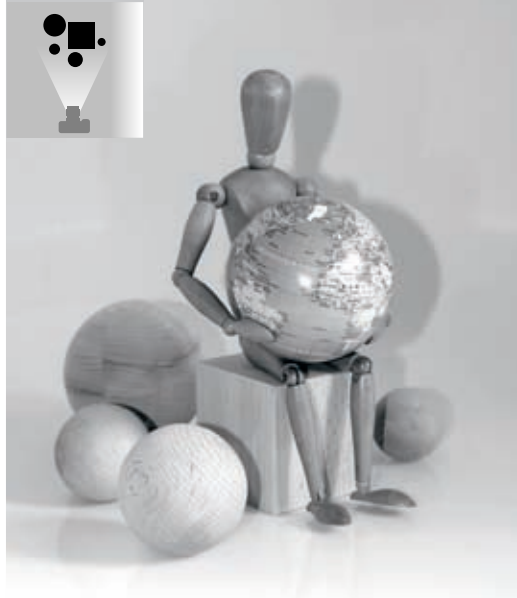




▲ **Internal Camera Flash:**
Not convincing. In addition, the flash is much too weak to ensure a great enough depth of field.



▲ **Rear Curtain Internal Flash: (Fill-in Flash)**
Slightly better with the incorporation of natural light, but the shadows running in two directions are distracting.



▲ **Off-Camera Flash:**
The shadows are more natural, but very hard. However, the external flash unit is much stronger and allows for a greater depth of field.

▼ **Off-Camera Flash and Diffuser:**
Beautiful, soft light without any distracting reflections on the shiny surface of the globe.

▼ **Big Softbox:**
Almost perfect. The balls look round; only the shadows are still a little dark.

▼ **Big Softbox and White Cardboard Reflector:**
Now everything is perfect. This image was taken with only one external flash unit.



Soft Light

Whether in portraits or tabletop photography, hard shadows are often distracting. However, with a little effort you can produce much softer light and shadows. This does not necessarily mean investing in an expensive studio strobe lighting system. Simply by the correct placement of flash units and softening devices, you can achieve a significantly more natural looking light.

The images on the left page were all taken with only one external flash unit. However, you will need to have a synch cord or a hot-shoe adapter to be able to use your flash off-camera. Alternatively, you can control an external flash in connection with a slave unit by means of an internal camera flash or infrared flash. If you use the internal flash, you will also have to consider its effect on the subject.

Generally, some light intensity will be lost when using diffusers, softboxes, or reflectors. You can make up for this disadvantage by increasing the light sensitivity on your camera (e.g., by changing the ISO from 100 to 200). In our example, the background consists of an imaging table with a seamless backdrop of a slightly reflective Plexiglas surface. In the following chapters we will look at how to build this setup, along with other equipment.

You do not need expensive strobe lighting. You can achieve great results by controlling the lighting separately with a normal flash unit, using a few accessories, and adding a little know-how.





A small hot glue gun helps with precise fastening.



A mat cutter allows for precise 45-degree cuts. When choosing a cutter, make sure that its blade reaches deep enough.



Spray adhesive and super glue should be included in your basic tools.



Stable cutting boards, utility knives, and compass cutters can be found in office supply or art supply stores.

The Right Tools

In order to build your own studio equipment, it is important to start out with some basic tools. Because you most likely already own many of the necessary tools, the shopping list should be relatively short. A metal ruler, a utility knife, and a stable cutting board are usually sufficient for most projects. In some cases, you will need a drill, as well as a screwdriver, metal saw, and riveter. In addition, you should have sandpaper, instant glue, and a collection of several types of tape. Spray glue is best suited to attach reflecting foil to large panel areas in softboxes. In the beginning, it might take some time to get used to a 45-degree mat cutter. Therefore, it is best to make a few test cuts before getting started on an actual project. In general, no prior experience is necessary.

Always think about your own safety. A good utility knife will cut your fingers like butter. Therefore, keep band-aids in reach, just in case something goes wrong.



Before you begin any project, go through your checklist. Do you have all the necessary materials and tools? It has been my experience that the glue usually runs out just after the stores close, and nothing is more frustrating than having to postpone a project just before it is completed.



Aluminum sections are best connected with rivets.

Choosing Materials

In retail stores you can find a multitude of different materials that satisfy the most important requirements for building your own photography equipment; stable, easy to use, and as lightweight as possible. Each material has its own special qualities. Take into consideration the inherent characteristics of the materials. For example, how does the material react when being bent? As a result, you will create

objects that are harmonious in form and function, and also look aesthetically pleasing.

A word of caution: Many of the materials described in this book are flammable. Due to the extreme heat generated by incandescent and halogen lights, the danger of fire is very high.


Presentation boards are available in many different thicknesses and designs.

Left: Black & white boards have a foam core, keep their form, are lightweight, and one side is coated in white and the other in black.

Middle: Craft boards (1mm thick) are well suited for the mini-seamless backdrop.


Right: Presentation boards (2mm thick) are available in gray, white, and black. They are durable and inexpensive.

Regular foam and ethylene vinyl acetate (commonly known as EVA foam) sheets can be found in a variety of strengths, thicknesses, and densities. Insulated camping mats from outdoor stores are a low-cost alternative. The material can easily be cut and the stronger varieties maintain their shape.




Ripstop nylon is great for building light tents and diffusers. It is generally purchased by the foot.

White Plexiglas sheets are available not only in various strengths, but also in various transparencies. (If your local home improvement or glass shop carries only clear Plexiglas, you can spray one side with a semi-translucent, matte coating). The acrylic glass satine is especially interesting. With its slightly rough surface, it is ideal for both small and large diffusers. It is easy to cut with a utility knife and serves as a good "roof" for a small light tent. Backlit film or Mylar, usually available at graphic and drafting supply stores, are thin plastic sheets excellent for diffusing light.



Connectors can easily be cut from tubing.



Many connectors and end caps can be found in kite building supply shops or websites.

Aluminum rods can be found in most hardware stores. Fiberglass rods are extremely light and flexible

An emergency blanket from a first-aid kit makes for a great reflective surface. These materials are extremely lightweight and highly reflective, and are great for lining softboxes, as well as for building light reflectors.

