

The Shutter

Review

- ◆ Distance from nodal point to focal plane is
- ◆ Larger number, ___ opening
- ◆ Difference between f/stops is
- ◆ Lens with the smallest angle of view
- ◆ f/16 give ___ depth of field
- ◆ Depth of field can be controlled by changing

Functions of the Shutter

- ◆ Controls the length of time light reaches the film
 - Controls time - of exposure
 - Controls movement - of the subject
 - Types of shutters

Types of Shutters

- ◆ Leaf shutter
 - Overlapping leaves
 - Rangefinder, twin-lens, view cameras
- ◆ Focal-plane
 - Curtain in front of film plane - SLR's
 - Allow interchangeable lenses
 - Faster speeds, yet noisy
 - Less flexible with flash

Operation

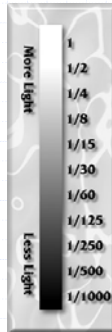
- ◆ Mechanical - gears
- ◆ Electronic
 - Will not operate without batteries
 - In between settings

Controlling Time

- ◆ Light must reach the film
 - Aperture - amount of light
 - Shutter - length of time
- ◆ Shutter speed
 - Time the shutter is open
 - Low light - longer or slow speed
 - Bright light - shorter or faster speed

Shutter Speeds

- ◆ Fractions of one second
 - Double or half relationship
 - Like f/stops



B&T

- ◆ B and T settings
 - For exposures longer than one sec.
 - B
 - ◆ bulb, open while pressed down
 - T
 - ◆ time, opens when shutter first released
 - ◆ closed when released a second time

Controlling Movement

- ◆ Stop action
 - Fast shutter speeds, stop subject movement
 - Speed of the subject determines shutter speed



Which Speed to Use?

- ◆ Direction of approach determines shutter speed
 - Movement left to right faster than straight on
 - Diagonal movement in between
- ◆ Speed of the action
 - Faster action - faster shutter speed
 - Slower action - slower speed

Simulating Speed

- ◆ Pan action
 - Slow shutter speed while following subject, sharp subject, blurred background
 - Steps in panning
 - ◆ Prefocus where the subject will pass
 - ◆ Meter the area, set shutter to 1/15 or 1/30 and f/stop
 - ◆ Begin panning the subject in the distance

Panning

- ◆ Squeeze the shutter release while panning as the subject passes in front of you
- ◆ Follow through - follow the subject out of sight



Accidental Movement

◆ Prevention

- Steady camera
- 1/60 or faster except when panning
- Use a tripod for slow speeds
- Brace against a tree or wall