How to Prepare Images for Digital Image Competition

Introduction

Preparation of images for digital competition is somewhat different than preparation for printing. See the Image Preparation steps required below. Some details for executing this preparation are shown later in the Details of Image Processing for Digital Competition.

If you shoot in JPEG or start with a JPEG image (filename extension .jpg) to create an image for submittal, you should always start from the same original un-edited image to create that competition image. Every time you edit a JPEG image and store it, you lose detail because of the file compression that is executed during the file storage process your computer executes. Keep a copy of the original JPEG file in a safe place (another folder or hard disk) where it will not be altered as you edit the working copy for competition.

Image Preparation:

All items below are mandatory for images you submit:

1. Size each image to a maximum of 1920 pixels wide and 1080 pixels high.
2. Images can be any size and aspect ratio as long as they adhere to these maximum width and height requirements
3. Sharpen the images to taste if your image editing software supports sharpening and you wish to do so.
4. Save the images in JPEG format limiting file size to 2 MB and using the naming specified by the Competition Submittal Rules.
5. Submit the JPEG images as specified by the "Guidelines for Submitting Digital Images."

Note: Most image editing software programs have file save commands that allow you to do this image conversion, resizing and saving automatically. Some examples are:
- Photoshop: File > Save for Web & Devices
- Lightroom: File > Export
- Photoshop Elements: File > Process Multiple Images
- Nikon View NX: File > Convert Files
- Picasa: File > Export Picture to Folder
- Aperture: File > Export > Version

For more details and help, read on.

Image Management

Get your images into your computer. Naturally you need images in digital form on a computer in order to create an image for digital competition. That means using images

from a digital camera, or even scanning slides or negative film. You could also scan rare old prints on a flatbed scanner.

Create a folder where your output image files for digital competition will be stored. For example, you could call it C:\Photographs - Club Competition Images. You can use whatever name and place the folder wherever you want. Save your images intended for competition into this folder. This way, you will always know where to go and find images when you are getting ready to submit one into competition.

Save your completed images as a master files in the competition folder and archive them for safekeeping. Warning: be sure you don't accidentally save and overwrite this master file after starting the process outlined below.

Details of Image Processing for Digital Competition

Processing your images for digital image competition often require you to execute some or all of the steps shown in this section to achieve best judging results. These steps are easily done in most photo editing software. Your workflow for image editing may not be in the order shown below. However, image sharpening should be the last step performed before you save the final image for competition if you sharpen your images.

If you only take JPEG photographs and they are stored in the sRGB image color space, you will not need to execute steps 1 and 2 because your camera does them for you.

1. Color Space. We suggest but do not require that you convert your image to the sRGB output color space if it is not already done in that space. For example, in Photoshop click Edit, Convert to Profile and select "sRGB IEC61966-2.1" as the destination color space.

If your images are not in sRGB color space, the colors in your images may be misinterpreted during competition because the HD TV used in our meetings uses sRGB for display. If you leave an image in Adobe or other color space, the image displayed in competition could vary from imperceptible changes to very poor fidelity--dramatic color shifts and reduced saturation, depending on the software used to display the images.

2. 8-Bit. If you normally work in 16-bit color depth and your image editing software does not automatically convert to 8-bit when storing images in JPEG format, you will need to convert your images to 8-bit before you store them for competition. Note: all JPEG images are 8-bit, so the fact that you can save your image in JPEG means it is in 8-bit format.

3. Downsize. With the aspect ratio ("Constrain Proportions") of the image size locked, change the image size (resample the image) to the following maximum dimensions:
- Height: 1080 pixels maximum
- Width: 1920 pixels maximum

As you change one dimension, you will see the other change automatically as the image editor software works to keep the same image aspect ratio. You can change either dimension until you get both dimensions under our size limits.

A landscape oriented image should have a maximum width of 1920 pixels and a maximum height of 1080 pixels; either dimension can be less than the maximum. A portrait oriented image should have a maximum height of 1080 pixels and a width less than 1080 pixels. Note: If you have a choice when performing this re-sizing, leave Resample Image turned on.

This downsizing preserves exactly enough information to get the best image display for competition while conserving storage space and making your images display faster during presentation to club members. Having a smaller image in portrait orientation than in landscape orientation will not adversely affect the judging of your image compared with those landscape images.

4. Set dpi/ppi. If the dots per inch (dpi) or pixels per inch (ppi) setting for your image is not already 72, you may want to change it to 72. Files used for printing are normally set at 240 to 300 dpi. Most computer monitors and HD TVs have a dpi/ppi of 72-96. Lowering the dpi/ppi setting of the image to 72 will not degrade the image when it is displayed for judging. Changing the dpi/ppi to 72 does prevents someone from printing your image as a high-quality print.

Technically, changing the dpi or ppi setting does nothing to the image data nor image size, but merely stores the number into the file's metadata to use for printing controls. However, changing to 72 dpi/ppi is sometimes necessary because display software such as PowerPoint will try to interpret the dpi/ppi data to set the size of the image. If the dpi/ppi is set to an unusual value (such as 4000 from a film scanner), the image may become distorted or incorrectly sized.

To change dpi/ppi using advanced image editing software such as Photoshop:
1. First, turn off resampling of the image by unchecking the Resample Image box on the image size change panel.
2. Second, set the image to 72 dpi/ppi.
3. Finally, turn resampling back on.
Note: Your image editing software may take care of the Resample Image steps for you when you change the dpi setting.

5. Save as a JPEG. Save the image as a JPEG file (.jpg file name extension) using the highest JPEG quality level available without exceeding the file size limit of 2 MB. You should not select an image quality level less than 70% or 7 on a scale of 1-12 nor less than Medium/Normal on a scale of Minimum-Maximum.

Some image editing software tells you the file size as you adjust the quality level, but the number may be rounded up or down. You will have to check the final file size using

Windows Explorer or another file viewing tool after you save it to be sure it is less than 2 MB.

Please note that you can reduce image save quality to as low as 7 or 70% to reduce the saved file size without adversely affecting the way the image displays in competition. This smaller file size speeds up file transfer when submitting the image and requires less storage space on the receiving computer.

Remember, during this save step, do not accidentally save the competition file on top of your original full-resolution file or you'll destroy that image with this low-resolution version.

6. Close the file, and you're finished with image preparation.

7. Submit the JPEG image as specified by the "Guidelines for Submitting Digital Images."

Advanced Techniques to Improve Your Digital Images

Monitor Calibration

Calibrate your monitor/computer combination for best results.

Without calibration, your computer monitor can display inaccurate colors, brightness and contrast. Images which look good on that uncelebrated monitor but may look different (usually worse) on the club's judging monitor and TV. Use a tool such as the Spyder2 or Spyder3 to calibrate your monitor, then verify that it looks accurate by scrutinizing a test chart. Be sure the software calibrates for screen brightness as well as colors. Some calibration hardware/software only calibrates for colors.

With some calibration products, it is possible to create a faulty calibration without warning. So check the results by eye every time and repeat the calibration if needed. Calibrations should be performed routinely – say, every month. The color, brightness and contrast response of your monitor will change over time due to aging of electronic circuits, wearing of LCD lamps, and fading of phosphors and LCD masks.

Sharpening Images

Apply final output sharpening to enhance your image as the last step before you save the image file for submittal.

You can improve many images by tasteful application of this final output sharpening. Tasteful is the key word here, as you will be sharpening based on the appearance of your image at the final size. Start by displaying the image at 100% zoom or "Actual Pixels" for images 1920 pixels wide or less, then adjust the sharpening to bring out the

best in your image. Watch for too much sharpening: bright halos around dark edges, over-emphasized textures, or too much brightness and definition in tree leaves. This sharpening is typically much less than you would use for storing an image for printing; sharpening radius is typically much lower for images sized for digital competition.