

# Projector calibration

## **How do you manage to eliminate black level differences ? Can VIOSO software do black level compensation or automatically calibrate it ?**

Black level is something that can only be compensated and made “invisible” by raising the overall black level of all projectors to the level of the maximum overlap of the whole projection, which basically can be the sum of remaining light levels of 2, 3 or 4 overlapping projectors, depending on the setup. This of course reduces the overall contrast ratio of the content significantly.

While our software allows to adjust (raise) the black level of all regions that are NOT overlapped, it might not render perfect results in totally dark environments since there will still be lighter and darker regions visible to the trained eye.

In this case – and from practical experience - we recommend to take additional measures. You will get good results using some sort of mechanical shutter plates to soften the hard edges of the rectangular projector outputs a little, or by raising the environmental light level, to get that up to the black level. Both actions will help to hide the hard edges of the projection fields.

Because from a psychological point of view, these rectangles are in fact the most vivid and first characteristic mark that the human eye will “lock onto” to identify the overlap areas – and then secondly recognize the different black levels afterwards.

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