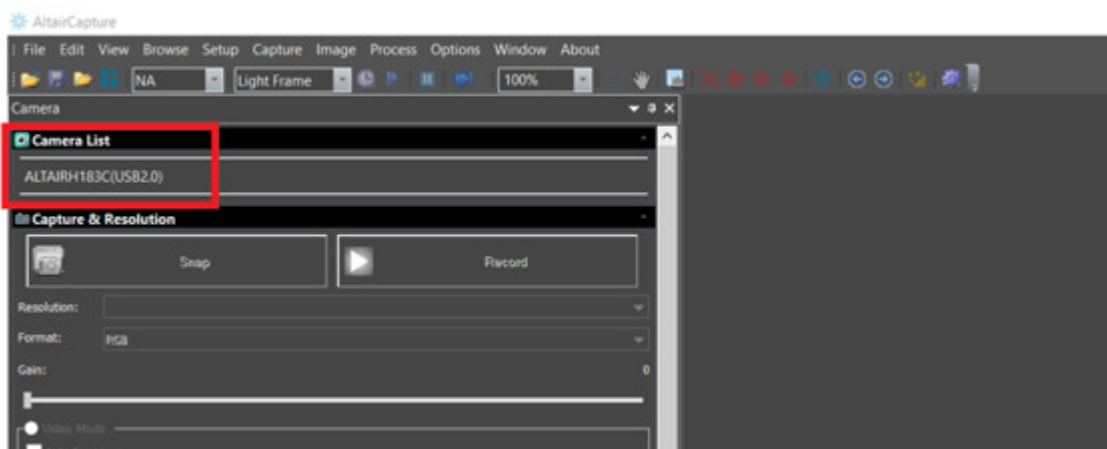
The following procedure is best done inside, in the warm, during daylight. This will help to ensure a productive first light session with the camera

The outline quick start steps are:

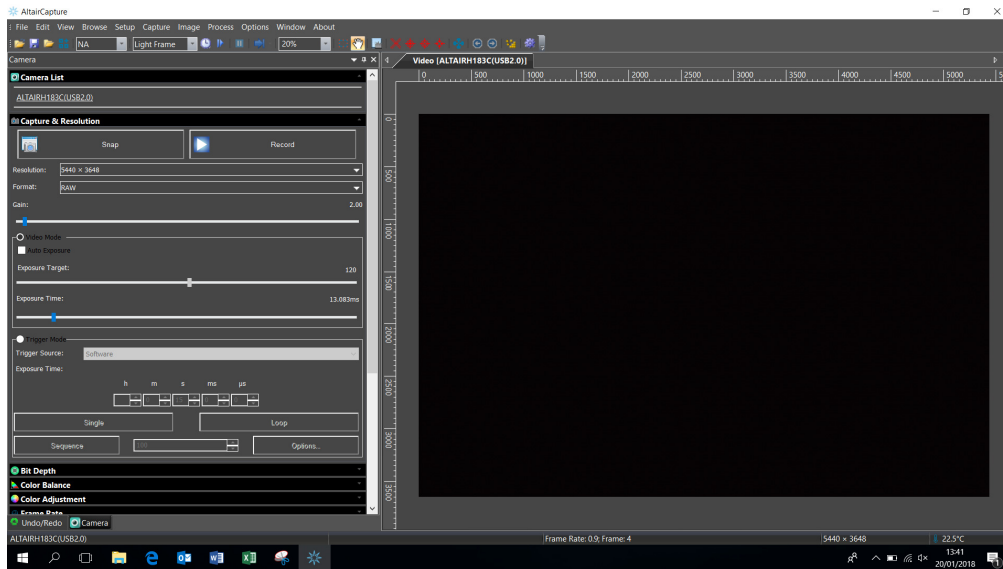
1. Download and install the *AltairCapture* software on the imaging PC/laptop.
2. Plug in the camera using the supplied USB cable. Leave the camera cap on at this stage.
3. Start *AltairCapture*.
4. Select the *Camera*.
5. Set the *Frame Rate* slider to *Low*.
6. Adjust settings.
7. Remove the cap.

Quick Start Steps

1. Download and install *AltairCapture*.
2. Plug in the camera using the supplied USB cable. The cap can be left on the camera at this stage.
3. Start *AltairCapture*. The camera should appear under *Camera List* near the top left of the screen. The right-hand panel should be grey.



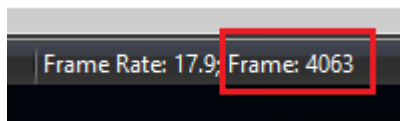
- Click on the camera name. It will be underlined (to show it is selected), a black rectangle will appear on the right-hand panel and the light on the back of the camera will flash (about once per second). This indicates a successful communication between the computer and the camera.



- Set the *Frame Rate* slider to *Low*. The *Frame Rate* control can be found in the left-hand panel in *AltairCapture*.



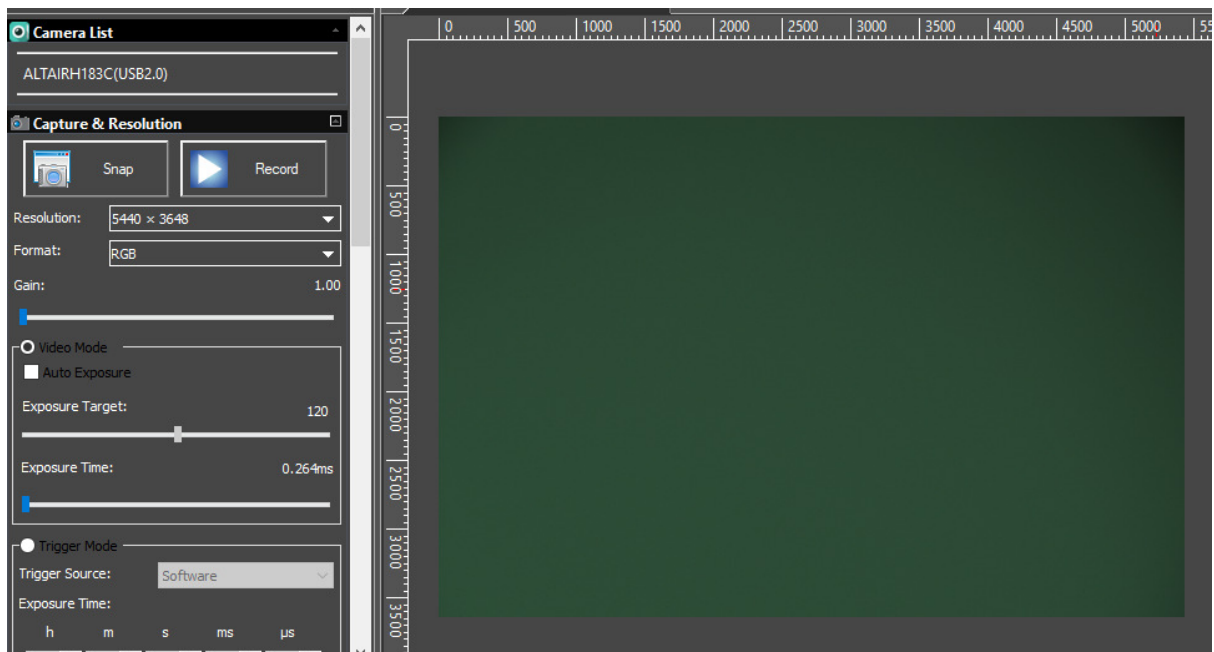
At this point the *Frame* counter in the status bar at the bottom of the *AltairCapture* window should be incrementing.



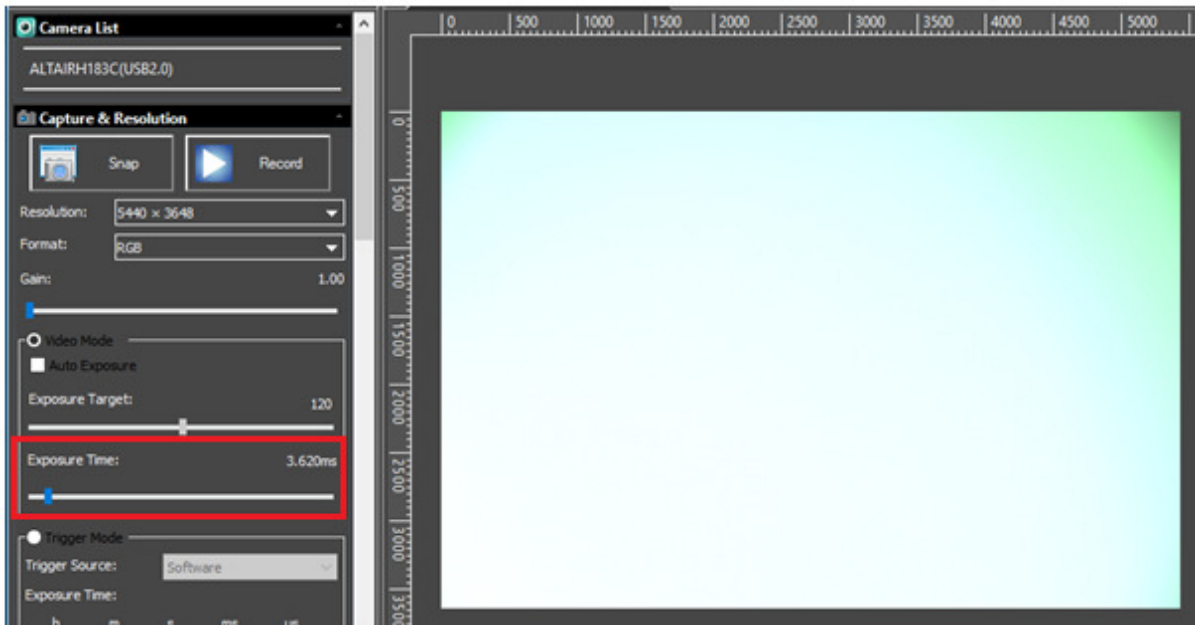
- Adjust the following settings.

	<p><i>Resolution</i> = lowest available</p> <p><i>Format</i> = any will do</p> <p><i>Gain</i> = lowest value (slider at left)</p> <p><i>Auto Exposure</i> = unchecked</p> <p><i>Exposure Target</i> = ignore</p> <p><i>Exposure Time</i> = lowest value (slider at left)</p>
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- After removing the lens cap, point the camera at a window (in daylight), a lamp or a bright computer screen and remove the camera cap. The black panel should change from black.

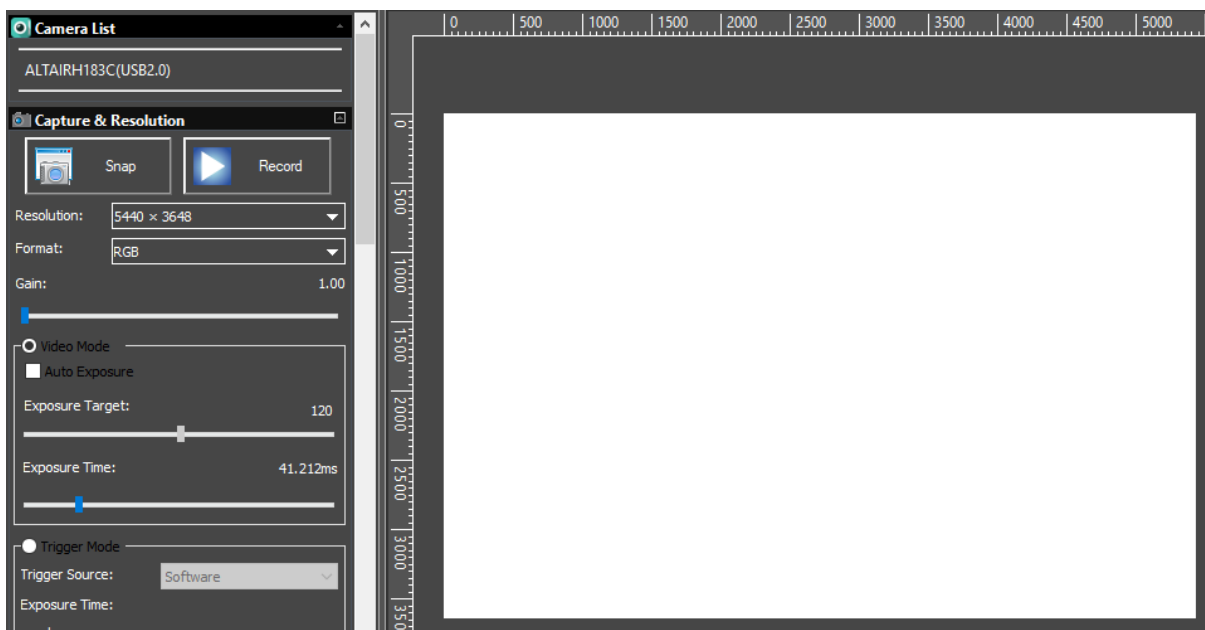


8. Move the *Exposure Time* slider slightly to the right. The right-hand panel should become lighter.

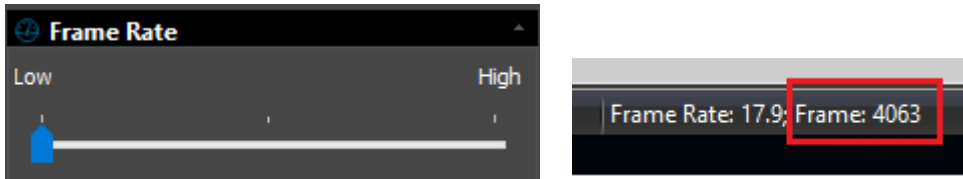


9. Continued movement to the right of the *Exposure Time* slider will result in a perfectly white right hand panel.

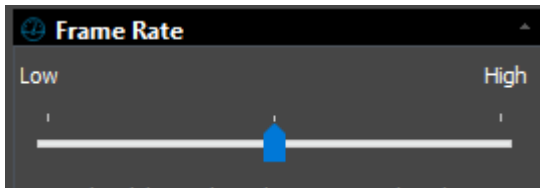
10. Repeated covering/uncovering of the camera will result in the right-hand panel being dimmed or brighter. At this point the installed capture software and camera have been proven to be working together correctly.



11. This step will establish the optimum *Frame Rate* setting for the capture PC/laptop. With the *Frame Rate* slider set to *Low*, the *Frame* count in the bottom status bar should be incrementing.



Set the *Frame Rate* slider to the *middle* and check the *Frame* count is still incrementing.



Set the *Frame Rate* slider to *High* and check the *Frame* count is still incrementing.



If, at this stage, the *Frame* count is still incrementing then the hardware is capable of sustaining this setting. If, at any of the above settings, the *Frame* count stops incrementing, set the slider back to the previous value and use this setting for image capture.

12. Step through all the available *Resolution* settings to ensure that the *Frame* count is still incrementing. If at any stage the *Frame* count stops incrementing, reduce the *Frame Rate* for that setting. These final tests will establish the limits of the capability of the USB hardware in the capture PC/laptop. [Note: the available *Resolution* settings will vary between camera models.]

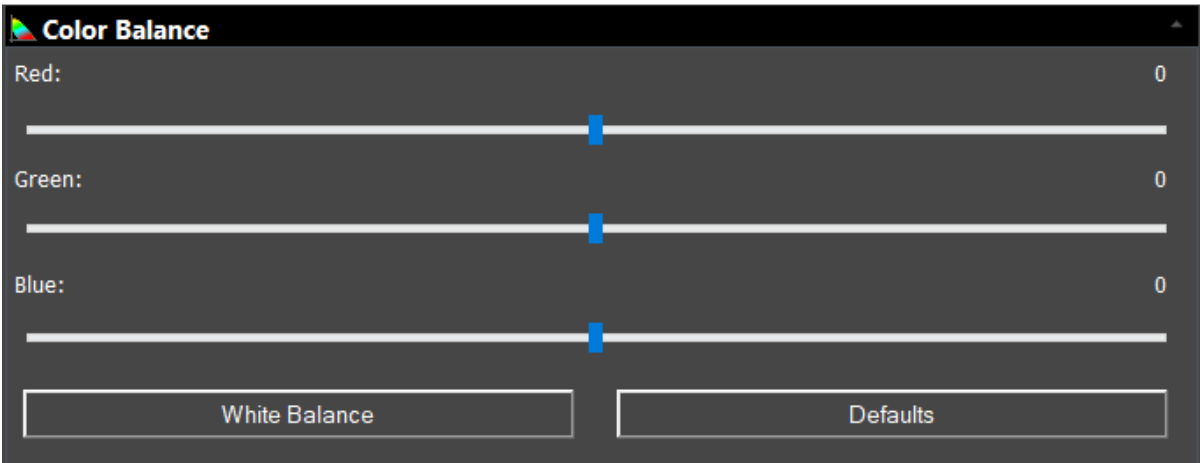
At this point, those in possession of a meteor lens could attach it to the camera and focus on an object. This would enable familiarity to be gained with the *AltairCapture* software.

If the above test has not been successful, work through all the settings below. Then repeat the steps above. The settings below are chosen as conservative values.

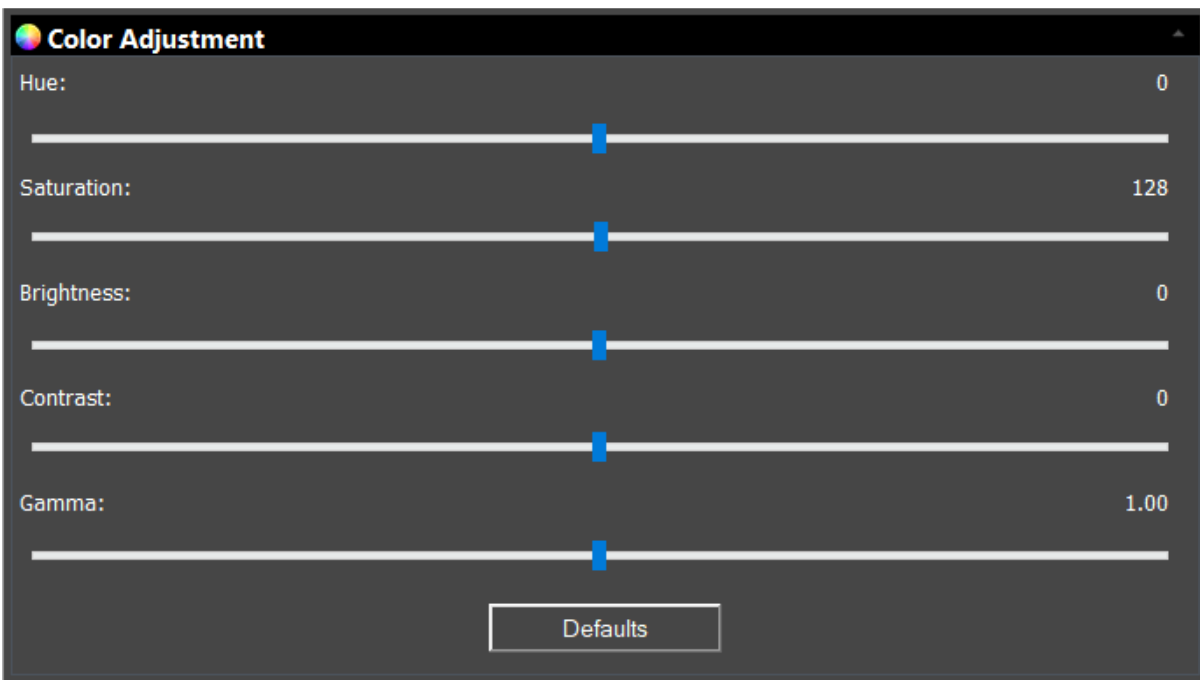
Bit Depth – set to 8.



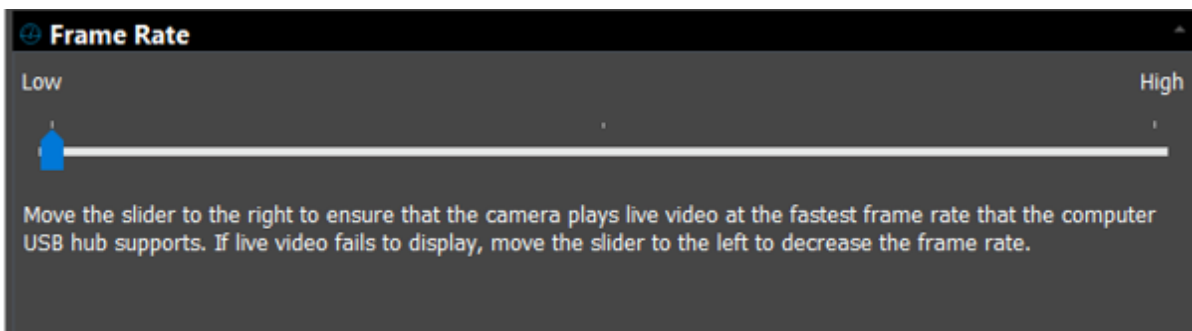
Colour Balance – click the *Defaults* button, all sliders will be centralised.



Colour Adjustment – click the *Defaults* button, all sliders will be centralised.



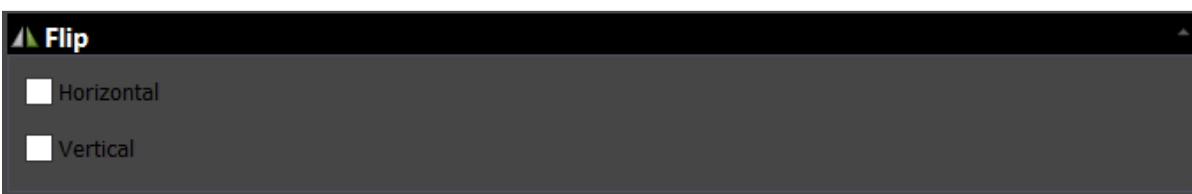
Frame Rate – set slider to *Low*.



Color/Gray – either is OK. *Color* will not be available on a mono camera.



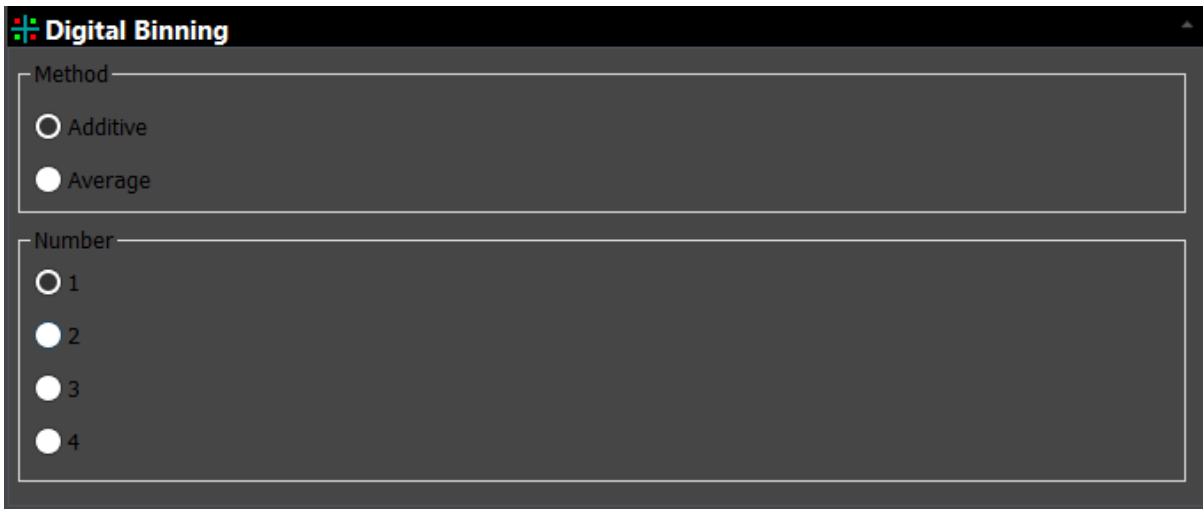
Flip – leave unchecked.



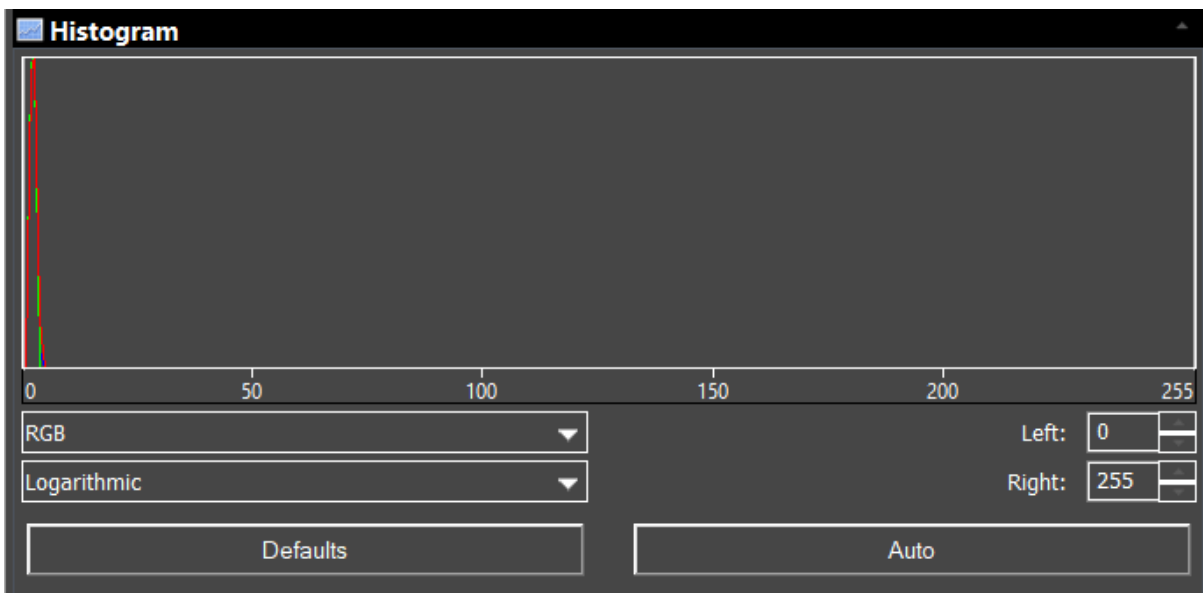
Rotate – any setting is OK.



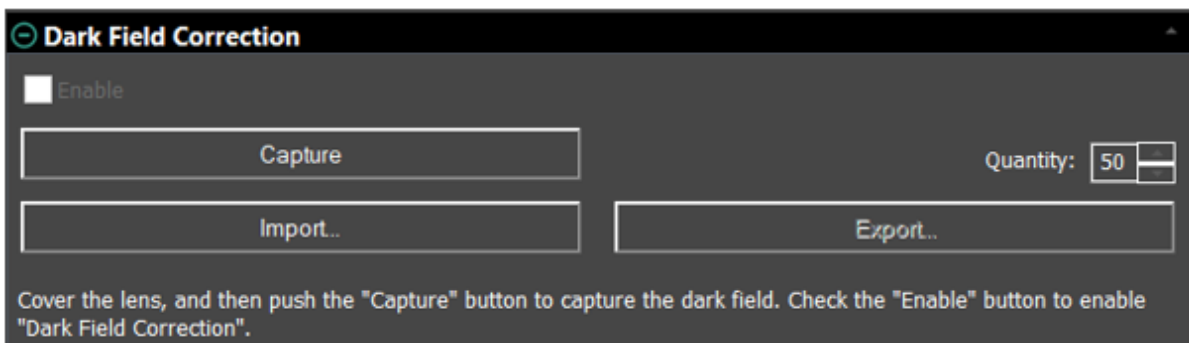
Digital Binning – should be set to 1. *Additive* or *Average* can be chosen (it will have no effect).



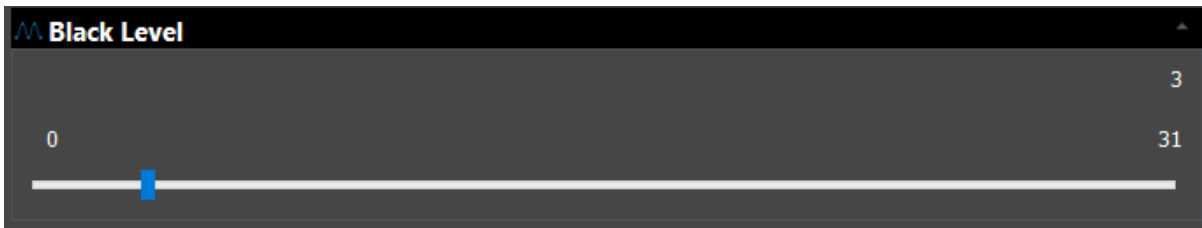
Histogram – will be at the left-hand side. Once light is detected the graph will move to the right.



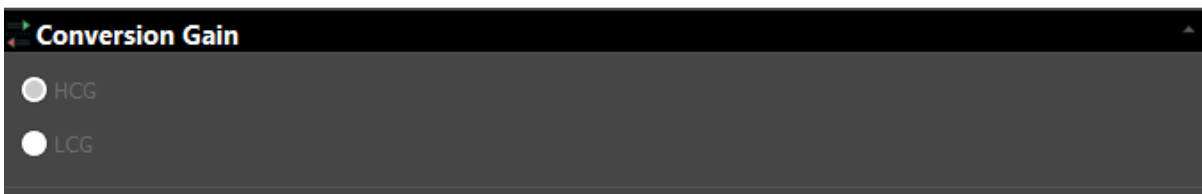
Dark Field Correction – uncheck *Enable*.



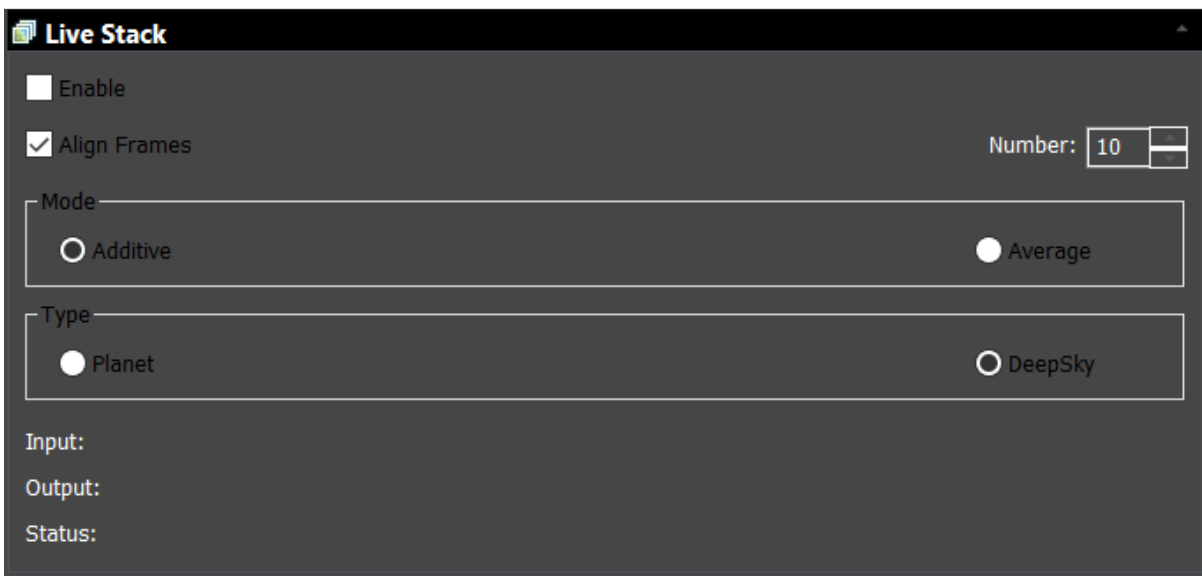
Black Level – any value will be OK for the camera test.



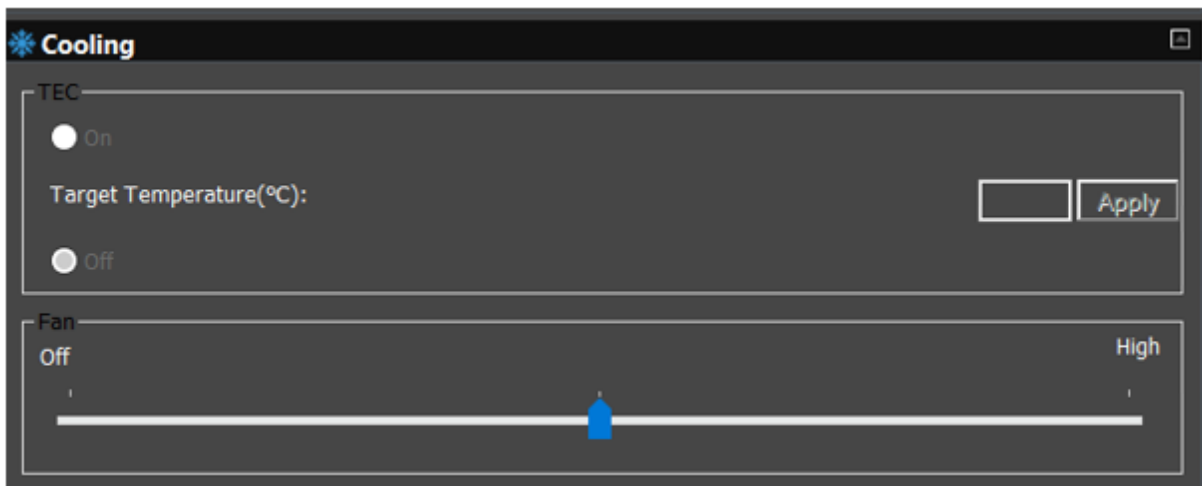
Conversion Gain – ignore.



Live Stack – *Enable* should be unchecked.



Cooling – settings do not matter for the camera test.



Parameters – does not matter for the camera test.

