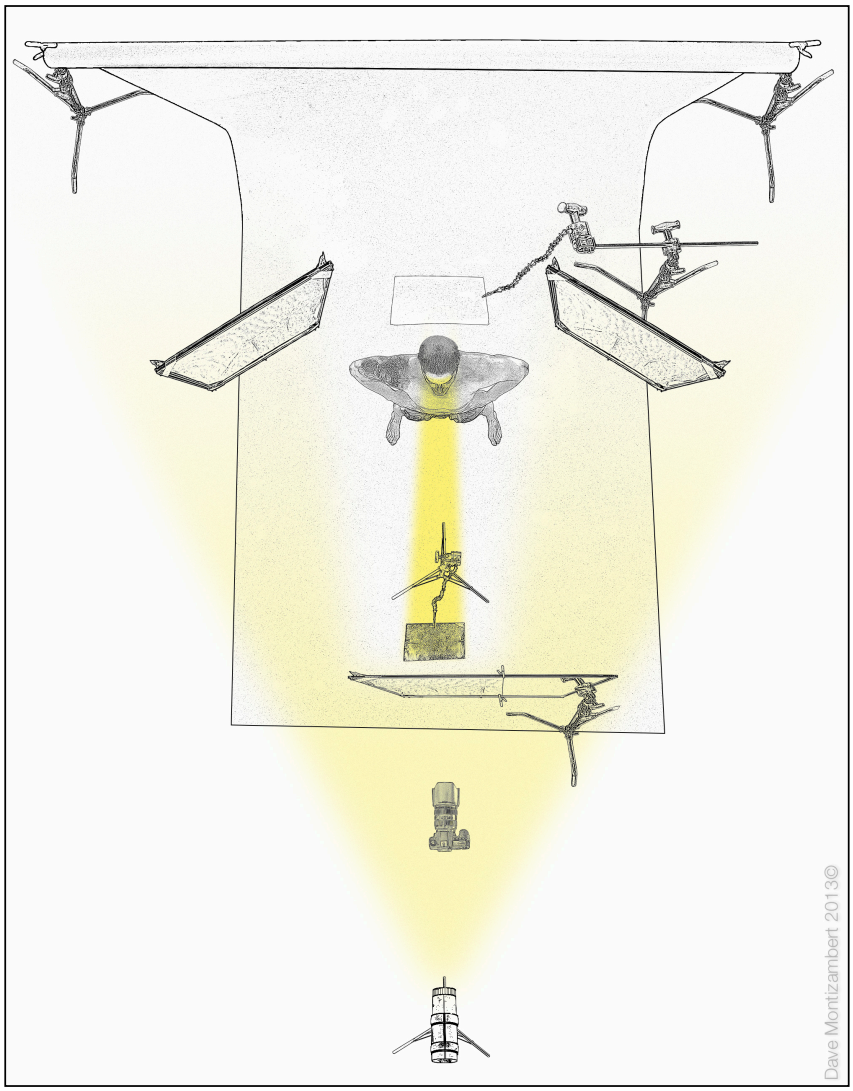
A Catch Light's Bedtime Story

In the early days of my photo career, cinema was a great inspiration. In particular I loved the lighting created in the B&W classics of the 1940s and 1950s (and for those of you who cannot remember that far back, look to George Clooney's 2005 film *Good Night and Good Luck*). To make up for the bad script writing and for the corny lines that were used, incredible lighting was created on the actors, it was often very dramatic and very contrasty. The night scenes were the most dramatic with their bright, heavy backlighting, dark underexposed flesh-tones, and bright beautiful catch lights in the eyes. In trying to duplicate this it was the catch lights that I couldn't get the hang of – I couldn't figure out how to underexpose the fronts of people to simulate night time, while maintaining brilliant eyes?

It wasn't until a few years later, when I was learning about specular highlight control while studying with my lighting mentor Dean Collins, that I figured it out – you can independently control the brightness of specular highlights (in our case, catch lights) from the brightness of the subject's actual tone. If you look to my last article, *Big Red*, in the December/January issue of *Professional Imagemaker*, you will see that I controlled the brightness of the reflection of the light source (a specular highlight) on the pepper independently from the pepper's red tone, by altering the distance of the main-light. I was able to reduce the brightness of the specular highlight on the red pepper by simply moving the light source in closer and adjusting exposure.

Changing the distance of the light source will affect the brightness of all specular highlights caused by that light. The question is, to increase the brightness of the catch light in the subject's eyes relative to the brightness of their flesh, would you move the light source further away or closer? If a source, lighting the front of your subject, were moved away to double the distance, the visual size of that light to the subject would now appear ¼ of its original size. This alters the catch light – it appears smaller, yet it appears to have the same brightness. How is it possible that the catch light can shrink to cover ¼ of the area of the origin area on the eye and still be the same brightness? Moving the light source away from the subject, let's say from 5 feet to 10 feet, will cause ¼ of the volume of light to fall on the subject. The catch light still appears to be the same brightness because the amount of light energy striking it decreased at the same rate that the catch light decreased in size. A quarter less energy spread over a quarter less area equals same intensity – they cancel each other out. If you are to keep the original exposure of the face, the exposure will need to be adjusted. By turning up the power of the strobe head by two f-stops, or by selecting a two-stop larger aperture opening, the flesh-tone brightness will be restored. But what will this adjustment do to the brightness of the catch light? It will appear brighter. To recap, the flesh-tone becomes darker while the catch lights stay the same brightness, the catch light stays the same brightness because it becomes smaller at the same rate that it receives less light energy (the catch light dropped to ¼ of its former size at the same time that it received ¼ less light) – the decrease in size cancels out the decrease in energy allowing the catch light to keep the same brightness. Since the flesh-tone receives less light it appears darker, but to keep the same brightness as it had at the closer light distance, it is necessary to re-meter. The meter provides a reading, instructing us to increase the exposure. This new exposure brings the brightness of the flesh-tone back up to the original brightness. It also increases the brightness of the catch light. In the end, the catch light appears more intense and smaller, while the flesh-tone appears as though nothing has happened. Increasing source distance from subject increases specular contrast.

There is one other factor along with the distance of source that controls the brightness of catch lights, and that is physical size – using a smaller light, soft-box, octa-box, umbrella, scrim, etc, greatly aids in keeping the catch light brilliant while maintaining a dark, night-time-lit flesh-tone. As you decrease the size of a light source – let's say switching from a 4x6 foot soft-box to a 2x3 foot soft-box – the reflection of that source imaged on the eye, will now cover only ¼ of the original area. Since the power of the light has not been adjusted, the same amount of energy is forced to cover less area, ¼ of the area in this example. This will increase its apparent brightness by four times or by two camera f-stops. In the end the brightness of the subject's flesh stays the same but the catch light is brighter and smaller – same end result as increasing distance of source, only no exposure adjustment required.



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Night time Look:

For my night time-look lighting technique used on (see Image 001) light weight boxing champion and model/actor Owen Vaags, I used two specular contrast controls: I placed the source further away and I used a relatively small source - a 10"x7" reflector (a silver-card catching light from a strobe head with a 5" parabolic reflector some 6' away) placed down low at 2.5 feet off the floor and positioned 5 feet away from his face (see Image 002). An incident meter reading with the back of the meter against Owen's face and with the dome pointing at the reflector, gave a reading 2⅓ stops darker than the camera exposure setting. This means that where-ever his face is fully lit by this source, it will be 2⅓ stops underexposed. Since the source skims its reflected light across Owen, lots of dramatic shadows occur, making his face seem darker. This reflector is a very directional source, which allowed me to spotlight his face without striking the rest of his body. You will notice that Owen's face doesn't look completely underexposed, there are lots of bright shiny bits (specular highlights) over his face and of course there are the two brilliant catch lights in his eyes, all controlled by the size and distance of this silver-card-strobe-head-combination light-source. Another aspect that can really help get this beddie-time look is to use high contrast processing settings or bump the image's contrast up nice and high, after the fact, in Photoshop. Pleasant dreams!

Dave Montizambert lectures internationally on lighting, digital photography, and Adobe Photoshop. He is also a published author having written two books on lighting and digital photography (www.montizambert.com) plus numerous magazine articles on these topics in North America, Europe, Russia and Asia. Dave also creates Lighting and Photoshop tutorial DVDs for www.software-cinema.com and www.photoshopcafe.com. Dave is available for lectures and workshops in your area and can be reached through www.montizambert.com.