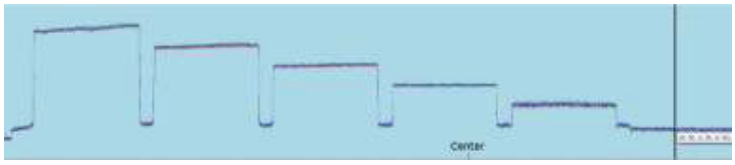
3.3.3 Color calibration (white balance)

On Suprascan Quartz A0, lighting must be ON 15 minutes at least before calibration

White balance adjustment requires a color chart.
A "Colorchecker classic" chart is provided with the scanner:

Go to "White balance" tab

Place the chart under the camera to see the column below:

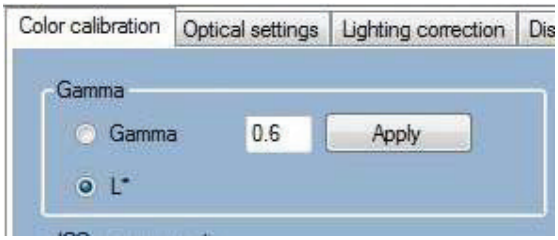


3.3.3.1 Gamma correction

Select the gamma correction. Recommanded value is 0.45

0.6 is set for 1.8 gamma display. In case all images will be converted to a color space having a 2.2 gamma, it is better to set the scanner gamma to 0.45.

It is also possible to set the response curve to L*; this is to be done if all images will be converted to a color space having a L* curve like eciRGBv2.

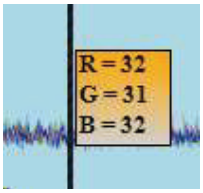


Gamma correction has to be set before building the ICC profile of the scanner!

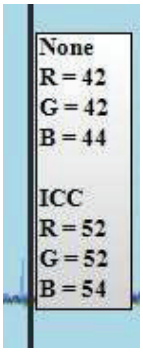
3.3.3.2 Manual calibration

3.3.3.2.1 Color picker

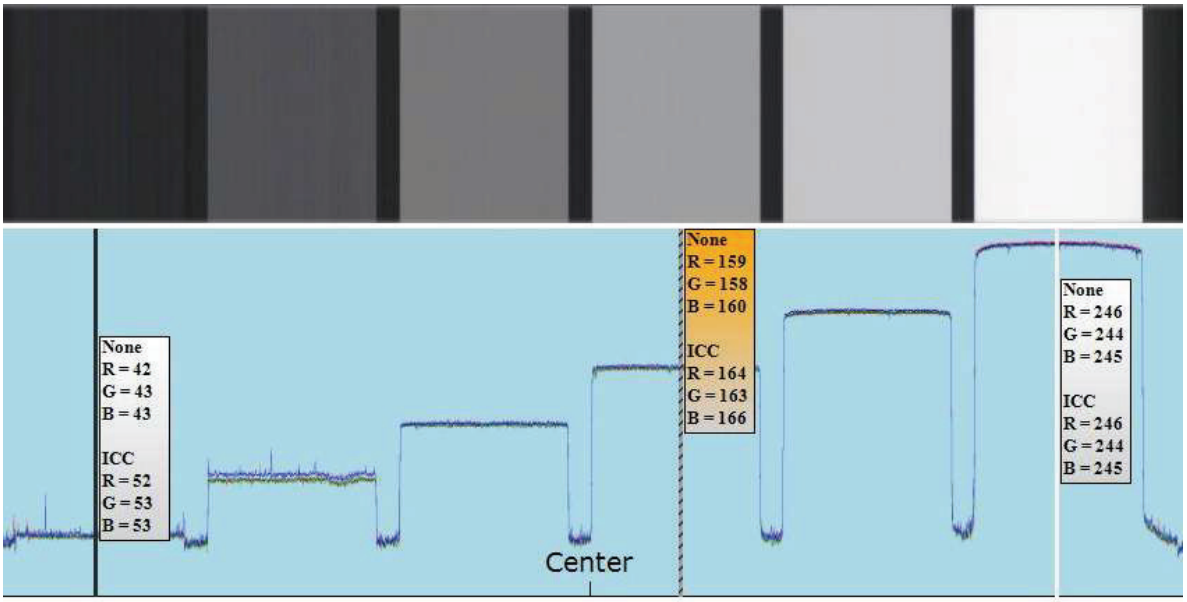
Double click on the signal curve to create a color picker (marker). This will display in real time the signal level for each color channel R, G, B.



If conversion to an output ICC profile is set, RGB values will be displayed before and after conversion :



Place a color picker on the black, white and central grey patches.



A right click gives access to a summary of all markers (color pickers)

Marker summary

Picker color	Picker RGB value			Picker RGB value with ICC		
	R	G	B	R	G	B
	42	42	44	52	52	54
	159	158	160	164	163	166
	245	244	244	245	244	244

3.3.3.2.2 Calibration

Move sliders in "Black adjustment" window until red, green and blue channels have the same level on the black patch
Move sliders in "White adjustment" window until red, green and blue channels have the same level on the white patch

On Colorchecker Classic chart, black level on darkest patch should be around 32 if gamma is 0.6 and 54 if gamma is 0.45.
To raise or lower the signal level on the black patch, check "All channels together" in" Black adjustment" window and then all three sliders will move at the same time.

White level should be around 240 on the white patch.

- On Quartz A1and Suprascan II, adjust level on white patch by modifying:
    1. Light power
    2. Exposure time
    3. Lens aperture but only as a last resort.

- On Quartz A0, adjust level on white patch by modifying:
    1. White adjustment sliders by checking "All channels together" to get the three sliders moving at the same time.
    2. Exposure time but this will increase scan time
    3. Lens aperture but only as a last resort.