

Flash Photography I

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WHY, WHY, Why?

Why use a flash?

- To control the amount and direction of light.
- Balancing the light to illuminate multiple subjects.

Why use a flash out side?

- in the sunlight to show detail in the shadow areas.
- to enhance the color of nearby objects on overcast days.

Why use a flash inside?

- to add light.
- to get truer color.

Definitions

TYPES of Flash Units:

- Non-Dedicated – Works with any camera, the flash unit determines how much light to emit based on the selected settings on the flash unit.
- Dedicated – the camera tells the flash how much light to emit. The flash communicates with a particular model of camera to enable TTL or ETTL for more accurate lighting.

MODES:

- Manual - Set the flash to emit a certain amount of light regardless of any other settings.
- Auto – Allow the flash unit or the camera to decide how much is enough.
- TTL, ETTL – The camera makes the decision about the lighting

About the light from the flash.

The duration of light from modern flash units is from about 400th of a second at full power to about 50,000/sec at minimum power. The unit fires the same “strength” of light at all power settings, but the duration of the light changes as the power level decreases. The older flash bulbs required about a 30/sec for full light. You had to use a blue bulb for color photos to correct the color. A clear or white bulb could be used for B/W. Each flash model has a Guide Number. The higher the guide number, the more powerful the flash unit.

Equipment Descriptions

- **On Camera** - Built in flash or hot shoe mounted flash is the most popular and economical but has limitations. Your light always comes from the same place.
- **Off Camera** - PC corded, Bracket and extension cords, Wireless, slaves, radio and IR. These allow more creativity by changing the direction of the light and allowing multiple flashes for additional lighting control.

Techniques

- Direct, Bounce or Fill
- Diffusers, Gels, Time Exposures with single or multiple flashes
- Reflectors, 1st curtain sync, 2nd curtain sync.

Color Correction

Your typical Daylight film is color balanced to the sun. Even if your camera indicates enough light is available for an indoor photo, Incandescent light bulbs will tint your photos brown. Fluorescent lighting can leave you with a green tint. The camera flash unit is color balanced to correct these color variations as long as you use daylight film or set your white balance to Sun or Flash.

Good Lighting means Good Color and Contrast

For people shots, keep the sun behind your subject. This prevents eye-squint and can give a nice highlight effect on your subjects hair and shoulders. Use a flash to give better color and to light up those shadows. Most built-in camera flashes are best between 3 to 12 feet. Using a higher ISO setting will allow you to increase the range of you flash. (These figures are average and will vary from camera to camera.)

Built-in Flash Range (may vary by camera)

- ISO 100 – 3 to 9 feet, ISO 200 – 3 to 12 feet, ISO 400 – 3 to 15 feet

The more powerful mounted flashes can achieve much greater distances,

- ISO 100 - up to 25 feet, ISO 200 - to 35 feet, ISO 400 - to 50 feet (a higher flash unit guide number will have greater range)

According to the Sunny f/16 Rule, a midtoned subject, when exposed in full sunlight, will be correctly exposed at an aperture of f/16 and a shutter speed of the reciprocal of the film ISO (1/ISO). In other words, a film with a speed of ISO 100 should correctly expose a midtoned subject at 1/100 second at f/16 in full sunlight.