

Photography Basics

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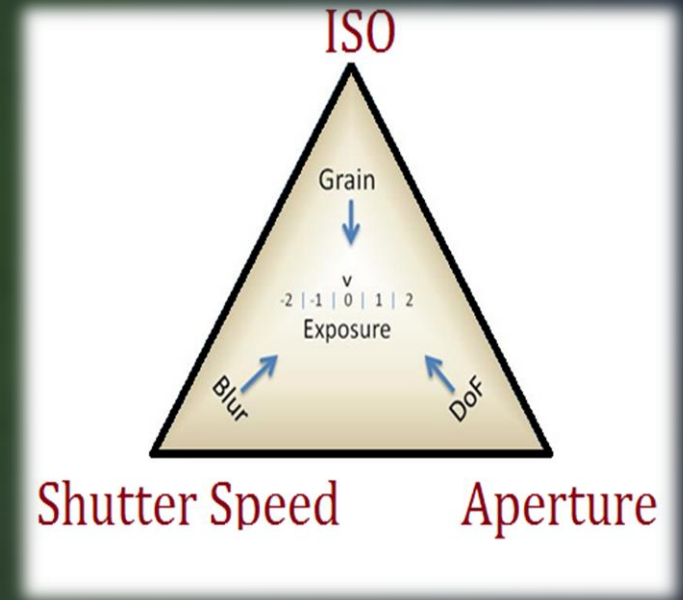
Who am I?

- Portrait and Landscape Photographer
- Weddings and Events photographer/videographer
- Active Member of PPO and MPPC

*** Photography is an art, part technical and part creativity ***

Agenda

1. Camera Basics
2. Exposure Settings
3. White Balance



This presentation focuses on the technical aspect of photography and is intended for beginner photographers with modern DSLR and Mirrorless Cameras.

Camera Basics

Know the basic parts of your DSLR / mirrorless camera

- Camera body (Point-and-Shoot, Digital SLR, Mirrorless)
- Shutter button (used to expose & take your image)
- Mode Dial (used to set the shooting mode; Auto, Manual, etc.)
- Main Dial (turn the dial to set the shutter speed, aperture)
- View finder, LCD live view screen (to view your subject)
- Flash (built-in, on-camera, off-camera)
- Lenses; focal length & aperture (prime lenses, zoom lenses).

FOV: wide angle 14mm, normal 50mm, telephoto > 100mm

Fast Lens: Lens with wide Aperture f/1.4 – f/2.8

Camera Basics

Shooting Modes

Modes used to determine exposure settings for shooting your subject

A – Auto mode (camera decides the exposure settings for proper exposure)

P – Program mode

Tv – Shutter priority mode

Av – Aperture priority mode

M – Manual mode (gives you full control of exposure settings for creative shooting)

B – Bulb exposure; the shutter stays open as long as you hold down the shutter button.

C – Custom; you select camera settings and assign them to a button/dial for quick access.

File Format (RAW, JPEG, RAW+JPEG)

Manual Focus (M) & Auto Focus (AF) setting

White Balance (WB)





1

2

3

4

5

6

SHOOT1

Image quality

RAW + L

Image review

Off

Beep

Disable

Release shutter without card

ON

Lens aberration correction

Flash control

Red-eye reduc.

Disable

M

1/2000

F4.0

ISO AUTO

-3..2..1..0..1..2..3

±0

OFF



AWB

**WB
+/-**



OFF



AI SERVO



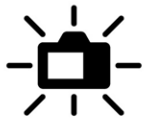
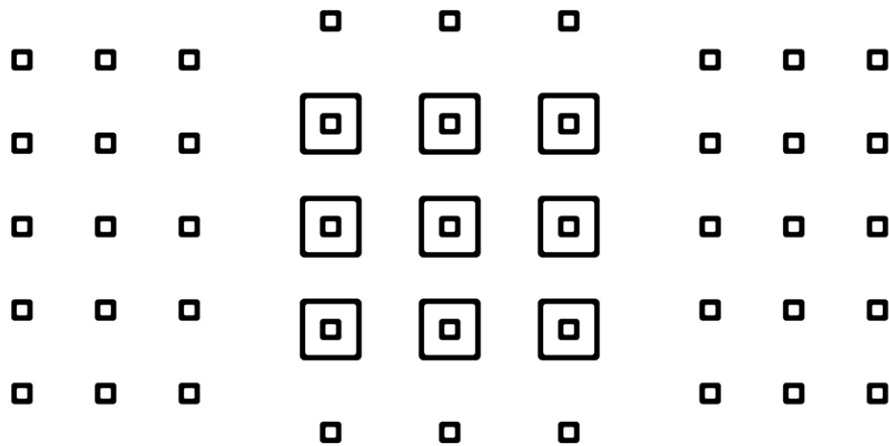
RAW + L



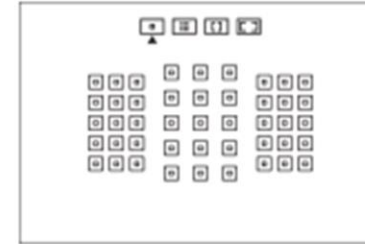
Manual select.:Large Zone AF

Setting the Auto Focus (AF) Mode

Set the lens focus switch to AF, and select the AF point or zone

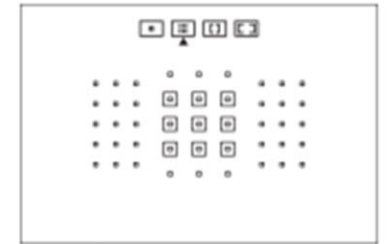


4 Types of AF Area Selection Mode



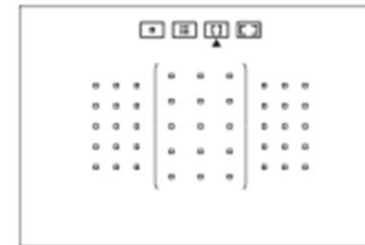
Single-point AF

Manually select any one of 45 points to bring barely moving subjects into focus. Effective for when composition is a priority.



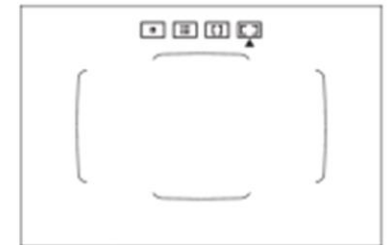
Zone AF

Manually select from 9 zones that detect subjects automatically. Effective for subjects that are difficult to capture with single-point AF.



Large Zone AF

Manually select from 3 zones, which are larger than in Zone AF. Effective for moving subjects and easy to use for beginners.



45-point AF Auto Selection

The camera detects subject automatically from 45 points. Effective for when the subject's movement is hard to predict.

Camera Exposure Settings

What is Exposure?

Exposure can be thought of as how bright or dark your image is. If it is too bright, it is overexposed. If it is too dark, it is underexposed.

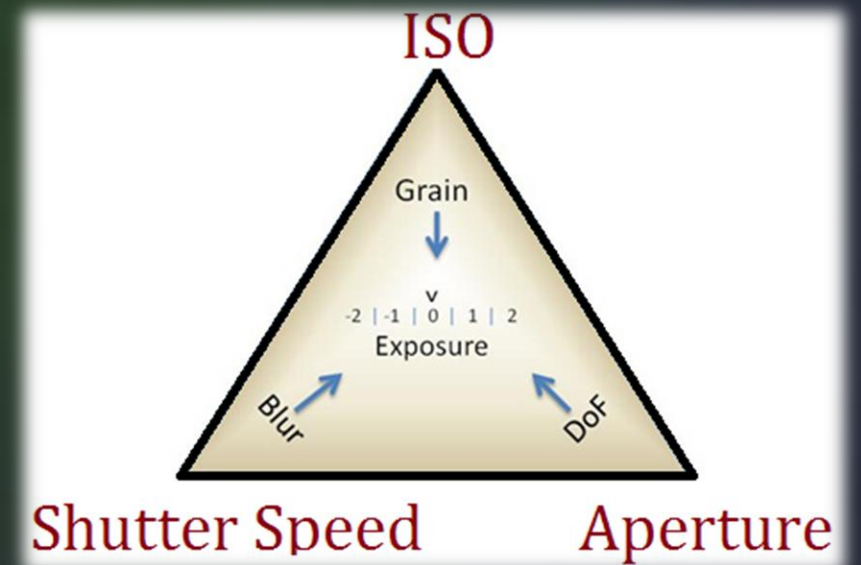
Understanding the basics of exposure help improve your photography skills.

How to set Exposure?

The Exposure Triangle

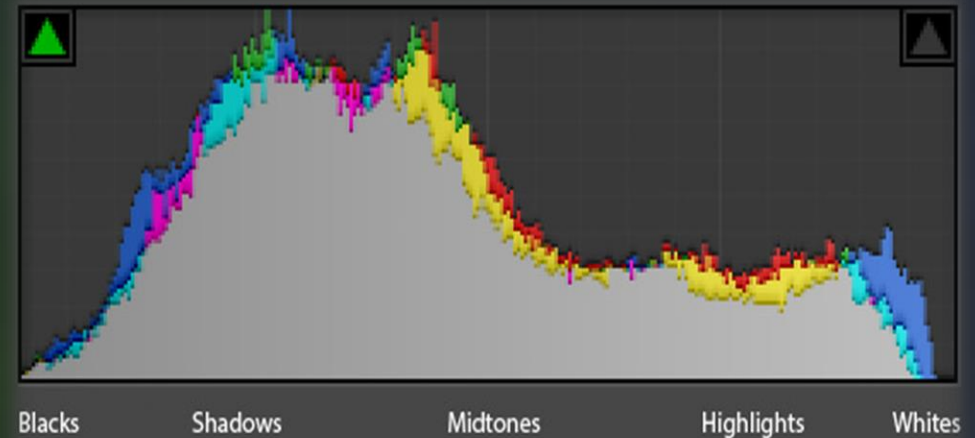
1. Shutter Speed 2. Aperture 3. ISO

Camera must be in “M” Manual shooting mode in order to set the Exposure Triangle values yourself.

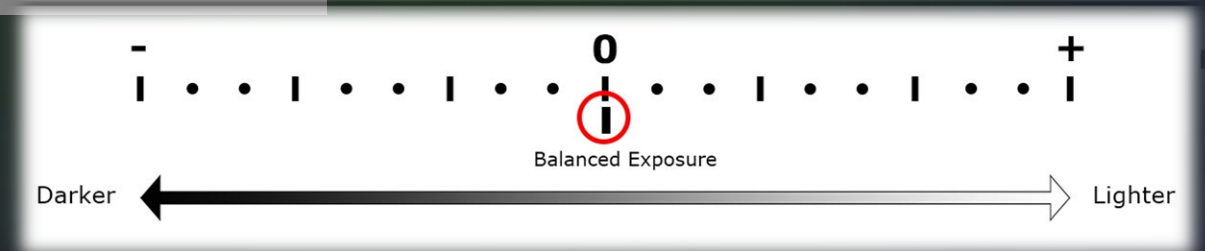


Exposure Indicators

Histogram - Is a graph showing the tonal values of your image.



Exposure Meter - A visual indicator of the exposure level.
Note that camera must be in Manual Mode to see it.



STOPS OF LIGHT



-2 Stops

-1 Stop

0

+1 Stop

+2 Stops

Correct Exposure

I. Shutter Speed

Controls how long the shutter is open; i.e. how long your camera sensor is exposed to light.

Shutter Speed values (sec)

1/2000 1/1000 1/500 1/250 1/125 1/60 1/30 1/15 1/8 1/4 1/2 1 2 4 8 15 30

Fast Shutter Speed (less light, darker image)

Slow Shutter Speed (more light, brighter image)

Shutter Speed affects motion blur in your image.

- Fast Shutter Speed **1/2000-sec** is short exposure; it lets in less light. *Using fast Shutter Speed freezes the action of moving subject.*
- Slow Shutter Speed of **1-sec** is long exposure; it lets in more light. *Using Slow Shutter Speed blurs the motion of moving subject.*

Effect of Slow vs Fast Shutter Speed



Slow Shutter Speed Shows motion
f/11, **1/40**, ISO 125

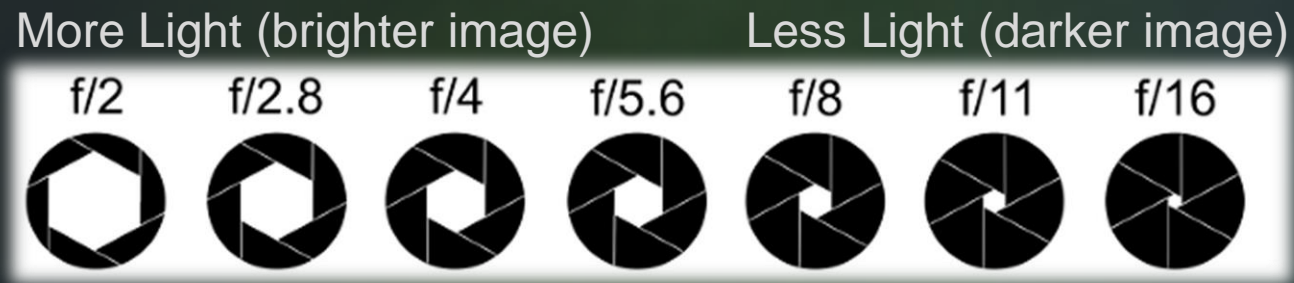


Fast Shutter Speed Freezes Action
f/4, **1/1000**, ISO 800

2. Aperture

Is the opening or hole size in the lens that controls how much light enters the camera.

Aperture values
written as f-stop



Aperture affects the Depth Of Field (DOF) in your image.

- Large Aperture **f/2.8** (wide open) allows more light into your camera. *Using f/2.8 creates shallow depth of field (less of your image in focus).*
- Small Aperture **f/16** (closed down) restricts light entering your camera. *Using f/16 creates large depth of field (more of your image in focus).*

Effect of Large vs Small Aperture



Large Aperture > Shallow Depth of Field
f/2.8, 1/100, ISO 400



Small Aperture > Large Depth of Field
f/11, 1/10, ISO 200

3. ISO

Is an electronic gain that makes the camera sensor more sensitive to light (amplification to create artificial light).

	Less sensitive (less noise)				More sensitive (more noise)		
ISO scale	100	200	400	800	1600	3200	6400
	Daylight/outdoors				Low light/indoors		

ISO affects the noise in your image

Low ISO of 100 is the base value for most cameras and is used mostly outdoors.
Using Low ISO results in clean image without noise.

High ISO of 3200 is more sensitive to light and makes your image look brighter.
High ISO is used in low light situations (indoors & night).
Using high ISO results in less clear, grainy image (noisy).

Tip: To avoid using high ISO, add artificial light (LED or Flash) to your subject.

Effect of Low vs High ISO



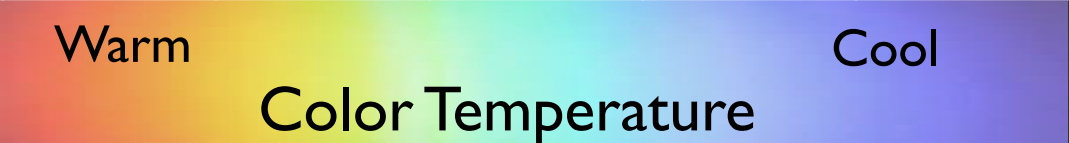
Low ISO > Clear Image, no Noise
f/5.6, 1/4-sec, **ISO 100**



High ISO > Less Clear, Noisy Image
f/5.6, 1/125-sec, **ISO 3200**

White Balance / Color Temperature

Camera White Balance (WB) Preset Modes

Auto	Tungsten	Fluorescent	Daylight Flash	Cloudy	Shade	Custom	K
	3200 K	4200 K	5600 K	6500 K	7500 K		
							Color Temperature

Light has colors, and different kind of lights cast different colors.

1. Check the WB setting and match it to the light you are shooting in.
2. Use a WB Grey Card to set Custom WB for the shoot.
3. Shoot in RAW and correct the WB in post (color grading).

NOTE: Correct White Balance is important when shooting Portraits, and Product Photography.

Effect of White Balance / Color Temperature

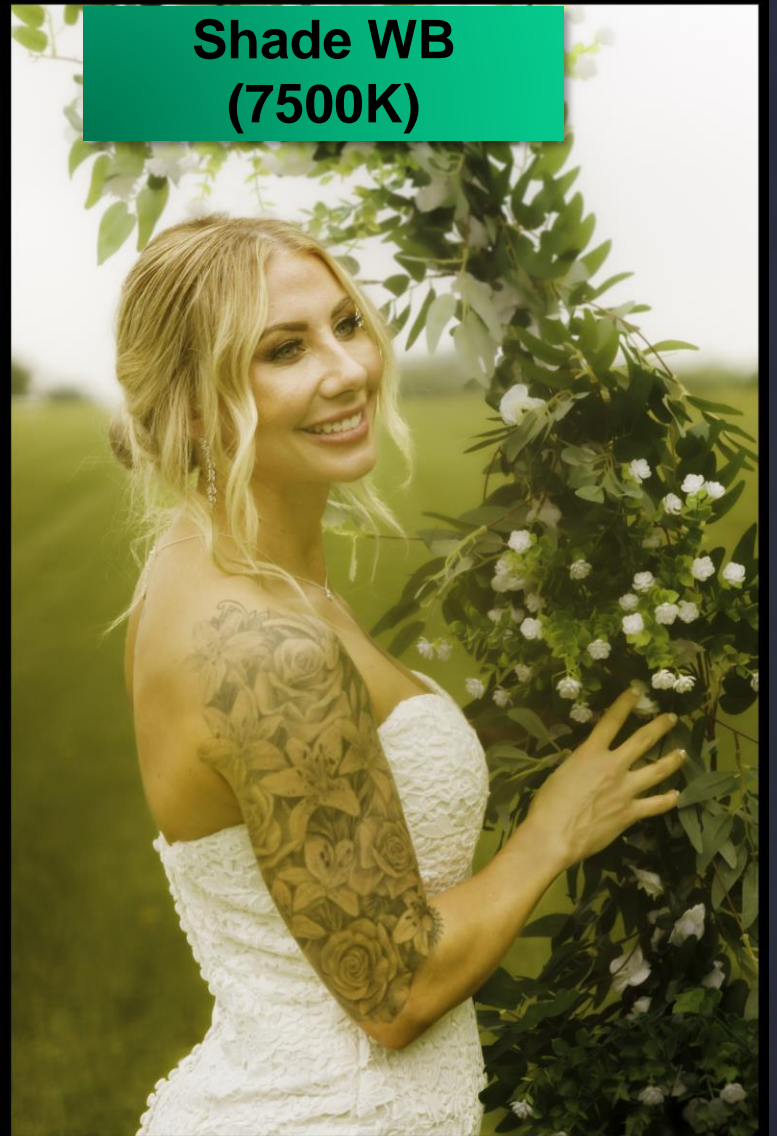
**Fluorescent WB
(4000K)**



**Daylight WB
(5600K)**



**Shade WB
(7500K)**



Thank You

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