

PRINT SIZES and ASPECT RATIOS

SPACE

Photographs are customarily printed on paper that is considerably larger than the image size. This is to allow handling space to prevent the fingerprints from degrading the print quality (archival printing). This also produces a print that looks finished, as if it were in a mat. Quite often portfolios of photographs are presented unmatted, in a portfolio box with slip sheets between the photos.

Bottom line – make prints that are about 2 inches smaller than the paper on all sides. Since the aspect ratio of a film negative is different from most digital pictures, there are two sets of values.

For Film Negatives:

This equates to optimum size: 4 x 6" on 8 x 10"

maximum size: 5 x 7.5" on 8 x 10"

Pictures larger than this should be printed on larger paper.

optimum size: 7 x 10.5" on 11 x 14"

maximum size: 8 x 12" on 11 x 14"

To make the largest print possible, you can print

maximum size: 12 x 18" on 16 x 20" paper

For Digital Prints:

This equates to optimum size: 4 x 5.3" on 8.5 x 11"

maximum size: 5 x 6.67" on 8.5 x 11"

Pictures larger than this should be printed on larger paper.

optimum size: 7 x 9.3" on 11 x 14"

maximum size: 8 x 10.67" on 11 x 14"

To make the largest print possible, you can print

maximum size: 12 x 16" on 13 x 19" paper

maximum size: 15 x 20" on 17 x 22" paper

Some people like to print 6 x 9" on 8 x 10" paper, but the grain of 400 ASA film starts to fall apart at this enlargement, making the 4 x 6" image a better aesthetic choice. If you print larger on 11 x 14" paper, then the grain has a considerably larger and more textural appearance that looks good again.

If you are printing a sequence of pictures to be presented adjacent, you may want to push the prints to within one-half an inch of the edge of the paper.

BLACK BORDERS

Most art photographs are printed full-frame. This proves that the shot was composed in the camera, and the photographer did not depend on cropping to make the picture (which implies that they did not look carefully enough when they took the original shot (which means they probably missed the best shot, which was down an inch over two inches and one second later)). We have special filed-out negative carriers in the Darkroom that print a black border around the outside of the image. In digital photography we add the black borders in Photoshop (as part of the page setup dialog). A black border puts the finishing touch on a photograph and makes it look more professional. (Larger black borders can be applied when matting).

PRINT SIZES and ASPECT RATIOS, cont'd.

ASPECT RATIOS

When a photograph is printed full-frame the aspect ratio is set by the size of the negative produced by the camera. With 35mm film the aspect ratio is 2:3. Most digital cameras produce a 3:4 ratio. Medium format cameras produce a square negative, while large format cameras are 4:5. Seeing the aspect ratio give the audience information about the camera used, which includes how the photographer made the shot. This is because each camera see the world differently, because of its size and weight and its viewing system (ground glass, waist level finder, through the lens, electronic screen).

If a photographs must be configured in a non-standard way, some other aspect ratio should be used that makes sense to the image content. If you are going to make pictures in some non-standard size, at least have a good reason for the size you use. "Well, it looks good!" is not good enough. Answer the question - Why does it look good?

There are several 'magic' numbers that can be employed, such as:

1 : 1	6cm medium format film
1 : 1.16667	6 x 7cm medium format film
1 : 1.25	view camera film 4 : 5
1 : 1.333...	digital camera 3 : 4
1 : 1.5	35mm film 2 : 3
1 : 1.414	square root of 2
1 : 1.6180339...	phi - golden mean / fibonacci series
1 : 1.777...	high def video 9 : 16
1 : 2	double square
1 : 2.6180339...	phi ² - fibonacci squared
1 : 2.8333...	fuji pano camera 6 : 17
1 : 3.14159...	pi
1 : 3.46410162	square root of 12 (well tempered scale)
1 : 4.23604...	phi ³ - fibonacci cubed

The Fibonacci series or golden mean is an amazing proportion. Notice that phi squared has the same fraction as phi, and as the square root of phi (0.6180339, 1. 6180339, 2. 6180339) Leonardo Da Vinci used them to set the proportions of many paintings and sculptures. Look closely at "the Last Supper", or the drawing of the "proportions of a man's body". Then examine the Fibonacci series in nature. Many organisms on this planet are designed using this proportion, including the human body!

One link is: <http://www.mcs.surrey.ac.uk/Personal/R.Knott/Fibonacci/fib.html>