

VIEW CAMERATM

Getting Started in Large Format Photography

Copyright 2000 by View Camera Magazine

For the private use of readers only

No publication or reproduction allowed!

Welcome to the world of large format photography. By making this choice, you are entering a field rich in tradition. As you already know, many wonderful photographers including Ansel Adams, Edward Weston, Morley Baer, Irving Penn, Richard Avedon, Brett and Cole Weston, and others have used this camera to create a large body of wonderful photographs. You are also deciding, or will soon learn, that the process of creating a photograph is as enjoyable as actually hanging the finished product on the wall. The craft of photography is emphasized as part of the large format process, and you will have opportunities for creative control that have been unavailable to you by using fixed or nonadjustable cameras and roll film. The opportunity to individually expose and develop each sheet of film and correct and/or adjust the perspective of each photograph with the camera's movements—two of the primary advantages of the large format camera—will open up a new way of working and seeing for you. These advantages, along with the larger film and the inherent detail and texture that is produced by this larger film, will slowly convince you that large format photography really is just what you have been waiting for from the moment you first picked up a camera. Now that you have made this decision, you will undoubtedly have many questions. The first question is probably about buying equipment—what type, what brand, what format size, and whether to buy new or used equipment. Let's take a look at the variety of formats.

THE 4 X 5 FORMAT This is far and away the most popular size at the present time. The film area has almost twenty square inches of usable area which is much more than either a 35mm or medium format piece of film. This extra film area translates into much nicer enlargements that have wonderful detail and texture, information in your prints that was not obtainable in blowups from smaller negatives. Because of its popularity, the amount of new and used equipment for this format is the greatest of any of the view camera sizes. Stores in most major metropolitan areas will usually have some equipment on hand, and magazines such as View Camera, Shutterbug, and Photo Techniques will have advertisements from companies selling new and used equipment. In addition, both View Camera and Shutterbug have classified ads from individuals selling used cameras, lenses, tripods, and more. If you are moving up from 35mm, you may find the slightly more square proportions of the 4 x 5 require some getting used to before feeling comfortable. What you will enjoy is how well the 4x5 enlarges into prints of the popular sizes such as 8x10, 11x14, and 16x20. In all likelihood, the move to the 4x5 will require the purchase of a new enlarger for your darkroom if you plan on doing your own work. You may or may not have to buy special equipment to process your film, depending on how you decide to do the work. New and used enlargers are also commonly available as are the

lenses for these enlargers.

The standard enlarging lens for a 4x5 enlarger is either 135mm or 150mm. A 4x5 enlarger will usually fit into the same horizontal space as a medium or small format enlarger but may require more height. Before deciding what camera to buy, you should first make some other decisions.

Contrary to medium and small format equipment, where you can buy almost any camera body and then add any lens at a later time, in large format you should first decide on the range of lenses you want to use and then select the camera body that will accommodate them. Because of their design and bellows extension capabilities, some cameras are more suitable for longer lenses, others more suitable for shorter lenses, and others for a mid-range set of lenses. To begin selecting a range of lenses, you should take your favorite 35mm lenses and multiply them by a factor of three to determine a rough equivalent for the 4x5 format. (Remember, there are no zoom lenses available for large format.) If you are currently working with medium format, use a factor of two to determine the 4x5 equivalent of your medium format lenses. For example, if you are using a range of 35mm lenses from 28 mm to 105mm, your 4x5 set will include lenses from 90mm to 300mm. If your medium format lens sets include lenses from 50mm to 150mm, your 4x5 sets should include lenses from 100mm (actually 90mm would be a better bet) to 300mm. If you like a 24mm lens on your 35mm camera, the 4x5 equivalent is 75mm. If you like a 150mm lens on your 35mm camera, you will need a 450mm lens on your 4x5. If you do select a folding camera then be careful about selecting lenses mounted in a #3 shutter. These are relatively large and heavy and may not fit well, or at all, on a folding camera. More information about shutters will be given later in this paper.

The next area to consider is your choice of subject matter. If you will be seriously photographing architectural or table top subjects, you want a camera that has at least the following movements-front and rear tilt, front and rear swing, and front rise and fall. If landscape is your preferred subject, then you want at least front swing and tilt and back tilt. If studio portraiture is your subject, the movement requirements are the same as the landscape requirements.¹ Now that you have some idea about the range of lenses you would like to use and the primary subject matter you will be photographing, you can begin looking at the available camera bodies and select the one best suited to your needs. To start this search, I recommend selecting a camera body with a bellows extension capability at least 25% longer than the longest lens you want to use (50% longer is actually better). By having a bellows that is longer than your longest lens, you can focus on objects that are closer than infinity, which is generally considered to be 200 times the focal length of the lens; i.e., a 150mm/6" lens would be focused at infinity when the subject is 100 feet from the camera. For example, if you want to use a 300mm/12" lens, which is twice the normal focal length for the 4x5 format, I recommend a camera with a bellows at least 400mm/16" long. If you won't need anything longer than 240mm/9.25", the equivalent of an 85mm lens on a 35mm camera, then a 4x5 body with 12"/300mm of extension will be adequate. If you want to do close-up work in which the reproduction ratio approaches or exceeds 1:1 (where the size of the image on the groundglass matches or exceeds the size of the object in reality), then you will want a camera with very long bellows-at least twice as long as the lens you will be using for close-up work.² Now, if you will be using a lens that is shorter than 90mm, I recommend a camera that allows you to exchange the normal pleated bellows for a wide angle or 'bag' bellows. This is a softer bellows that allows you to use the full range of movements offered by the camera body and the lens without binding or restricting your creative controls. If you will be using extreme wide angle lenses, 65mm and shorter, then ensure that the camera can be used with these very short lenses and easily focused. Now for the next question-wood or metal,

monorail or folding? There are advantages to each and trade-offs as well. As a general rule, and there are many exceptions, the monorail style offers more extreme movement capabilities, but the folding cameras are more easily portable. The monorail cameras are made from various metals and plastics, and the folding cameras are made from either metal and plastic or metal and wood. All of the materials are treated in such a way so that the wood will not rot in most climates, and the metal will not rust along the sea coast. Many of the less expensive folding cameras may not be as suitable for doing serious architectural or studio photography, but then again, you might not want to take a high-priced monorail camera out to do landscape work. These are just personal preferences and not hard and fast rules. What is most important is to pick a camera body that offers the best combination of features that are most important to you-length of bellows and the ease of using wide angle lenses, movements, weight, portability, etc. The best way to select a camera body is to think through carefully and completely, as best you can at this point, the type of subject matter you want to photograph and the range of lenses you will be using. These considerations will eliminate some cameras that do not have the necessary features you want and will highlight other camera bodies that have more than you need. Most 4x5 cameras will weigh between three and ten lbs. Some photographers place great importance on light weight, and others prefer having a tight and very rigid camera to use, while other photographers want every movement possible. These are not necessarily incompatible features, but it may be difficult to combine all extremes in the same camera body since there are always some trade-offs. Consequently, it is again important to think about your preferences and subject matter requirements very carefully before selecting a camera. If in doubt, be sure to ask different people a lot of questions before choosing a body, and be sure to get a ten-day return guarantee before actually spending any money. The camera movements I consider essential are front and rear swing and front and rear tilt. These movements offer a great deal of creative control, and by using them effectively, you can duplicate all of the other movements. Additional movements such as front shift, front rise and fall, rear shift, and rear rise and fall are nice features to have but should not be considered vital to your future view camera success.³

THE 5x7 FORMAT The 5x7 format is a wonderful format to work with, but it is less popular than the 4x5 size. The 5x7 offers almost twice as much film area as the 4x5-35 square inches as opposed to 20 square inches-but the 5x7 camera is much smaller than the 8x10 size. In the United States most 5x7 cameras are made in the folding style and weigh between five and ten lbs. The 5x7 format's proportions are more rectangular than the 4x5, which offers an advantage since adjusting from 35mm may be slightly easier. New and used equipment is available for the 5x7 but not in the abundance as the 4x5. The 5x7 format can use a wide range of lenses, from wide angles designed for the 4x5 to long lenses for the 8x10 assuming that the camera has the capability in terms of bellows length and short lens focusing ability. The normal lens for the 5x7 format is 210mm/8.25 inches. To convert your 35mm lenses into 5x7 equivalents, use a factor of four; i.e., the 50mm becomes a 210mm, the 35mm becomes a 150mm, the 85mm becomes the 350/360mm lens. Use a factor of three to move up from medium format so that the normal 80mm becomes the 210-240mm, etc. A workable variety of black and white and color films is available for the 5x7 format. If you will be doing your own darkroom work, the 5x7 is large enough to consider doing contact prints only. This can eliminate the need for a new enlarger. If you want to make larger prints, used 5x7 enlargers are available relatively inexpensively, but you may want to add a new light source; be sure to figure this as an added expense before making any decisions. The normal lens for a 5x7 enlarger is in the 180mm to 210mm range.

THE 8 X 10 FORMAT For some, the 8 x 10 camera and the contact print is the

true test of a large format photographer. I worked this way for many years and learned a great deal of discipline. I do not recommend this approach for everyone. However, there is something special about an 8x10 contact print. The 8x10 camera is the largest format seriously considered by most photographers. 8x10 folding cameras weighs between eight and 18 lbs., and the monorail style weighs between ten and 20 lbs. Their size and the size of the related equipment, primarily film holders, can take up a lot of space in a case or travelling bag. There is a large supply of 8x10 film available in both black and white and color, as well as a good supply of new and used 8x10 cameras and lenses. When selecting lenses for your 8x10, remember to take your favorite 35mm lenses and multiply their focal length by six or your medium format lenses and multiply them by four to obtain equivalent focal length lenses. The rules regarding the bellows length which needs to be at least 25% longer than the longest lens, availability of a wide angle bellows for lenses shorter than 210mm, and basic movements are the same for the 8 x 10 format as outlined above for the 4x5.

LENSES The question of whether to buy new or used equipment is always present. Used equipment can be less expensive, but there may be trade-offs. The real difference lies between lenses that are not coated and those with a single coating. The addition of multi-coating is not as significant as the difference between no coating and a single coating that reduces the amount of light bouncing between the surfaces of the elements in the lens. Older, uncoated lenses will not produce the same degree of local contrast and color saturation as a single coated lens. Some people like this "softer" look, but be aware of your choice. The telephoto lens offers a way to use a longer lens on your camera that the bellows extension cannot allow. However, telephoto lenses are specially designed, which should be understood before making any decisions.⁴ Copal and Compur make the best shutters. Most newer lenses will come in a Copal shutter. The older shutters, such as an Alphax, Acme, etc. are reliable if they are cleaned and tested. The older compound shutters should probably be avoided as they are powered by air in a cylinder and are not reliable and almost impossible to fix. Most lenses will come in shutter sizes of #0, #1, and #3. Occasionally a long lens will come in an older #4 or #5 shutter. These #4 and #5 shutters are large and are probably best used on an 8x10 camera or larger. They are generally too big and heavy for folding 4x5 and 5x7 cameras, although they work for the monorail cameras.

PROCESSING SHEET FILM There are several ways to process sheet film. If you are working in color materials, the usual solution is to find a good, quality color lab and have them do the work. If you are working in black and white, you can process in trays, in tanks, or in a rotary drum of which there are several designs available in the marketplace.⁵

Footnotes 1 and 3 A detailed discussion of view camera movements is beyond the scope of this paper. Please refer to *Using the View Camera* by Steve Simmons, *Amphoto*. 2 Close-up work requires special lenses designed for close focusing. For specific information about these lenses please see the following articles in *View Camera Magazine*: *Closeup Lenses*, July 1989, pages 30-33 and *Up Close and Personal: Macro Photography*, July 1992, pages 32-38. 4 see *The Telephoto Lens*, March/April 1991, pages 41-48. 5 For a discussion of film developing techniques see *Processing Sheet Film*, July 1990, pages 46-49.