

4-Week Short Course: Introduction to Product Photography With Instructor John Siskin

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Lesson #1: Getting the Tools

The thing about product photography is that it is really just a form of communication. In order to sell a thing the potential buyer needs to know all about the product: size, color capabilities and so on. Our job as photographers is to give them that information while still making an attractive photograph. Of course, because this is essentially an economic venture, we will want to do this efficiently, and we will want to control our investment in tools.



Tomato Soup

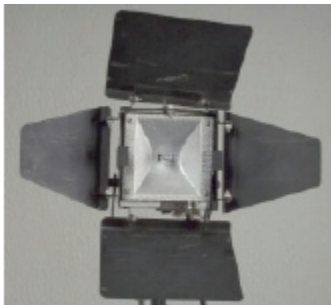
Made for my portfolio.
Norman strobes and hot
lights. Kim Baccom stylist.

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In order to control our investment, we will need to be concerned about the specific nature of our work. For instance, if you

are putting an in-house studio into a warehouse-based business you may want to use continuous lighting and a camera with a permanently attached lens; however, if you are doing photography for a variety of clients you will want to have strobe lighting and a choice of lenses. The first scenario would be a much cheaper investment, but greater limitations on the work it could do.



Smith-Victor
Barndoors Quartz Light
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Calumet Travelite Strobe
This is a monolight head,
everything is on the head. You
can see the controls for the
strobe power and modeling

light level. The black button is a test fire button. The red part on top is a slave and the green light is a ready light.

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Our first decision about equipment will be about light. Light is also a major expense in shooting product photographs. There are two basic types of lights we can use to do product photography, strobes and quartz lights. I think that strobe lights are easier to use and they are definitely cooler to use. Quartz lights are cheaper. In addition to the type of light we will use we need to pay attention to the number of lights used. I would suggest that you get three lights, but since the quartz light will be our budget choice I am going to suggest a two light quartz kit. The third light can be used on a boom (overhead light) or as a background light. If you are really shooting just small product, and not jewelry, you will not need a third light. The reasons we need special lights will become apparent next week, for now you should know that on camera flash looks terrible.

Quartz light has some disadvantages, which we will discuss first, and at least one advantage, other than price. We'll get to the advantage later. First there are two types of tungsten lights that are actually suitable for photography. Tungsten refers to the filament, and thus covers all regular light bulbs as well as specialized bulbs for photography. Quartz bulbs have a tungsten filament and a fused quartz bulb, rather than glass. They run much hotter than a regular light bulb and this enables them to produce a better color balance for photography. It is important to insure that your product will be the right color. Also, you wouldn't want to have to individually color correct three hundred shots of pillows, would you? Quartz bulbs are not the same as quartz halogen bulbs; the halogen bulbs have a lower color temperature. That means they are redder. Also, they have less stable color.

There are also some lights in regular bulbs that are balanced for photography, these are substantially cheaper than quartz bulbs and the fixtures are also cheaper, but they do not maintain color. After as little as four hours the color in these lights begins to drift, and that is not good. Quartz bulbs will maintain their color until just minutes before they burn out.

Now that we have defined some terms, what's wrong with these things? First they are continuous lights that run at about 500 watts. That means they will heat up a room fast! Not a problem in November, but lousy in July. Second, they will mix with room light, and this means bad color. You really need to use the in a room where they are the only light source. Say the backroom in that warehouse. Strobes put out much more light, but for just about 1/1000th of a second, so they can overwhelm daylight.

Now I know that there are people reading this who are saying: "But I can

adjust the color balance of my camera to match any light source, why is this a problem?" You can adjust you camera to any one color, but it does a poor job adjusting to two different colors. If you are trying to shoot with quartz lights in a room with bright fluorescents you may see color shifts in your shadows and reflections in your highlights. Another problem is that you will need to use a tripod. Strobes can get by without a tripod in many situations, but the shutter speed will often be 1/4 second (more on this later) with hot lights. You can't hand hold that!

A couple of good things about quartz lights: **first**, the auto focus system in you camera will work great. Often, when shooting in an area of low illumination the auto focus system will become completely confused, that won't happen with a couple of 500 watt lights! **Second**, your meter will work; it won't work with strobes, more on this later. This is not as great an advantage as it first seems, often you shoot a huge number of products at the same exposure, and so you don't always need the meter. I promise more on exposure as the weeks go by.

And so we come to an actual product recommendation. I like Lowel lights; they are a good value and well designed. Samy's Camera has a kit that uses the Lowel Omni-Lights and stands and an umbrella (you will want one for each light source), as well as barndoors and other great stuff. You can see this kit at: www.samys.com/ Obviously if you already have quartz lights they will be appropriate for this course and for doing product photography. If you have the bulb style lights you should upgrade. I actually own quite a few Smith-Victor lights; if you are looking for an alternative to the Lowel lights you might want to look at Smith-Victor lights.

Now, let's talk about strobes. The lights, also called flash, go on for about 1/1000th of a second each time they are fired. Essentially they are lightning in a tube. They have several advantages and a couple of disadvantage. Again we'll talk about the problems first. Strobe units use large amounts of electricity; consequently they are possibly hazardous. Please understand the above statement does not mean that these lights will make your electric meter go crazy, far from it. Strobes take power delivered slowly from either wall current or batteries and store it up. Then they open the gates and let all the power go at once. It is this storage capacity that concerns us. Strobe systems keep the power in electrical parts called capacitors. Capacitors can store power for YEARS. Unless you have special training never disassemble any strobe equipment, ever. Let me make this clear, I have a certificate in Camera and Audio repair. I make my own cameras. I DO NOT WORK ON STROBE EQUIPMENT.

I use Brent Hollister at Holly Enterprises (818)892-9020 when I need repair, he's great. One more warning: it takes a doctor between 150 and 250 watt-seconds to defibrillate your heart (jump start your heart with the paddles on the table); strobe systems frequently have between 200 to 4000 watt-seconds. Do the math. The second problem is that they cost more than quartz

lights. One of The kits I'm recommending costs about \$1700.00 dollars, of course you get a lot for that.

There are several advantages of a strobe. First the color, the strobe is matched to daylight. The strobe will maintain its color balance for many years. Also, since the strobe can put out more light than the sun, if only for 1/1000th of a second, you generally don't need to worry about room light. Another advantage of this short exposure is that you do not HAVE to use a tripod, but you should. The real difference is that you can set-up lighting for product almost anywhere, so if you are doing product photography in several places this is the way to go. Another advantage is that you do not need to worry about the heat of quartz lights.

I am going to suggest two kits; the more expensive one has three lights, each more powerful than the ones in the two light kit. Umbrellas stand and a case are included. The first Calumet system is at www.calumetphoto.com/ This is the three light kit. This kit costs \$1699.00 I have one of these lights and it is a fine product. This is a two light kit, with the same power heads as the [first kit](#). It is cheaper, 1199.00. The heads in both systems have 750 watt-seconds; this is plenty for almost any product application. Another place I'd recommend is [Alien Bees](#). I like their lights, but I don't like their kits. If you plan to do other things besides product shots the Alien Bee kits make sense, but for just product you will buy stuff you don't need. What you want to remember is that you want at least 500 watt-seconds, anything less will reduce the ways you can control light. This means that the little systems on EBay are not good for our purposes.

Now let's talk about the camera, many of the available cameras will do product photography just fine. In no particular order you will want the following features: 6 megapixels (more is nice), manual exposure control, manual color balance, strobe sync (hot shoe sync is ok, I like pc sync better), tripod socket, minimum lens aperture of f11 or less, close focusing lens and either slr (through the camera lens) viewing or live viewing on the camera screen. I like the Fuji FinePix S9000 for a fixed lens camera, but there are a lot of cameras that will do this. You can check the camera out at the [Canon website](#). Be sure to get extra memory.

An SLR camera, one where you look through the lens has several benefits. It is easier to set-up the shot, since you are looking through the camera lens. Additionally there are special lenses for specific purposes, macro and perspective control, these are not available to a fixed lens camera. You can even adapt an SLR onto a microscope. Of course many people will not need pictures of products that have these special problems. A great Digital SLR is the Canon D30, check it out at: www.bhphotovideo.com Both of these cameras will work with strobes or continuous light, many cameras have a problem using synchronizing with strobes.

The next thing you need is a tripod. This has a couple of functions; first it

keeps your camera from shaking during a long exposure. Second it will make you take time to properly set-up the shot. Unfortunately a lot of photography is done by the get the product into the frame and shoot it. A little extra time will provide a better communication with your consumer. The best features a tripod can have are a geared center column and an ability to work an eyelevel. It is also good if the unit is built to last and heavy enough to say put. I found a Davis & Sanford tripod at B&H that seems to be a good value, check it out at [B&H](#).

Another thing you may want, if you are using strobes, is a radio sync. It cuts down on the number of cords in a shoot, by connecting the camera to the lights with radio. You can check them out at this [EBay page](#) devoted to strobe sync. What you're looking for here is a radio slave and I would suggest getting the battery model, it is a little easier to match to any equipment.

You will need a light stand for each light. You will want more light stands or a couple of C-stands to hold things in the set, either backgrounds or products. You can often get these used, poor quality stands are often useful for holding things, but don't put expensive lights on them. I am including pictures of stands and of C-stands.



Light Stands
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C-stands
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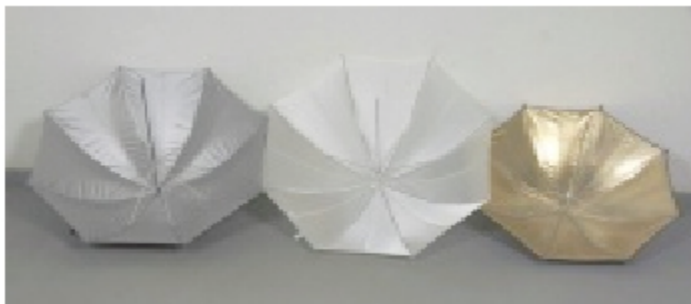
A boom holds a light above a set, or someplace else it can't go with a regular light stand. They are very helpful for putting a light over a set. Keep in mind you will need a counter weight with a boom. Again, [B&H has a cheap one](#).



Boom

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I think that umbrellas are the best all around lighting tool you can get. They are very inexpensive, bordering on cheap. They set-up easily, unlike a softbox. If you knock your light over they even act as a parachute! They spread light the way a sawed-off-shotgun spreads pellets, only more so. Heck, if you use a shoot through umbrella (white umbrella with no cover) you can create 360° light! Really only two draw backs, **1**) they light everything there is no stopping them, and **2**) they leave telltale reflections all over the shiny stuff in your shot. You will want at least one umbrella for each light. You will want white satin umbrellas with black covers, between 45 and 60 inches. The lighting kits come with some umbrellas, you may also want a silver umbrella or a gold umbrella, for special purposes.



Umbrella 2

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I am not a big fan of soft boxes. They are hard to set-up and the big ones are

expensive. However a 2X3 foot soft box can be very handy, especially on a boom.



Softboxes

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Light Tent for Product

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Another important piece of lighting gear is a tent or dome. These diffuse light all around a product they are very popular for small metal parts and jewelry.

Unfortunately they are inherently a pain to work with. Getting product in and out is always a problem. We will be discussing them at length next week, but I am putting this in as a preview.

Another preview is the shooting table. We'll be talking about strategies for building and using tables next week. I usually use a couple of sawhorses and a hollow core door or Plexiglas. You might want to see if you can find sawhorses with a variable height, you can get them from [Home Depot](#). You might also want to check out Ikea or a furniture place, they have variable height supports for tables.



Translucent Shooting Table

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Look, you are going to want some of these light panels. I use them alone or with umbrellas. They help me to create large



Light Panel

I sometimes refer to these as scrims also. They allow you to make a small light source into a large light source.

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shadowless light source. You can buy them ready made or build them to suit your circumstances.

Light Panel

I sometimes refer to these as scrims. They allow you to make a small light source into a large light source.

MATERIALS

- 3 pieces 10 foot PVC pipe 3/4-inch schedule 40 (that's the thick stuff)
- 4 pieces T connectors
- 2 pieces straight connectors
- 2 pieces corner connectors
- 4 pieces end caps
- 2 yards, plus a little white cotton broad cloth, 42 inch wide
- 1-foot elastic strip
- Glue, PVC glue, any PVC glue. Try to use the PVC glue outdoors.
- Glue, white glue wood glue something along that line.

You can get all this stuff at Lowes or Home Depot, or a bunch of other places. It's not rare.

HOW TO ASSEMBLE

Cut the PVC in to the following lengths:

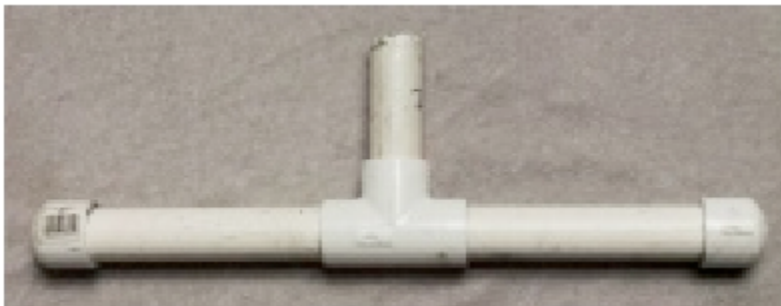
- 2 pieces 42 inches
- 4 pieces 36 inches
- 2 pieces 6 inches
- 4 pieces 10 inches

ATTACH

- Only glue a PVC connector to one side of pipe except on the feet.
- 2 corner connectors to the same piece of 42 inch PVC
- 1 straight connector to one piece of 36 inch PVC. Make 2 of these. You should have 2 pieces of 36 inch PVC without any connectors and 2 pieces with one straight connector on each.
- 2 T connectors to one piece of 42 inch PVC. You want to glue the PVC into the hole that is at a right angle to the straight through hole.

If you have trouble with this, put the thing together without glue. It should be a rectangle 42 inches by 72 inches. When you are through it should come apart easily to go into an equipment bag. You might try this with the feet also, before you use glue.

The feet will fit into the open holes on the second piece of 42 inch PVC.



Light Panel Foot

This shows how to assemble the foot for the light panel

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- Take 2 of the 10 inch pieces of PVC and glue them into the straight through sides of a T connector. Glue an end cap onto each of these. Glue a piece of 6 inch PVC onto the open side of the connector; this will fit into the bottom of the frame you just made.
- Now the fabric. You will want to finish up with a piece of cotton that is tight in the frame, so measure the frame! Make your hems with glue; this should enable you to use up any extra fabric. Cotton glues well, nylon doesn't, so if you use nylon you'll probably need to sew these ends.
- Sew pieces of the elastic ribbon on each corner; this will hold it onto the frame

You have made a useful photographic tool. We'll see how useful in the coming weeks!

Your Assignment

Choose some subjects you can work with as you progress through these lessons. Shoot them with your current gear as sort of a base line image. You should choose the kinds of producte you'll want to shoot.

If you'd like me to critique your assignment you can arrange that by paying \$25 on my website. Please visit www.siskinphoto.com/workshop.php . I suppose you could also make a donation at the site. I hope you find this class useful.

Thanks!

Please note that this class was originally prepared some years ago. You'll want to evaluate current equipment rahter than relieing on these suggestions. The light panes is really useful, you sould build or buy a couple of these.

John

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