

Setting up a Photo Studio on a Budget

by John Siskin

Whether beginner or pro, a studio set up for your purposes helps you get more work done



Figure 1. Light panels, an enormous help in manipulating light, are a basic tool of studio photography.



Figure 2. A Bogen, chain drive for raising and lowering seamless paper.



Figure 3. A Norman head mounted on a Bogen Magic Arm, which is mounted onto a super clamp.



Figure 4. Two C-stands and a couple of extension arms can easily hold seamless paper or other background material.

If you're a landscape or street photographer, you probably don't need a photo studio, but for some photographers a studio is essential. For many, this means converting a garage or spare bedroom into a studio, sometimes temporarily for specific projects. In this article, I'm going to lay out what you need to create such a studio, keeping one eye on the pocketbook.

A studio is a place where a photographer has control of the light, whether it's daylight from a window, or strobes or quartz lights. There should be no other light sources that overpower the photographer's light. This includes anything that might cause reflections—you don't want to see a TV set reflected in your model's eyes (unless a shoot calls for that, of course).

Walls and reflections

One of the ways I can control these problems is by making walls. I usually do this with seamless paper or with light panels, as in figure 1. The panels are one of my basic studio tools; they let me diffuse, bounce, and block light, all of which is accomplished by changing the fabric cover of the panels. I usually use a black cover—often Duvateen—to kill the reflections. These are easy to set up and put away, so they work well in a temporary studio. I can build a room within a room from these panels.

If you are outfitting a garage as a studio, or creating a permanent home studio, you have another choice: you can mount rolls of black

seamless paper on the ceiling and bring down the paper as a wall to control reflections. This is quick and easy, especially if you use a chain drive on your paper roll. Bogen, also called Manfrotto, has a nice chain drive (figure 2) for raising and lowering the seamless paper. Even simpler is to buy a roll of black seamless paper and staple it to your wall. Seamless paper is available in widths of 4.5, 9, and 12 feet, and lengths of 10, 50, and 100 meters (watch out—those 100-meter rolls are extremely heavy). Another method is to hang brackets and put up a curtain. Of course, if you did use white here you could employ it as an oversized light panel. Any of these ideas can be adapted to your circumstances to bring your location under control.

Another concern is the area above the shot. My ceiling is not in very good condition, so I don't bounce light off it. If I need an overhead bounce, I either put up a light panel or pull white seamless paper along the ceiling. I have a set of rails mounted on the ceiling that make either possibility more practical (see figure 1). I've mounted two 10-foot

poles to the ceiling using thread and expansion bolts; I've run two more poles between them. This second set of poles moves, and I am able to hang lights, reflectors, and props from them. This won't work in most living rooms, but it would fit pretty well into a garage studio. Everything should be available from your local Home Depot. Figure 4 is a Norman head mounted on a Bogen Magic Arm. The Magic Arm is mounted onto a super clamp.

The ability to mount backgrounds in the studio is critical. In addition to the brackets shown in figure 2, there are temporary ways to hold seamless paper or other backgrounds. It is easier to set up smaller backgrounds; in fact you can hold a small roll of seamless paper or a light background with two regular light stands and a top made of PVC (just like the top of a light panel, but wider). For bigger backgrounds you can buy a set of background stands, but you might be better off with a set of C-Stands. C-stands are critical around the studio; they are like light stands on steroids. If you use two C-stands and a couple of extension arms you can easily hold seamless paper or other background material (see figure 4), or hold lights or hang things in the shot. Another permanent method is to make wall brackets out of 2x4s (figure 5). This works well, as you can have several backgrounds set up at once. However the Bogen background rollers will work with the U-brackets and won't work with the wall brackets.

Lights

Good photographic lights aren't cheap; lights probably will be the biggest investment you make in your studio. With so many products available, choosing which to get can be tough. I personally like lights with a lot of power. This is probably

because of my history as a large-format photographer. It could also be that I don't want to be limited in what I do in the studio; I want to be able to manipulate the light to give me whatever effect I want without worrying about using a high ISO film (or digital setting) or a low aperture.

There are two types of lights that I think work well for still photography: quartz and strobes. Quartz lights are high-wattage continuous lights; you can see one of my quartz lights in figure 6. They produce a lot of heat, which makes them questionable for taking pictures of a live model. They are terrific for doing tabletop lighting, if you can stand the heat. Lowel makes some very fine quartz lights.

Strobes are only on for about $\frac{1}{1000}$ second, so heat is not a problem; this fast exposure also means that you don't have trouble with camera shake, or movement of your model. Another nice thing about strobes is that they are color balanced for daylight, so you don't need to change the settings on your camera.

There are some significant differences in the way strobes are designed. I think the most popular strobes on the market today are systems where each head plugs directly into the wall. Generally referred to as monolights (figure 7), these are very flexible units that, for the most part, have continuous control over the power output, built-in slaves, and model lights. Slaves trigger the unit when another strobe goes off, while model lights help the photographer see what the strobe will do. Calumet makes some terrific units called Travelites; Paul C. Buff makes some more great units called Alien Bees.

You can also get a system where several strobes are designed to work off one power pack. These systems have been the workhorses of studios for decades (you can see



Figure 5. Wall brackets made of 2x4s are a good way to hold and position studio tools.



Figure 6. Quartz lights generate a lot of heat, and are better for lighting a tabletop than a person.



Figure 7. The flexibility of monolight strobes makes them popular for studio use.



Figure 8. Norman lights with a powerpack.



Figure 9. This entire battery-powered lighting system fits into one not-too-heavy case.



Figure 10. This studio is built in a garage. It has black seamless walls and extra electrical sockets. Unfortunately, the photographer doesn't have enough storage.



Figure 11. A space-efficient studio that makes great use of storage.



Figure 12. The author's studio cart.

some of my Norman gear in figure 8). Consequently, you can often get a deal on such a system used—check out both Speedotron and Norman on eBay (though be leery of the Norman 4,000-watt-second power pack, as they have had some problems). Power-pack units generally have higher power levels available than monolight heads. If you are thinking about getting a lot of lights, these systems can be flexible and efficient. You might also want to check out Dyna-lite strobes. These are lightweight, efficient, and reasonably priced. What's not to like?

The last type of light that I use regularly is battery-powered strobes—which are tricky to define. Many of the manufacturers of monolights and studio strobes now make battery systems for their units. As a matter of fact, Calumet, Paul C. Buff, and Dyna-lite all do. I don't think of these as battery-powered strobes because of their weight, and for me battery-powered stuff is location stuff. I also wouldn't put a Vivitar 283 into this category—not enough power. What I think of as a battery strobe is something truly portable with at least 150 watt-seconds of power. I have a Norman 200 B system with four heads, three packs, three stands, two umbrellas, and slaves—all of which fits into a single case that I can carry with one hand (figure 9). Norman has made battery stuff for years; you might check out used 200B units. Lumedyne makes terrific battery-powered strobes; unfortunately they're harder to find on the used market.

With all these lights, you may want to design some extra power outlets into your studio. We usually need extra power to use strobes or quartz equipment. Also, keep the power cords from going all over the studio—you don't want anyone to trip.

The home studio problem

I have seen a lot of home studios, and I have identified one major problem: home studios become home storage areas. Of course it starts out with storing photographic equipment; and suddenly everything that has no other place is in the studio (take a look at figure 10). This kills your ability to work in the studio. Storage is a problem every studio faces. My studio, which is in a commercial space, has a large number of things I keep as props, as well as an 8×10-inch enlarger; I have almost as much space dedicated to storage as I do to shooting. Of course, it's important that your clients don't see your mess. The alternative is to clean out the studio every time you want to use it, which takes a lot of energy.

The studio in figure 11 is very space efficient. It's a smaller studio space than the garage, but maybe because of this, the photographer put a great deal of thought into storage. I like the stand storage along the sidewall. This is a great use of space, but it is even better because of the curtain that covers all of this storage. The curtain is placed here so that the gear on the sidewall does not create reflections. Also notice the trash can in this shot of the sidewall—it's for umbrella storage. I also use trashcans in my studio, one for umbrellas and light panels and another for light stands. Trashcans are the best light-stand storage I have seen.

I like to have a rolling cart filled with supplies. I can put my laptop on top of the cart, or film holders and a loupe for the view camera. You can see a cart in figure 11; my cart in figure 12. Underneath I have such things as clay, cleaning products, reflectors, and other little things that are often critical to a shoot. I really like to use my digital camera tethered to the computer, and a cart is a

great way to keep the computer close to the shoot.

Controlling light

Of course, the most important thing in a studio is to be able to manipulate light. A huge number of tools are available to do this in the studio, but I use just a few most of the time: umbrellas, softboxes, and light panels. Umbrellas, which are easy to set up and inexpensive, are in almost every studio shot I do. They spread light smoothly all over the studio, sometimes over too much of the studio. You can see a few different kinds of umbrellas in figure 13. Softboxes are both expensive and annoying to set up, but create smooth reflections and offer a higher degree of control than umbrellas, so they are great to have around the studio (figure 14). I use light panels all the time—not always for lighting. As I mentioned at the beginning of this article, I use them to block light (figure 15). I use so many of them that I build them myself from PVC pipe and cotton fabric, and save a lot of money that way.

These lighting tools fall into two basic groups: tools that broaden light to make it smoother, and tools that concentrate light so that you can affect just one part of a photograph. I use more light-broadening tools, and I think most others do, too. These would be things like umbrellas, light panels, and softboxes. The light source, whether it is a strobe or a quartz bulb, is a very small source and consequently produces harsh shadows like those produced by an uncovered light bulb. Light-broadening tools act similarly to a lampshade—in essence, making the light into a bigger source. This instantly reduces shadows and softens edges, making it easier to light most things, both people and products.

The tools for detail lighting include grid spots, snoots, and barn doors. All of these control the spread of your light, but they have different characteristics. A grid spot is a metal honeycomb that goes over the light. This reduces the spread of the light more than any of the other tools. A light with a grid spot that is six feet from the subject may light an area that is less than a foot wide. There are various sorts of grid spots, so you have some control over the size and shape of the lighted area. A snoot is an empty tube that slips over a light. This reduces the spread of a light dramatically, although not as much as a grid spot. Both the grid spot and the snoot are used with strobes rather than hot lights. Another great tool for detail lighting is a set of barn doors. Usually four flat metal blades are used to control the spread of light. Barn doors give you more ways to arrange your light than either of the other tools, but one thing they can't do is give you as tight a spot as the grid or the snoot.

Of course there are a large number of other tools around the studio—stands, reflector, clamps, spray, clay, and backgrounds, for starters. But in order to use these tools you have to have a place where you can control the light and that would be your studio! I hope I've given you some ideas for how to start or improve one. ■

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Figure 13. Several types of lighting umbrellas.



Figure 14. Softboxes create smooth reflections and more control than umbrellas.



Figure 15. Light panels. The author made these himself to save money.