Flash/Strobe/Speedlight photography
Flash types

- Fuji S7000 + Metz 45

Images of various cameras and flash units.
On compact camera

- Flashes tend to be positioned near to the edge.
  - Pop up flash
  - On camera flash
  - Off camera flash
Pop up flash

- Generally poor light
- Flash light is a small light source
- Small light sources produce a harsh light.
- Tends to produce Red Eye
- Lights directly on face, removing all forms of shadows
Pop up flash

- Use a slow shutter speed to allow ambient light in the photos as much as possible.
- Move away from subject to reduce the amount of light as much as possible.
- Use flash exposure compensation.
Pop up flash

• Use something to diffuse light and make it softer (tissue, thin paper, white handkerchief)

• Use a yellow gel to warm up the light.
Filters

- U.V. FILTERS
- POLARIZING FILTERS
- COMBINATION FILTERS
- WARMING FILTERS – 81 Series
- ENHANCING
- SOFT FOCUSDIFFUSION
- GRADUATED NEUTRAL DENSITY
- WARMING FILTERS
- 81 Series
- ENHANCING
- SOFT FOCUSDIFFUSION
- GRADUATED NEUTRAL DENSITY
- FLD – Fluorescent Correcting
- NEUTRAL DENSITY
- COOLING – 80 Series
- COLOR CORRECTING
- SPECIAL EFFECTS
- Star Filters
- Rainbow Filters
- Motion Filters
- Thin Filters for Wide Angle Lenses
Red eye
Red eye reduction

• Camera flashes the flash multiple times to make the pupil smaller.
• Even with red eye reduction, there might be some red eye.
• Red eye reduction may cause the person to blink.
Red eye

• Have subject look away from the camera slightly.

• Get more light into the room (open windows, light up all lights ect..)
Benefits of pop up flash

- Fill flash
- In outdoor shots, with light from behind the subject, shadow falls on subjects face.
- Pop Up flash can provide fill light to reduce shadows.
- Use Flash Exposure Compensation to prevent flash from washing out subject.
- Achieve balance between natural light and un-natural light from flash.
Stopping motion

• Use when some ambient light but subject is in motion.
• Insufficient light for high shutter speed to freeze motion.
• Turn Red Eye Reduction off
• Set camera to capture ambient light with slow shutter speed.
• Instantaneous burst of light from Flash will freeze motion
Flash settings
<table>
<thead>
<tr>
<th>Options</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Off</td>
<td>The flash will not fire. Camera shake warning will be displayed when shooting in low light.</td>
</tr>
<tr>
<td>Auto</td>
<td>The camera will select a proper flash setting for the detected scene in the smart auto mode.</td>
</tr>
<tr>
<td>Auto</td>
<td>The flash fires automatically when the subject or background is dark.</td>
</tr>
<tr>
<td>Red-eye</td>
<td>The flash fires when the subject or background is dark. The camera reduces red-eyes.</td>
</tr>
<tr>
<td>Fill in</td>
<td>The flash always fires. Light intensity is adjusted automatically.</td>
</tr>
<tr>
<td>Slow Sync</td>
<td>The flash fires and the shutter stays open longer. Select this when you want to capture ambient light to reveal more details in the background. Use a tripod to prevent your photos from blurring.</td>
</tr>
<tr>
<td>Red-eye Fix</td>
<td>The flash fires when the subject or background is dark. The camera corrects red-eyes through its advanced software analysis.</td>
</tr>
</tbody>
</table>
Dedicated external flash

- Dedicated Flash offers of good light anytime you want
- Can be used effectively mounted on hot shoe or can be used off camera
  - Flash can be tilted up to bounce flash off of ceiling
  - Flash can be swivelled horizontally to light to left and right
Dedicated flash

• If flash is synched to camera, it can be controlled from the camera.
• Most Cameras allow for Through the Lens Metering (TTL) to control the quantity of Flash light output (Canon E-TTL; Nikon i-TTL)
• Camera turns flash output on and off based on camera exposure
Dedicated Flash

- Camera has Flash Exposure Compensation to allow you to manually adjust Flash output
- ISO and Aperture have no affect on balance between ambient light and light from your flash
- In manual mode however, Shutter Speed does impact that balance
• Each Camera has a shutter speed at which the Flash is synchronized called Maximum Sync Speed.

• Speeds above the Maximum Sync Speed will contain a black bar which is the shutter closing.

• Speeds below the Maximum Sync Speed will introduce Ambient light into your photos providing background illumination.
• Additional Controls on the flash unit:
  • Power Output – Most Flash Units allow you to control the Power out with a slider.
    Flash Exposure Compensation
  • Zoom – Many Flash Units allow synchronization with the camera as to Zoom distance and vary the flash power output to match the zoom distance.
Passing max sync speed
Soften light - diffusers

- Most flashes have some kind of diffuser built in.
- Otherwise you can buy your own.
Stofen diffuser effect

SB-600 Head Test...with/ and w/o stofen omnibounce

1/250th
f/8
Commander=1/128
SB-600=1/10th
Manual Mode

50mm head zoom
without omni

50mm head zoom
with omni

75mm head zoom
without omni

75mm head zoom
with omni
Bouncing flash

• Flash can be tilted to face the ceiling.
• Bounce gives softer light as the wall itself becomes the diffuser.

• Problems
• Tinted ceilings
• Ceiling may be too high
• Shadows on eyes. Use bounce cards/front flash
Reflector

• Bounces light into shadow area.

• Can be made very cheaply.
Snoot

Put it on your Speedlite and call it a Snoot!
Beauty Dish
Umbrella/Softbox
Off camera flash

- Bracket and
- Remote cord
Wireless

- Use of optical, infra red or radio transmitters and receivers
- Have varying distances and reliability issues
- Advantages include portability, range, flexibility of use
Wireless
Slave Flash

- External flash fires when it sees another flash of light.

- Cheaper but much dumber than other flashes.

- Useful if used when you are the only photographer.
Rear/Second curtain flash

- Usually your flash fires when you press the shutter button.
- At sync speed this usually puts the background in shadows.
- A setting on your camera allows the flash to fire at end of exposure which allows the camera to expose the background properly.

- Then toward the end of the exposure the flash fires to freeze your subject.
- This gives the image the natural light of the background plus the additional light from the flash on your subject.
Rear Curtain flash

- Allows normal exposure of background with natural lighting
- Freezes subject movement with light from flash
- Creating more natural lighting of both foreground and background
- Can create interesting results objects in background are moving, i.e. cars, motorcycles, or even people.
- Blurred movement but sharp final image
High speed sync

- Fill flash is effective outdoors when background is bright
- Flash sync speed however cannot be faster than max sync speed
- Thus aperture must be stopped down to control background exposure
- Makes background less blurred
- Modern flashes have High Speed Sync to allow more open apertures to be set freely
- In High Speed Sync Mode multiple flashes are fired while shutter is open to give continuous flash