

OUTDOOR PORTRAITURE WORKSHOP

SECOND EDITION

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bryan@rollaphoto.com

Goals

The goals of this workshop are to present various techniques for creating portraits in an outdoor environment, including:

- Individual and group portraiture in an environment with variable lighting
- Available Light Photography
- Using fill flash to balance foreground and background brightness
- Using Manual Mode photography to improve quality and consistency
- Techniques for improving accuracy with Autofocus
- Using the LCD to judge image exposure and quality

Preparing for the Workshop

In order to practice the manual mode technique, it is necessary to know how to adjust a few basic settings on your camera. Please read through the manual for your camera and understand how to make the following adjustments to your camera:

- How to select the Manual exposure mode
- How to adjust the aperture to f/5.6, f/8 and f/11
- How to adjust the ISO to 100 and to 400
- How to adjust the shutter speed to 1/60 second
- How to adjust your camera to write RAW + JPG files
- How to view a histogram of an image on the LCD screen
- How to enable Highlight Alert on the LCD screen
- How to configure your flash for High Speed Sync (HSS) mode
- How to adjust Flash Exposure Compensation (FEC)

Don't worry if your camera doesn't have one or more of these adjustments. You'll still be able to participate.

Equipment Needed

Bring along any camera you have. Make sure your batteries are charged! We will be using RAW + JPG mode for this workshop, so bring extra memory cards with lots of free space on them. Any lens which covers the focal range of 35-200mm will work. Lens hoods are critical for any situation where direct sunlight might fall on the front element of the camera. If you have a flash, bring it, along with several sets of charged batteries. Reflectors are useful for adding fill lighting in available light images, and for blocking unwanted light from falling on the subject. We'll need several of these for the workshop, so if you own one, please bring it along.

Camera Settings

Exposure Modes

Automatic exposure modes such as P, Av and Tv are useful for beginners, but they place control over the exposure with the camera's electronics. Unfortunately, the camera has no idea of how we want the image to look. It has no idea what our subject is. The camera meter is easily fooled by white dresses and black tuxedos, backlit subjects, the way we frame our subject, skin tone, subjects which emit light, and low light levels.

Manual mode is the way we tell the camera what we want the image to look like. Manual exposure mode offers consistency and absolute control over the image exposure. Manual mode is completely unaffected by such things as the color of clothing a subject wears or the tone of the subject's skin. Manual mode is the way we gain control over overly-bright and overly-dark backgrounds.

Together, the Aperture, Shutter Speed and ISO control the exposure of the camera. Manual mode means that we must intentionally select a value for each of those settings. Don't worry - this doesn't mean that we need to know exactly which settings need to be used for every possible scenario. If you're using Av or Tv mode, you're already making two of the three choices necessary for manual mode.

ISO

ISO refers to the sensitivity of the digital sensor. Lower numbers are less sensitive, and are used in brighter situations. Higher numbers are more sensitive, and are used in scenes with lower light levels. Lower numbers result in images with less digital "noise" artifacts, so you should use the lowest ISO possible for a given light condition.

To adjust the ISO, start with the following guidelines: Use ISO 100 for bright, sunny days, and use ISO 400 for overcast days and twilight. If you notice that you can't achieve a hand-holdable shutter speed with the aperture you're using, increase the ISO speed until you can achieve an appropriate shutter speed.

Aperture

The aperture we choose, along with the focal length of the lens and the distance from camera to subject, determines the depth-of-field of the image. Depth of field is the range of distances from the camera at which our image will be acceptably sharp.

With most portraits, it is often desirable to emphasize the subject by selectively blurring the background. This is achieved by selecting a larger aperture with relatively less depth of field. An aperture of f/5.6 is common for individual portraits. Apertures of f/8 to f/11 are common for groups with multiple rows of subjects. After you become more familiar with critical focus, consider using f/4 or even f/2.8 for individuals, and f/5.6 for groups of two or fewer rows. As we move further from the subject for full-body portraits, depth-of-field increases for a given aperture, so smaller apertures (such as 2.8 or smaller) can be used.

Shutter Speed

Our goal is to select a shutter speed which provides a correct exposure, while still allowing the photographer to hand-hold the camera without fear of camera movement showing up in the image. Since everyone's photography style is different, it will be up to the individual photographer to determine a maximum acceptable shutter speed. For lenses commonly used for portraits, this maximum shutter speed for a hand-holdable camera is probably in the range of 1/50 – 1/100 sec. To choose a shutter speed, follow this process:

1. Start with 1/50 sec (or the maximum shutter speed that you determined previously).
2. Look at the display and/or histogram to determine if the exposure is correct.
3. If the image is too dark, change the ISO to a higher value and go to step 1.
4. If the image is too bright, adjust the shutter speed to something shorter than 1/50sec and try again.
5. If the shutter speed is less than 1/250sec, consider changing the ISO to a lower value and go to step 1.

Exposure Compensation

Here's a tip it took me months to figure out: In manual mode, the Exposure Compensation control on your camera does absolutely nothing! To add more or less light to an image, adjust the shutter speed (for background exposure) or flash exposure compensation (for subject exposure).

Flash Exposure Compensation

At the time of autofocus, the camera uses exposure info to calculate an appropriate exposure for the dedicated flash (if one is used). Flash Exposure Compensation is used to modify the power of the light that the flash emits. Since the subject is typically much closer than the background, the flash only illuminates the subject. The result is that we can vary the Flash Exposure Compensation control to vary the brightness of the subject relative to the brightness of the background.

RAW vs JPG Files

In this workshop, we're just learning manual exposure. To ensure that we still have usable images, even if we miss the exposure by a couple of stops, we'll be shooting RAW files. RAW files have to be converted to JPG before they can be printed or placed online, so this does mean a bit more work (but not much more – really!). RAW files have the added advantage of allowing us to correct shadow and highlight information MUCH more effectively than we can with JPG files. This can be important when dealing with contrasty subjects. If it makes you feel better, it's fine to shoot RAW + JPG.

Focal Length

Focal length is largely an artistic choice. The exaggerated features and barrel distortion created by really wide angle lenses of 28mm or shorter make them poor choices for portrait lenses. I use a 24-70mm lens (or the full-frame equivalent) for 90% of the portraits I shoot, however I never use it at less than 35mm.

Telephoto lenses (over 100mm or the full-frame equivalent) are excellent choices for close-up portraits. They compress facial features and offer shallower depths-of-field.

Exposure

There are various ways to determine if the exposure you've chosen is correct:

- The in-camera meter still works in manual mode (and you should still ignore it!)
- The LCD screen
- The Histogram

Once you determine the correct exposure for a given scene, you don't have to make changes unless the lighting changes! And remember: When shooting RAW mode, if you make a mistake of up to two stops, it can be corrected later!

The Camera Meter

No, seriously – ignore this thing! It's the same meter that the automatic modes use to ruin your masterpieces!

The LCD Screen

The LCD screen can be used to determine the exposure of the image, but this technique can take some practice to master. The basic technique is to adjust the exposure until the skin tone of the subject on the LCD screen matches the tone of the subject.

Note: Even though we're shooting RAW mode and can choose to select the white balance later, the setting of the white balance does affect the appearance of the image on the LCD screen. The white balance setting on the camera should be set to match the lighting falling on the subject.

The brightness of the LCD screen is adjustable on most modern SLR cameras. Regardless of the viewing conditions, I recommend setting this brightness to one of the middle levels and leaving it there. Otherwise, changes in brightness of the screen will influence how photos appear to be exposed.

Highlight Alert

"Highlight Alert" is another feature offered by some digital camera manufacturers. Highlight Alert is a setting which will highlight overexposed portions of the image during image playback. Highlight alert will indicate completely exposed portions of the image by flashing those areas, or by placing a zebra-striped outline over them. Highlighted areas mean that those portions of the image are overexposed, and detail is being lost in that part of the image – this is called "clipping". It's acceptable for some extremely bright portions of the image to be clipped, we just don't want that area to cover important details of the image, such as the subject or important portions of the background.

The Histogram

The histogram is yet another way to judge the exposure of an image. The histogram shows a graph of the number of pixels (vertical axis) versus the brightness of those pixels (horizontal axis). The left side of the graph represents information in the shadows. The right side of the graph represents information in the highlights. Each of the five divisions in the histogram represents approximately one full stop of light.

The typical histogram looks like a mountain. Darker images will have the mountain of pixels on the right side of the graph, and brighter images will have the mountain of pixels on the left side of the graph. To ensure that the image isn't overexposed and information isn't lost, make sure the right side of the mountain doesn't touch the right side of the graph.



Histogram of Properly Exposed Image



Focus

Where to Focus

In the case of a portrait, always focus on the eyes. In a traditional portrait, the eyes are the only thing that need to be in focus. If the subject is standing at an angle to the camera, focus on the eye closest to the camera. In the case of multiple people, focus on the eyes of the person closest to the camera.

Autofocus Failure

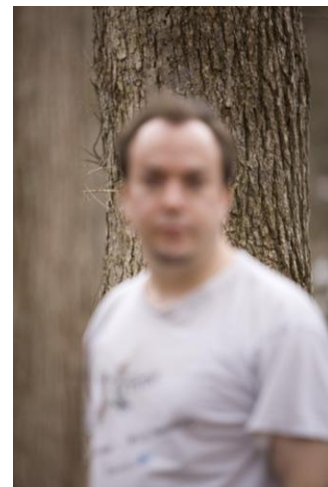
Sometimes autofocus doesn't focus on the subject. Sometimes the camera guesses incorrectly about the subject. This usually happens when there is a high contrast object (such as a brick wall or a tree) in front of, or behind, the subject. To eliminate this problem, use the "Autofocus Lock" technique shown below.



Front Focus



Correct Focus



Back Focus

Autofocus failure can also occur when there is very low light available, when the subject and background are approximately the same color, or when there is no sharp detail in the image. To correct the failure, try turning on more lights, or switching to manual focus.

Focus Lock Technique

The subject isn't always in the middle of the image where the camera focuses, but the focusing point usually is. For most cameras, exposure is also determined at the time the camera autofocuses.

It is common practice to use a technique called "Focus Lock" to focus on an off-center subject and in the case where the camera autofocus incorrectly guesses the subject. This technique ensures that the camera knows where the subject is in the scene for the purpose of determining the correct focus and exposure (which is required for dedicated flash photography).

To perform the Autofocus Lock technique, do the following:

1. Look through the viewfinder and adjust camera position and focal length to compose the image.
2. Temporarily move the camera to place the eye of the subject nearest to the camera in the center of the frame.
3. Press the shutter release half-way, and wait for the camera to achieve focus on the subject. The camera will indicate that it has focused by beeping, or by outlining the focusing point in the viewfinder with a lighted box, or by displaying a box around the portion of the image that has auto-focused in the LCD display.

Note: Keep the shutter release button pressed half-way down for the next steps.

4. After the camera has focused on the subject, the photographer can change the position of the camera to compose the image.

Warning! The distance between the camera and subject should not change after the focus has been locked.

5. Finally, press the shutter release the rest of the way down to take the photo.

Note: Modern cameras contain many AF sensor points. However, the center sensor is more sensitive than other sensors, which is useful when working in low light or with filters or lenses with small maximum apertures. The center sensor is usually a cross-type sensor, which means it works well in both landscape and portrait modes.

Extra Credit #1

If your camera is capable of spot metering (or partial spot metering), select that mode for much finer control over where the camera meters. Even though we're using manual mode, metering is still used by the flash to determine flash exposure, and flash exposure is subject exposure.

Extra Credit #2

You can gain much more control over the area where the camera autofocuses by selecting a single focusing point, instead of the default area focusing points. If so, you should choose the AF point which is most sensitive, or which is labeled as a cross point sensor.

Location and Lighting

In outdoor portraiture, our goal is to place the subject in location which offers light which is flattering to the subject. Desirable portraiture lighting typically comes from the side, rather than from above the subject, is even in intensity, and is as soft (diffuse) as possible. We should choose a location which offers a pleasant and photogenic background which doesn't distract from the subject.

Location

When selecting a location, pay careful attention to the background. Try to eliminate distractions such as overhead lines, signs, and people who aren't the subject of the photo. Our eye tends to be drawn to bright objects, so bright objects in the background would distract from the subject, and should be avoided.

Sunny Days

Direct sunlight is a horrible choice for photography – it provides harsh and unflattering light, and creates deep shadows on the face. Shadows from overhead lighting, including the sun, can create "Raccoon Eyes," and other unflattering shadows on the subject's face. We can accomplish this by photographing at times near sunrise and sunset, by using a flash, and by placing the subject in a shaded area at times when the sun is overhead.

Locations with open shade are an excellent choice for portraiture on sunny days. Place the subject in the shade of a tree, facing the light. Avoid locations which provide mixed lighting (some shade, some sunlight) on the subject – digital is much less forgiving than film with respect to uneven lighting, and this is not a condition which can be corrected later in Photoshop. If you can't locate natural shade, you can create your own. A reflector, umbrella, or sheet of cardboard can be used to block any direct sunlight from falling on the subject. An assistant is usually necessary to hold the reflector out of view of the camera.

Overcast Skies

Overcast days offer fabulously soft lighting which works very well for portraiture. Dull grey skies aren't terribly photogenic. Consider excluding the overcast sky from the shot, or intentionally overexposing the background to eliminate detail.

On overcast days, the light still has a direction. Since it is diffused by the clouds, it is now possible to place the subject facing the sun.

Available Light Photography

Available light photography means that we're photographing the subject + scene with no additional flash lighting.

Available light can provide an extremely soft light falling on the subject. Often times in outdoor portraiture, the subject is darker than the background (since we intentionally placed the subject in shadow). If we photograph this scene without a flash, we have two choices of exposure, both of which have shortcomings:

- Expose for the background, in which case, the subject will be too dark.
- Properly expose the subject, in which case, the background will be much brighter than the subject, with the background possibly losing detail and turning white. This is usually the better of the two choices.

One of the issues often associated with available light photography are "Raccoon Eyes" – dark shadows around the eyes of the subject when the light comes from above, rather than from the side. The best solution is to use a fill flash. Reflectors can also supplement the available light, at the expense of harsher lighting and possible subject squinting. Therefore they should only be used if a flash isn't available.

Balancing Foreground and Background Light

To balance the brightness of the subject to the brightness of the background in contrasty lighting conditions, we need a flash. The goal of the flash is not to become the primary light source illuminating the subject, but rather to supplement the light which is already lighting the subject. This is called "Fill Flash," as it fills in the shadows. Flash also helps to provide a natural color to the subject's skin in the portrait.

1. Stand 6-12ft from the subject. The working distance of dedicated flashes when used outside during the day is usually 15ft, and even less if a modifier is used.
2. Using the Aperture, ISO and Shutter speed controls, select an exposure which properly exposes the background.
3. Set the flash exposure compensation to 0 and take a photo of the subject.
4. If the subject is much darker than the background, increase the flash exposure compensation or move closer to the subject and take another photo.
5. If the subject is much lighter than the background, decrease the flash exposure compensation or move farther from the subject and take another photo.

When working with flash, there are two exposures which need to be set: The available light exposure, and the Flash exposure. The light which illuminates the background is sunlight, and the brightness of the background in the image is controlled by the ISO, aperture and shutter speed. The light which illuminates the subject is the flash, and the brightness is controlled by the flash exposure compensation. When increasing the flash exposure, watch the color of the subject on the LCD. A change from dull grey to proper skin tone is an indication that the flash exposure is configured properly.

Extra Credit #3

To place additional emphasis on the subject, decrease the brightness of the background by ½ stop.

Technical Aspects of Posing

People who are different distances from the flash will be illuminated differently. Try to compose scenes so that everyone is as close as possible to the same distance from the flash. Make multi-row groups as shallow as possible.

People who are different distances from the lens will be focused differently. For multi-row groups, be sure to select an aperture which will provide sufficient depth of field. Make groups as shallow as possible.

When posing a person with glasses, be sure the eyes are visible through the glasses. It's often necessary to push glasses farther up on the nose to be able to see the eyes of the subject. Also: During the shoot, be sure to examine photos on the LCD to be sure the glasses aren't creating unwanted reflections. If they are, you can reduce or eliminate them by using a flash bracket, with a polarizing filter, or by removing the glasses.

Try to position the camera so that the subject is looking up to the camera. This ensures that the head is closer to the camera, and can eliminate a double chin appearance.

Chimping

It's a good idea to periodically evaluate the lighting to be sure conditions haven't changed and that no settings have been bumped. Sometimes it's difficult to tell whether or not someone has blinked. Use the LCD panel and the Zoom and Pan capabilities of the playback mode to zoom in on faces to determine if the eyes are in focus, if a blink has occurred, and if glasses are causing unwanted reflections.

How to Deal with Blinks

For most cameras, the exposure happens at a time when the mirror is up, which means the photographer can't see when a blink might have occurred. It's a good idea to evaluate one or two photos to determine if the subject is prone to blinking. If so, be sure to shoot lots of additional shots. If blinks happen in a majority of shots, consider switching the flash off and using available light to photograph the subject.