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## **How to set your digital camera to photograph art**

### **Some basic misconceptions and the truth**

Just because you capture your images as a JPEG, it's ready for digital jurying. Or, the sales person at the camera store told me to set the camera at a lower resolution setting because I told him I needed a JPEG file. Your new out of the box digital camera is set wrong. It's set for auto everything and not even the highest quality JPEG. You need to change your settings before photographing your artwork. These are the instructions that should come with every new camera when you need high quality images of your artwork.

### **Purchase and use a tripod**

Let me repeat. Always use a tripod. For the highest quality photographs with any camera, always use a tripod to steady the camera. If you're using a DSLR and/or lens with built in image stabilization, or even a point and shoot camera with image stabilization, always turn the stabilization off when mounting the camera on a tripod.

### **Set the ISO to the lowest setting**

By default, the ISO is set to Auto which lets it fluctuate between the lowest and highest setting depending on the amount of available light. Lower ISO is higher quality with less digital noise. This is equivalent to ASA film speed where ASA 25 or 100 speed film is higher quality than ASA 400 speed film because higher ASA films have more grain. Digital noise is equivalent to grain. The less noise the cleaner the image.

### **Set the camera to capture the most pixels**

This won't be an option if you shoot TIF or RAW because those setting will always use the most pixels available. But it's really important if you shoot JPEG because you'll need all the information the camera is capable of capturing. Forget what that sale person told

you when you mentioned needing JPEGs. Web or social media sized JPEG images are too small for jurying. Additionally the JPEG setting in most digital cameras offers you a choice of compression quality. Always choose the setting that gives you the highest quality with the least amount of compression. It's usually called Fine JPEG. If you don't have enough room on your memory card, purchase a larger capacity card. Memory is cheap and you shouldn't let it dictate the quality of the images you produce.

### **Never use the digital zoom**

All consumer digital cameras have an extended digital zoom range. If you can't get close enough with the built in optical zoom, move your tripod. The digital zoom interpolates in camera and is not as good as cropping (and enlarging) in an editing program like Photoshop or Elements. To insure this never happens, permanently turn off the digital zoom in the set up menu. You should try and keep the optical zoom in the middle of the zoom range when photographing your art because there will be less distortion caused by lens aberrations.

### **Fill the frame**

Fill the frame as much as possible with your art so you end up using more of the available pixels. If your artwork is horizontal, position the camera horizontally. If your artwork is vertical, position the camera vertically. Use the most amount of image area you can in the long pixel dimensions. I recommend composing using 80% to 90% of the image area so it can be cropped in a visually pleasing way.

### **Turn off the flash**

Shooting artwork with the built in flash is ugly, causing hot spot reflections and too much contrast. Better to shoot without the flash and use window light with a reflector to illuminate the art, or shoot outdoors under your white canopy for even illumination.

### **White Balance**

To get more accurate color, set your white balance to match your light source. That will insure that the whites in your artwork show up as white in your digital files, which will let all the other colors fall into line. This is a difficult concept to grasp. I would suggest trying auto white balance first because sometimes, it's good enough.

### **Use a Macro Lens**

If you're using a point and shoot camera you have no options except to set your zoom lens in the middle of the zoom range to minimize distortion. If you're using a DSLR consider purchasing a macro lens, not a zoom lens with macro capabilities. Macro lenses are camera manufacturer's sharpest and most fully corrected lenses. For large artwork I recommend a macro lens in the 50mm to 60mm range and for smaller artwork or jewelry, a macro lens in the 100mm or 105mm range would be best.

### **Set your camera to Aperture Priority**

After setting your camera to aperture priority, set the F stop to F8 or F11 to ensure enough depth of field to keep the entire object in focus. Aperture Priority on Nikon cameras is the A on the PASM dial on top of the camera. On Canon cameras it's the AV setting. Jewelry is the most difficult art form to photograph. The smaller the jewelry is, the harder it is to get the entire piece in focus. That's because as you get closer with the camera, the depth of field gets smaller. For jewelry it might be necessary to stop the lens down even more to F16 or F22 for more depth of field.

### **Auto focus**

If you're using a point and shoot you have no options here. But if you're using a DSLR with interchangeable lenses, turn off Auto Focus (on the camera and on the lens) and focus on the piece manually. If it's jewelry, try and focus half way between the front and back of the piece to try and keep the entire piece in focus.

### **Auto Bracketing**

Set your camera to Auto Bracket at one stop intervals. What that means is the camera takes three pictures each time the shutter release is pressed, each at a different exposure setting, one lighter, one darker and one at the setting the meter thinks is accurate. By auto bracketing, you will have the option of choosing the exposure that is most accurate for the piece, not the background.

Some cameras take the three pictures automatically and some require three presses of the shutter release button. When using Auto Bracketing, make sure to finish the sequence before shooting the next piece of artwork. When the camera is set on Aperture Priority,

the adjusted exposure settings will result in different shutter speeds so make sure to be using a tripod.

### **The sRGB color space**

All digital cameras can create files in the sRGB color space. That's a good thing for digital jurying because the images will be projected, or viewed in a web browser, in the sRGB color space. More advanced digital cameras also may give you the option of the Adobe 1998 RGB color space. Either is OK for capture as long as you convert your digital file to the sRGB color space before creating your JPEG images for jury submission. RAW files do not capture in a color space. Choosing a color space for RAW files is part of the conversion prior to editing.

### **Save your settings**

Take notes as you set the camera properly to photograph your artwork. Make sure to write all the settings down and if possible, save the settings in the camera menu. Some higher end point and shoot cameras have a user setting on the top dial. Canon calls theirs "C", or C1 and C2 if they allow multiple settings to be saved. Nikon calls theirs U, or U1 and U2 if they allow multiple settings to be saved. After making all the setting changes, go into the menu and find the Save Settings option. Then choose which user setting to use and save the setting. Then in the future, you can use the camera to photograph your family or dog and set it back to C (or U) to photograph your artwork without worrying if your settings are correct. Some DSLR's have a custom or "My Settings" settings menu where you can add the important settings.

### **A JPEG is not a JPEG**

The image quality of a JPEG that a digital camera captures is almost indistinguishable from a TIF. For the purposes of digital jurying, you can shoot JPEG and end up with excellent digital jury images. That's why you should always shoot at the highest quality with the least amount of compression. I know I'm repeating myself, but it's important. The JPEG you wind up with after editing, if done correctly, will be a compressed JPEG and have little relation to the JPEG originally captured in the camera.

Opening your camera original JPEGs in an editing program – also part of image management

This is one of the most important facts on this page. When you first open your images in an editing program like Photoshop or Elements, go to File>Save As and specify either a TIF or a PSD, which is a native Photoshop file. Those are uncompressed image formats. A JPEG is a compressed image format which loses something with each modification. NEVER work on an original JPEG out of camera. It's your negative and you need to archive it. Working on a JPEG and pressing the Save button causes the image to degrade, even saving it at the 100% quality level. And if you save over the original, you've lost it forever. Always work on an image in an uncompressed format so any changes you make improve the image, not degrade it. If you have any questions, this is where you e-mail or pick up the phone and ask someone who understands, before you do any irreparable damage to your digital images.

### **Every digital image needs post processing**

Actually every photograph, either captured on film and scanned, or captured digitally, can be improved in post processing. This is really the reason we work in programs like Photoshop. It's not to just resize our images, but also to improve how they appear to others. After all, you want your image to accurately reflect how your art looks. That requires practice and is an acquired skill.

### **The smart phone camera**

Something I need to touch on. I can give you many reasons why you shouldn't use your smart phone to photograph your artwork, but there are artists out there who don't own a digital camera and depend on their phone to take whatever pictures they would use a camera for. Best scenario is to have someone else photograph your artwork with a real camera because even an inexpensive real camera can give you higher quality images than a smart phone camera can.

Smart phone cameras do not allow modifying ISO or exposure. They have a tendency to blow out highlights, meaning that the brightest areas of your images may not retain detail. For the most part, you're stuck with the images you get. They don't have the capability of being mounted on a tripod, though I know of two ways to mount them. But I can't see an artist see carrying a tripod if they don't want to even

carry a camera. The only way to get sharp pictures is to rest the phone on something sturdy at the correct height and take many pictures hoping to get one that's really clear. An iPhone app that I recommend is called Big Button Camera. It turns your entire screen into the shutter release so you don't have to take your eyes off the subject to tap the shutter release button. There are a number of camera apps that offer that feature.

### **iphone camera tip**

When using the iphone camera, the volume control on the headphones that came with the iphone acts as a cable or shutter release. Pressing either the up or down volume lever activates the camera.

### **Tripod mounts for cell phone cameras**

The Glif, which can be purchased from Amazon and another using components from Ram Mounts:  
<http://bermangraphics.com/blog/mounting-an-iphone-or-ipad/>

### **Managing your images**

Most of the suggestions in this part are based on my own workflow.

### **Importing the images to the computer**

There are two ways to import the images to the computer. The first is to use the cable that came with your camera. The second is to purchase a card reader that plugs into the USB port on your computer. Take the memory card out of the camera and insert it into the card reader. In both methods, the camera sees it as a hard drive and opens a window for you to copy or move the images. Or, if you have software on the computer that's determined to manage your images, it moves the images for you.

### **My suggestions**

I have never connected a camera directly to the computer. I always use a card reader. Before copying the images I create a destination folder. I never use software to move the images from the card to the computer, always manually copying them to the prepared folder using the computer's operating system. I always COPY and check to make sure they've moved before deleting the images from the memory card.

There are many programs that want to import the images for you. Lightroom, Picassa (PC only), iPhoto (MAC only) try to come to the task. The problem with any of the programs that want to import the images is that it complicates finding the images when you need them.

I create a parent folder on my hard drive. Within the parent folder, I create a folder using the date in yyyy/mm/dd format so any folders I create in the future stay in chronological order. For artist images I create the folder using the artist name if I'm photographing their artwork or working with the images they've provided. Within that folder, I create sub folders for original provided or captured files (I call the folder work files), full size masters, ZAPP formatted files and JAS formatted files. Every image in the ZAPP folder has a prefix of 1920- and every image in the JAS folder has a prefix of 2000- (I size JAS images to 2000 pixels long dimension) so that I know exactly what any size image is or where it's located. When emailing images, I never depend on any software to attach the images. I drag and drop them directly onto the attachment line of my e-mail program so they don't get reduced.

The key to successfully managing your images is to keep the originals untouched, and be able to find them when needed. Work on duplicates and save the edited versions in an uncompressed format like TIF or PSD (Photoshop native format) so your images aren't degraded. I use a good search program and can find files by artist name or image number within seconds. The program I use on my PC is called FileLocator Pro. I'm sure there are similar search programs for the MAC.

### **Editing your images**

Every image needs to be edited to appear accurate. In fact, artwork photographed digitally has the potential to be much more accurate than photographs of artwork taken with slide film ten years ago. Most artwork images require cropping, contrast and color adjustments before formatting for jurying. Make sure to edit the full size images and save them as your master in an uncompressed format, like TIF. That gives you something to fall back on if you make a mistake and need to start over.

**Emailing images**

Let's not forget the e-mail issue. IPhoto and Picassa automatically reduce the images when you need to e-mail them, as do some e-mail programs. Always look for the option to export at actual size. Small, medium and large are all reductions and are too small for jurying.

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