

What do weddings, wars, and sunsets have in common? Fleeting moments. And for photographers, these offer some of the most stressful conditions to shoot under. Now shooting sunsets is no big deal, but if that sunset is a key component of a shoot that involves a subject that needs to be professionally lit, it is right up there with weddings and wars. The photographic lesson I'm about to set down revolves around such an image that went so right after everything went so wrong (see Image 001). I created this image during an assignment in Hawaii that involved lighting and capturing a series of images of a Hollywood actor/writer Sherri Synder. As the shoot unfolded, it quickly became an exercise in thinking on your feet and letting everything go that you couldn't change or control so that you can concentrate on making a decent image. To capture the fleeting beauty of a sunset, time is of the essence and so if you are planning to light a person in front of such a spectacle, then you need arrive well before to set up and work all the bugs out long before the magic moment.

This Hawaiian trip was to consist of several real photo assignments that would also be captured on HD video for Adobe TV as an educational series on location lighting using tethered shooting with Lightroom. For the project we had a small crew, myself, Rick Miller of Adobe USA, cinematographer Megan Sinclair, and then local talent for hair, make-up, and assisting. Both Rick and Megan organised the locations, accommodation, car rentals, and lighting gear from California, before meeting me in Hawaii. They did a great job setting it up, however, no amount of organising could have prevented delayed flights and a last minute sickness of the make-up artist, both of which put us some five hours behind schedule. After much scrambling we arrived at the sunset location 15 minutes before sunset and so the race was on. We had a ton of lighting gear and no time to transport it half a kilometre from the parking lot over some rough terrain to the shoot site on a beautiful stretch of beach on Sand Island near Honolulu, let alone set it up. Determined to get something on this first day, we tore through the gear dumping into my emptied camera bag only what we thought we would need: digital SLR camera, a couple of zoom lens, a speed-light (camera flash) with radio slave, a roll of duct tape, a flash meter, and a flashlight; all the real lighting equipment was left behind at the parking lot. With Sherri already made up and costumed, we literally ran to the spot. With the sun already set, Rick in preparation for creating a mixed light image, assembled a speed-light and radio slave while I composed Sherri against the quickly fading sky. During these frenzied moments, I chose f5.6 as the perfect aperture for depth of field for this image, then took a couple of in-camera meter readings to find an appropriate shutter-speed for the F5.6 aperture setting for what I thought would be the perfect exposure (f5.6, 2 seconds at 100 ISO) of the sky background. To dial in a suitable exposure on the speed-light, which Rick (now acting as a human light stand) aimed at Sherri, a flash meter with its incident dome directed toward

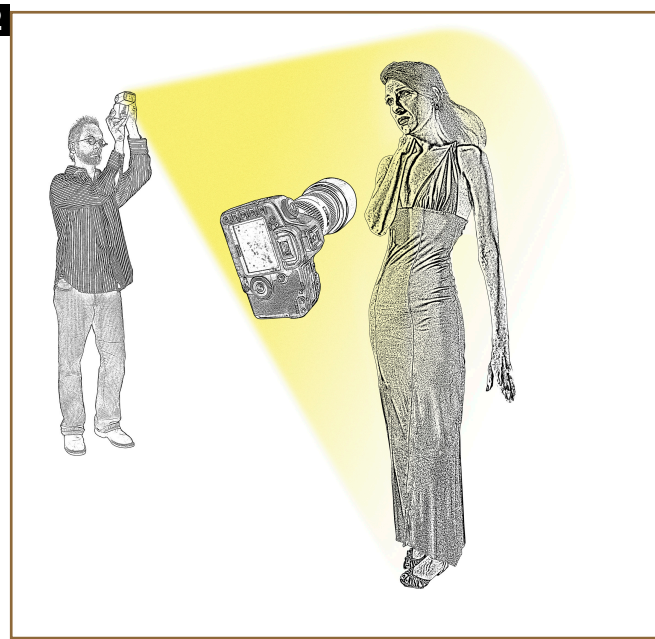


this main light was brought into position next to Sherri's face – for more information on flash meters, see the callout box entitled 'Flash Meters'.

Unfortunately, and I will use that word a lot in this story, after taking the first reading, the read-out on the meter sputtered in and out of existence a couple of times as the poor thing's life flashed before its eyes and then went blank – death by dead battery was the prognosis. We did have spare meters and batteries, but unfortunately they were back at the parking lot with the rest of the gear. Since we were shooting digitally we could rely on the LCD preview image on the back of the camera, but judging exposure and lighting ratios solely by screen previews without meter readings to back it up is less than optimum since our eyes are influenced by the surrounding environment's brightness which effect critical visual judgement of preview screens. Accurate exposure is really critical in an image with high contrast subject matter and subtle shadow detail like Image [1]. In my opinion, using the histogram to judge exposure in an image like this one, isn't so hot either – it is too interpretive and it tells

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you nothing about lighting ratios. You could argue that exposure could be corrected during processing, which it could, but if you needed to brighten the exposure this would surely create banding issues in the shadows since digital cameras do not assign much bit-depth to dark tones. This whole situation seemed like the perfect time to freak-out but for some reason I just let go, maybe the laid back vibe of islands got through to my frenzied mainlander brain, or more likely too many things had gone wrong and my brain said, "Enough!" and let go. Anyhow I completely relaxed, cleared my mind, and a few short moments later a solution popped into my mind; some time ago while teaching a group of photo students about strobe/flash lighting, I came up with a metering solution for those who couldn't afford flash meters, this temporary solution turned your digital SLR into an incident flash

Flash Meters:

If you create lighting with studio strobes or portable flash units special meters are required. Non-flash meters such as the one built into your camera, can only read constant light, to meter the burst of light from a strobe or flash you need a flash meter; these are designed to read not only constant light, but also bursts of light from strobes and flashes.

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meter without using the in-camera meter at all! Acting on this memory, a homemade 'filter holder,' made of rolled, duct tape with sticky side out (see Image [3]), was wrapped around the front of the lens (see Image [4]). With the tape in place, a blank sheet of clean white paper, torn from a notebook which always resides in my camera bag, was stuck to this 'filter holder' completely covering the front of the lens with clean, blank, unwrinkled white paper (see Image [5]). With the camera held next to Sherri and with the white paper end of this impromptu meter pointed at Rick's speed-light (see Image [6]), several exposures were taken. With each exposure Rick varied the flash output with its manual output settings creating a series of captures that look like solid grey swatches ranging from brighter to darker. Looking in turn at each image's histogram on the back of the camera, I chose the image whose histogram spiked in the middle at middle grey (see Image [7]). This method works only if the paper is the same density as the paint on a middle-grey card, see callout box entitled 'Grey Card Incident Meter Explanation.' After identifying the best exposure from the histogram, Rick reset the speed-light to the manual power setting which created that exposure, I removed the white paper from the lens, and with the help of a flashlight aimed at Sherri's silhouetted face, auto-focused, and then captured a series of images of Sherri such as Image [1].

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Paper Test:

To test a given piece of paper's transmissive density relative to middle-grey:

- To reduce reading errors: set in-camera meter to spot meter, set focus to manual, throw image out of focus to blend the grey tone, set White Balance (WB) to AWB.
- Take a reflective meter reading (your in-camera meter is a reflective meter) off an evenly lit grey card or grey tone, be mindful of glare and of your own shadow on card.
- Take note of resulting exposure setting required for a correct exposure.
- Place the white paper over the front of the camera lens.
- Position front of lens with white paper covering so that they are now on the same plane and at the same distance from the light source as is the grey card. The camera lens and paper will now be pointed at the light source, if you are doing this test outdoors, that light source may be the open sky or it may be the sun directly.
- Depress the shutter button halfway, then look at the exposure indicator inside or on your camera. If the reading is the same as the initial reflective reading off the grey card, then you know that the paper has equal density to the grey card, if not take note of the difference and adjust exposures accordingly or try different white papers until you find one that is. I found that my regular office paper – Hammermill International Paper 20lb. 96 Brightness – was one-third of an f-stop less dense (transmissive) than the grey pigment of a grey card and that the paper from the note book I had on Hawaiian Sand Island shoot, which was one of the papers I originally tested with the aforementioned photo students, was right on.

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Lighting for Digital Part 16

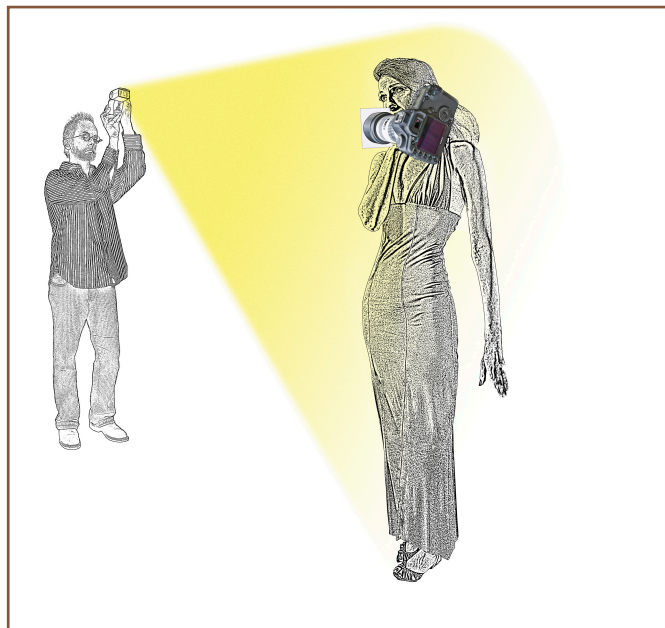


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It is funny how things turn out, with this shoot everything seemed to be working against us, but really it was only time we were fighting with, a photo-shoot is wrought with an infinite number of variables and so you need time to work through them. In the end I was pretty happy with the results of our efforts, even though it was too dark to get any video footage. I was also amazed at how fast the shoot came together – we managed to pull it off in just seven minutes from arriving at the spot to final click of the shutter – even though at the time it seemed like an eternity with the meter problems and with using the accurate, but cumbersome, white paper metering method. Also I was really thankful to work with people like Rick who know their stuff and with Sherri who needed little direction, simply tell her an emotion to portray and you were off and clicking.

A few points to wrap up with:

- I love the look of out of focus backgrounds and foregrounds because of the depth they lend to an image. Shallow depth of field (DoF) is a strong creative tool for creating the illusion of depth (3-D) in flat (2-D) reproduction such as a photo and so for that reason we created the perfect exposure on Sherri by changing the speed-light power settings rather than the camera aperture. Keep in mind that the perfect exposure doesn't have to alter camera aperture – the aperture can stay as is and the exposure can be dialed in by altering the light source power and/or changing distance of light source and/or, for constant light sources, changing shutter-speed.
- Hand-holding a light source is fraught with danger – Rick had to concentrate on holding the speed-light in place, if his concentration wandered, the flash would point off the mark and our exposure on Sherri would have suffered.
- What really makes the lighting work in this image is placement of the speed-light. If the flash had been left on camera, the shadows would have fallen directly away from the camera creating flat lighting. In my mind lighting should help create the illusion of depth in a photograph, not flatten it out. For this reason I worked with the flash off camera and to one side (see Image [2]), this positioning forced the shadows forward on Sherri. This light direction created a dramatic light pattern over her that portrayed the depth I was after. As for the shadows, some low level fill lighting at about 3½ stops below the working camera exposure did occur from the overhead sky.



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Grey Card Incident Meter Explanation:

When light hits a grey card, the light particles enter into the card's grey pigment, some of the light energy is trapped inside and some of the energy bounces back out. The card's grey pigment will always absorb the same percentage of light energy striking it and so, with the aid of a reflective meter which reads the escaping light particles, provide exposure settings for your camera that will place the grey card brightness in your capture at the appropriate level. If the grey card is correctly exposed then all other tones at the same distance from the light and on the same plane will fall into place too. When you use an incident meter, the white dome or disk absorbs as much light as a grey card's pigment allowing what is left to pass through to the meter's sensor. When you use my paper over the lens method, the paper is absorbing the same amount of light as does a grey card allowing what is left to get through to the camera's imaging sensor. If the paper's transmissive density is truly the same as a middle grey reflective density, then you will be able to predict accurate exposures relative to middle grey, see callout box entitled 'Paper Test.'

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