Using Your Digital Camera to Photograph Your Artwork

Sweet Pixels Fine Art Giclée
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Many artists wish to use their digital cameras to photograph their artwork for the purpose of making prints, web pages, greeting cards and promotional materials. Yes, you can do your own photography and get good results without the expense of paying for a professional photographer. In this paper we'll offer a few pointers to help you get better results. You'll probably need to consult your camera's manual to change some of its settings.

Lose the Shake - You're going to be photographing at relatively slow shutter speeds so the use of a tripod is essential to getting a sharp image. You can pick up an inexpensive tripod at most camera shops that will do an adequate job. The second element in avoiding camera shake is to eliminate movement induced by your fingers in pressing the shutter release button. Use a cable release if you have one, or just use the camera's self-timer.

Get Things Square - In order to minimize distortion of your image, you need to get the camera square to the artwork. The easiest way to do this is with a mirror. A few points on setting up your tripod and artwork to be photographed:

a. Remove any framing or mats to avoid problems of glare from glass or shadows from mats. Attach painting to easel (if you have one that will go vertical) or wall. If you paint in a medium where you will varnish the work, it is best to photograph the piece first in order to reduce glare.

b. Before mounting the camera to the tripod, determine the appropriate placement of the camera. If you're using a zoom lens, set it at a point where there is minimal optical distortion; generally midway between wide angle and telephoto. Looking through the viewfinder or at the display screen, move forward or back until the painting is close to filling the view. Set your tripod at this point.

c. Make sure camera is securely attached to the tripod. This is necessary because of slow shutter speed so that you don't get a blurred image and in order to get appropriate alignment with the painting. Make rough adjustments to the tripod so that the camera is at a height equal to the center of your painting and oriented approximately square to it.

d. Use a mirror located flat and centered on the artwork to help with aligning the camera square to the painting surface. The back of the camera has to be parallel to the work in order to avoid keystone distortion. Adjust the tripod until you can see the reflection of the camera's lens centered in the mirror.

Slash the Flash - The last thing you want is your camera's automatic flash making a major glare ball in the center of your image. Turn it off.

Get the Right White - The color temperature of the light that you are working with will dramatically impact the color-accuracy of your file. Digital cameras use a setting called "white balance" to adjust for lighting temperature. Typically, the automatic white balance setting works just fine for normal camera use, but when you are photographing paintings it can be thrown off by the colors in your work. There are manual settings for white balance on all digital cameras and you can choose the appropriate one for your lighting conditions: cloudy for outdoors in shade, tungsten for typical light bulbs, or fluorescent. Many cameras provide for reading a custom white balance by taking an exposure of a white or gray card. Check your manual.

Select the Best Settings - Make sure that you have your camera set at its highest resolution so that you capture as large of a file as possible. All things being equal, the greater the resolution, the larger the print you can make. Also make sure that you are recording the image data at the camera's best quality setting. Cameras allow a choice of higher image compression to save card space, but it will degrade your image. At a minimum, use your camera's best JPEG setting. If your camera allows you to shoot in RAW format and you know how to work with these files, this is your best choice as it records the most information, allows the most flexibility in processing the file, and doesn't make in-camera decisions that impact color, noise reduction, and sharpness.

If using a digital SLR camera or a point and shoot model that allows full manual settings – select aperture mode and set the aperture to somewhere in the range of f-5.6 to f-8. The lens is usually the sharpest in this range. If using a digital point and shoot model that only allows preset shooting modes – select **program** mode.

Keep the Noise Down - Digital cameras have a setting called ISO that determines the sensitivity of the sensor to light. In lower light when you use automatic settings on your camera, it is programmed to use a higher ISO setting to help keep shutter speeds up and minimize blurriness due to camera movement. Unfortunately, higher ISO settings come at the expense of greater digital noise (speckles of incorrect color or value). Since your camera will be on a tripod, you aren't worried about camera motion. Manually select an ISO of 100 or as close to that as your camera allows.

Get in the Right Light - The easiest lighting for photographing artwork is also the cheapest: outdoors in an evenly shaded area. The north side of a building (assuming you're in the northern hemisphere) is a good choice. Wherever you set up, avoid harsh direct light and make sure that the painting is evenly lit. Since weather and time of day can make this option difficult at times, consider a lighting setup if you will be photographing your work often. The diagram below shows how to set lights at a 45 degree angle to the artwork to minimize glare and unwanted reflections. Turn off other lights and close curtains to minimize reflections from other light sources. If your painting does not have a matte finish, the use of a polarizing filter on your camera lens and polarizing gels on the lights will allow you to dial out unwanted glare.
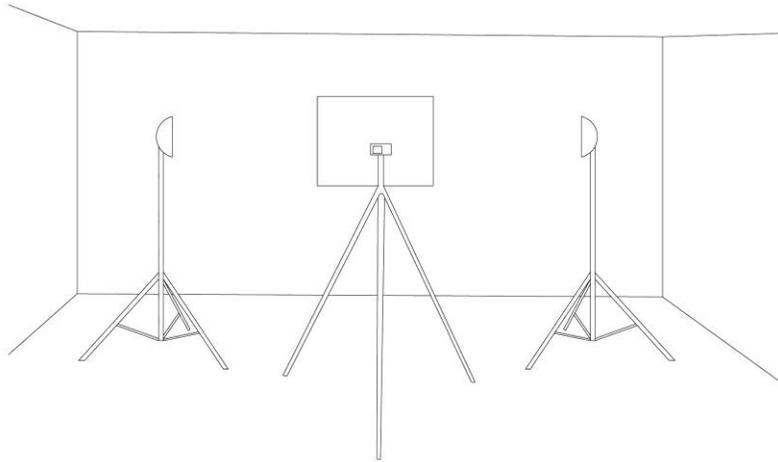
If using artificial lighting, use 250 or 500-watt photo bulbs available at major photo supply shops as they have the 3200K light temperatures that should match your camera's tungsten white balance setting.

You can use pro lights that provide for easy adjustment, or simply get photo fixtures with a metal reflector available at any major hardware store. The kind that clamp on can be attached to a chair back or other items to allow you to position the lights appropriately

If photographing oils or other materials that have a shiny surface, you will probably need to use polarizing gels placed in front of the lights and a polarizing filter on the camera. Rotate filter on camera until reflections are minimized.

A Bit About Resolution - We are frequently asked how large of a print we can make from a camera that records a given number of megapixels. The frustrating answer is "it depends". As a general rule, if an image is sharp and doesn't have much digital noise or glare in it, we can make a good print at 150 pixels per inch. This chart will give you an idea of how large we would generally recommend printing based on megapixel ratings:

6 megapixels = 2000 x 3008 pixels = 13.3" x 20"
10 megapixels = 2592 x 3872 pixels =17.3" x 25.8"
12 megapixels = 2848 x 4288 pixels = 19" x 28.6"

If you need a larger print, we can push the resolution farther, but you may not be satisfied with the sharpness of the image. We'd recommend getting a proof. It is also possible to take multiple images of sections of your photo and stitch them together in Photoshop. If you would like information on this process, please contact us via e-mail.

A Word About Color - Since we won't have access to your painting for color correction, we can't guarantee color accuracy when printing from your file. We do offer to mail you a color chart that you can place along side your painting when you take the picture. Using this color chart, we can adjust colors so that the chart matches ours here in our studio, helping us to get as accurate of a representation as possible absent having your original to work from. If you would like us to mail you this chart free of charge, e-mail us at info@sweet-pixels.com to request one, and be sure to provide us with your mailing address.

Shooting the Picture

- If setting exposure manually – meter a gray card in automatic mode and then set exposure according to camera readings. Using a gray card avoids exposure problems that can result with paintings that are either very dark or very light.

- Use a cable release or the camera's self-timer to avoid shaking the camera when releasing the shutter.

- Check image in LCD. Use camera's histogram display to check exposure. No darks or lights should be clipped (off graph to right or left). If the image is underexposed (too dark), either use a ½ stop longer shutter speed, or use the camera's exposure compensation (EV) and set it to + ½. If it's overexposed (too light), use a shorter shutter speed or set the EV to – ½.

- WHEN YOU'RE DONE PHOTOGRAPHING YOUR WORK, BE SURE AND RETURN THE CAMERA SETTINGS TO YOUR NORMAL SETTINGS.

Editing In Photoshop Elements

- Insert card in card reader or connect camera to computer using USB connector provided by manufacturer and download the picture to your computer.

- Open the file in Photoshop Elements.

- Select **"Save As" and save the file using a new name.** This way, if you make an error in your editing, you'll still have the original file to start over with.

- If your painting is rotated out of square, use the "Straighten Tool" to adjust it.

- Use the Crop Tool to crop it to the painting's borders.

- Virtually every digital photo can be improved through the use of the levels command. This adjusts the darks and lights so that the image has good contrast. Use the Levels command and adjust the light and dark sliders so that they just touch the "mountain" on the levels display. If need be, adjust the center slider to set midtone value.
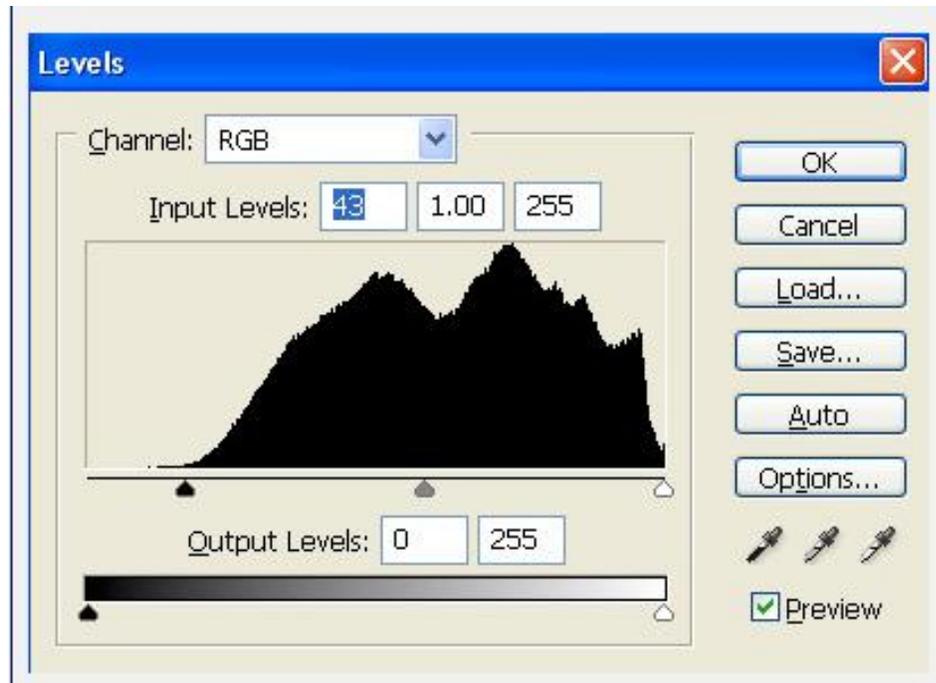
- If necessary, you can make adjustments to color using the Hue Saturation command. Use sparingly as it's easy to overdo this. Work on the appropriate color channels to only adjust those colors needing to be tweaked. Remember that whatever you do is only as accurate as your monitor's color display. At a minimum, use Adobe Gamma to adjust your screen to its best display. Consider buying color calibration software and colorimeter.

- If you need to re-size your image for various uses, use the Image Size command. **Remember to save the re-sized file under a different name.** Use the following rules of thumb to help you choose the right resolution and file type:

  i.   For Web use: 100 pixels per inch – JPEG (resample to downsize file to approximate dimensions you want it to appear on screen)

  ii. For inkjet printing: 200 pixels per inch (more is OK) – High quality JPEG, TIFF, or PSD

  iii. For offset printing: 300 pixels per inch – TIFF

  iv. For use in having slides made: 2" x 3" @ 1000ppi – center image on black-filled slide template. TIFF or High Quality JPEG.

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