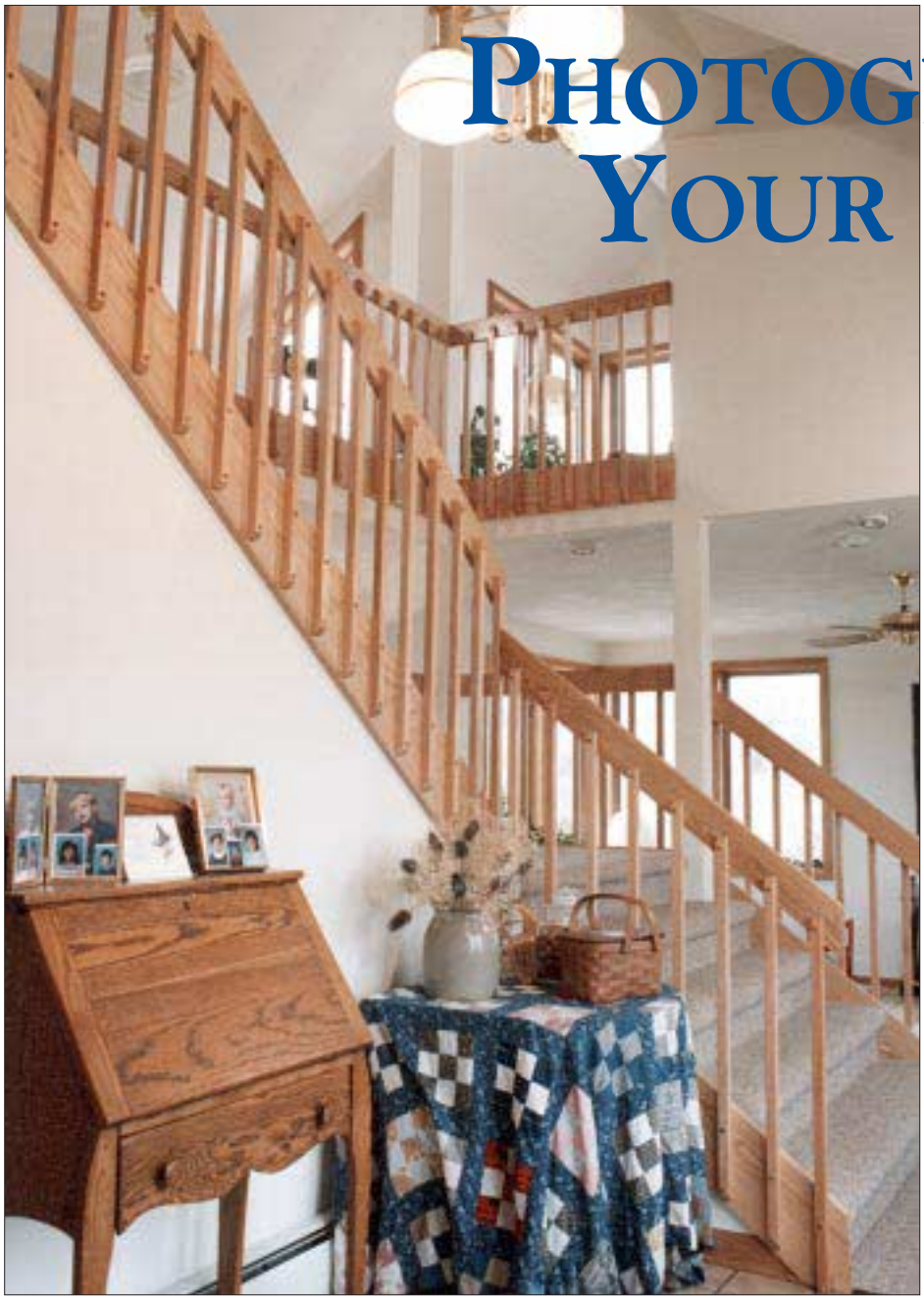
# Photographing Your Work

*by Benjamin Partrick*



*With a manual camera, plenty of light, and the right exposure, you can take good photos every time*

*Unlike a floor plan or a perspective drawing, a good photograph helps your customers imagine how spaces relate to each other, and the way light works in them.*

When you think of a builder's tools, the first ones that come to mind are circular saws, power nailers, and drills. But before you put any of that stuff to work, you've got to sell your services to someone. That's when a builder's "other" tools — computers, fax machines, and cellular telephones — become important.

One tool that doesn't get enough attention is the camera. A good photograph can help your customers imagine what it would be like to live in one of your creations. It can show how spaces relate to one another, and the way light works in them. With luck, a photograph can help customers get romantically involved with your work, something a floor plan or perspective drawing just can't do.

Of course, the success of a photographic portfolio depends on the skill of the photographer. Hiring a professional architectural photographer will cost $50 to $100 per hour. But you can achieve good results and save money by honing your own photography skills. You may not be able to handle every situation, but you can produce excellent results with a relatively modest outlay for equipment and a solid understanding of how to use it.

## Cameras

The technically sophisticated cameras sold today bear little resemblance to their counterparts of as little as ten years ago. Most high-tech features — auto-focus, auto-exposure, auto-winders, auto-flash, auto-zoom —

were designed to reduce the number of settings you need to make on the camera before taking a photograph. All this automation makes it easier to photograph action, such as a sports event. But houses usually stand pretty still (except in California). You can save a lot of money and get better results by following a few simple guidelines.

- ***Use a manual, single-lens reflex (SLR) camera.*** Unlike cameras with a "view-finder," an SLR lets you look through the lens, so you see exactly what the film "sees." SLR's also have interchangeable lenses, so you can frame your shots in a variety of ways. Unless your camera will do double duty for family snapshots, skip most of the "auto" features. They add needlessly to the cost and will keep you running to the owner's manual to figure out how to use them.

  Also consider buying a used camera. I purchased my camera used in 1977 and it has performed flawlessly since.
- ***Choose a large film size.*** The less a negative needs to be enlarged, the better. I wouldn't consider anything smaller than a 35mm camera, which is affordable and can give good results. For a much higher investment, you can buy a 120 format (roll film) camera. It has good features, it's portable, and it offers three negative sizes — $2\frac{1}{4}$x$1\frac{5}{8}$, $2\frac{1}{4}$ square, or $2\frac{1}{4}$x$3\frac{1}{4}$. These "medium format" camera bodies and lenses cost considerably more than 35mm equipment, but the improved image quality, especially in enlargements, is noticeable.
- ***Carry several lenses.*** In 35mm format, a 50mm lens is standard. For interior photography, however, you'll also need wide-angle lenses — 28mm and even 24mm. Wider is better, because while you can always move in closer to your subject, backing up in tight quarters is always a problem.
- ***Use a heavy-duty tripod.*** With long shutter speeds, it's essential that you mount your camera to a rock-solid support. You can get a good, heavy-duty tripod for about $100. Cheaper models will vibrate even when new, a condition that grows progressively worse as the joints loosen up.

**Figure 1.** *The author's equipment includes inexpensive photoflood sockets with 10- and 12-inch-diameter reflectors, 250-watt and 500-watt color-balanced bulbs, a sturdy tripod, a medium-format camera, and an incident light meter.*


**Figure 2.** *An incident light meter directly measures the intensity of the light source. By taking several readings, you can adjust the lighting so all important details are well lit.*

## Lighting Equipment

The thing that makes photographing the interior of a building so hard is the same thing that makes photographing the exterior of the building so easy — daylight. Outdoors, there's plenty of evenly distributed light, even when it's overcast. Indoors, however, there's usually too much daylight in one place and not enough in another. The resulting photos will look washed out here, blacked out there. The same goes for available artificial light: There's never enough in the right place. A camera-mounted flash will light the darkness, but the result is often amateurish, with unnatural highlights and harsh shadows.

The ideal solution is to use a source of diffused light that can compete in intensity with sunlight. I use inexpensive photoflood sockets with 10- and 12-inch diameter reflectors (Figure 1). They are similar to clamp-on work lights (mine have, in fact, seen some duty on job sites). But you'll have to buy them from a camera shop, because lights designed to handle 250- or 500-watt photoflood bulbs aren't available in hardware stores.

To properly balance natural and artificial light, I use daylight film with blue "color balance" bulbs, which approximate the color of sunlight. You can mount the lights to stands or clamp them on to anything convenient. You should be able to get a reflector, a 250-watt socket, and a bulb for under $20; a 500-watt setup will cost $40 to $50. A light stand should cost about $30.

You get what you pay for, of course. These inexpensive lights are limited by their relatively low light output (pros use lights that put out from 1,000 to 10,000 watts). You won't be able, for example, to show direct sunlight entering deep into a room. The low light levels also require long exposure times, so your subject must be perfectly still. Also, floodlights cannot handle very large spaces, such as those often found in commercial buildings.

## Light Meters

For interior photography, a camera's built-in light meter doesn't work as well as a hand-held meter. The built-in meter measures the light reflected from a scene, not the intensity of the light source, so it can be fooled by light or dark subjects, such as a white wall or an unlit corner.

***Incident light meter.*** I prefer to use a hand-held incident light meter (Figure 2). To take a reading, direct the meter from the subject toward the camera and lights. Move around the scene to measure the amount of light that is reaching important areas of the picture. While it's not always possible to achieve even

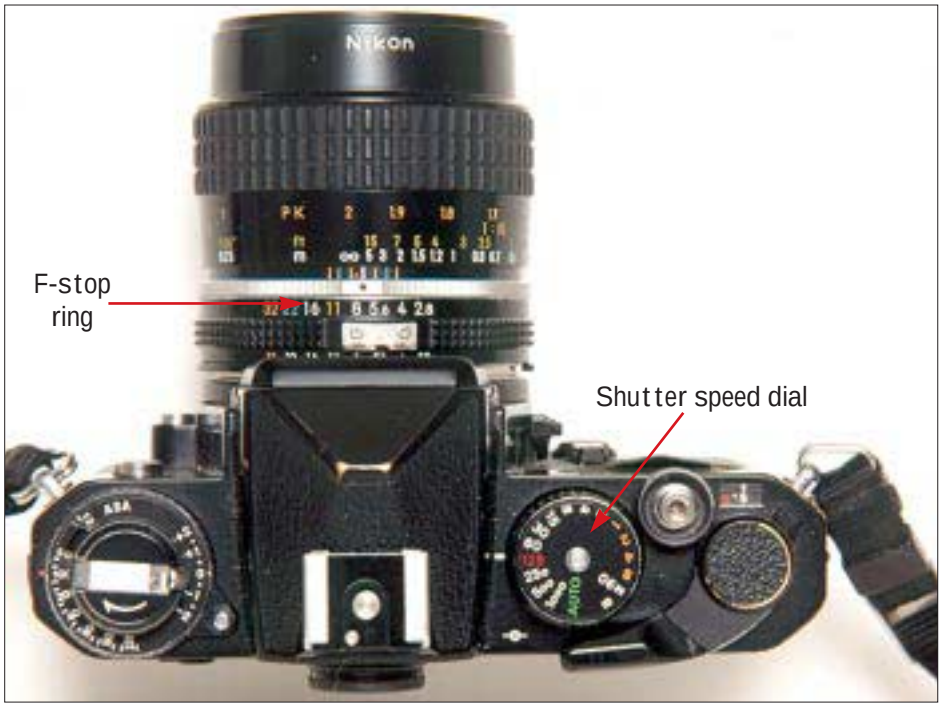



**Figure 3.** *The shutter speed dial on the top right of this camera is set to 1/125 second — the amount of time the film is exposed to light. The f-stop ring on the lens is set to 8. Higher f-stop numbers close the aperture; lower numbers open the aperture.*

illumination over the entire subject, you can adjust the lighting until all important details are well lit.

***Gray card.*** A less expensive alternative is to use a reflective hand-held meter or your camera's built-in meter along with an 18% reflectance gray card. A gray card is simply an 8x10-inch piece of cardboard with a medium gray tone on one side. Reflective light meters are calibrated to reproduce this tone faithfully, and the result is identical to what you can achieve with an incident meter.

Gray cards are available at camera shops for a few bucks, and as long as you use one, you should never make a mistake. After you've set up your lights, place the gray card over your subject. If you're using your camera's built-in light meter, stand close enough to the subject so that the gray card fills the entire frame. Use the light reading you get to set the exposure. Don't be fooled by other light readings you may get when you remove the gray card and pull the camera back from the subject. The gray card setting will give you a perfect photo every time.

## Exposure Basics

Getting the exposure right is where most people get stuck, which is why the market for automatic cameras is so strong. But the truth is, it's not that hard. If you have mastered the intricacies of a framing square, you've learned something much more complex than properly exposing a frame of film.

Your goal is to take pictures that are neither too light nor too dark, and in which your subject is in sharp focus. A camera has two mechanisms to control these variables. One is the *shutter*, which determines how long the film is exposed to light. The other is the *aperture* in the lens, which controls the amount of light entering the camera.

***Shutter speeds.*** The shutter is a door that opens and closes inside your camera. It controls the amount of light that reaches the film by staying open for a specified amount of time. Somewhere on your camera body (usually on top) you will find a dial with a series of numbers — 8, 15, 30, 60, 125, 250, 500 (Figure 3). If you put a "1" over each of these numbers, you get a fractional shutter speed — 1/8 second, 1/15 second, and so on. Moving from one speed to the next either halves or doubles the length of time the film is exposed to light. If your subject is still and the camera is mounted on a good tripod, you can use any shutter speed you want. For hand-held photography, however, 1/30 second is generally considered the slowest allowable setting.

***F-stops.*** If you look at the lens barrel of the camera in Figure 3, you will see a series of numbers — 2.8, 4, 5.6, 8, 11, 16, 22 — called "f-stops." By turning a ring on the lens, you can set the aperture at any one of these stops. If you remove the lens from the camera and set it to "manual" (most lenses have an auto/manual switch on them), you should be able to see its "pupil" opening and closing as you turn the ring.

Don't worry about what the numbers actually represent. The important thing to remember is that when you change the stop to the next higher number, you reduce the amount of light that reaches the film by one half. Conversely, when you change to the next smaller stop, you double the light.

Many combinations of f-stops and shutter speeds are possible, and your light meter readings will give you a range of acceptable settings. If, for example, you set the shutter speed at 1/250 second and the aperture at f-8, the amount of light that reaches the film is the same as a setting of 1/125 at f-11. Changing from f-8 to f-11 halves the amount of light entering the camera, but slowing the shutter speed from 1/250 to 1/125 doubles the length of time the film is exposed. If you can understand this relationship, then you are officially smarter than your camera.

***Depth of field.*** So which setting should you use? It all depends on the depth of field you want to achieve. Depth of field is a term used to describe the camera's ability to keep near and far objects in sharp focus. As the size of the aperture opening decreases, the depth of field increases. Since building interiors have important details at varying distances from your camera, you need to know how to set the depth of field to capture them all — or just the ones you want.

The easiest way to keep as many of the objects in focus as you can is to set the f-stop to the highest number — probably f-16 or f-22 — and leave it there (Figure 4). If your meter readings tell you that you need more light, don't touch the f-stop — adjust

only the shutter speed. Other settings are possible, of course, and can even be used to highlight certain objects in the picture while obscuring others. Your owner's manual should give you a more detailed explanation of how to use a depth-of-field scale.

## Cameras Don't Shoot Pictures, People Do

Once you have the proper equipment and understand how it works, you still have to use good judgement in putting it to use.

***Frame the shot.*** You probably already have a feel for the most flattering or interesting angles for your pictures. Walk around the room with camera to eye, viewing the subject "framed" as the camera will see it. Try every vantage point you can think of, including high and low angles. Once you have chosen a location, set your camera up on a tripod and lock it into position.

***Place the lights.*** Now it's time to consider the lighting. For small details, two lights may be enough. Set up a main light on one side of the camera. On the other side, place a slightly weaker or more distant light to fill in the shadows. Check the result, first by eye and then with the light meter, to ensure that there are no important areas of over- or underexposure.

Larger, more complicated subjects may require more light. Often, some combination of natural light, available artificial light, and supplemental lighting works best (Figure 5). And occasionally, daylight alone can work (Figure 6).

***Check the furnishings.*** Photographs of interiors will always look better when the room is furnished. If you can, take your pictures after your customers have moved in. Then spend some time working with the furnishings. Moving a plant into a scene or an overstuffed chair out of it can make a huge difference in the result. Similarly, a few minutes spent rearranging the objects on a kitchen counter will reap big rewards.

***Don't forget the background.*** If the view through windows is unattractive or distracting, you can still get good results (Figure 7). If you can't pull the shades or draw the cur-

**Figure 4.** *Depth-of-field determines the distance at which objects remain in focus. This photograph was taken at f-16, a small aperture opening, so objects both in the foreground and background are in focus.*

**Figure 5.** *Several light sources were used for this photo. The fluorescent "up lights" in the collar ties give shape and form to the ceiling of the loft. Natural light from the heavily overcast sky illuminates the upper room. And the oak balustrade is lit by two flood lights, one on either side of the camera.*

**Figure 6.** *The space occupied by the indoor swimming pool was much too large to illuminate with flood lights. Fortunately, the natural light entering the room was adequate. This photo was taken on a cold winter day, and when the pool cover was removed, every pane of glass in the building was immediately covered with condensation. The light that filtered through was very soft, helping to evenly illuminate the entire subject.*

**Figure 7.** *Try to hide a distracting background. In this photo, the pleasant view through the windows was marred by the tangled lines of overgrown trees, which drew attention away from the whirlpool tub. The shades are partially drawn to strike a balance.*

tains, select a fairly bright day for the photo session: The exterior will become grossly overexposed, and outdoor objects will be indistinguishable.

***Think before you shoot.*** Just before making the exposure, survey the entire scene carefully through the camera lens. Look at and consider every object in it. With so many technical details to think about, it's easy to miss something, like dirty laundry under the bed. Later, when you view the photograph, small details you never noticed before will leap out at you.

Remove clutter and rearrange large objects into a pleasing configuration. Look for reflections in shiny objects and glass. Usually a slight change in camera angle or a minor adjustment of the object — like opening a window — will remove the unwanted reflections.

## Presentation

The two most common ways to present your work are slide shows and prints. Slides are less expensive to process and proof. And if your clients customarily come to you, rather then the reverse, you can leave a projector set up in your office. Slides also catch the eye at a home show, and are preferred for magazine reproduction. Choose a fine-grained color slide film such as Ektachrome 100 or Fujichrome 100.

Since I meet with many of my clients are in their homes, I prefer to use an easily transportable portfolio album. I enlarge all my photos to 5x7 size, and display them in vinyl protective pages in a loose-leaf binder. For easy reference, I use index tabs to group photos by job. I keep this album with me all the time, and find it invaluable not only for sales, but also to quickly show customers various options while jobs are in progress.

I use color negative film because it's the simplest way to get to a print and can also make a respectable black-and-white enlargement. With my medium-format camera, I use a fast (light sensitive) color negative film like Kodak Vericolor 400. Kodak Super 200 Gold is the equivalent for 35mm cameras.

Finding time to do the photography can be a problem for a business person. I use the winter months to catch up on a few houses at a time — a close examination of the living rooms in my portfolio will show a lot of Christmas trees. From a business point of view, I think the work is highly profitable, and from a personal point of view, quite satisfying. With a little effort and education, you may find the same. ■

*Benjamin Partrick is a building contractor in the Syracuse, N.Y., area. Photos by the author.*