

The Shutter




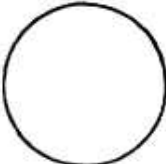


Shutter....

- Shutter
 - Curtain
 - Set of blades
 - Some cameras have a leaf shutter. Looks like aperture. P. 67
 - Blocks light from entering and striking the film

 - Some shutters are mechanical – gears and springs.
 - Some shutters are electronic.



Leaf Shutter

1.  SHUTTER FULLY CLOSED
2.  SHUTTER STARTING TO OPEN
3.  SHUTTER ALMOST FULLY OPEN
4.  SHUTTER FULLY OPEN
5.  SHUTTER CLOSING
6.  SHUTTER FULLY CLOSED

To take a photo...

- Press the shutter button
- The shutter then opens and closes
- The amount of time the shutter stays open is variable.
- Interval of time is called the shutter speed.
- Some cameras let you adjust the shutter speed. (Manual)
- Some cameras do it for you. (Automatic)

Shutter affects....

1. Controls exposure (How long the light hits the film for)
2. Appearance of motion. (Whether an image looks sharp or blurred.)

Controlling Exposure

- Exposure is controlled by two variables...
 1. Amount of time the shutter stays open.
 2. Size of the lens opening (F-stop)

Choosing the correct shutter speed...

- Determined by the light conditions
- You have to select a shutter speed that allows in the correct amount of light.

- Shutter speeds...
- 1,2,4,8,15,30,60,125,250,500,1000,2000,T,B

- Low light conditions=slow shutter speed
- High light conditions=fast shutter speed

- Find the shutter speed dial on your camera

Low light = Slow SS



Shutter speed means...

- Fraction of a second
- 1,2,4,8,15,30,60,125,250,500,1000,2000
- $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$, $\frac{1}{15}$, $\frac{1}{30}$, $\frac{1}{60}$, $\frac{1}{125}$, $\frac{1}{250}$...
- Shutter speed of 1 is double the amount of light then 2.
- Shutter speed of 4 is half the amount of light then 8.
- Each halving or doubling is called one “stop”

Mechanical vs. Electronic

- Some shutters are mechanical – gears and springs.
- Some shutters are electronic.

- Electronic shutters offer half stop or third stop increments.... 90 (between 60 and 125) usually quiet and more accurate than mechanical shutters.

- Mechanical shutters do not depend on batteries to work.

B and T

- B = bulb
- T = time
- Very long or time exposures.
- Very dark lighting conditions.
- B stays open as long as you keep the shutter button pressed down.
- T Press the button – shutter is open until you press it again...then it closes.

Controlling Movement

- 1,2,4,8,15,30,60,125,250,500,1000,2000
- Faster shutter speed = movement freezes
- Slower shutter speed = movement is blurred.

Freeze/Blur

- Freeze a walking dog at 1/125
- Freeze the motion of a galloping horse at 1/1000
- May photograph the horse at 1/125 to blur it.
- Still subject like a rock – you may use a slow shutter speed. 1/60

***Slow shutter speeds may result in blur due to camera shake.

500



60



30



8



Stop Motion







Star GLENN GUAN





Blur





© Home Photo.com