

# Photo 149 Test Review #1

Exam date: Thursday, Oct. 16  
Bring Scantron # 4521

In addition to the following material, the test will cover information on all handouts and discussions.

## FLASH EXPOSURE

Exposure = Intensity X Time  
Intensity = f/stop

f stop is determined by the flash to subject distance

Time is determined by the flash duration  
or

The time film/sensor is exposed to light

## FLASH DURATION / ABILITY TO STOP ACTION

With many flash units the duration of the flash will be 1/1000th of a second or faster.

More flash heads or higher power setting =  
longer flash duration

examples:

1/500th of a second with 4 heads in use.

1/2000th of a second with one head in use.

Power settings with manual flash

examples:

1/16 power = 1/15,000 second

1/32 power = 1/19,000 second

## LIGHT / FLASH METERS

Incident -- use a translucent dome to gather and read the light falling on a subject. With a consistent light source, reading does not change regardless of subject. Most common for flash and video, also available for continuous light source

Reflective-- reads the light reflected from a subject.

With a consistent light source, reading changes depending on reflective value of subject.

Most common for continuous light source, also available for flash.

## SHUTTER/SYNC SPEED

B setting holds the shutter open for as long as the shutter release is held.

Leaf Shutters:

X setting is for electronic flash synchronization.

T setting is for long exposures. Pressing the shutter once on T opens the shutter, pressing it again closes the shutter.

M setting syncs flash bulbs

Sync speed:

The fastest shutter speed you can use with flash.

1. Focal plane shutters, (found on DSLRs) have sync speeds of 1/80th to 1/500.
2. Selecting shutter speeds that are faster than the sync speed results in only a portion of the frame being exposed.
3. Leaf shutters, generally found on view cameras, will sync at any speed.

High Speed Sync: allows the flash to sync at any shutter speed, effectively doing away with the limits of maximum sync speed.

Slow Sync: a dedicated flash setting that adjusts the camera's shutter speed automatically to compensate for low-light level backgrounds.

Rear-Curtain Flash Sync: With normal flash synchronization the flash fires as soon as the shutter opens. With very long shutter speeds ambient light obscures a moving subject. When using rear-curtain sync the flash fires at the end of the exposure.

## LENSES

A lens with a larger maximum aperture, relative to the lens focal length, is called a "fast lens". That is, an 85mm 1.8 lens is considered fast. A 2.8 200mm lens is considered fast.

Wide Angle (short lens) :

1. Common wide angle lenses for a DSLR are: 10mm, 18mm, 21mm
2. Have more depth of field than longer lenses.
3. Increase feeling of space in interiors and exaggerate "round" forms in product shots.

Telephoto (long lens):

1. Common long lenses for a DSLR: 135, 200 and 300mm
2. Narrow angle of view, useful because long lenses require less background material.
3. Tend to be slower and heavier than wide lenses.
4. Less depth of field than shorter lenses. (Softens backgrounds and horizon lines in table-top scenes, separates backgrounds from subject on location.
5. Compress distance.

## MODEL RELEASES

Model releases are documents signed by a person, guardian, or property owner granting permission for a photograph of a recognizable person or structure to be used, generally for advertising purposes.

Note: releases are for usage, not permission to take photographs.

## INTELLECTUAL PROPERTY / U. S. COPYRIGHT:

A photographer owns a photograph and sells only the right to use that image to a client for a stated purpose, for a particular time period.

Copyright lasts for life plus 70 years.

This need not be stated in writing when the use of an image is sold.

Violation of copyright is the duplication of the entire or a substantial portion of a photograph exactly or by simulation or imitation.

Copyright notation: © 2004, Sue Smith

Place this notation on all digital files, prints, & negatives that leave your possession.

## COPYRIGHT EXCEPTIONS:

- a. Work for hire - the photographer is an employee of the company, with all usual rights of a regular employee.
- b. Fair use - educational use, scholarly research, book review, or the photograph itself becomes newsworthy.

It is a serious violation of ethics, as well as copyright, to emulate, use or copy even a portion of another photographer's work, without their permission.

## ADDITIONAL TERMS

### AMBIENT LIGHT

Existing continuous light source (natural or artificial).

### FILL CARD

Reflector (white, silver, gold) used to fill shadows created by the main light.

### FILL LIGHT

Used to fill shadows created by the main light source (sunlight or electronic)

### GUIDE NUMBER

Number that indicates the aperture setting for a given light-to-subject distance at a given ISO. Small flashes have a guide number which indicates the flash's power.

### HOT SHOE

U-shaped connection on the top of 35mm / DSLR cameras for battery operated flash connections and provides an electrical connection for large strobes

## KEY LIGHT/MAIN LIGHT

Dominant source of light, determines contrast.

### Higher contrast:

The farther the main light is from the subject the deeper the shadows.

The smaller the main light is, relative to the subject, the darker the shadows

### Lower contrast:

The closer the main light is to the subject the softer the shadows.

The larger the main light is, relative to the subject, the softer the shadows

MODELING LIGHT a low color temperature, continuous light source in a flash head.

MONOLIGHT (AKA monoblock) a self-contained flash lighting unit, that contains a modeling light and a flash. Utilizes a battery OR AC power.

## PATCH CORD/PC CORD/SYNC CORD

Cable that signals flash to fire from strobe to camera.

POWER DUMP INDICATOR: shows when the flash unit needs to "dump" the capacitors (required when lowering power).

RECYCLE TIME is the amount of time it takes for a flash to reach full power after being fired.

## RIM LIGHT / BACK LIGHT

Usually placed behind the subject, to light hair or the edges of a subject, to ensure separation between a subject and background.

TTL Through-the-lens metering: occurs at film plane/sensor. Very accurate means of determining correct exposure for both dedicated flash & ambient light.

## WIRELESS FLASH TRIGGERING METHODS

### 1. Slave:

A flash unit set up to fire by detecting the flash from another flash unit in a multi-light setup.

### 2. Radio Signal (such as Pocket Wizard)

Need not be line-of-sight, signal will pass through walls.

Uses different radio frequencies to trigger flash.

### 3. Infrared

Uses infrared source to trigger flash. Must be line-of-sight.