
SPEAKING OF ULF

by
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Even if you are an experienced Large Format photographer, you may have some questions about the move into Ultra Large Format imaging. There is more involved than just moving up to a larger film size. Going from either 35mm or Medium Format to 4x5, 5x7 or even 8x10 is not particularly difficult. If you have the equipment and space to make 8x10 prints, you can process sheet film all the way up to 8x10 with little trouble. But moving beyond 8x10 can be a challenging task if you are not fully prepared.

Keep in mind that moving up in film size requires that everything be larger. You know the film, the camera, film holders, and lenses are larger, but don't forget that a move to larger isn't just about the obvious. When the film gets bigger, so does everything else. . . including the load on your back.

I would never try to discourage anyone from moving to ULF. But, I would sincerely like everyone that is considering the plunge to understand what they are getting themselves into. . . before they start purchasing equipment. A blind leap can be frustrating and expensive. Nothing is more discouraging than to see an entire ULF camera system. . . everything from camera to a partial box of film. . . on Ebay for sale. This tells me that someone took the time to gather all the necessary equipment and materials only to discover they were really not cut out for the challenge. A little careful thought and preparation will save you a lot of frustration in the long run.

Here are a few points to consider before you take the plunge into ULF. Most items are obvious, but you might be surprised to find some things that you have not considered.

ULF FORMAT There are numerous film sizes available for the ULF photographer. Generally speaking, any film larger than 8x10 is ULF. You need to consider what format best suites your vision and the kind of imagery you create. Some ULF film can be considered to have a standard height to width ratio of about 1:1.25, like 4x5 or 8x10. . . these sizes extend into the ULF range with sizes like 11x14, 16x20 and 20x24. Then there are the wide formats, with ratios as high as 1:2.5. These film sizes are better known as the Banquet Format, or Panoramic Format. The format is strictly a personal choice. Do your homework here and choose carefully.

THE CAMERA Here is an important decision point. You can choose a vintage camera or a new one. Which is best? The choice depends greatly on your personal preference, and budget. If you buy a vintage fixer-upper it could cost you time and money to get it into useable condition. Remember a vintage camera will have to be sent to a custom shop for repairs. Fortunately, there are numerous new cameras in most all ULF formats from companies that will even custom design for you. Consider format, features, usability, factory support, your budget and your time carefully.

LENSES Here is where the sky is the limit. Lenses for ULF range from vintage to new. You need to understand various lens specifications in order to choose lenses that will work with your chosen ULF format. A little research will be needed to make sure you select lenses that are suitable for the format you choose.

FILM HOLDERS Another ULF challenge is finding useable film holders in the size required to fit the format you have chosen. Beware of vintage holders. . . they could be worn, warped and leak light. Most ULF formats have no standard for film holder dimensions. Be very careful you choose the correct holder to fit the camera you have chosen. There are numerous sources for new holders. . . be sure to specify the camera you have to insure proper fit.

FILM Always a moving target. . . Some ULF film is readily available. . . others are special order. Do your research here. One thing to remember, most ULF film available today is B&W only. If you want color film in ULF sizes, be prepared to spend major money for custom orders. Also be prepared to buy ULF film in quantity. Purchasing a year's supply is a good idea.

TRIPOD DO NOT FORGET THE TRIPOD. . . Very important!. . . a heavy camera requires a heavy tripod to adequately support its weight. A shaky, inadequate tripod will negate your sharp negatives and even worse do serious damage to your camera and lens if it collapses suddenly. Do not scrimp on the tripod! Don't even think of putting a large heavy camera on that tripod you use for 35mm!

CASES Don't forget about cases. You will need durable cases to protect the camera, film holders and lenses. Good cases are a must if you travel with your camera equipment. Do not scrimp here!

THE DARKROOM The thing about a darkroom is, no matter how large it is, it could always be bigger! Before you jump into a format that requires 20x24 trays, measure to be sure you have the room. Remember that you will need room to handle both wet and dry film. You will also need an appropriately sized washer and a place to dry your film.

CHEMICALS You will be using large volumes of chemicals. Whether you choose to use pre-packaged or mix your own, you will need accurate measuring equipment for larger amounts of everything needed for processing. You will also need larger containers and more room for storage.

PRINT FINISHING The goal of all of this is the finished print. You will need large sheets of mat board for mounting. Again, think of where you are going to store these materials. Also consider if you have a paper trimmer that is large enough? . . . how about a mat cutter? . . . dry mount press? . . . Don't forget boxes to store your prints and negatives.

TRANSPORTATION Something else to seriously consider how you are going to haul all of your gear into the field. If you go on the road, will your vehicle be large enough to hold all your equipment, and will it be accessible once on the road?

STORAGE Think carefully about storage. You will need space to store your unexposed film along with finished negatives and prints. If you buy film in quantity, you may want to consider a freezer. Space. . . Space. . . and. . . more space!

FILM SIZE inches	FILM SIZE mm	DIAGONAL inches	DIAGONAL mm
4x5	102x127	6.40	163
5x7	127x178	8.60	218
4x10	102x254	10.80	274
8x10	203x254	12.80	325
11x14	279x356	17.80	452
8x20	203x508	21.50	546
16x20	406x508	25.60	650
20x24	508x610	31.20	793

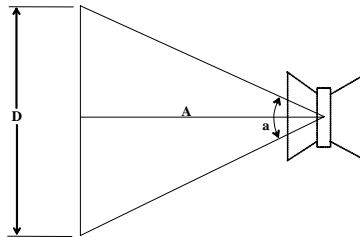
$$C = \sqrt{A^2 + B^2}$$

A = film height
B = film length
C = film diagonal

The table above contains diagonal measurements of commonly available film sizes, both measured in inches and millimeters along with the formula used to calculate the data. If you know the image circle of a particular lens, then you can determine which film sizes will work with the lens. For example, if you are contemplating buying a lens and you know the image circle is 325mm, looking at the table above you will immediately see that 325mm is the exact diagonal of a sheet of 8x10 film. This lens would probably work. But, you would have absolutely no movement available when using the camera. This lens would adequately cover 4x10 and would have generous coverage for 5x7 and 4x5 formats.

$$D = 2 \left(A \tan \left(\frac{a}{2} \right) \right) \quad a = 2 \left(\tan^{-1} \left(\frac{D}{2A} \right) \right)$$

A = Focal Length
D = Image Circle
a = Angle of Coverage



Use the formulas above to solve for either image circle "D" or angle of coverage "a."

NOTE: This is by far not a complete list of things to consider, but it is food for thought. As with most anything today, your best source for information is the Internet and a Google search. A little time browsing can yield a wealth of information. Also we would like to invite you to visit the web site of JB and Susan Harlin; www.jbhphoto.com

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