

Using Flash

Why Use Flash

- Used for increased illumination
- Stops action
- Fills shadows in outdoor daytime shots
- Illuminates foregrounds to prevent silhouettes of backlit subjects

Flash terminology

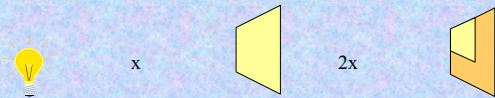
- Electronic flash – strobe
- Synchronization
 - shutter/aperture/flash
 - flash fires when shutter wide open
 - focal plane shutter – SLR
 - 1/60 or slower
 - some at 1/125
 - leaf shutter - rangefinder, twin lens, view
 - synchronize at any shutter speed

Test for best shutter speed to use with flash

- camera back open, face white wall, flash while looking through the lens. You should see a circle of light.
- Most cameras - 1/60 sec.
 - some ok at 1/125

Exposure factors

- Inverse square law of light
 - Essential consideration
 - The amount of light falling on the subject is inversely proportional to the square of the distance



Exposure factors (cont.)

- F/stop
 - increase as distance to subject increases
 - decrease as distance to subject decreases
 - inverse square law
 - ex. flash at 10' from subject - f/11
 - move flash to 20', illumination cut by 1/4
 - open lens 2 stops or to f/5.6
- Film speed
 - faster film, increase sensitivity
 - ability to use smaller apertures
- Quantity of light
 - increase power of flash, use smaller f/stop

Exposure calculation

- Manual
 - calculate distance between subject and camera
 - set film ISO on flash calculator dial
 - refer to distance, and select f/stop to use
 - shutter speed set to synchronize with camera

Exposure calculation

- Autoflash units
 - adjusts flash time length based on preset f/stop and film speed
 - light from flash reflected from subject is read by a sensor
- Using
 - Set ISO
 - Set color code based on distance
 - Set f/stop

Dedicated Flash

- Flash unit designed for a specific camera
- Hot shoe
- Automatically sets shutter speed

Problems with automatic flash

- treats all subjects the same
 - ie. dark subject in a light room, more light reflected, subject underexposed
- compensation
 - use manual mode
 - bracket exposures

Flash placement

- On the camera
 - shadows directly behind
 - flattening of subject
 - red eyes in color photos, due to light shining against the back of the eyeball

Bounce flash

- off of the ceiling
- prevents red eye
- softens harshness

What to look for in a flash

- Power
 - more power, better, increased cost
 - more power, greater distance, smaller f /stop
- Power source
 - battery or plug in

What to look for in a flash

- Recycle time
 - time to reach full power
 - increases as battery fails
- Energy used
 - energy saving - thyristor, unused power is stored