

## THE BLACK & WHITE PAPERS

### DALMATIAN'S DEFINITIONS

#### 8 BIT

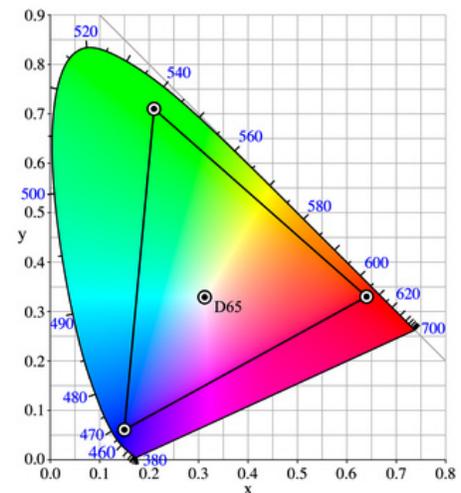
A bit is the possible number of colors or tones assigned to each pixel. In 8 bit files, 1 of 256 tones is assigned to each pixel. 8-bit Jpeg is the default setting for most cameras; whenever possible set the camera to RAW capture for the best image capture possible.

#### 16 BIT

A bit is the possible number of colors or tones assigned to each pixel. In 16 bit files, 1 of 65,536 tones are assigned to each pixel. 16 bit files have the greatest range of tonalities and a more realistic interpretation of continuous tone. **Note the increase in tonalities from 8 bit to 16 bit.** If your aim is the quality of the image, then 16 bit is a must.

#### ADOBE 1998 COLOR SPACE

Adobe '98 is the preferred RGB color space that places the captured and therefore printable colors within larger parameters, rendering approximately 50% the visible color space of the human eye. Whenever possible, change the camera's default sRGB setting to Adobe 1998 in order to increase available color capture. Whenever possible change this setting to Adobe 1998 in order to increase available color capture. When an image is captured in sRGB, it is best to leave the color space unchanged so color rendering is unaffected.



#### ARCHIVAL

Archival materials are those with a neutral pH balance that will not degrade over time and are resistant to UV fading. In reference to photographic prints, archival also refers to the ability of the material to retain its color, tone or blackness over time. Items that are acid-free are considered archival. For archival standards to be maintained, prints should be matted and framed in acid-free materials and hung out of direct sunlight.

## BORDERS

Photographic prints are often printed with borders to allow additional space for framing purposes or artistic reasons. Standard borders are white edges around the image and can be requested at any size larger than 1/8". Most sizes of bordered prints will crop the original image proportionally to the requested size. Borders are included in the final size of the print. Note how the image changes with the crop. **Custom borders available.**



4x6 Borderless Print



4x6 with 1/8" Borders



4 x 6 Full Frame



4x6 Full Frame Black Border

## BORDERLESS

Borderless prints show the image falling to the edge of the paper. Most sizes of borderless prints will crop the original image proportionally to the requested size.



5x7 Borderless Print



8x10 Borderless Print



11x14 Borderless Print



16x20 Borderless Print

## CAMERA RAW

Camera Raw is a plug in for Adobe Photoshop that allows you to open and edit a digital camera's Raw files. Camera Raw is most closely akin to shooting traditional negatives since all the information available remains embedded in the file. Just like shooting film, processing occurs in the Camera Raw Software after the image is captured. Tiff and Jpeg images are both "processed" in the camera without human intervention.

## CARBON PIGMENT INKS

Artists have used carbon pigments for centuries for their density, tone, and light resistance. Carbon pigment inks are the medium used in ink jet printers to create Giclées with the same properties. Lifespan rated at over 200 years when matted, framed and hung according to archival standards.

## CROP

Cropping is the enlargement of an image with a portion of the image removed for proportional or aesthetic reasons. Most standard sizes will crop proportionally depending upon the original negative or file size and chosen print size. Crops can be minimal and determined by the paper size or they can be customized and printed on any size paper. 35mm format will be cropped least on 4x6s and 8x12. See **Borderless** for examples of cropping.



4 x 6 Custom Crop



5 x 7 Custom Crop

## DIGITAL

Any photographic process that deals with the capture of a photographic image via a digital capture and stores the image as a bit map. Digital images can be viewed on a computer screen or printed as photographs on any number of papers including those coated with photographic emulsions. Lifespan depends upon storage as well as output material.

## DODGING & BURNING

Dodging and burning are respectively the selective lightening and darkening of specific areas of a photographic image to customize and enhance the tones of the image. Dodging is often used to lighten faces or areas of interest. Burning is often used to darken highlights that distract the viewer from the areas of interest.

## DPI / DOTS PER INCH

Dots per inch (dpi) is the measurement of the number of ink dots sprayed per square inch in an ink jet printer.

## DMAX / DYNAMIC RANGE

The dMax is the amount to shadow tonality in a print or negative that maintains printable detail. In digital terms, dynamic range is the ability of a scanner to pull out these shadow details. Ratings for dynamic range can run from the high end at 4.2, like the **CREO EVERSMART SUPREME** to 3.6 in the **DURST SIGMA 67** and lower.

## FIBER BASED PAPER

Silver gelatin fiber based papers are cotton rag paper coated with the silver halide photographic emulsion. Because there is no plastic coating that is common on RC papers, the image sinks into the paper more creating a sense of depth, luminosity and tonal range. Photographers choose this paper for museums, galleries, or heirloom prints. With toning and proper archival handling, the longevity of fiber based prints can exceed 200 years.

## FULL FRAME

Full frame prints show the entire image that is present in the negative or file without any cropping. White borders are present on both the height and the width but the borders are not equal. This allows for the whole image to show without cropping. Dalmatian uses ½” borders by the fall as our standard Full Frame. **Custom borders available.**

## FULL FRAME BLACK BORDER

Full frame black border prints show the entire uncropped image that is present in the original negative plus a thin black line surrounding the image that is created by showing the RAW edge of the film. For digital files, the black line is created around the file for artistic effect. **Custom borders available.**



5x7 Full Frame



8x10 Full Frame



5x7 Full Frame Black Border

## GICLÉE

A Giclée (zhee clay) is a high end, superior resolution ink jet print on archival watercolor paper or canvas with pigment inks. The French term means “to spray forcefully”. The printer uses a continuous tone technology by which very small droplets of ink are capable of rendering an amazingly smooth and consistent image. Because there are no screens involved, Giclée prints have an even higher resolution than lithographs. Lifespan estimated at 200 years or more. Giclee prints have an equal or even extended lifespan to traditional Fiber based prints and are in collections of major museums and galleries. For more information of the longevity of the fine art prints, take a look at the [Wilhem Research Center](#). Wilhem tests archival qualities of printing materials. They are the most respected in the industry when it comes to questions of longevity.

## GLOSSY

Glossy photographic paper has a high sheen and excellent reproduction of fine details. Glossy RC paper shows fingerprints due to its high sheen. Fiber based glossy paper has slightly less sheen so fingerprints are not as evident.

## INTERPOLATED RESOLUTION

Scanners typically have two types of scan modes, interpolated and optical. Interpolated scan enhance the resolution of a file by measuring scanned information and adding new values or information to create a larger scan size. Photoshop and other imaging software also have the necessary capability of increasing file size by means of interpolation. The more a file is “rezzed up” or interpolated, the greater the file degrades. When it is necessary to “rez” up a file, the safest procedure is to work in 10% increments.

## JPEG

JPEG is a compression format for digital images that receives considerable processing in the camera. This processing includes adjustments to white balance, density, contrast, sharpness, and color saturation. Files tend to be small (only 3 bytes per pixel) and quick to download, however, images lose quality with each compression and saving of the file. Jpegs are best used for emails or website. Output from Jpeg files need to be small in size with little adjustment to avoid degradation of the image. Jpegs are only available as 8-bit.

## OPTICAL RESOLUTION

Scanners typically have two types of scan modes, interpolated and optical. Optical scans only measure and interpret the available information producing the most accurate scan of the original material.

## PEARL

Pearl photographic paper has a medium “tooth” or texture that looks slightly glossy but does not show fingerprints.

## PIXEL

The pixel is the basic unit of the composition of an electronic image as on a computer or camera screen. The complete array of pixels makes up the full image and can be in any combination of colors or grayscale.

## PPI / PIXELS PER INCH

Ppi or pixels per inch is the measurement of the number of pixels of digital information that make up one linear inch.

## RESIN COSTED PAPER

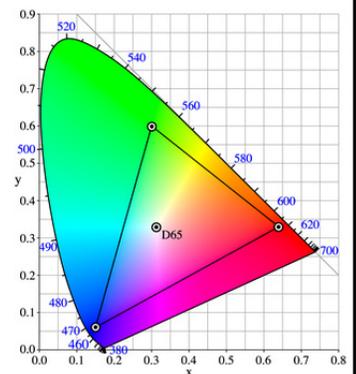
Resin coated or RC paper is a layer of photographic silver halide emulsion coated onto a piece of photographic paper backed by a white plastic coating. These prints are more economical but are less archival than their fiber based counterparts with a lifespan of approximately 75 years. Toning can extend this lifespan.

## RAW

A RAW file is a collection of unprocessed data that has not been altered or manipulated by the camera or capture device and contains the most pixel information and dynamic range of any capture mode. The image remains unprocessed until opened by the computer therefore you retain the most image detail without increasing save times. RAW files tend to be 2 – 3x larger but are faster than Tiff files and can be brought into the computer as either 8-bit or 16-bit and saved as Tiff or Jpeg. In this mode, the photographer has the ability to process the file including control over white balance, tint, hue and exposure. ***RAW files are considered the closest counterpart to a traditional negative with the computer being equivalent to the darkroom.*** Whenever possible, change your camera’s default setting from Jpeg to RAW for best image capture.

## sRGB COLOR SPACE

sRGB is a standard RGB color space that places the captured and therefore printable color space within certain constrained parameters that are well inside (by about 1/3) the visible color space of the eye. Because this color space was originally designed for 8-bit Jpeg files, the colors rendered are smaller in range. Most digital cameras’ default settings are sRGB. Whenever possible change this setting to Adobe 1998 in order to increase available color capture. When an image is captured in sRGB, it is best to leave the color space unchanged so color rendering is unaffected.



## SEPIA TONING

Sepia toning is an archival process that replaces the less stable silver in a traditional black and white print with a more stable substance called silver sulphide. Silver sulphides changes the tone of the print from black and white to brown and white; a range of different brown tones can be achieved by altering the percentage of the replacement or by the undertone of the paper color. Warm tone papers produce an antiqued brown and cold tone papers produce a chocolately brown. Sepia toning is achieved by washing, bleaching, washing briefly, and then immersing in the sepia bath (silver sulphide solution) and rewashing the print to archival standards. Lifespan increases to over 200 years.

## SELENIUM TONING

Selenium toning is an archival process that increases image permanence, intensifies the blacks in the image and only slightly alters the color of the image. The selenium toned print has a cooler look with a slightly purple hue, shadow detail is intensified with no loss of highlight detail. Selenium toning alters the silver halide compound in the photograph with a more stable compound called silver selenide which will be less affected by airborne contaminants that degrade silver gelatin prints over time. This labor intensive toning process is achieved by the completed print receiving the following baths: wash, plain Hypo, Selenium Toner + Hypo Clearing Agent, wash, Hypo Clearing Agent, archival final wash. Lifespan increases to over 200 years.

## SEMI-MATTE

Semi-matte fiber based photographic paper has a strong “tooth” or texture that appears velvety and has no sheen. It is also excellent for hand tinting.

## SILVER GELATIN

Silver gelatin is a photographic emulsion coated onto photographic papers in order to produce traditional black and white prints. The coating can be applied to resin coated papers or fiber based papers.

## TIFF

Is an uncompressed file format for digital images that are higher resolution in nature. These files receive “processing” in camera that includes adjustment in white balance, sharpness, contrast, density, and color management. Tiff files tend to be larger in size (8-10x larger than Jpegs) and therefore are slower to transfer. The benefit of a Tiff file is that it does not lose quality with each compression and saving of the file. Therefore, files that receive manipulation or must be used at higher output sizes need to be captured as or initially saved as Tiff or RAW files. Tiff files can be stored as either 8-bit or 16-bit.

## TRADITIONAL

Any photographic process that deals with the capture of the image via a silver halide emulsion is a traditional process. Silver gelatin negatives and prints are traditional. Dalmatian offers a hybrid digital printing process where we print digital capture on traditional RC silver gelatin paper.

## VIGNETTE

The photograph is printed in an oval shape that gradually fades out to the same shade as the paper the image is printed on.

## WARM TONE

Warm tone prints have a warm black and white image tone on a warm white or “eggshell” paper base. This selection is especially nice for images that are to be sepia toned. Dalmatian’s fiber based prints are always on Warmtone paper.