

TABLE TOP PHOTOGRAPHY

Setup, Lighting, & Suggestions

EZcubeTM
User's Guide

SETTING UP AND USING THE EZCUBE LIGHT TENT

EZcube™ User's Guide

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About the EZcube™

The EZcube is a very simple to use photographic light tent which provides soft lighting and uncluttered backgrounds for small and medium size object photography.

This guide will provide you with an introduction to taking great pictures with an EZcube light tent. The guide provides information on both setting up and lighting the EZcube. It also provides an overview of different light sources. For beginning photographers this guide provides simple instructions for producing quality images. For professional photographers it offers the information necessary to use the EZcube as a tool to save time, improve productivity, and increase lighting options.

Setting up the EZcube

What's included with the EZcube

The EZcube includes three pieces in a carrying bag.

- 1.** The EZcube itself is the largest article.
- 2.** The background sweep is the large rectangular piece.
- 3.** The front cover is the square piece with a slit near the center.

DESIGN CUSTOMIZATION

Opening the cube

The cube should uncoil and spring into a rectangle as soon it's removed it from its carrying bag. Pulling the sides away from the front will allow it to form the cube shape.

One of the sides may not spring into perfect shape at first. You should be able to get them to spring into shape by shaking the cube, or by tossing the entire cube against the floor. *Don't hesitate to give it a fairly hard shake or toss. The EZcube is quite durable and sometimes it needs a really good jolt to get the sides to spring back into their correct shape.*

The cube will have lots of wrinkles. Don't worry about the wrinkles. They won't affect the cube's ability to soften and diffuse light.

When you set the cube down you may notice that it is drooping in front. If this is the case then rotate the EZcube a quarter turn. It should now have a slight arch to the front.

The background sweep

The background sweep is used to provide a clean, seamless background for your image. It can be used as the only background or it can be used to support a paper, poster board, or additional fabric background.

The sweep will be quite wrinkled when it is first removed from the carrying bag. If you choose to use the sweep itself as the background, and you don't want the wrinkles to appear in the background, the wrinkles can be removed by ironing the sweep with an iron set to the synthetic setting. *Storing the background sweep rolled up rather than folded will help prevent it from becoming wrinkled again in the future.*

Installing the sweep

The background sweep has six tabs, two in the back and four near the front. Attach the two back tabs to the tabs at the top and back of the EZcube. Normally you will hang the sweep from the position that will allow the cube to be slightly taller than wide. However, if the product you will be shooting requires more width than height, you can rotate the cube into the (slightly more) horizontal position.

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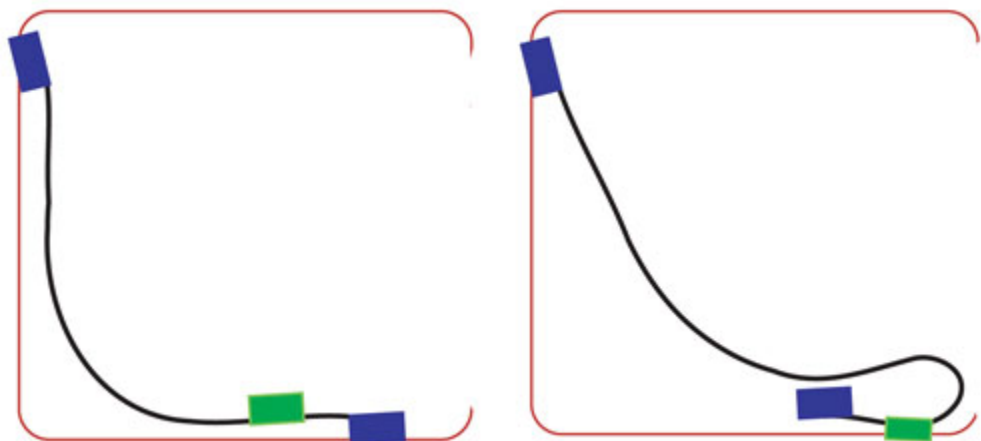


Location of the tabs on the background sweep

The front of the sweep has two different sets of Velcro tabs. One set is on the top surface (shown in green in the illustration) and one set is on the bottom (shown in blue) surface of the sweep. Which set of tabs you attach to the front floor of the cube will depend on whether you would like a gentle slope in the sweep or a steep angle (useful for larger objects). Positioning the sweep at the steep angle may create a harsher rear shadow while the shallower angle makes for a softer shadow or no rear shadow at all.

You may want to install the sweep in the steep position for larger subjects.

Side views of EZcube with background sweep installed



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Sweep installed in steep position

Sweep installed in shallow position

(The tabs are actually white, colors are used and the sizes are exaggerated for illustration purposes only).

Using the sweep

The simplest arrangement is to use the sweep as the only background, simply place the subject to be photographed directly on the sweep near the middle of the cube floor. However, you may want to use a large sheet of paper or poster board as the background. (Paper and poster board are useful if you require a dark or colored background, or if your subject might get the fabric sweep dirty). When using a paper or poster board sweep, insert the cube's fabric sweep in the normal way, but don't worry about removing the wrinkles. The sweep provides support for the paper or poster board. Lay the paper or poster board over the sweep. If your subject is very small you might be able to use a standard 8½ x 11" sheet of paper, larger objects will require a larger sheet of paper.

If you need to use a larger sheet of paper inside the EZcube you can hang it with clips attached to the elastic loops near the top rear of the cube. Large paper clips will support paper. Poster board may require heavier clips.

If a different color or texture is required for the background, the background sweep can also be used to support fabric. As with a paper background, small pieces of fabric can simply be laid onto of the original fabric sweep. Larger pieces of fabric will need to be supported with clips attached to the elastic straps in the top corners of the EZcube.

Lighting the EZcube

Lighting is normally the single most important element in successful product photography. After all, improved lighting is the main reason for using an EZcube. Lighting an object inside of an EZcube is relatively simple. Nevertheless, it does require a couple of important decisions. First is choosing the type of light source: sunlight, incandescent light, fluorescent light, etc. Next, if using an artificial light

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source, you will need to decide which sort of fixture or light stand to use in order to position the lamps. The following should help you to decide what light source and what sort of light supports to use.

Daylight as a light source

Sunlight is an inexpensive source of light, but you have probably already discovered that unless it is foggy or hazy day, direct sunlight is normally too "harsh" to be useful for product lighting. Direct sunlight (i.e. light without a diffuser like the sides of the EZcube) creates very sharp and often undesirable shadows. Direct sunlight can also cause glare from the subject. The EZcube softens and diffuses sunlight creating nice soft shadows while reducing or eliminating the glare.

When using sunlight as a light source it's best if possible, to take the cube outdoors. Orient the cube with the opening facing away from the sun. (This is the opposite of normal outdoor photography in which you would typically try to keep the sun behind the camera and in front of the subject.)

If you will be working indoors with sunlight as the light source, you should position the cube near a large unobstructed window. (Obstructions may create unwanted shadows). Keep in mind that if the light from the window has been reflected off of nearby buildings, trees or other objects it will pick up the color of those buildings, trees or objects. The same applies to sunlight which has reflected off of the walls or objects inside the room. (If the light striking the cube has picked up color, the white fabric of EZcube will not remove that color, it will transmit the color onto the subject unchanged.)

Another consideration when using sunlight as a light source is to be aware of the fact that the color of sunlight will vary considerably depending on the time of day. Early morning or late afternoon sunlight has a yellow or orange color cast compared to the midday sunlight.

Simple artificial lighting

Sunlight may be an inexpensive source of light, but unless you normally have great weather and want to limit your shooting to the daytime, it has some obvious limitations. In addition to not always being available, sunlight provides only a single light source. You will find that using multiple sources of light allows you to have more control over shadows and highlights. Multiple light sources can also allow your image to have more of a three dimensional appearance.

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The most basic lighting setup is to light the cube with similar lights from two sides. The lights are normally slightly in front of and above the object. For most subjects all of the light striking the object will normally pass through the fabric of the tent. (*Actually you might be thinking that the simplest light source would be your camera's built-in flash. In fact, an on-camera flash will probably not produce a very good product image. For an explanation of why an on-camera flash is not a good light source for most object photography, see the section below on strobes and flashes.*)

Try positioning the lights in different ways to see the effects it will have on your image. Keep in mind that moving the lights further from the cube and the subject may create slightly harder shadows and moving the light source closer will soften or even eliminate the shadows. Because different lighting effects are sometimes not very obvious until you actually take some photos, it can be helpful to take a few shots and examine them as you try different light positions.

How the lights are positioned (professional photographers call this "modeling" the lighting) will have a big impact on your final image. *Many professional photographers keep notes to remind them later which setups work best.*

Choosing a light source

Artificial light is produced by many different types of lamps. Which of these lamps you choose has a big effect on your images? The most important difference between the various sources is the color of light which they produce. Although a standard incandescent light bulb appears to produce white light, it actually produces yellowish colored light that appears white to our eyes. However, to a film or digital camera light from a standard light bulb is yellow and it will cause images to look yellowish or brownish.. To our eyes a standard fluorescent bulb also appears white. But to a film or digital camera most fluorescent bulbs appear greenish or bluish. If we use standard incandescent or fluorescent bulbs as a light source, they will distort the color of the image we are taking.

Should you chose to use standard light bulbs, either incandescent or fluorescent, there are a couple of ways of dealing with the color distortions they introduce.

Color Adjustment with Digital Camera White Balance

Most digital cameras have a feature which attempts to compensate for the color distortions created by standard light bulbs. This feature is called white balance. By setting the appropriate white balance on a digital camera, much of the distortion can be removed. (See your camera's instruction manual for more on setting the white balance). You may find that because the color distortions introduced by incandescent

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or fluorescent bulbs are quite complex, a digital camera's white balance setting may not remove all of the distortion.

Color adjustment with software

Another method to correct for the color distortions introduced by standard incandescent or fluorescent light bulbs is to use the color adjustment features of image software. Nearly all of the software programs designed to modify digital images (programs such as Photoshop or Paint Shop Pro) allow the colors of images to be adjusted. Some of these programs are quite powerful and make it relatively easy to correct colors. Again however, the fact that the color distortions introduced by standard light bulbs are quite complex they may not be completely corrected with software.

Daylight Balanced Bulbs

The best (simplest) way to reduce or eliminate the need to color correct images is to use color corrected light bulbs as the light source. Both incandescent and fluorescent bulbs are available in color corrected versions. ***We recommend using daylight balanced, compact fluorescent bulbs.*** These bulbs will normally fit standard light fixtures but produce three to four times as much light compared to incandescent light bulbs using the same amount of energy. And since the compact fluorescent bulbs use much less energy they operate much cooler than incandescent bulbs. Daylight balanced compact fluorescent bulbs are more difficult to find than standard bulbs and they typically cost \$15 to \$25 each. However, they are by far the easiest light source to work with. The higher initial cost of these bulbs is offset by the fact that the bulbs last for thousands of hours and use so little electricity.

Don't mix light sources

When using multiple light sources it is important to make sure all the lamps have the same color balance. As we mentioned above, it is possible to correct for some color distortions with a camera's white balance or with imaging software. However, it is nearly impossible to correct for color problems caused by using multiple light sources.

This means that if you are using daylight, use only daylight. Don't use window light and then supplement it with artificial light. When using artificial lights, all the lights must have the same color balance. Don't mix incandescent lights with fluorescent lights. And even when using only incandescent or only fluorescent bulbs, make sure all the bulbs have the same color balance. (Different size bulbs can be used, but the color output of their light should be identical). This means you may need to turn overhead

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lights or other lights off before taking pictures, if light from these fixtures can directly strike the object you are photographing.

Unless you have a specific creative reason for doing so, using bulbs with different color balance on the same subject is likely to lead to undesirable results. Sometimes the light colors are mixed inadvertently. For example if overhead incandescent lights left on while shooting an image with daylight balanced bulbs. Some of the light from the overhead lights may “leak” onto the image.

Supporting the lights

There are many ways to support lights for tabletop photography. The type of light support you use won't have a direct impact on the quality of your image. However, *the type of light supports you use will make a big difference in how easy it is to set up and reposition the lights.*

The least expensive lights are desk lamps for the small EZcube and clamp lamps for the standard size EZcube. However, you will quickly discover that desk lamps and clamp lamps can be very frustrating to adjust precisely. Desk lamps are not very stable and have a tendency to flop over. Clamp lamps tend to slip. Both desk lamps and clamp lamps have a relatively limited range of height adjustments.

If you don't have any other lights or you are anxious to start taking some pictures then give a couple of desk lamps or clamp lamps a try. You may find that they fit your needs well. However, after your desk lamps have fallen over a few times or your clamp lamps have slipped you may want to invest in better light supports. There is a reason professional photographers don't use desk lamps and clamp lamps as light supports. The pros discovered that they would waste lots of time trying to balance desk lamps or trying to keep clamp lamps from slipping. Unless you are going to take table top product shots on a very occasional basis, you will probably want to invest in a proper light support system.

We have found that standard photographer's flood light stands are the best light support. Photo flood light stands are easy to adjust, they are quite stable and they collapse and fold up for easy storage.

Photo flood lights with daylight balanced compact fluorescent bulbs make a great combination for lighting an EZcube.

Positioning the lights

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There is no single position which will work best for every subject and situation. However, the majority of subjects will look good if two lights are used and the lights are placed on either side of the EZcube. We normally position the lights slightly higher than the subject, with the lights shining down towards the subject.

For most subjects all of the light should be diffused by the fabric of the EZcube rather than come directly from the light. An exception to this rule would be when shooting glass, porcelain, or some other very shiny surface when it is important for the glossy surface of the object to appear in the image. If diffuse light is the only source of light when shooting glass or porcelain, the surface of the object may appear slightly dull. To put the shine back into the object, either move one of the lights forward enough that some of the light is hitting the object directly (not diffused by the fabric of the EZcube) or add an additional directed at the object from in front of the EZcube.

The exact lighting effect you try to achieve will largely be a matter of your own preferences. For most subjects you will want soft shadows with enough highlights that the depth or dimension of the object is apparent in the image.

Feel free to experiment with different light positions. The biggest advantage of using continuous lighting is that you can “model” the image by moving the lights around to see the different lighting effects. Digital film is free, so don't hesitate to try different light positions. As mentioned before professional photographers often take notes so that they will know what lighting setup worked best or what lighting setup didn't work in a particular situation.

What about strobes or flashes?

You may be wondering why we haven't discussed strobes or flashes as light sources for the EZcube. After all, nearly every digital includes a built-in flash. However, using your camera's on-camera flash will not allow the EZcube to diffuse and soften the light before it strikes the subject. Also, because on-camera flashes are located so close to the camera lens, they will often produce very strong glare. Finally, because the on-camera flash is coming from the same location as the lens, it will cause images to appear flat, with little apparent depth. (Although this flattening effect caused by an on-camera flash is subtle, it is probably the biggest difference between a “snap shot” type image and a professional looking image).

Off-camera strobes and flashes can work well with the EZcube and many professional photographers use them. However, for most folks, strobes or off-camera flashes are more expensive and much more difficult to work with than the continuous light sources mentioned above. Unless you have already made the big investment in the time and money required to purchase and learn to use strobe lights properly, we would suggest you use one of the continuous light source like those mentioned above.

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Disadvantages of Flash lighting vs. continuous lighting

- ✎ With flash lighting you can't really tell what the lighting looks like until after you have taken the picture
- ✎ Continuous lighting allows for "What you see is what you get" modeling
- ✎ Flash lights must be synchronized with each other and with the camera shutter
- ✎ Flash lights are more generally much expensive than continuous lights

Strobe lighting can be useful when

- ✎ The subject is moving.
- ✎ The shot requires extra light in order to increase the depth of field by reducing the cameras aperture.
- ✎ You already own an expensive multi-head strobe system.

There are a couple of applications in which professional quality strobes can work better than continuous light sources.

If the subject is moving, then the short duration of the strobes flash can help to "freeze" the subject. Even a relatively slow moving subject will cause a blurred image.

To get the most depth of field requires a small aperture (lens opening). A smaller aperture means more light is required for the image. In many case the additional light can be obtained by simply increasing the exposure time. However, there are occasions where the exposure time cannot be increased enough to produce the required amount of light for a small aperture. In those cases, the intense light of a strobe light is useful. Often times a strobe will not solve the depth of field problem when using a digital camera since most of the digital cameras on the market do not allow the aperture to be reduced enough to produce the required depth or field or require the additional light of a strobe.

Using the Front Cover

Normally you will not need to install the front cover on the EZcube. However, you may find that when trying to take a picture of a very reflective round object such as a silver pitcher or Christmas ornament, a reflection of your camera and even yourself may be reflected in the image. The front cover is designed for this situation.

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The front cover is installed by matching its Velcro tabs to the tabs on the front of the EZcube. Once the cover is installed the camera can be positioned so that it protrudes through the slit in the cover. Since the object is now completely surrounded by the white fabric of the cube nearly all of the undesirable reflections will be removed.

Folding up the EZcube for storage

Before starting to fold up the cube, make sure to remove everything, including the background sweep, from inside the EZcube.

- 1.** Change the cube to a flat square. Do this by folding the back edge of one of the sides towards the front edge of the opposite side.
- 2.** Make sure the sides of the cube are all completely flat. This is important. If two of the edges cross over each other rather than lie on top of and under each other, you may have difficulty with Step 6.
- 3.** Grasp the flattened cube at 10:00 and 2:00, keep your thumbs on the inside and your fingers on the outside.
- 4.** Roll the cube away from your body as though you are making a giant taco.
- 5.** Once the “taco” is formed reverse the position of one of your hands so your thumb is on the underside facing out.
- 6.** Twist this hand forward to form a loop. This loop can tuck under the section you are holding in the other hand.

For a fully illustrated version of these folding instructions please go to:

www.ezcube.com/HowTo

