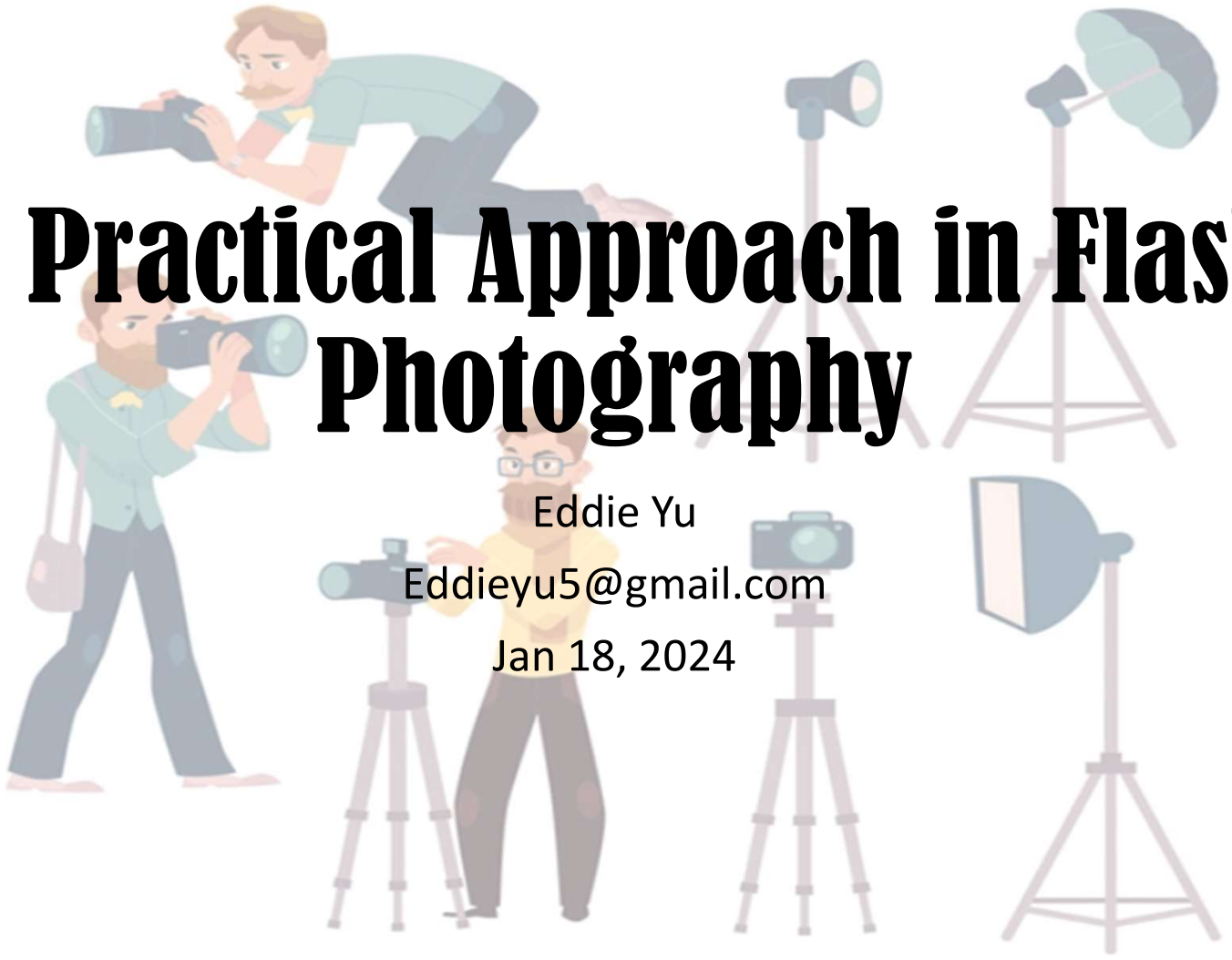

A Practical Approach in Flash Photography

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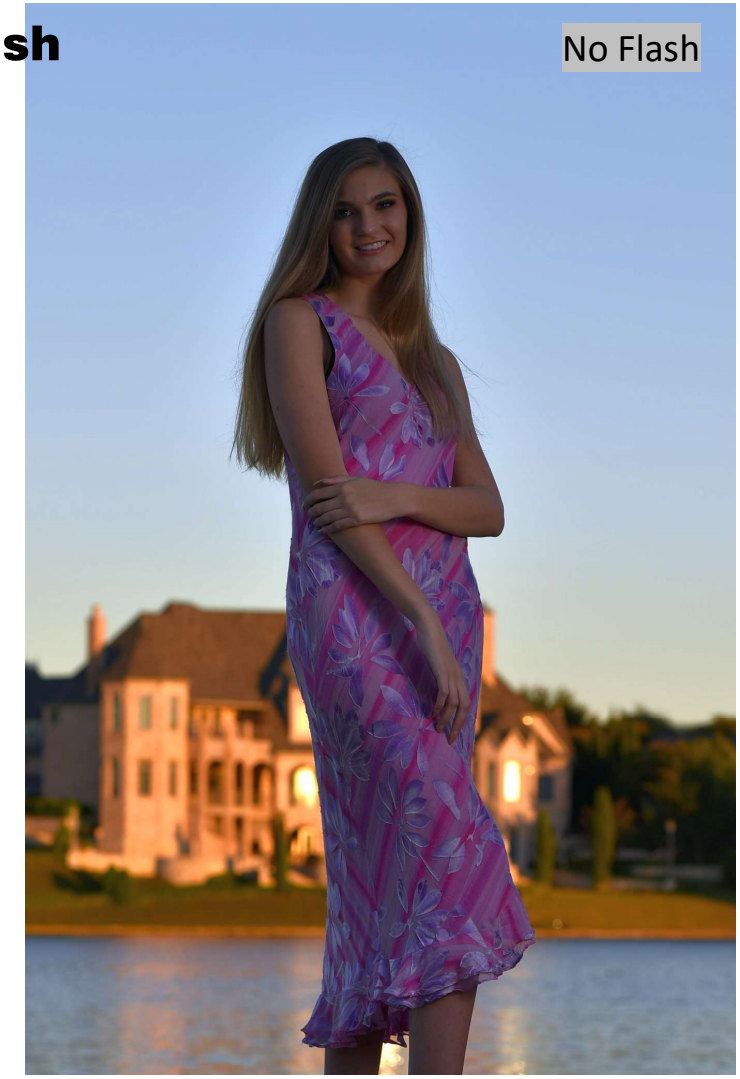
Jan 18, 2024

Why Use a Flash ?

Use flash to enhance your image in various situations ….

- Low light conditions
- Backlit Scenes
- Fill Flash
- Under shades
- Freezing Actions
- Creative Effects

Ex: Flash & no Flash



Two main type of Flash Photography

1. Flash mounted on top of Camera (Hot shoe mounted)

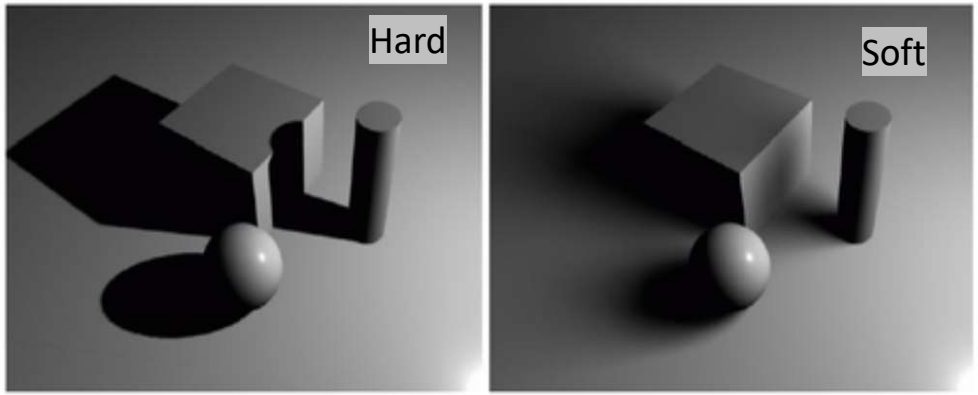
2. Off Camera Flash (**OCF**)/Master Slave system

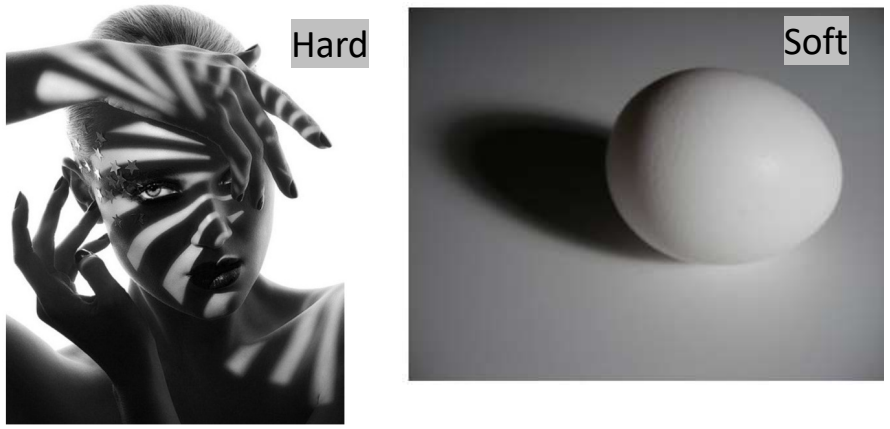
Why Hot Shoe Mount not a Preferred Choice for Portraits?

1. Harsh Shadows –unflattering, hard light, more blemishes
2. Red eye effect – light reflects off the retina of the eyes
3. Unnatural lighting – too close to the sensor (same direction as the camera)
4. Flat light – reduced texture and depth in the subject
5. Small light source – producing glares from reflective surfaces
6. Limited power and range

Solution: OCF

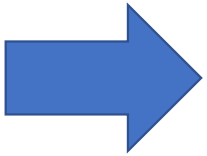
What are the advantages of OCF setup?





Using a Light Modifier for OCF setup

1. Diffuse and spread light evenly
2. Enhance Portrait lighting
3. Soften harsh light
4. Reduce glare and highlights
5. Add catchlights in eyes



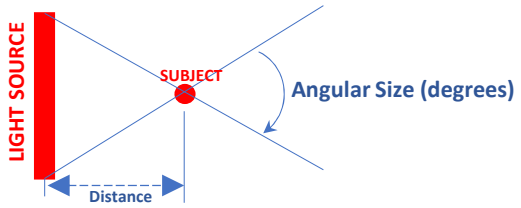
<u>Rule of Thumb</u>:
The larger the modifier, the better the light quality

..What are the trade offs??

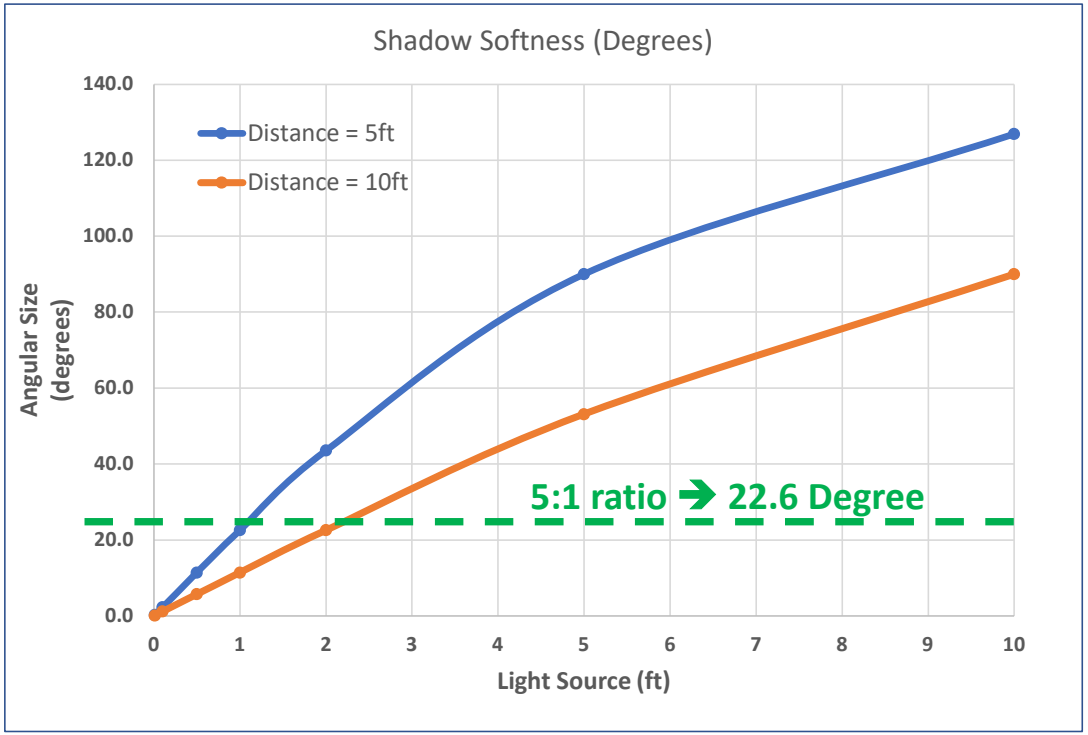
What size Modifier Should I use to Achieve Good Result?

The softness of the shadow is defined as “Angular Size”

$$\text{Angular Size} = 2 \cdot \arctan\left(\frac{\text{Size of Light Source}}{2 \times \text{Distance to Subject}}\right)$$



Light source (ft)	Distance (ft)	Angular Size (degrees)
0.01	5	**0.2**
0.1	5	**2.3**
0.5	5	**11.4**
1	5	**22.6**
2	5	**43.6**
5	5	**90.0**
10	5	**126.9**
20	5	**151.9**
0.01	10	**0.1**
0.1	10	**1.1**
0.5	10	**5.7**
1	10	**11.4**
2	10	**22.6**
5	10	**53.1**
10	10	**90.0**
20	10	**126.9**



Examples of OCF (1 light setup)

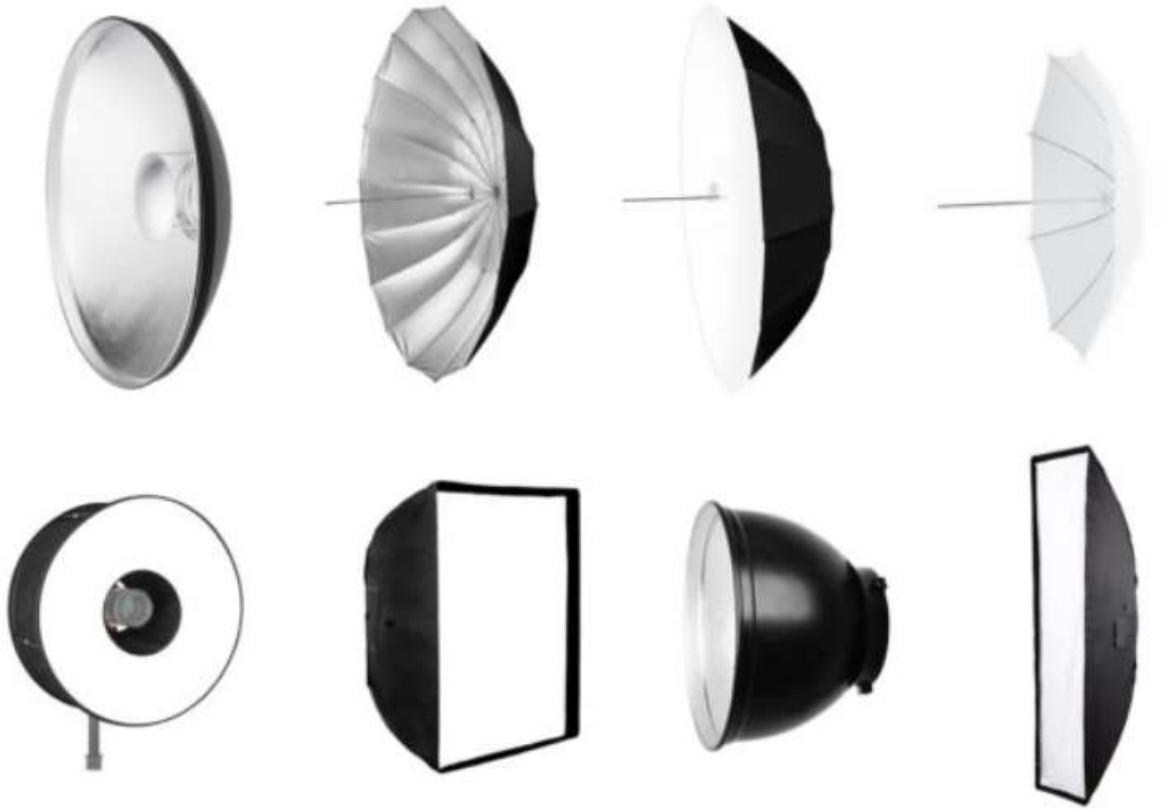
Examples of OCF (1 light setup), cont.

Examples of OCF (1 light setup) – Front light balanced w/Ambient

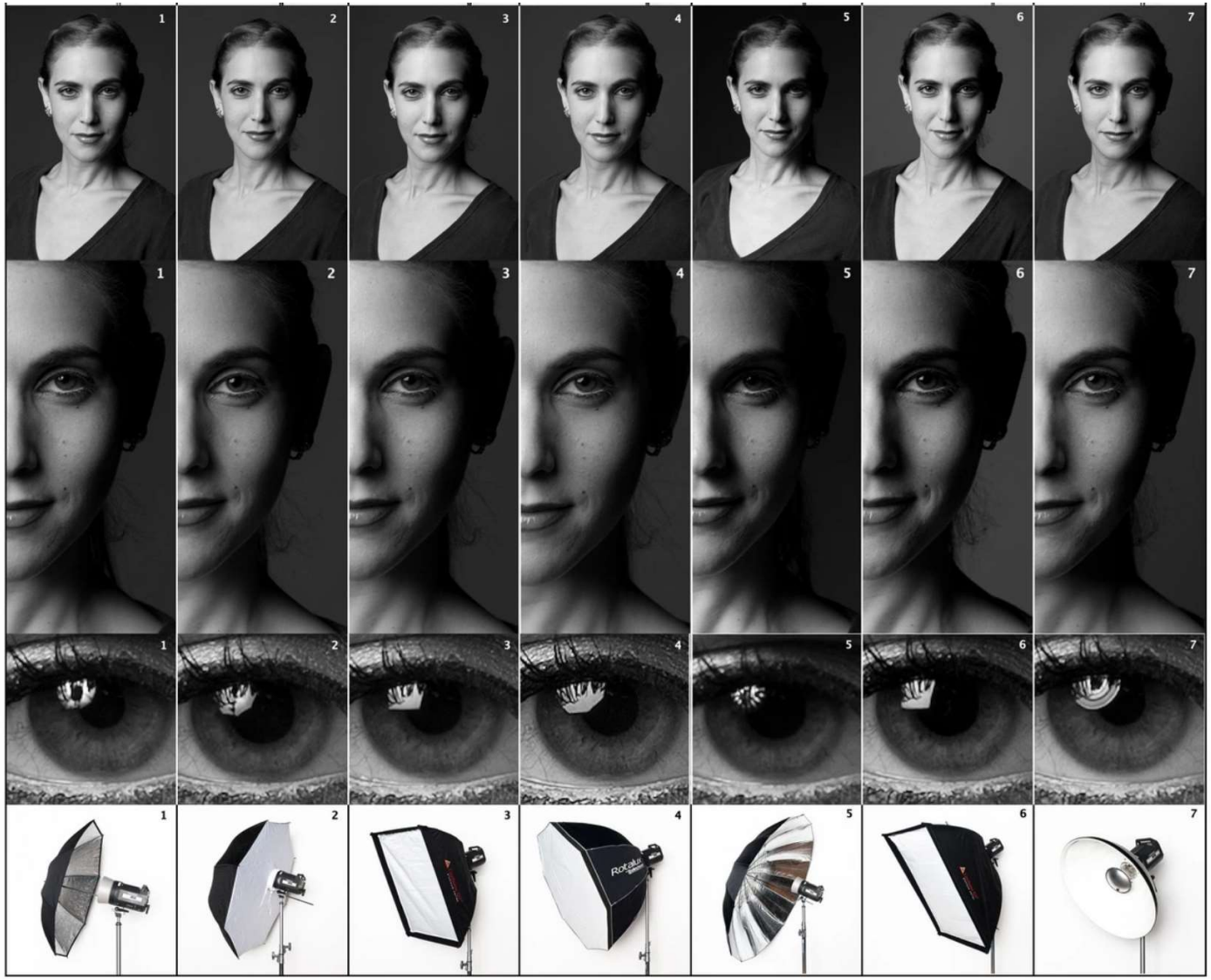
Examples of OCF (1 light setup) – Front light balanced w/Ambient

The brighter the background, the brighter the flash power

What kind of Light Modifier should I use?



Types of OCF Modifiers

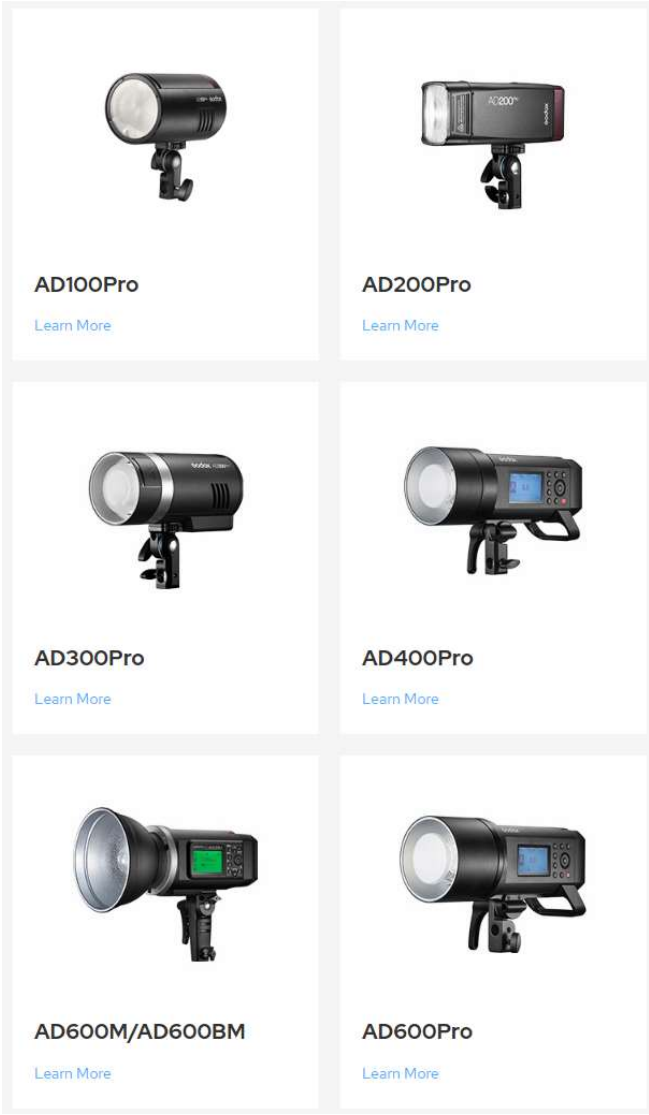


Original Source and all credit to http://thelightingacademy.com/blog/comparing-light-modifiers-part-i/

Assembled by @gmjhowe

What kind of Flashes should I use?

Godox Flashes



Light and Distance Relationship

Intensity of light is inversely proportional to the square of the distance from the light source

Illuminance= $\frac{F}{D^2}$ *; F=Flash power, D = distance*

for the same illuminance= $\frac{F}{D^2} = \frac{F(new)}{D(new)^2}$

$$F_2 = F_1 * \left(\frac{D_2}{D_1}\right)^2$$

Ex: What is the Flash power if the distance is doubled?

Distance (D1) =10ft,

New Distance (D2) = 20ft

Flash power (F1) = 10%,

New Flash power (F2)= ?

$$F2 = 10\% * \left(\frac{20}{10}\right)^2 = 10\%*4 = 40\%$$

2X distance ➔ 4X Flash power

Homemade 15” lightweight Softbox

Multiple lights setups..

Added a second OCF to separate subject & background

Added a second OCF to separate subject & background, cont.

Added a second OCF to separate subject & background, cont.

Ways to Adjust Flash Power

AUTO MODE →TTL/iTTL metering

- The camera measures the amount of light coming through the lens to determine the proper exposure settings for a photograph.
- The camera's metering system evaluates the scene and communicates with the flash to determine the appropriate amount of light needed for a well-exposed image.

- Unfortunately, TTL likely will not produce accurate power if a modifier is used
  - Solution: use flash compensation

Ways to adjust flash power

- MANUAL MODE → Use master-slave remote system

Ways to adjust flash power (OCF system)

What is Guide Number

GN – Represents the power of a flash unit

GN = Aperture * Distance

Distance = GN/Aperture

Ex:

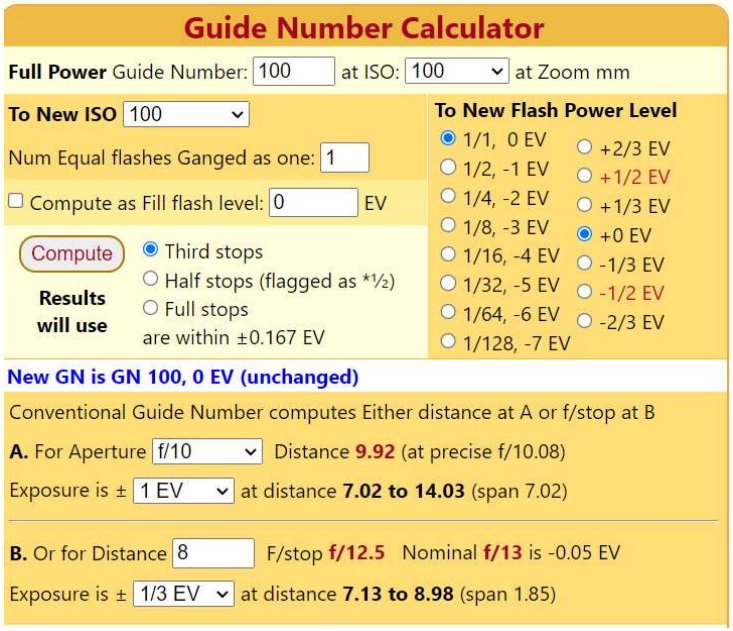
Aperture = 10 (f/10)

GN = 100 (in ft, ISO100)

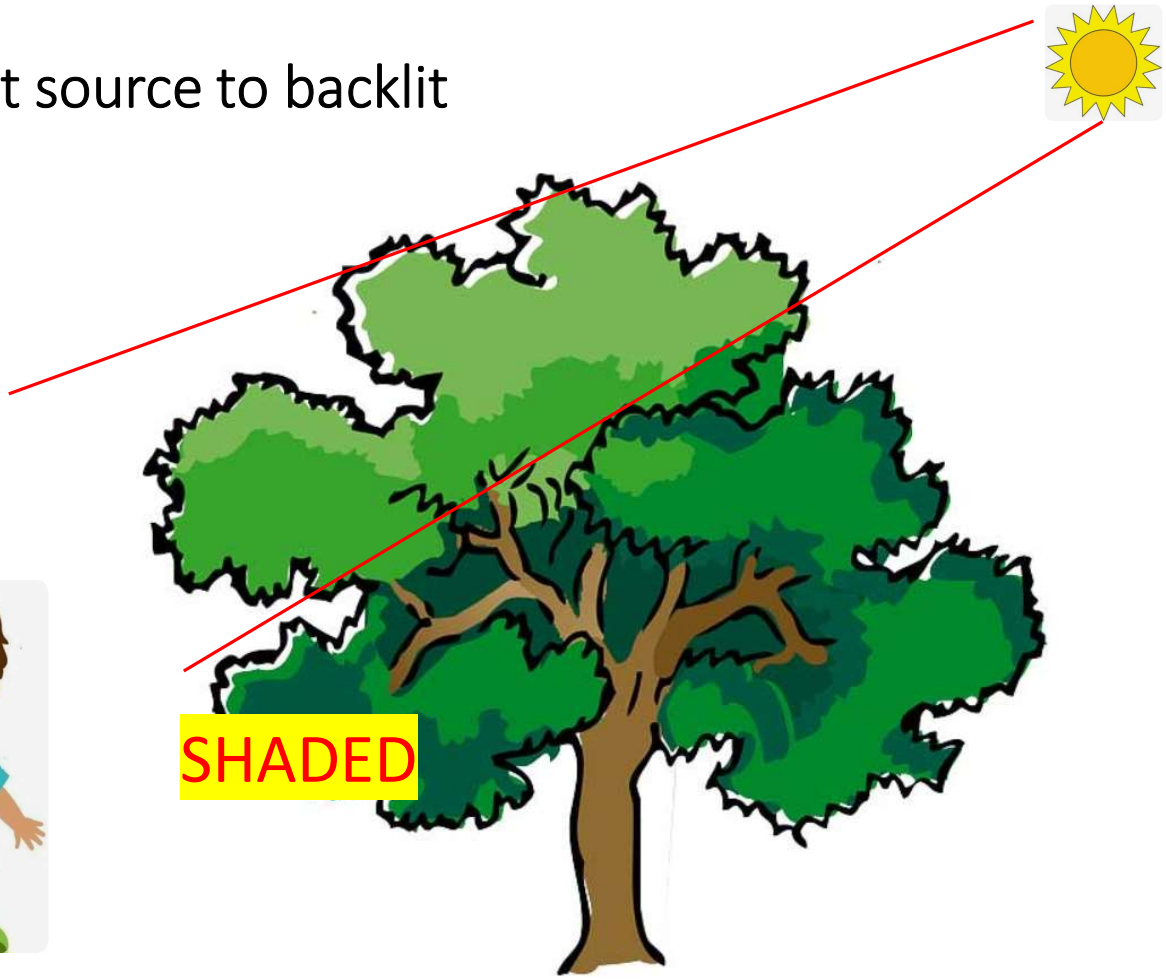
Distance = 100ft/10 = 10ft @ ISO100, f/10

GN online Calculator

www.scantips.com



Instead of using a second light source to backlit the subject, use the sun



Backlit by Natural light

Backlit by Natural light, cont.

Backlit by Natural light, cont.


Q&A

Colored Gels as the Second Light

Second Flash using a Colored Gel

Second Flash using a Colored Gel

Four Flashes with Two Colored Gels


Q&A

Thank you

THE END

No More slides after this