

Digital Entry Preparation FAQs

What are the requirements for image size, (pixel dimensions)?

Images must be down sampled (i.e., down sized) to fit within the native resolution of our Canon Realis projector which is 1920 pixels in width x 1200 pixels in height, far below the resolution of all modern cameras. (Similar down sampling is required for display on a monitor but generally by a lesser amount.) This down sampling may be accomplished using photo editing software or may be left for the projector to perform. The former method has been adopted for our submission requirements as it affords the photographer the ability to view the image in its final form prior to submission. It also precludes the need to compress the file with potential resulting degradation in order to satisfy the file size limit of 5 MB and ensures a level playing field by requiring all entries to have the same resolution. (A Google search for *How to size a digital file for projection* will yield results indicating this is the requirement of camera clubs worldwide,)

Therefore, submit images having pixel dimensions as follows: width equal to or less than 1920 pixels, and height equal to or less than 1200 pixels. To ensure the largest possible image while satisfying this requirement, one image dimension must equal the corresponding projector resolution dimension and the other dimension must either equal or be less than the other projector dimension. The aspect ratio of our projector is the ratio of its resolution width to its resolution height or $1920/1200 = 16/10$ which is typically written as 16:10. The aspect ratio of an image file is similarly defined as the ratio of its width to its height in pixels. Thus, an image having an aspect ratio of exactly 16:10 (the width is exactly 1.6 times the height, unlikely but possible), should be down sampled to a size of 1920 x 1200 pixels, exactly the resolution of the projector. If on the other hand, the image has an aspect ratio larger than 16:10 (i.e., more panoramic), its width should be 1920 pixels and its height will be less than 1200 pixels. If its aspect ratio is less than 16:10, its height should be 1200 pixels and its width will be less than 1920 pixels. A common mistake is to reverse these numbers, definitely not optimum.

This may sound complicated but these image size requirements are easy to accomplish using the image sizing function of your photo editing software (often found within the export function of the software as described in the examples below). Simply set the new image width in pixels to 1920 and height to 1200. Unless the image aspect ratio is exactly 16:10, the software will automatically reduce one of these settings to match the actual aspect ratio of the image. Some editors such as Photoshop will actually show you the changed value while others such as Lightroom will not. But, if you check the file once the export is complete, you will find that the change did indeed occur. Either the width will equal 1920 pixels or the height will equal 1200 pixels and the other dimension will be smaller than the specification.

It is highly recommended that you check the dimensions of your images before submitting them for competition. Images with pixel dimensions exceeding these mandatory limits may be rejected.

Images with both dimensions significantly smaller than these requirements will suffer from reduced detail and may be projected at a reduced size. Judges sometimes comment that low-resolution images seem to have focus issues or camera movement during exposure, and then they eliminate the image as technically inadequate.

What about DPI (dots per inch) or PPI (pixels per inch) resolution settings?

DPI, although often erroneously used interchangeably with PPI, refers to dots of ink per inch laid down on a page by a printer and refers to the resolution specification of a printer, not a digital file. A printer with a higher DPI specification will be able to print an image with more but smaller dots of ink and thus produce an image with greater detail. But, strictly speaking, it has nothing to do with the size or resolution of a digital file regardless of whether that file is intended to be output to a display device (a monitor or projector), printed, or simply stored on a computer (or in "the cloud"). It is not used in photographic editing software. A PPI setting, however, may be used to define the resolution and, thus, the ultimate size of a file intended for printing. While the size of such a file could be specified in terms of the number of pixels in each dimension, it is easier to specify the desired size of the print in inches and let the photo editing software determine the file's dimensions in pixels. The desired resolution in PPI is then specified to permit the software to convert the dimensions of the physical print in inches to the dimensions of the digital file from which the print is derived. For example, assume a file is to be used to generate an 8 x 10 print and that it is to have a resolution of 300 PPI (thought to be the ideal resolution for printing), the file size must be (8 in. x 300 PPI) pixels x (10 in. x 300 PPI) pixels or 2400 pixels x 3000 pixels. But PPI settings are not relevant to digital competitions as the image file dimensions are specified directly in terms of pixels negating the need for a resolution setting. In other words, the file's dimensions in pixels inherently define the file's resolution. Therefore, the resolution setting need not be set. Any default setting that appears is ignored by the software and you can ignore it as well. This setting applies only when the image dimensions are specified in inches as would be done if the file is intended to be printed.

What file size is recommended?

The file should be less than approximately 5 MB to facilitate submission via email and the Digital Coordinator's competition preparation. If you follow the image size guidelines above, your file size should be well within the prescribed limit; no file compression should be needed unless your image is very detailed and from an exceedingly high resolution camera. Even in that case, minimal compression should be needed to achieve the 5 MB limit. (Exceeding this limit by a small amount, say half a MB at most, should not be an issue,) If necessary, compress the image by reducing the image quality. See [*How to Prepare an Image for Competition*](#) for details on how to accomplish this in various photo editing applications. Generally compressing a file to 1/10 its original size will not cause noticeable degradation.

What about file name?

To allow the Digital Projection Coordinator to process the entries more efficiently, use the official file-naming convention:

Div[HYPHEN]Title with spaces[HYPHEN]FirstName[SPACE]LastName.jpg

Example: Adv-Red Tulips by Brick Path-John Smith.jpg

Do not use underscores; do not use hyphens in the image title or in your name. Use them only between you class, image title, and your name as indicated above.

Should I crop to the projector's aspect ratio in order to completely fill the screen?

Probably not. You do have this option, but we'd suggest you use your own artistic judgment to decide where to crop, rather than trying to use every available pixel. Our projector has a 16:10 aspect ratio: that is, the full image area is significantly wider than it is high. An uncropped horizontal 35mm frame, which has an aspect ratio of 3:2 (15:10), will fill the height of the image area but not quite the width; it will be displayed in the horizontal middle, with thin blank (black) areas left and right. A horizontal image cropped to a smaller aspect ratio will have wider blank areas on the sides. A vertical 35mm frame, while filling the height of the projected image area, will be smaller overall, with large blank areas left and right, and as such there will be less total detail displayed. An image with an aspect ratio greater than 16:10 (e.g., a wide panoramic shot) will fill the width of the image area, leaving blank areas on the top and bottom.

My images don't look the same on the projector - why?

There are three likely possibilities: (1) your own monitor is incorrect, (2) you forgot to convert to sRGB color profile, or (3) you're seeing limitations of the projector system. If your own monitor is not calibrated, or you're using an inferior monitor such as a laptop LCD screen, there is a strong possibility that your images will look different when projected. Our recommendation is that your images be converted to sRGB color space during image preparation, as that is the color space used by our projection system.

The Club has gone to great lengths to maximize the accuracy of the projected images. We have purchased a Canon Realis projector that is highly rated for photography. It employs LCoS technology that affords greater image accuracy than either the LCD or DLP technology used in most projectors. Our projection system (computer and projector combination) is calibrated using a photospectrometer to maximize accuracy of the projected images. The projector is connected to the computer using a digital High Definition Media Interface (HDMI) cable rather than an analog (VGA) connection which can introduce drift and, thus, non-repeatability. Nonetheless, you may see subtle variations between your monitor and the projected image as no projection system is 100% accurate regardless of price.

Preparing your images using a quality calibrated monitor and insuring conversion to the sRGB color space will minimize if not eliminate any such variations. Furthermore, conditions beyond our control such as ambient light in the meeting room can cause minor degradation of the projected image, most notably to black levels. The relatively high brightness level of our projector appears to overcome the effects of ambient light to a large

degree.