

Slow Tech Synch

See Image 001 of model Nikki de Winter-Brent sporting a fabulous red Vesuvius gown while flogging poison apples - proving that witches don't need to be ugly to get the job done! For this image I wanted to create an enchanted vibe to enhance the already great garden and greenhouse location and so, as always, I relied heavily on lighting to create that mood. But to get what I wanted wasn't going to be simple. As in most of my images I wanted the subject to pop out of the image, that is stand out from the surroundings (foreground and background). Lighting is the most effective tool for creating the illusion of depth in your images so to have complete lighting control, I created this image with studio strobes and mixed in a little ambient light. A close second for creating a threedimensional feel is Depth of Field (DoF), shallow DoF - I shot wide open at f2.8 on a 70-200mm lens rendering the background and foreground soft while keeping the dress crisp. The only drawback to shooting outdoors with strobe at f2.8 is shutter sync-speed. Generally speaking, ambient light levels from open sky or overcast sky require a shutter speed of 1/250th of a second when shooting at f 2.8 at 100 ISO – at that setting you are getting full exposure from the sky. What's wrong with this shutterspeed? It is above the shutter-sync speed of DSLR's and mirrorless cameras. Theoretically with an electronic 'virtual' shutter you can sync at any shutterspeed but there are other complications with these shutters so they are not much in use. Most camera manufacturers claim a syncspeed up to 1/250th but that is with a dedicated flash, many studio strobe units need a camera shutter speed longer than 1/200th to effectively capture the full burst of light they produce. Beginning to see the problem?

But it is even more complicated than that because, to do dramatic lighting with strobe/flash outdoors, you usually need to overpower the ambient light and so require an even faster/shorter shutter speed. For a dramatic look, I wanted the ambient light from the open sky to be under-exposed by three stops, that would mean a shutter speed of 1/2000th of a second (1/2,000th is three stops darker than 1/250th). That's way beyond the shuttersync capabilities of my mirrorless camera. The first solution I came up with was to shoot with two 600 watt second (Ws) High Speed Sync (HSS) battery-powered mono-block strobes, one as a rim light in front and to one side of the subject (see Image 002E).

Unfortunately the fake sunlight strobe needed to light a large area and so had to be almost five metres away from the subject. A 600 Ws strobe could not give me the brightness I wanted-I needed the rim light striking Nikki to read 2/3rd's of a stop (incident meter reading) brighter than the camera setting to give an intense back-lit sun-lit look. Since 600 Ws was not strong enough for the rim light, I had to use some old but powerful studio strobes and lots of AC extension cords. Problem with this solution is these old relics had no HSS capability. In fact the unit used for the rimlight was a 4800 Ws beast and has a flash duration of 1/125th of a second. To shoot at 1/2,000th would guarantee no exposure from the flash since the syncspeed is so far off. So what to do? The only solution, which I dreaded, was to darken the image down with a neutral density (ND) filter over the lens. I didn't have any screw-on ND filters for my camera but I did have an old, but in good repair, square-shaped Kodak Wratten 3-stop ND filter that I was able to wedge into the lens shade so it sat against the lens well enough. A test shot revealed no noticeable loss of image sharpness due to this filter so I was good to go.



So why did I dread this solution? Dreaded because with through-the-lens viewfinders, the image appears really dark making the image hard to see. But, since I was shooting with a mirrorless camera - so not through the lens viewing but rather a very high resolution electronic OLED viewfinder - I was able to set the camera's 'Live View Setting Effect' to 'On' making the miniature OLED viewfinderscreen brighten right up to an acceptable level so focusing, directing the model, etcetera was as though the minus 3-stop ND did not exist! With three stops of ND, now the shutter speed could be slowed down to 1/250th and by changing my ISO from 100 to 50 dropped the shutter speed down another stop to 1/125th. Perfect! My exposure would be f2.8 at 1/125th of a second at 50 ISO under exposing the ambient light by three stops, giving me a slow enough shutter that camera would be able to record the burst of light from the studio strobe, and all this with a nice bright image in the viewfinder! The only danger with this is remembering that your hand-held meter for reading the strobe is not affected by the minus 3-stop ND filter on the lens and so you need to account for it while taking your meter readings. To make life easier for myself I reset the ISO on the meter to 3 stops less sensitive - dialled 50 ISO down to 6 ISO - now the minus 3-stops ND was accounted for every time I took a reading. How smart was that?

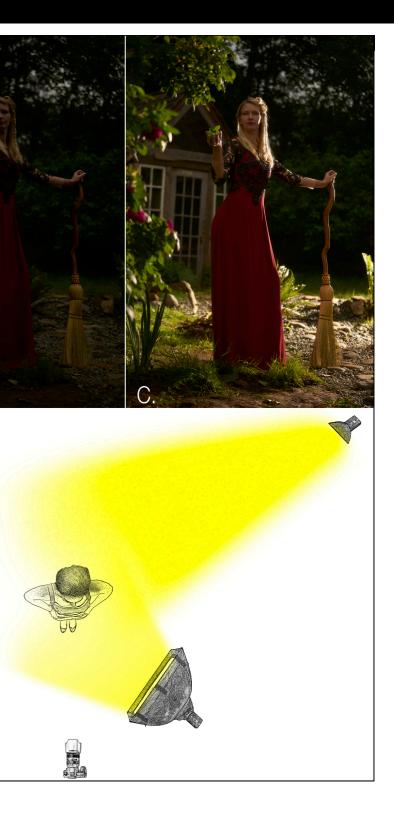
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dave MONTIZAMBERT'S creating with light



Imagemaker





As stated earlier, to get the overall scene's ambient brightness down low enough, I used a 3-stop ND filter and dropped ISO sensitivity by 1 stop. Why not use a 4-stop ND and forget the ISO change? ... certainly the way to go for cameras that can't drop below 100 ISO. Well my decision to go with the 3-stop was made for me, I only had a 3-stop, but yes a 4-stop would be a good solution if you have one. By the way, you can get 'light-sucking' ND filters from less than 1 stop all the way up to 10 stops. You can also put more than one together to build up to what you need, but each new layer of glass or gel degrades the image slightly. Also my solution of a 3-stop ND at 100 ISO – less darkening density over the lens allows the camera's auto focus to work better.

Well that sure was a lot of maths to pile through, but I did it all the day before the shoot so that on the day I could swagger around the set brimming with confidence rather than trying to look like I knew what I was doing while being completely freaked out! Planning ahead really does make a huge difference to more than a confident swagger, by metering the ambient light a day or two before, at approximately the time of day the shoot would occur, then doing the calculations discussed above based on those incident readings, really makes for a sane shoot with better quality captures that need less post production. Besides, my low-tech ND over HSS approach allowed me to justify keeping old gear from the 80s and 90s that my wife Sylvianne had been trying to get me to throw out for years!

Bio:

Let me tell you a secret! I'm not really a photographer ... I'm more of a light sculptor – I bend the light to my will, to my vision using lots of cool geeky lighting equipment then immortalise my creation with my camera.

I lecture internationally on lighting, digital photography, and Adobe Photoshop. Check out my Lighting and Photoshop tutorial DVDs for

www.software-cinema.com and www.photoshopcafe.com.

I'm available for lectures and workshops in your area and can be reached through *www.montizambert.com*.

Want to learn more cool lighting stuff? Check out DaveOnDemand at www.montizambert.com

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