

PRODUCING BRACKETED IMAGE SETS.

Many/most scenes that we wish to photograph present a wider ‘dynamic range’ – brightness levels between lightest and darkest tones – than can be captured with film or digital media. We have several choices:

1. expose for the brightest tones and allow the shadows to be under exposed and without definition - blocked
2. expose for the darkest tones and allow the light areas to be overexposed and without definition – blown
3. expose for the most important area of the image and accept whatever results obtain in the rest of the image
4. use Neutral Density filters when shooting to block part of the light from the lighter areas
5. shoot several versions of the scene with different exposures – bracketed set of images

There have been ‘many’ discussions on the pros and cons of these choices – not all of them friendly and soft-spoken. A recent innovation, High Dynamic Range (HDR) processing has been very successful in adding to the heat of the discussions without adding much light ☺. That said, it is my choice of the available methods.

A typical bracketed set would be five images, one stop¹ apart (-2/-1/0/+1/+2). I sometimes use seven images, one stop apart for very bright scenes (-3/-2/-1/0/+1/+2/+3), or three images, two stops apart for very dark scenes (-2/0/+2). Most dSLR (digital Single Lens Reflex) cameras have a bracket function. The bracket function allows one to select the number of image to be shot and the exposure difference between them.

Assuming one wants a five image set, one puts the camera on a tripod, sets up the bracket function for 5 shots one f/stop (eV) apart, adjusts f/stop and shutter speed according to the exposure meter, puts the camera in Aperture Priority (so the changes between shots will be changes in shutter speed), and presses the shutter release five times. It is strongly recommended to use a shutter release cable, or remote shutter control to minimize camera movement blur. If the camera is capable of burst mode, and is set up to shoot a maximum of five frames, one can just hold down the shutter release until the five frames have been shot. In any event, the five images produced as a result will be a bracketed set that can be used for HDR processing.

Note that the automatic bracket function is not necessary to produce a bracketed set of images. Manual mode can also be used. Assuming one wants a five shot set, one dials the preferred aperture, meters the scene, adjusts the shutter speed for two stops underexposed, shoots one shot, adjusts shutter speed for one stop underexposed, shoot a second shot, and continues to zero, one stop overexposed, and two stops overexposed to

¹ For whatever reason, a ‘stop’ is sometimes referred to as ‘eV’ which is actually a reference to ‘Electron-Volt’. You may see the intervals between exposures defined as 1 eV rather than 1 f/stop or 1 stop.

shoot the third, fourth, and fifth shots. Special care should be taken when making shutter speed adjustments to avoid moving the camera and producing mis-registered images.

It is also possible to produce usable bracketed sets shooting handheld. The images will not be well registered, however, both Photoshop and Photomatix have alignment tools. The Photoshop tool does a better job when it works and when the resultant images are usable by Photomatix. This is not always the case, and sometimes the Photomatix tool will be needed.

Starting with a bracketed set of images, various processing techniques can be used to blend/stack/merge them so the properly exposed areas from each image are used as building blocks from which an overall properly exposed scene can be constructed. Generally, all of these techniques can be defined as HDR processing. For my purposes, I prefer to use the PhotoMatix software from [HDRSoft](#). Detailed usage is provided in the Tutorial – [HDR Photomatix](#).