

# Manual and Automatic Settings

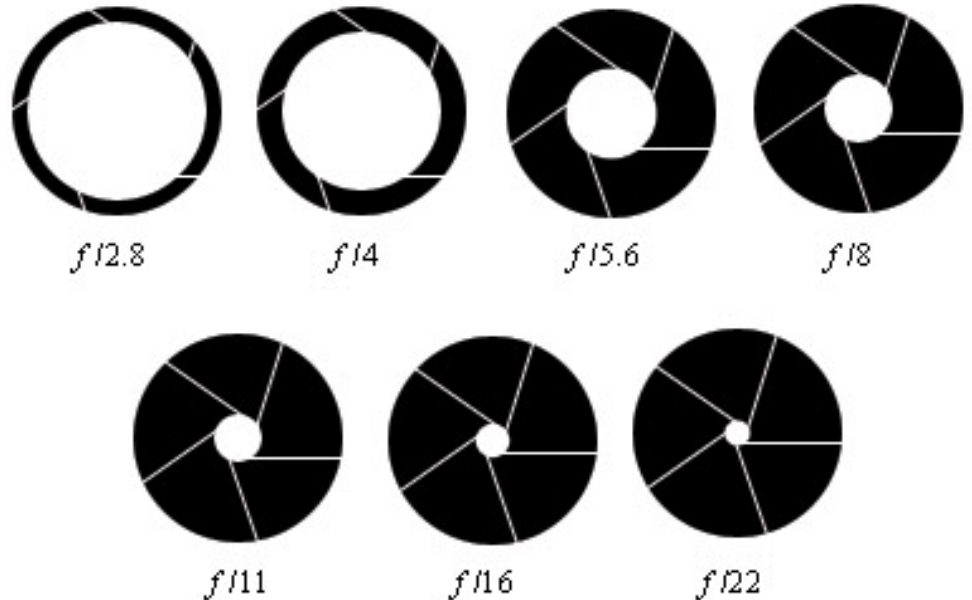
# Tips for Beginners

- Always set “IS” (image stabilizer) to ON
- When not in use, take battery out of camera
- For beginners: set to AF (auto. focus) on lens
- For more control: set MF (manual focus) on lens
- Hold shutter button half way to focus, all the way to shoot
- Always use both hands to hold camera

# Definitions

- Aperture: A hole within the lens that controls how much light passes through.
  - Referred to as f-stops
  - $f/4$ ,  $f/4.5$ ,  $f/5$ ,  $f/5.6$ ,  $f/6.3$ ...  $f/25$

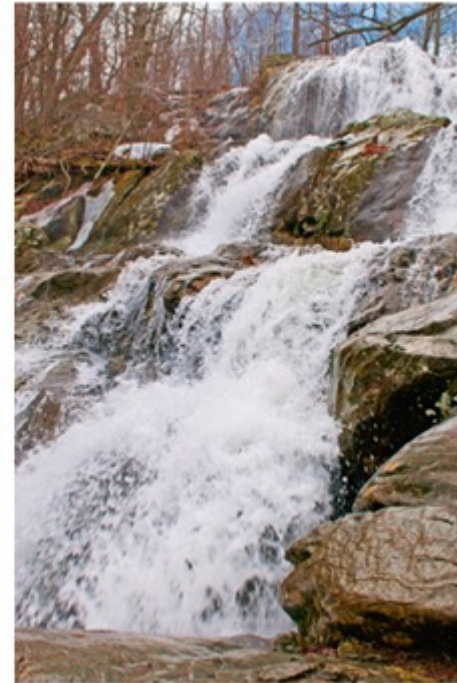
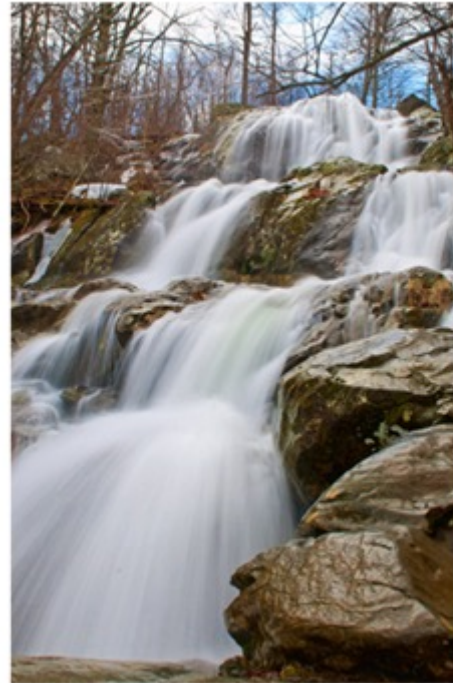
Smaller number=  
more light



# Cont.

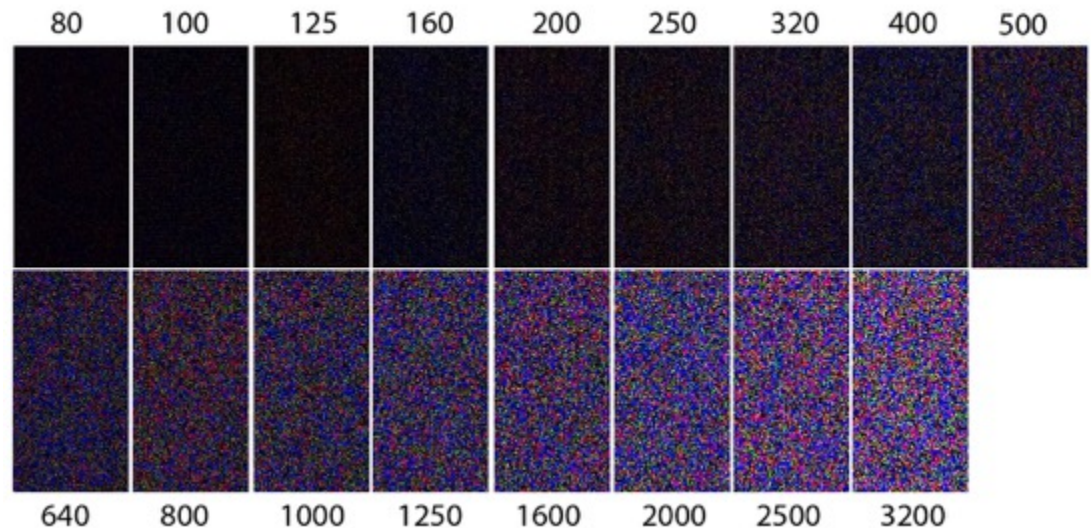
- Shutter Speed: The amount of time the shutter is open.
  - Measured in fractions of a second
  - $1/4 \dots 1/4000$

Bigger denominator=  
faster speed



# Cont.

- ISO: Measures the sensitivity of the image sensors to light.
  - 100, 200, 400, 800, 1600, 3200, 6400
  - Lower number- less grain
  - Higher number- more noise



Lower number=  
lower sensitivity

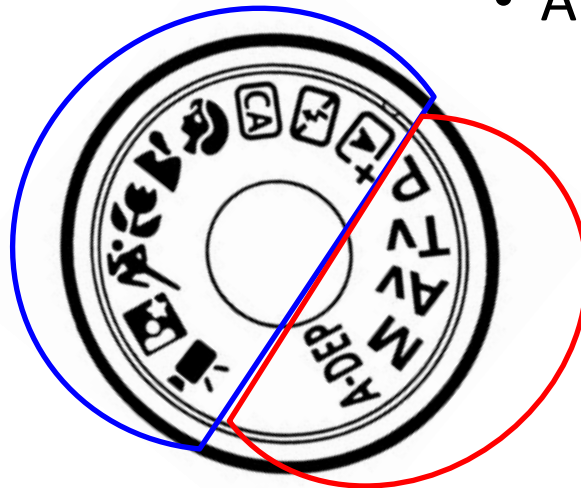
# Getting You Started

- Automatic Settings

- Night Portrait
- Action
- Close Up
- Landscape
- Portrait

- Manual Settings

- Programmed Auto Exposure
- Shutter Priority
- Aperture Priority
- Manual Exposure
- Auto. Depth of Field



# Auto: Night Portrait

- Under low light, the built in flash will fire automatically.
- Best results within 16 feet of subject
- Camera shake is more likely to occur. A tripod is recommended



# Auto: Action

- Set lens to AF (auto. Focus)
- Press shutter halfway to focus, all the way to shoot.





# Auto: Close Up

- Use a simple background.
- Move into subject as close as possible.
- Background will automatically blur.



# Auto: Landscape

- Foreground and background will automatically focus.



# Auto: Portrait

- Slightly blurs background.
- Farther away the subject is from the background, the better.
- Skin tones and hair look smoother.



# Manual Settings

# Manual: Shutter Priority

- Camera chooses aperture
- User chooses shutter speed
  - If the shutter is open longer (ex: 1/4) the user is able to capture a sense of motion.
  - If the shutter is open shorter (ex: 1/1400) the user is able to freeze motion.

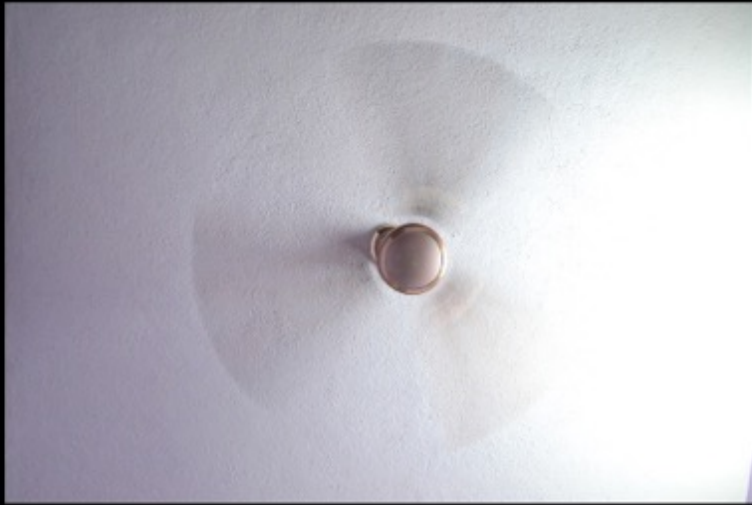
(Tv)

# Cont.

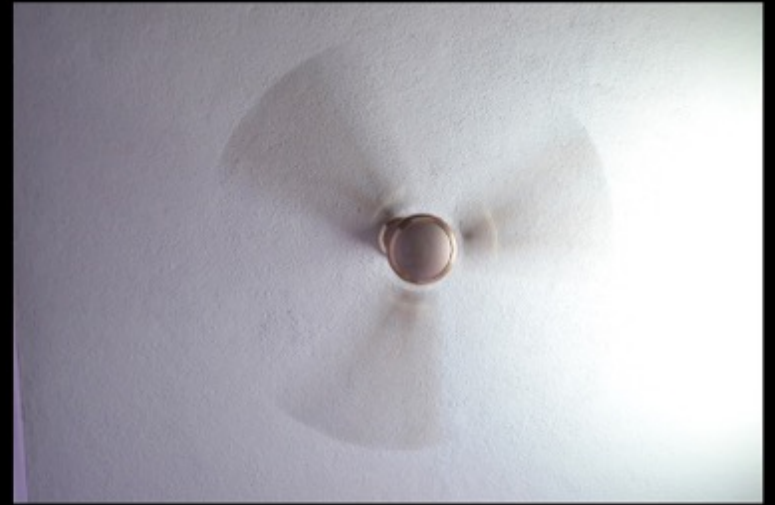
- The slower the shutter speed the more prone your photo is to camera shake.
- If you set your chosen shutter speed but notice the aperture symbol is blinking, you can still take the photo, but the image may be under-exposed.
- In general, it is safe to 1/80-1/125

# Shutter speed variation

shutter speed 1/30



shutter speed 1/40



shutter speed 1/80



shutter speed 1/200



# Manual: Aperture Priority

- Camera chooses the shutter speed.
- User choose the aperture.
- The main use of this setting is for the user to choose the depth of field.

(Av)



# Cont.

- Good for landscape photography where you want to capture foreground, middle ground, and background.
  - This would require a narrow aperture (higher number)
- Also works for portrait photography where you want the focus to be on the foreground and the background to be blurred
  - This would require a wide aperture (lower number)



*f/12.8*



*f/14*



*f/15.6*



*f/18*



*f/11*



*f/16*



*f/22*

Which shows the use of a narrower  
(or larger number) aperture?



Which shows the use of a narrower (or larger number) aperture?



Taken at 2.5 ↗



Taken at 7.1 ↗



f/22



f/2.8



# Manual: Manual Exposure

- The user choose the aperture and/or shutter speed.
  - Aperture controls the depth of field
  - Shutter speed controls motion blur
- <https://www.youtube.com/watch?v=yFX5P26R9mw>

(M)

# Equivalent Exposure Chart

<b>f1.4</b> 1/1000	<b>f2</b> 1/500	<b>f2.8</b> 1/250	<b>f4</b> 1/125	<b>f5.6</b> 1/60	<b>f8</b> 1/30	<b>f11</b> 1/15
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