

Exposure Compensation

The Best Exposure in Camera

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Agenda

- What is Exposure Compensation?
- Why Do We Sometimes Get “Bad” Exposures?
- How Your Exposure Meter Works
- How to Use Exposure Compensation
- Using Exposure Compensation with In-Camera Histogram (Nikon)
- Summary
- Web Resources

What is Exposure Compensation (EC)?

- Feature on your Camera – Usually a dedicated +/- button or dial
- Allows you to **Brighten** or **Darken** the picture from the values provided by the camera's exposure meter
- Available in common shooting modes:
Shutter and Aperture Preferred, Program
- Applies to **all** light sources:
Daylight, LED, Incandescent, Mixed, Flash (Flash Exposure Compensation), etc.

Why Do We Sometimes Get Bad Exposures?

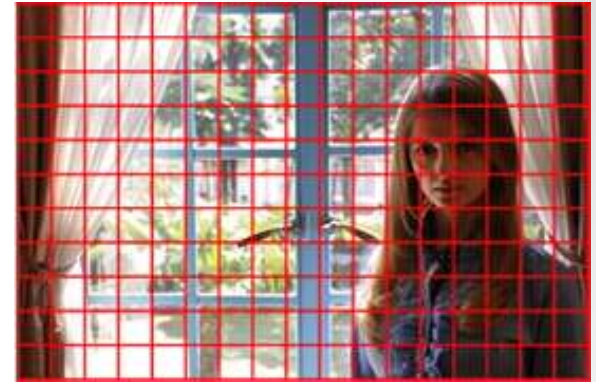
- It's Not the Camera – ***It's Us!***
 - *The camera does not know what is being photographed - **Only We Do***
- The exposure meter must **assume** a brightness (a.k.a. tone or reflectivity) of the subject to calculate the exposure settings.
 - The exposure meter **assumes** the subject has a brightness of **Middle Gray**.
 - If the subject brightness is **not equal to Middle Gray**, then the meter will likely produce a bad exposure

How Your Exposure Meter Works

Exposure Meter Modes (Patterns)

- Intelligent Multi-Zone

- Names: Evaluative, Matrix, Multi-segment, etc.
- Meters multiple zones from “corner to corner
- Match scene to data base of photos to determine subject and may apply exposure compensation
- Good for average subjects, grab shots, and Flash Fill



- Single-Zone Center Weighted

- Meters a user-defined central area (you can set the entire frame)
- Good with central subject



- Single-Zone Spot

- Meters a very small area – Usually at Focus Point
- Good to isolate a specific small area for metering or when subject is off-center
- Most time and skill required



How Your Exposure Meter Works

The Gray Scale



“Zone 5”
“Middle Gray”
“18% Gray”

Your Exposure Meter **Assumes** the metered area has brightness equivalent to **Middle Gray** and it reproduces **Middle Gray** in the photo.

Most subjects **average** the brightness of Middle Gray.
Exposure Compensation generally not needed
for average subjects!





Not all subjects average the brightness of Middle Gray.
This is What You See.



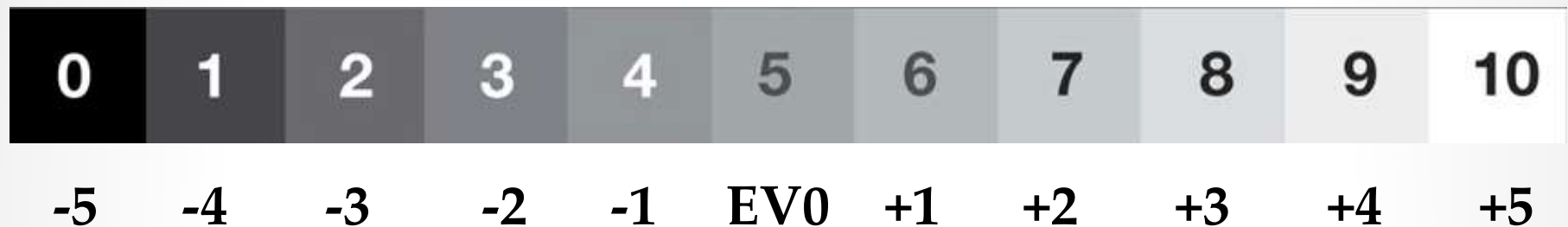
But this is What You'll Get.
What other subjects might not be average Middle Gray
brightness?

Using Exposure Compensation

Using Exposure Compensation in Camera

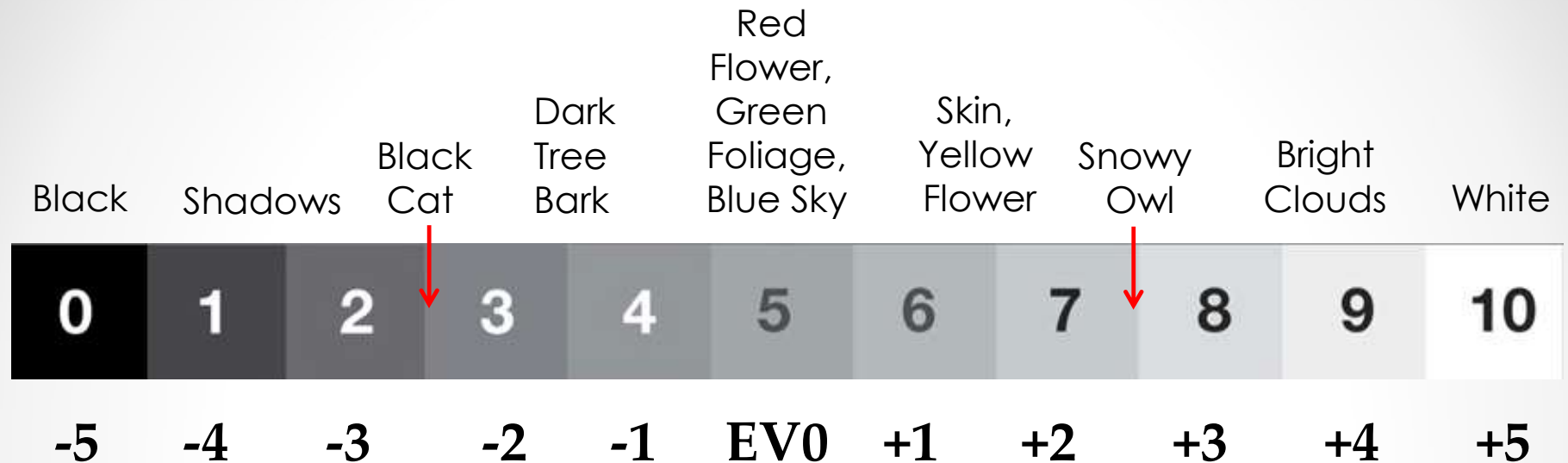
Exposure Value (EV)

The Gray Scale



- A feature of Exposure Compensation in your camera
- Measures the amount of Exposure Compensation applied
 - EV=0 No Exposure Compensation
 - +EV brightens photograph, -EV darkens
- EV is aligned with the 11 Zone Gray Scale

Using Exposure Compensation in Camera

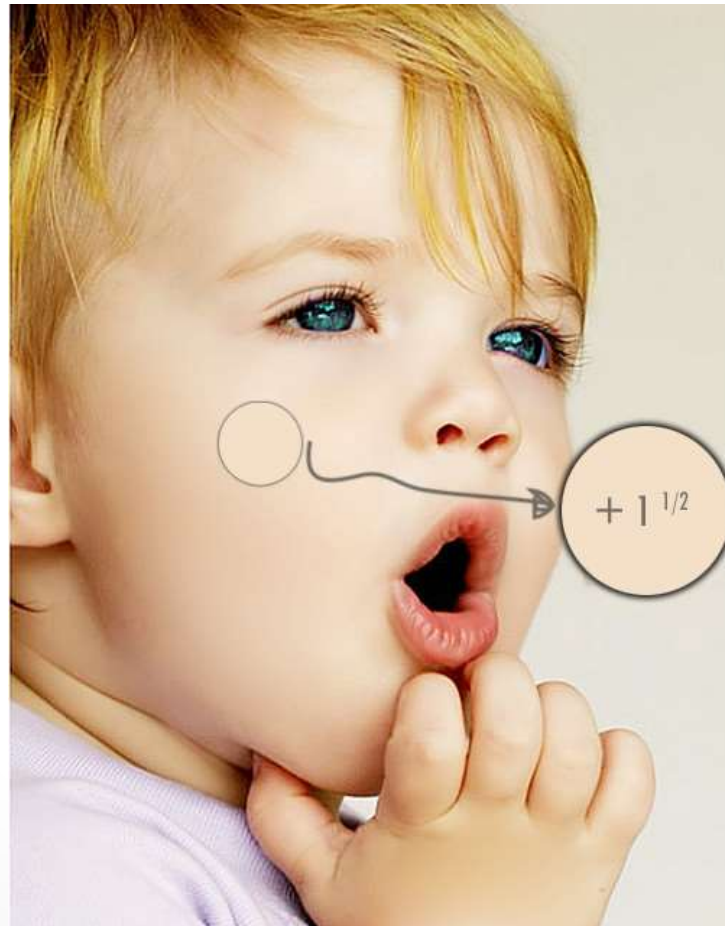


- Use Exposure Compensation to set EV to the desired brightness in the Gray Scale
 - EC shifts the histogram of photograph to left or right
 - View photo and histogram to check exposure in camera
 - Don't over brighten or darken

* The *amount* of light doesn't matter.
Think *only* about the tones you see in the subject *

Spot Metering

- Meters only 1 or 2% of the frame
- Isolates a specific portion of the subject
- May need to use Exposure Compensation if metered area is not average brightness



Using Exposure Compensation with In-Camera Histogram

Summary

- Dominant Light Tones → Set + EV, moves histogram. to right
- Dominant Dark Tones → Set - EV, moves histogram. to left
- Average Tones → No EC (EV=0)

- How much? Set the Exposure Value to the desired point in the Gray Scale

- Consider Exposure Compensation if you use Spot Meter

- The amount of light doesn't matter. Think only about the tones you see in the subject

- If uncertain, then bracket. = "3 Frame Automatic Exposure Compensation" (+1, normal, -1, etc), plus you can bracket around an EV point

Summary - Continued

- dSLR (Canon, Nikon, etc.)
 - Take Picture – View preview and your histogram
 - If needed apply EC and retake the picture
 - Check to see if the histogram is in the desired position in the Gray Scale
 - Check for blown out highlights or shadows
- Live View Camera (i.e. mirror-less Sony, Olympus, etc.)
 - View Picture in Live View – What you see is what you get. Adjust EC based on perceived brightness and histogram
- If you shoot **RAW** (vs JPEG), you can fix many more exposure errors in editing.

ANSEL ADAMS ZONE SYSTEM

0	1	2	3	4	5	6	7	8	9	10
Pure Black	Near Black slight tonality no detail	Dark Black slight detail in shadows	Very Dark Gray distinct shadow texture is visible	Medium Dark Gray slightly darker black skin, dark foliage, landscape shadows	Middle Gray 18% gray darker tan white skin, lighter black skin, light foliage, dark blue sky	Middle Light Gray average white skin, light stone, shadow areas on snow	Light Gray pale white skin, concrete or gray asphalt in sunlight	Gray/White pale detail in highlights, white wall in sunlight, bright surfaces	Bright White slight detail in highlights, white paper, snow, white water	Pure White no detail light sources, specular highlights

Resources

- Zone System
 - <https://photography.tutsplus.com/tutorials/understanding-using-ansel-adams-zone-system--photo-5607>
 - <https://luminous-landscape.com/zone-system/>
 - https://en.wikipedia.org/wiki/Zone_System
- Exposure Compensation
 - <https://www.youtube.com/watch?v=MObkyd6Pq1w>
 - <https://www.youtube.com/watch?v=O-H2lbHluLg>
- Histograms
 - <https://www.youtube.com/watch?v=nqH7nZLHeVw>
- Exposure
 - <https://www.dpmag.com/how-to/shooting/get-perfect-shots-every-time/#>
 - <https://www.youtube.com/watch?v=VP-FQNk-kCY>