

CONTROLLING ELECTRONIC LIGHT

In the studio light may be handled in one of three ways:

- A. Concentrated.
- B. Diffused.
- C. Reflected.

There are a number of devices made to create artificial light for photographers.

In commercial photography studios the electronic flash (strobe) is the most popular choice.

Strobes are powerful, high speed, cool and relatively portable light sources. Power packs, generally rated at 500 watt seconds and higher, can supply several light heads. Control panels on these units permit the user to vary power to each flash tube and modeling lamp.

ELECTRONIC FLASH HEAD (STROBE)

Flash tube

- a. May be a ring shape or cylindrical.
- b. Provides high intensity light source for photograph.
- c. Short duration 1/300 to 1/2000 of a second, depending on # of heads and power setting.
More power = longer duration.
- d. High Kelvin temperature (blue) 5900-6200 K.
- e. Using multiple heads, from a single power source, does not increase light in a scene. Additional heads change the ratio of light in the scene and the duration of the flash.



Modeling lamp

- a. Variable, low intensity, continuous light source for preview.
- b. Shows direction and quality, not intensity of light for photograph.
- c. Low Kelvin temperature (yellow). Helps correct blue quality of flash tube. Long shutter speeds with modeling lamp on may cause a yellow/orange cast.
- d. Very hot temperature. Be sure fan, located in flash head, is always on and vents are unobstructed.

FLASH HEAD WITH REFLECTOR

Concentrated Light

- a. Most light on subject (permits smallest aperture).
- b. Emphasizes texture and form.
- c. Hard shadows.
- d. Concentrated, directional, harsh light.



SOFTBOX

Diffused Light

- a. Light is diffused through translucent fabric after being bounced off inner surfaces of box.
- b. Less light on subject than using flash head with reflector.
- c. More light on subject than umbrella or scrim.
- d. Requires boom or ceiling support system.
- e. Directional light source.



FLASH HEAD GRID

Concentrated / Slightly Diffused Light

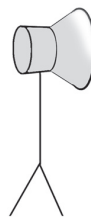
- a. Directional / slightly diffuse.
- b. Can be used to concentrate light on background, objects or hair.
- c. The finer the grid (honeycomb) the narrower light source.
- d. Light falls off sharply from center to edges of grid.



SCRIM

Diffused Light

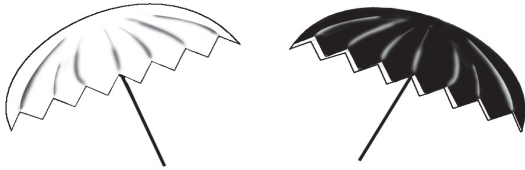
- a. Less light on subject than using flash head with reflector or softbox.
- b. Light passes through translucent diffusion material supported by light weight frame.
- c. Directional light source.
- d. Can be used on location -- does not require boom or ceiling support.



UMBRELLA

Reflected Light

(Bounced Light)



In addition to an umbrella, light may be bounced off of reflector cards, the ceiling and walls. When a large room or set needs to be evenly lit reflecting light is the most efficient and effective way to handle most situations.

- a. The flash head is pointed directly into the umbrella and the umbrella stem is pointed at the subject.
- b. Umbrellas produce soft, wrap-around, slight shadow lighting.
- c. The lighting is multidirectional.
- d. The larger the umbrella the broader the light source. It reduces shadows and lighting errors.
- e. Umbrellas are "flattering" light sources.
- f. Bounced light gives less light on the subject than a flash head with a reflector, softbox or scrim. Because of this bounced light requires a larger aperture.

Translucent white umbrella -- softest light/ most light lost.

Umbrella with black backing -- harder light/ less light lost.

Silver or gold reflective umbrella -- most contrast / least light lost / sharper light.

SAFETY

Electronic strobe systems are very high power light sources. Treat them with respect.

- a. Use only the heavy duty lamp and extension cords provided with the system.
- b. Keep away from all liquids. Liquids and strobes are a dangerous combination.
- c. Modeling lights are hot. Do not touch or use paper or fabric near flash heads.
- d. Be sure fan is always running, never obstruct vents, in the flash head.
- e. Connect and disconnect heads with power off and discharged.
- f. Fire extinguisher is next to the front door of the classroom.