Flash

Extra Help!

Flash

- Things you should know about using the flash:

- **Every flash photograph is two exposures in one** – an ambient light exposure and a flash exposure. This is a critical fact to remember. The shutter opens, the flash fires, the shutter closes. During this time, both ambient light and flash will contribute to the recorded image. Flash photography requires managing both exposures.

Flash

- Since every flash exposure is two exposures (flash and ambient light). If you are having trouble with blown out images, you may want to add more ambient light to your surroundings to help bridge the gap between the flash exposure and background.

Flash

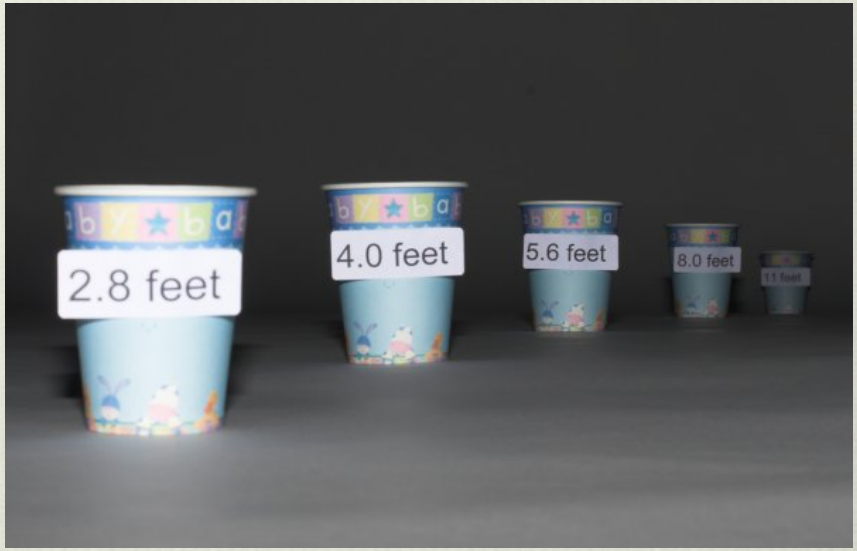
- DSLRs and some point and shoots have the ability to adjust the flash output manually.
- This is a great feature if you are having trouble with the ambient exposure being good, but the flash is too bright or too dark.

Flash

- **Flash exposure is not affected by shutter speed.** The entire burst of light from the flash begins and ends while the shutter is open, so keeping the shutter open longer won't help with flash illumination. The flash exposure and the effective range of your flash unit will be affected by aperture and ISO settings, but not the shutter. Of course, the ambient light component in a flash photograph is affected by shutter speed. So changing the shutter speed is one way to manage the amount of ambient light that contributes to a flash photograph.

Flash

- **Flash illumination is dramatically affected by distance.** This is known as the inverse square law. This phenomenon, sometimes referred to as “flash falloff”, will affect any image with more than one subject at different distances. Whenever your subject distance increases by a factor of roughly 1.4 (the square root of 2), the flash illumination will be cut in half. Suppose you’re taking a large group portrait. The people in the first row are 10 feet away, and the people in the back row are 14 feet away. With on-camera flash as the primary light source, the front row will be a full stop brighter than the back row!

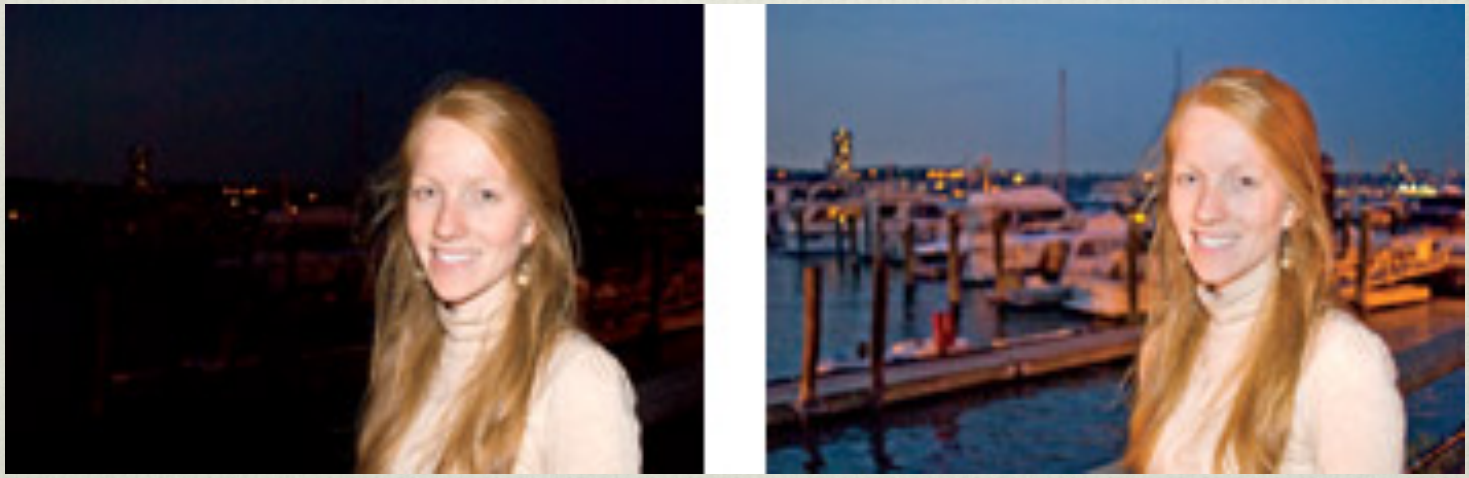


Flash

- **Every SLR camera with a mechanical shutter has a maximum flash sync shutter speed** (typically 1/200 or 1/250). This has to do with the way focal plane shutters work. At slower shutter speeds, the first curtain opens, the flash fires, and after the specified time duration, the second curtain closes behind it. At shutter speeds faster than flash sync, the second curtain begins to close before the first curtain is completely open. The second curtain follows the first across the frame, exposing only a slice of the image at any given moment. Firing a flash during this process would illuminate only part of the image.

Slow Sync Flash

- Slow Sync Flash (Night Mode or Party Mode): Allows for a long shutter speed to capture ambient light and a flash to illuminate foreground.
- Will create a decent stopped image in foreground without losing all the detail in background.



Slow Sync Flash

- Rear and Front Curtain Sync: Your camera actually has two shutters, a rear curtain and a front curtain. This is to make your shutter speed as accurate as possible for those really fast shutter speeds.

- This is primarily when you are shooting a moving subject. It won't really matter if you are shooting a stationary object.

Slow Sync Flash

- **Rear Curtain Sync** – this tells your camera to fire the flash at the end of the exposure. When you press the shutter your lens opens up and starts collecting light and just before it closes the flash will fire to light up and freeze your main subject (see the card shot to the left for an example where you'll see the card trail ending in a nice crisp shot of the card).

Slow Sync Flash

- **Front Curtain Sync** – this tells your camera to fire the flash at the start of the exposure. When you press the shutter, the flash will fire immediately and the shutter will remain open afterwards capturing ambient light.

Front Curtain Sync

Rear Curtain Sync

Flash

- When photographing moving subjects, front and rear curtain sync makes a big difference. Many action and sports photographers will use Rear Curtain Sync when shooting with a panning technique.

Slow Sync Flash

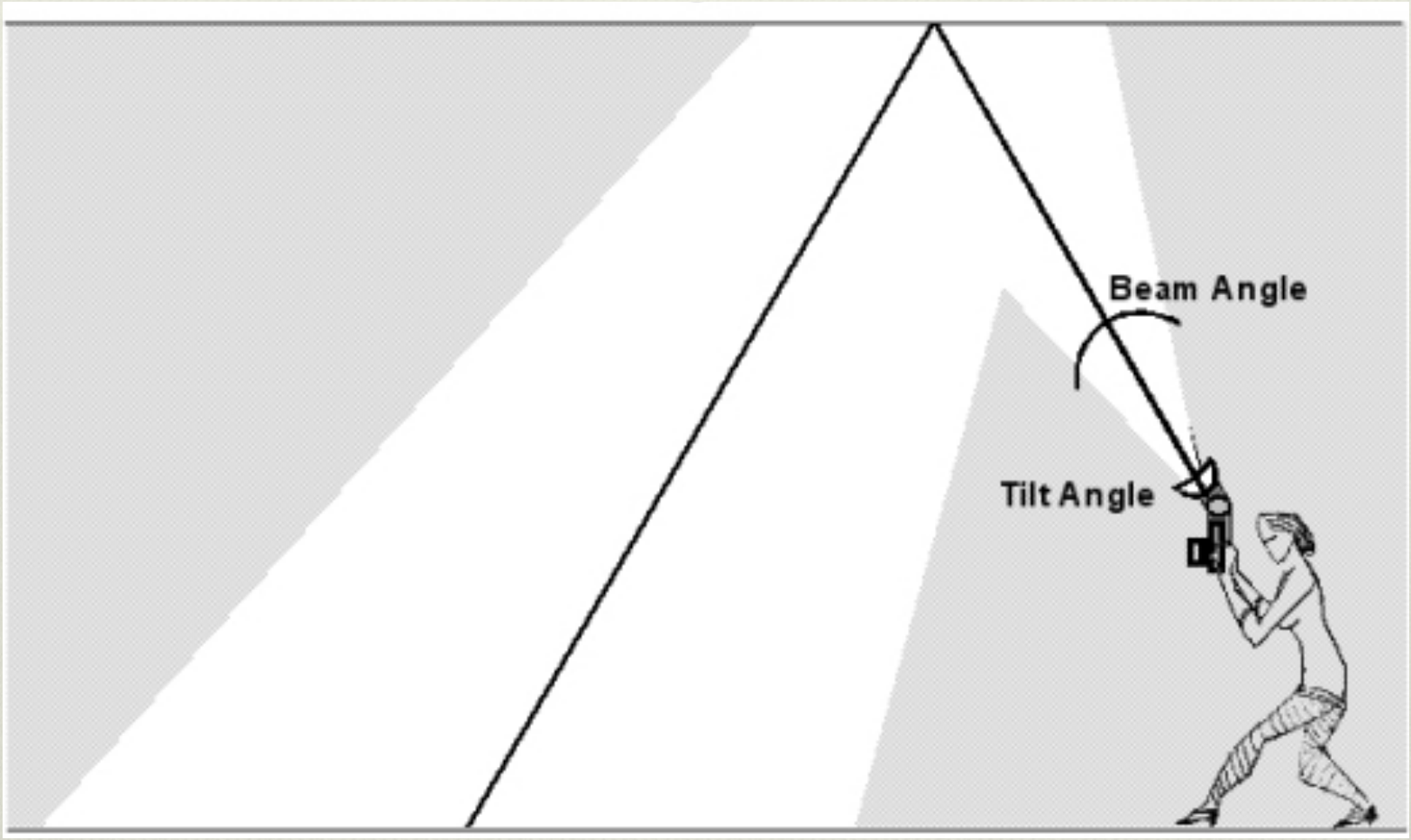
- If you are not shooting a moving subject, you will want to use a tripod or stable shooting surface. Although the flash will usually freeze motion due to camera shake, the background will probably be blurry unless you keep the camera still.

Bounce Flash

- Bounce Flash is bouncing the light from the flash off of a reflector onto a ceiling or a wall in order to diffuse it.

- Bounce flash tends to look a little more natural because it comes from above (what we typically see in the real world- overhead from the sun or indoor ceiling lights).

Bounce Flash



Bounce Flash

- Keep in mind it will not work particularly well if you have a really high ceiling (flash will not reach it) or a particularly dark ceiling or wall (will absorb the light).

Bounce Flash

- Most easily achieved with an external flash that can be pointed in any direction. You can bounce it off the ceiling or wall (or any somewhat reflective surface - you can bring your own reflector too).

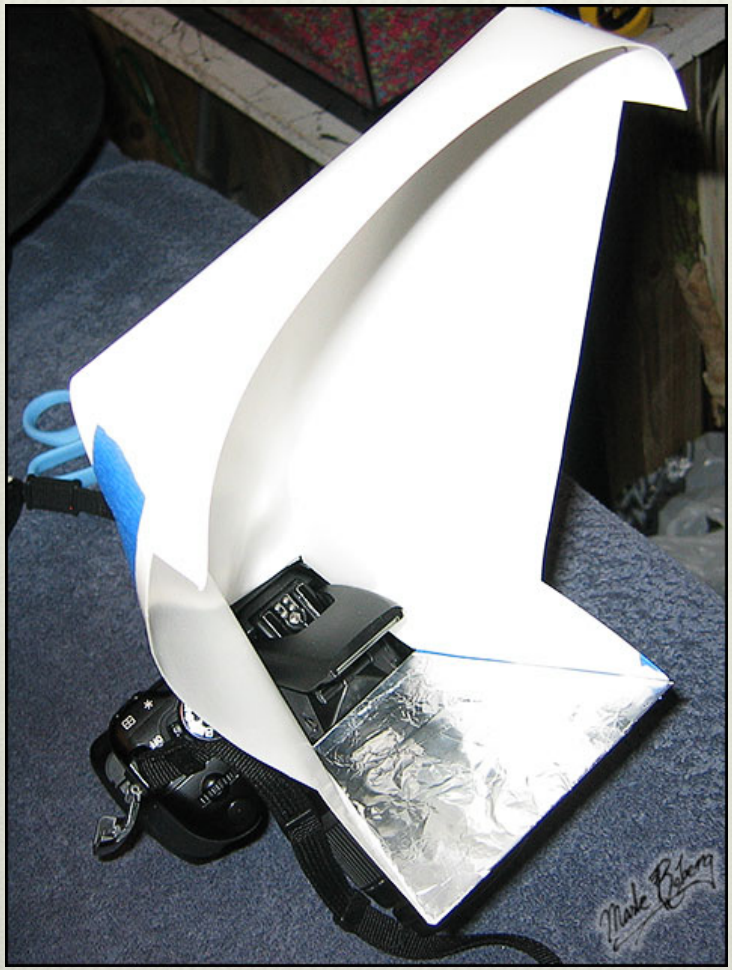
Bounce Flash

- Adding a bounce card will help direct the flash to where you want to bounce it.
- Some flashes have built-in flash cards or you can simply tape a piece of white paper to it. A post-it works well.

Bounce Flash

- If you do not have an external flash, you can create a bounce card and mount right outside the flash.

Bounce Flash



Bounce Flash

Bounce Flash

Diffuse Flash

- Diffuse Flash: Putting something in front of the direct flash to make the effect softer. You are spreading the light out to make it less direct. This can be homemade or purchased.
- Also more easily done with an external flash, but you can also make homemade diffusers.

Diffuse Flash

- You can use a purchased soft box or diffuser – made specifically for this purpose and work quite well.
- There are mini soft boxes as well as various plastic attachments and diffusers.

Diffuse Flash

Diffuse Flash

- Paper, tissues, coffee filters (anything that is white and semi-transparent) work to diffuse the flash and are easily just held or taped in place over your flash. Probably what you will need to do with a point and shoot camera.

Diffuse Flash

- Another thing that works well is a translucent film canister with a hole in it.
- This would be used for a pop-up flash.
- Notch out the film canister to fit onto pop-up flash (link to tutorial in Projects Tab).

Diffuse Flash

Diffuse Flash

Diffuse Flash