

Q:

I am concerned with background light from the lab having an effect on my measurements. Does PixelScope allow me to change the “black” level of the camera?

In other words, is there any way to change the DC offset?

A:

No there is not.

The early releases PixelScope included this capability, but we decided to remove the feature. Our reasons fell into two general categories:

It isn't necessary

- Unlike NTSC video cameras, the ThorLabs FireWire cameras have superb black level stability. If you cover the camera, the output will go to zero. Period. You can easily verify this with the *Histogram Tool* in PixelScope.
- The OpticStudio instruments are quite insensitive to general room light levels. For example, the microscopes do a good job of rejecting light that does not originate within the field-of-view of the lens.

It isn't a good idea

- From long experience we've come to the conclusion that it is always¹ better to eliminate the stray light at the source than to correct for it by fudging the measurement values.

To put it bluntly, a DC offset adjustment allows you to “measure” whatever contrast value you want to. All you have to do is to convince yourself that the stray light isn't *really* due to flare in your lens.

- It is all too easy to set a DC offset and notice a week later that you forgot to set it back to zero. Now what do you do with the data you took last week?

¹ OK, we admit there are occasionally times when you really do need to manipulate black level in an image. When this happens in our shop we use PhotoShop to manipulate the image gamut.