



Flash Photography



With



Just One Flash



Flash Photography with Just One Flash

What we will cover:

How electronic flash works

Camera settings for indoor and outdoor photography

Get your flash off the camera and how to do it

Use of a radio controller

Full manual operation of the camera and flash

Inexpensive flashes and radio controllers

Use of flash (demonstrations & tutoring)

Flash Photography with Just One Flash

Flash Power:

Flash power is rated by a Guide Number

Guide number is in feet or meters

The maximum distance the flash will illuminate a subject

At a specific ISO

At a specific millimeter setting on the flash (if it has variable lens mm settings)

Examples:

High end Canon and Nikon off camera flashes are typically at around Guide # 190' at ISO 100 and lens at 200mm

Most on-camera flashes are rated at less than Guide # 40' at ISO 100

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Prior to modern flashes:

Photographer controlled flash intensity on the subject by changing the f stop on the camera.

Photographer had to find the f stop by dividing the guide number by the distance from the flash to the subject.



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Today's flashes (using TTL):

The camera tells the flash:

f stop

Focus distance

ISO setting

Lens in use and millimeter setting

Flash Photography with Just One Flash

Today's flashes (using TTL):

The camera tells the flash:

f stop

Focus distance

ISO setting

Lens in use and millimeter setting

The flash initiates a low power pre-flash upon shutter release:

The camera meters the pre-flash (assumes subject is in center of frame)

The camera calculates the flash power needed

The camera sends the flash power needed to the flash

Flash Photography with Just One Flash

Today's flashes (using TTL):

The camera tells the flash:

f stop

Focus distance

ISO setting

Lens in use and millimeter setting

The flash initiates a pre-flash:

The camera meters the pre-flash (assumes subject is in center of frame)

The camera calculates the flash power needed

The camera sends the flash power needed to the flash

The flash fires at the power set by the camera

Flash Photography with Just One Flash

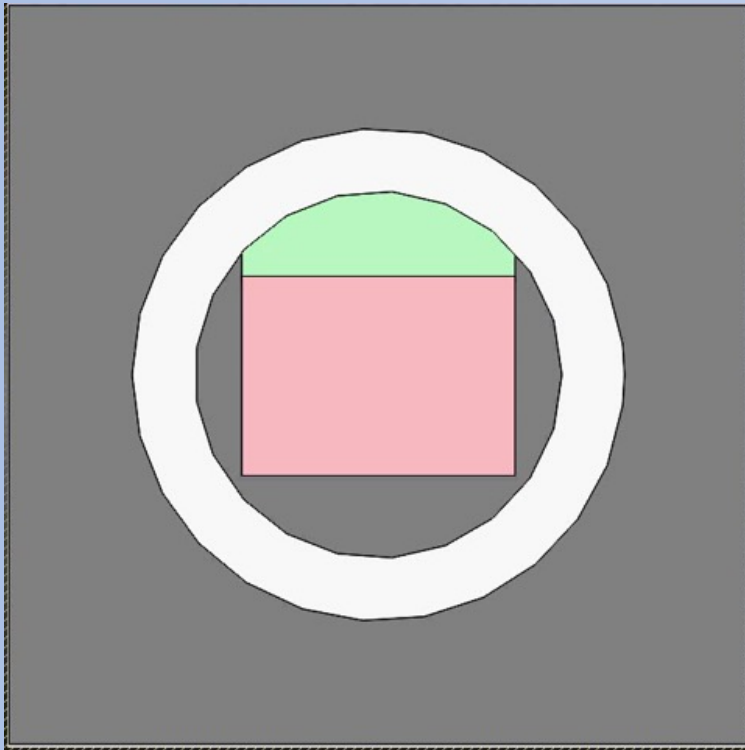
Some things to remember with flash photography:

With today's DSLR cameras, maximum shutter speed is usually 1/250 second

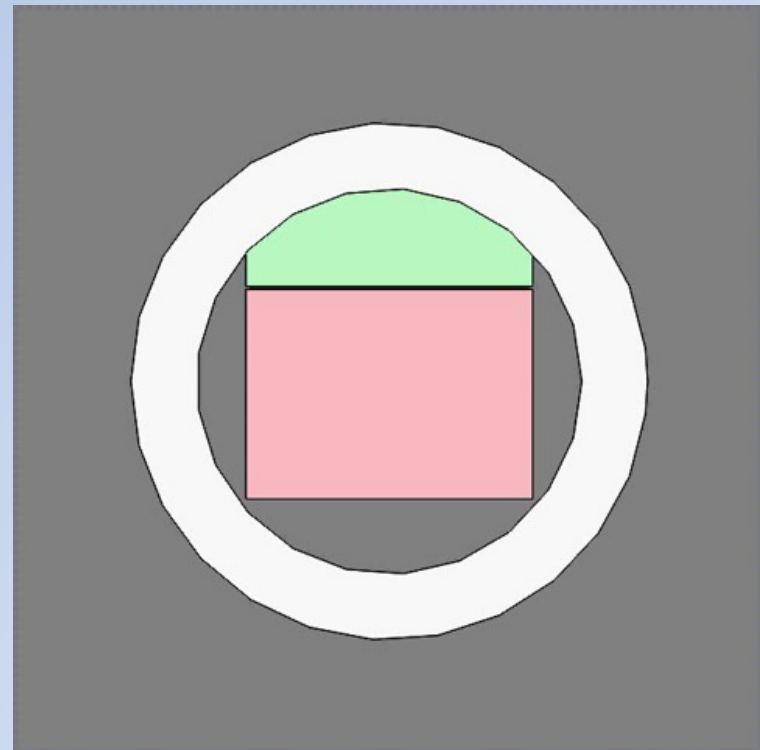
Many mirrorless cameras have a higher maximum shutter speed for flash

Flash Photography with Just One Flash

Focal Plane Shutters on DSLR Cameras



Up to 1/250 second



Above 1/250 Second

Flash Photography with Just One Flash

Some things to remember with flash photography:

With today's DSLR cameras, highest shutter speed is usually 1/250 second

Shutter speed controls ambient light, not the flash power

Aperture controls depth of field

Flash Photography with Just One Flash

In Auto or Program, the camera is controlling:

White balance

ISO

Shutter speed

F stop

Focus

Flash power

You have no control over the result

Flash Photography with Just One Flash

In Auto or Program, the camera is controlling:

White balance

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Shutter speed

F stop

Focus

Flash power

You have no control over the result

To gain more control, set your camera to Manual

Flash Photography with Just One Flash

Indoor Shots

Set up your camera:

Camera in Manual Mode

Shutter speed – 1/125 second

Aperture – f8

ISO 200 – Turn off Auto ISO

(Use ISO 400 or 800 for lower power flashes)

Set up your flash:

Flash in Manual Mode

Flash power at $\frac{1}{4}$

Take photo, look at result and adjust flash power as needed

Flash Photography with Just One Flash

Outdoor Shots

Set up your camera:

Camera in Manual Mode

Shutter speed – 1/125 second

Aperture – Vary to get proper exposure, without flash

ISO 200 – Turn off Auto ISO

Set flash to manual, flash power to 1/4

Take a photo with flash

Look at result and adjust flash power as needed

Flash Photography with Just One Flash

Camera Pop Up Flash



Don't Use It

Low power

Harsh direct light

Can cause red eye

Screams that a flash was used

Flash Photography with Just One Flash

**Get your flash off
your camera**

Flash Photography with Just One Flash

How to trigger the flash off camera

Use a flash extension cord

Low cost

Limited distance from camera

Flash Photography with Just One Flash

Coiled Flash Cord



Flash Photography with Just One Flash

How to trigger the flash off camera

Use a flash extension cord

Low cost

Limited distance from camera

Use infrared if flash has this capability

Requires direct line of sight

Limited range

Requires use of on camera flash to trigger remote flash(es)

Can be unreliable

May not work outdoors

Flash Photography with Just One Flash

Camera Pop Up Flash



Use to trigger IR flash

Flash Photography with Just One Flash

Use infrared filter to block visible flash



Infrared Filter (Nikon SG-3IR)

Flash Photography with Just One Flash

How to trigger the flash off camera

Use a flash extension cord

Low cost

Limited distance from camera

Use infrared if flash has this capability

Requires direct line of sight

Limited range

Requires use of on camera flash to trigger remote flash(es)

Can be somewhat unreliable

May not work outdoors

Use Radio Control

Extended range

Works indoor and outdoor

No cords to trip on

Reliable triggering – Line of sight not required

Hardware cost may be high

Flash Photography with Just One Flash

Radio Controllers

Pocket Wizzard Transceiver & Control Unit

Transceiver \$185, Control Unit \$64

Used Transceiver \$75

Used Control Unit \$15



Flash Photography with Just One Flash

Radio Controllers

Yongnuo Transmitter & Receiver
\$80



Flash Photography with Just One Flash

Flashes From Camera Manufacturers

Expensive - \$350 - \$600 New

Can be acquired used for much lower



Flash Photography with Just One Flash

Other Flashes



FlashPoint \$99



Godox (RF) \$129



Yongnuo (RF) \$85

Flash Photography with Just One Flash

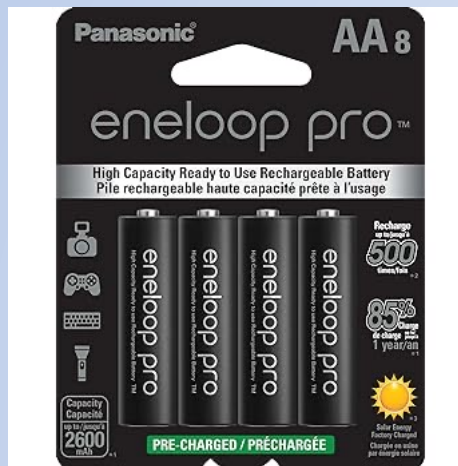
Flash Power

Most non-studio flashes are powered by 4 AA batteries

Rechargeable NI-MH AA batteries provide the most power

Eneloop Pro NI-MH AA batteries have the highest capacity (2500 mAh), and hold a charge longer than other rechargeable batteries

4 @ \$22, 8 @ \$37 – charger @ \$16



Flash Photography with Just One Flash

Used Photography Equipment

keh.com	Large selection of used photo equipment
mpd.com	Large selection of used photo equipment
usedphotopro.com	(Roberts Camera)
bhphotovideo.com	B & H Photo – goto used department
adorama.com	Adorama – goto used department

The above firms perform a rigorous inspection of used equipment and disclose the condition. They warrantee their equipment and have a return clause if not satisfied. Most offer free shipment.

Flash Demonstrations