Better Query Saul: Night Photography

With shorter days and colorful light displays, there are some wonderful opportunities for Night Photography – photographs where there is little light. Here are some tips to taking some great photographs.
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1. Use a tripod. Given the low-light capabilities of the newest cameras – especially some of the mirrorless- it is possible to handhold or brace the camera on a fence or some level plane. You don't have the same ability to choose longer shutter speeds, smaller apertures and lower ISOs if you handhold, and therefore I do not recommend handheld cameras for night photography. Some tripods have a level bubble that allows you to adjust the horizontal or vertical plane. Alternatively, some cameras have a horizontal level indicator on your screen.
2. Exposure. When I was taught night photography, the instructor said to always use manual exposure. You would have to start with a guess of aperture, shutter speed and ISO, and adjust these settings by trial and error. If the initial exposure is too dark, increase aperture, shutter speed or ISO. I listened to him that first time, but ever since then I've used **aperture priority** as my preferred setting for static images. My preferred aperture is **f8**, but I will increase my aperture setting to **f16** or f22 if I want existing lights to have star settings, or **f2.8 to f4**, if I want blurry backgrounds**. The higher the ISO, the greater is the noise –** I would recommend 200 to 640 for an ISO**.** For my Sony a7R3, I would typically use ISO 400**, f8** and let the shutter speed adjust to the ambient light. If the image is not static I would switch to **manual mode** or **shutter priority.**
3. Focusing. In general, it is not a good idea to use autofocus for night photography. Most cameras, even the high-end ones, have a difficult time autofocusing in lowlight situations. With my camera on a tripod, I use **live view** – the LCD screen at the back of your camera – to focus making use of the **+ or zoom-in** button to hone in on the object that I wish to be in focus. Some cameras have the ability to magnify the screen by a factor of 15 and 30, making it easier to get sharp focus. It is a good idea to fire the camera with either a remote shutter release or use the camera's self-timer setting.
4. Bracketing. Because exposure is strongly influenced by the limited available lighting, it will often be the case that the highlights are too bright and the shadows are too dark. A typical scene may be something like figure 1. Some of this can be corrected using the **highlights** and **shadows** sliders in Lightroom or Adobe Bridge, but often this is just not enough. I strongly recommend shooting in **raw** and **bracketing** your exposures. You can do this manually or with the automatic bracketing feature of your camera. Automatic bracketing allows you a choice of the number of exposures and the difference in exposure between shots. Most of the time I use 3 exposures with the overexposed shot 2 stops higher and the underexposed shot 2 stops lower. For example, if my 'correct' exposure was f8, 1/200 and ISO 400, the

overexposed settings would be f8, 1/50 at ISO 400. The underexposed settings would be f8, 1/800 at ISO 400. If you shoot using jpegs your ability to recover details in bright highlights is limited even if you bracket. You would then use the bracketed exposures along with a program that merges the photos to produce an HDR (High Dynamic Range) image[1].

5. Light trails. One of the more interesting effects that can be produced with Night Photography is light (or star) trails. See figure 2,3. With light trails you need to use slow shutter speeds – (1/30 to 30 second exposures). To photograph stars or night sky a typical exposure would be between 10 to 30 seconds.
6. Light Painting. If you have a 'small' subject – a person, an automobile, part of a building – rather than something like the Brooklyn Bridge or Manhattan skyline, you can enhance the lighting falling on your subject with a flashlight. With the camera using a slow shutter speed, use the flashlight to light the image and move the flashlight rapidly in order to cover your subject. The technique is known as Light Painting – and it will be the subject of a future column.

Figure 1. Note the highlights are too bright

[1] Lightroom has a very good HDR feature.

Figure 2. Note the light trails on the right of the photo.

Figure 3. Northern Lights.