

In the art world today, it is imperative that artists have good documentation of their work. There's even more importance for quality documentation when competitive variables are involved. Competing for graduate school acceptance, job applications, gallery submissions and any other situations involving a selections process all require the highest quality documentation possible to achieve acceptance. Most often, images of artist's work can be the only criteria considered. If submitted images aren't high quality, the result can be the quickest exit from a selections process.

When it comes to choosing the right camera for documenting art work, the first considerations will be image quality and functionality the camera can provide. Point and shoot cameras (compact) are very convenient but these cameras lack the sophistication to properly document artwork. A DSLR camera is the optimum tool for the job so it is recommended to become a little more familiar with these cameras and how they work. Moving forward in the world of creating artwork, an artist will find that documentation should be as much of the overall process as buying supplies. It's simply a necessary part of the equation and needs to be done with high standards in mind.

Basic Camera Functionality



Menu Button - Allows navigation through all menu options. For artwork documentation, “Quality Settings” will be the most important option to set.

Playback Button - Used to view captured images first and foremost. Pressing the **Info** button multiple times while viewing a captured image will provide added image info and camera settings applied to that specific image. Most cameras allow this button to toggle through full image view, full image view with added file info, thumbnail image view with info and thumbnail image view with info and an added histogram. After hitting **Playback**, use the **Zoom** buttons on the top right of the camera back to zoom into an image and view specific details and also check focus.

Info Button - Pressing the **Info** button while not in playback will provide information pertaining to settings that are set within the menu system such as time/date, color space, color temp., amount of free space left on a memory card, etc.

Zoom/Reduce Buttons-At top right of the back of camera and manipulated with your thumb to zoom into an image during playback.

Garbage/Erase Button- The trash can icon usually at the bottom of the camera back will delete a captured image.

Dioptric Adjuster Dial- Found connected to the view finder, this small dial can correct viewing for camera users who have bad eyesight. To use, set the lens to AF (auto focus) and press the shutter button halfway to focus on a subject. Turn the small dial until the image in the view finder appears crisp. This only changes the way the viewfinder presents an image for viewing and doesn't change actual focus of the lens on the subject. Note... if you wear glasses while shooting, be sure to have them on when adjusting the dial.

Exposure Dial and Shooting Modes



DSLR Core Shooting Modes:



-  **Full Auto** - Sets all camera settings without your intervention. This isn't optimum for artwork documentation because it can tend to enable settings that will provide less than optimum results. For instance, automatically activating flash, not allowing RAW capture, no control over ISO settings, are only a few reasons not to use this mode to document artwork.
-  **Program:** Aperture and Shutter are auto selected but can be altered using the dial or toggles on your camera. This will keep a same exposure level while altering depth of field or motion in the image. Similar to Full Auto, this mode isn't optimum for shooting artwork either due to camera intervention on specific settings.
- **(Tv or S) shutter-priority mode** – Allows user to set shutter speed while camera chooses other settings to achieve proper exposure. This mode is also less than desirable for documenting artwork.
- **(A) Aperture-priority mode** – Allows user to set the aperture to obtain the depth of field needed and the camera chooses other settings to achieve proper exposure. This mode is best when depth of field is most important and would be very beneficial to documenting artwork.
- **(M) Manual mode** lets you select both the shutter speed and the aperture. You normally use this mode only when the other modes can't give you the results you want. In Manual, you can control everything yourself but might take a little more experience to correctly balance exposure.

Image Formats and Quality Levels

Press the menu button to access quality settings found in the first menu screen.



RAW vs. JPEG...which one should you be using?

For artwork documentation, it is recommended to shoot in RAW format rather than JPEG. RAW files will give far greater control once editing images assuring correct color, white balance, exposure, etc.

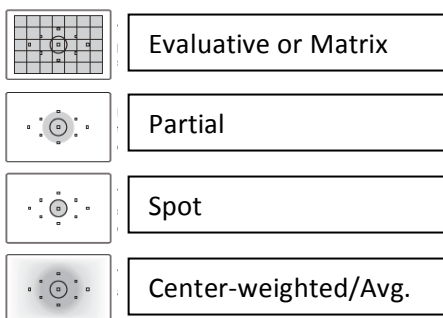
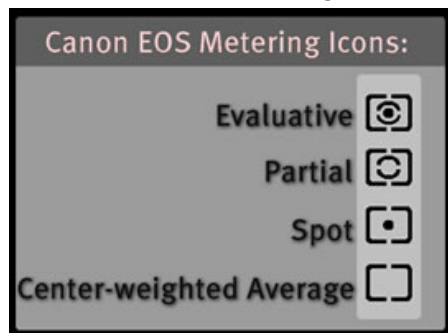
JPEGs are compressed files (reducing file size) that have added “in-camera” processing applied. These manipulations cannot be undone later and are permanent. Some of the original image data is lost for good after the compression is applied.

RAW images aren't processed in the camera as JPEG images are. With images captured in RAW format, all of the original data captured by the camera is saved allowing much more control over color and exposure and other settings. The camera settings used to capture RAW images are saved, but they are not permanently applied to images until saved as another format such as JPEG, TIFF or a Photoshop Document (PSD). **YOU** essentially process them later using software. Adobe Camera RAW (ACR) built into Photoshop or Photoshop Elements is most commonly used to process and convert RAW files.

Metering to determine exposure


Most cameras offer more than one metering method. This setting can be important when documenting your work. Evaluative (or Matrix) metering will be the best choice for most situations. However, there are potential situations (especially with 3D artwork) that could benefit from more precise metering of a specific point on the artwork. Spot metering would be the best choice for this.

The most common metering choices include the following:



- **Evaluative or Matrix** metering divides the image area into a grid or zones taking separate readings from each and then uses averaging for correct exposure. This mode works well for most situations.
- **Spot**, or slightly larger **Partial** metering, evaluates only a small area in the middle of the scene. This allows you to meter just a specific part of the scene instead of relying on an average reading across the whole image. This mode is especially ideal when photographing a subject against a bright or dark background.
- **Center-weighted** meters the entire scene but assigns the most importance to the center of the frame where the most important objects usually are located.



Metering modes can be changed by pressing a dedicated button on the camera that looks like this  or in the Quick settings LCD screen using the toggles or dials on the back of the camera.



THE EXPOSURE TRIANGLE

ISO, Shutter Speed, and Aperture



ISO (International Standards Organization)

ISO pertains to the sensitivity of your sensor for the available light conditions. The higher the number, the more sensitive to light the camera sensor will be.

When documenting artwork, it will be best to set the ISO to 100 or 200 but not higher. Higher value settings can result in undesirable digital noise (multi colored specs seen more in shadows and mid tones of image) and decreased image quality. Because you will be documenting your artwork in somewhat lower light environments, this lower ISO setting will be compensated by simply using a longer shutter speed while the camera is kept stable on a tripod.

Lower ISO = less light sensitive but less digital noise resulting in smoother, less grainy images

Higher ISO = more sensitive to light but results in more digital noise resulting in images with decreased visual quality

Aperture Priority--“AV” or “A” on the mode dial

Using this shooting mode allows the user to set the lens aperture setting to control exposure and also depth of field. The camera will make adjustments in other areas to achieve correct exposure.

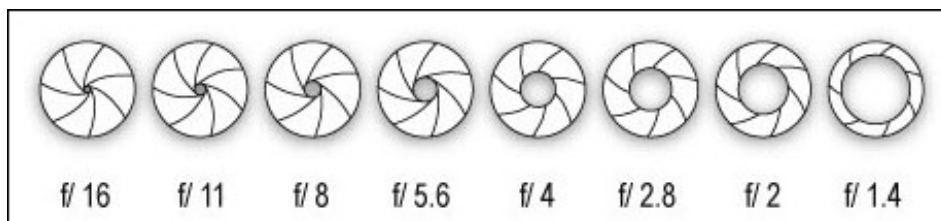
The aperture diaphragm, a ring of overlapping leaves within the actual camera lens, determines the size of the opening in the lens through which light passes to the image sensor.

Aperture and exposure-The aperture can be opened up to let in more light or closed (stopped down) to let in less. Opening up and closing down the aperture is one way to make images lighter or darker.

Aperture and depth-of-field - Aperture settings also control the depth of field. Depth of Field (DOF) is the depth in a scene from foreground to background that will be sharp in a photograph. Outside of this DOF is generally blurred or out of focus. The smaller the aperture you use, the greater the area of a scene that will be sharp. Controlling the aperture can be very important when documenting 3D artwork because often, it can be necessary to have as much of a 3D object or in focus as possible to show all details.

Understanding aperture settings

Common Aperture examples:



Aperture settings are referred to as f-stops and indicate the size of the aperture opening inside the lens. F-stops have traditionally been f/1, f/1.4, f/2, f/2.8, f/4, f/5.6, f/8, f/11, f/16, f/22, f/32, f/45. No lens has the full range of settings As the f-stop number gets larger (f/8 to f/11, for example), the aperture size gets smaller allowing less light to reach the camera sensor.

Shutter Priority--“TV” or “S” on the mode dial

Using this shooting mode allows the user to set the camera shutter speed to control exposure and also show or freeze motion. The camera will make adjustments in other areas to achieve correct exposure.

When documenting artwork, typically longer shutter speeds are needed. This will require added stability for the camera so using a tripod is necessary.

The shutter and exposure-Slower shutter speeds let more light strike the image sensor making an image lighter. Faster shutter speeds let less light strike the image sensor resulting in a darker image.

The shutter and motion-In addition to controlling exposure, the shutter speed controls how motion is captured in a photograph. Understanding shutter speeds is vital if you want to anticipate if a moving subject will appear in your image sharp or blurred. The longer the shutter is open, the more a moving subject will be blurred in the picture.

Understanding shutter speed settings -There are a series of settings that have traditionally been used in regards to shutter speeds although more are available in between these settings. Some traditional shutter speeds (listed from the fastest to the slowest speeds) include 1/1000, 1/500, 1/250, 1/125, 1/60, 1/30, 1/15, 1/8, 1/4, 1/2, and 1 full second. Shutter speed duration can be lengthened in intervals all the way to 30 seconds.

Documenting your work

This set up is what would be considered a basic, standard set up. Variations will sometimes be necessary depending on the work being shot.

What you will need

- Proper space to shoot work
- Tripod
- Photo specific lighting (recommended and optimum)
- DSLR Camera (recommended and optimum)
- Memory Card (most cameras use SD memory cards)
- White Balance Card or something similar like a white paper plate
- Photoshop Software and Adobe Camera Raw which generally is built into Photoshop

Process and camera set up

1. **Set Quality Level**- Press the Menu button on the back of the camera and go to Quality. Set Quality to RAW capture.
2. **Set White Balance**-Cameras default to AWB (Auto White Balance). AWB does a pretty good job in most cases but if you are ever shooting and not going to use Adobe Camera Raw for adjustments and color corrections, you might consider setting white balance to match the lighting conditions of the shoot. For example, Daylight, Tungsten, Fluorescent, etc. If shooting in RAW, White Balance can be set after the fact during editing of the RAW files.

3. **Set camera ISO to 100** – This setting corresponds to the camera sensor and how sensitive to light it is while shooting. Higher numbers can help when shooting in low light situations but also produce digital noise in images which can compromise the quality of a final image.
4. **Set mode dial to Av (Aperture Value)** - This is recommended but other modes could be used. Av mode is a “semi-auto” mode allowing you to set your aperture while your camera sets shutter speed accordingly for proper exposure.
5. Once in Av mode, you will want to set the camera aperture to f5.6 or higher. If you are shooting 3D artwork, it could very well be necessary to go to higher number f-stops like f16 or f22. These settings will help provide a greater depth of field to ensure that the overall object is in focus and parts of the work don't start to blur.
6. **Insert memory card into camera**
7. **Check battery and battery life**
8. **Attach camera to tripod** - A tripod is absolutely necessary to stabilize the camera. Shooting artwork under continuous light generally will require shutter speeds too long to handhold the camera without movement causing blur or “camera shake.”
9. **Set up lights** – For 2D, generally lights are set about 35 degrees off of the wall on either side of the artwork