

Think “Stop” To Connect Exposure Settings

Your Camera Has Many Settings

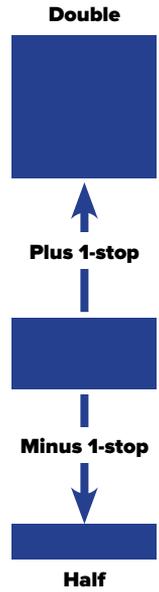
Your camera has so many settings that it may be confusing to translate a change in shutter speed to an offsetting change in aperture. To keep your settings simple, start by using the whole stop increments listed in the chart below. Feel free to ignore all the other numbers that show up in your viewfinder. They are either 1/3-stop or 1/2-stop increments. When beginning, stick with whole stop increments.

A Stop Doubles or Halves a Setting

To change a camera setting by a stop means that you have either doubled it or cut it in half. Using the chart below, you can see that switching your shutter from 1/500” to 1/125” is a two-stop change—making the shutter slower (green arrow ①). Likewise changing from 1/500” to 1/2000” is also a two-stop change—making the shutter faster (green arrow ②).

Camera Settings			Flash Power
Shutter	Aperture	ISO	
<i>slower / longer = motion blurred</i>	<i>wide = shallow depth-of-field</i>	<i>fast / high = more sensitive</i>	<i>high-power = brighter</i>
1”	f/1.0		
1/2”	f/1.4		
1/4”	f/2.0		
1/8”	f/2.8	12800	1/1
1/15”	f/4.0	6400	1/2
1/30”	f/5.6	3200	1/4
1/60”	f/8	1600	1/8
1/125”	f/11	800	1/16
1/250”	f/16	400	1/32
1/500”	f/22	200	1/64
1/1000”	f/32	100	1/128
1/2000”	f/45		
1/4000”	f/64		
1/8000”	f/90		
<i>faster / shorter = motion frozen</i>	<i>narrow = deep depth-of-field</i>	<i>slow / low= less sensitive</i>	<i>low-power = dimmer</i>

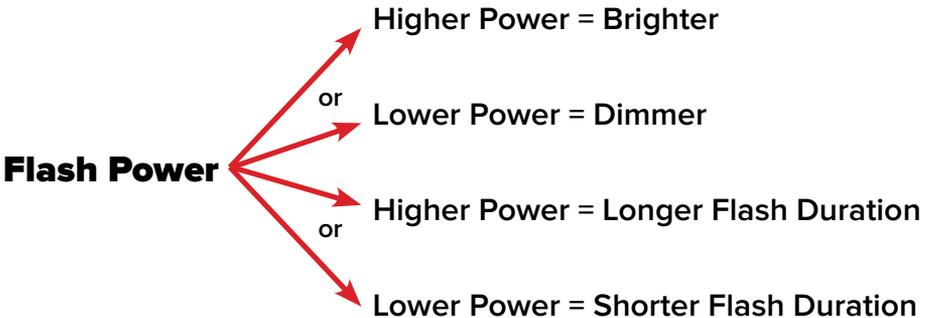
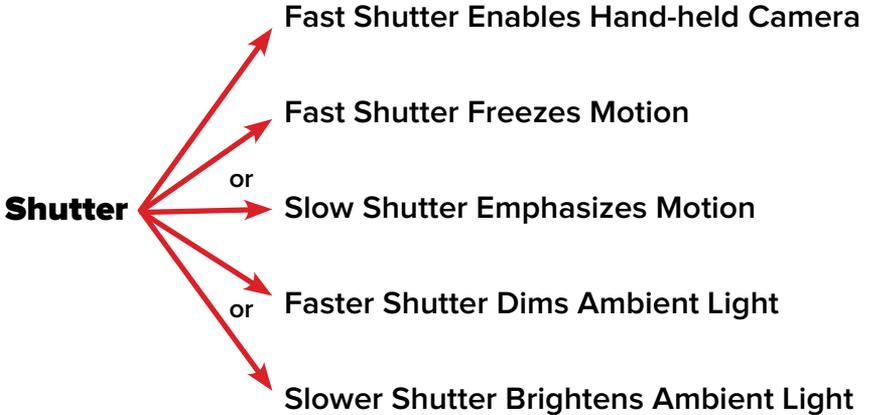
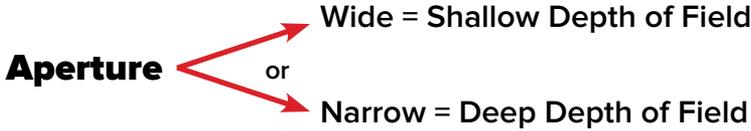
WHOLE STOPS



When Counting Stops, Go Same Distance in the Opposite Direction

If you want to freeze action by changing your shutter from 1/60” to 1/500” (red arrow ③), then you need to offset this move by changing either the aperture or ISO. If your aperture was f/16, you could change to f/5.6 (④). Or, if you want to preserve depth of field, you could change the ISO from 100 to 800 (⑤).

Deciding Which Camera/Flash Settings to Change



Consider the Ambient Light First

Ambient Light Is All Around You

Ambient light is the light that is already in the scene—from the sun and man-made sources. A popular technique is to use a Speedlite to add light to your subject and use ambient light to illuminate the background.

Expose for the Ambient Light First

When you are using your Speedlite as the main light on your subject (key light), settle on the exposure for the ambient light before you turn on your Speedlite. This will enable you to see what the flash is and is not doing.

Use the Shutter to Change Ambient

Shutter speed controls how ambient light (but not flash) is recorded. Use a faster shutter to dim the ambient (background light) and a slower shutter to make it brighter. If you exceed your camera's sync speed, activate High-Speed Sync. See page 11.

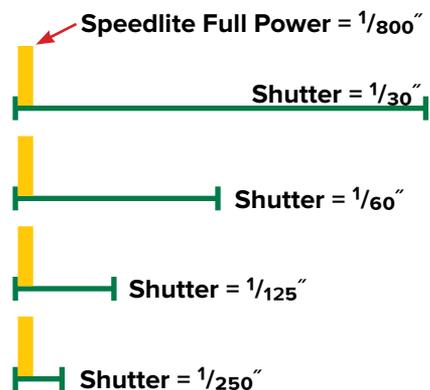


^ **Shutter Speed** controls ambient light. The background on the right is darker due to the use of a faster shutter speed ($1/100''$ to $1/400''$ = two-stop change).

Why Shutter Speed Does Not Affect Flash Power

The reason that you can use your camera's shutter speed to adjust how the ambient light is recorded is that your Speedlite's longest burst (at full power) is much shorter than the shutter speeds you can use with flash. Even if you make the shutter faster, the burst of flash flies through just fine. [High-Speed Sync is an exception to this rule. See page 11.]

Camera Mode	Adjust Ambient (Shutter) By
 -Full Auto	Switching to another mode
P-Program	+/- Exposure Compensation on camera
Av-Aperture Priority	+/- Exposure Compensation on camera
Tv-Shutter Priority	+/- Exposure Compensation on camera
M-Manual	+/- Shutter Speed directly on camera



Best Camera Modes for Flash Photography—Aperture-Priority and Manual. In Av, you control depth-of-field via aperture and the camera sets shutter. Use M when you want full creative control of ambient light and depth-of-field.

Syl Arena's Speedlighting Checklists

Simple OCF Portrait Workflow

Use this workflow for portraits when you are starting out with flash.

1. Test Shot—Ambient Light Only

Camera in Av-mode. Set your aperture for desired depth-of-field. No flash.

2. Test Shots—Ambient Exposure

Take more test shots without flash. Use Exposure Compensation on your camera to adjust how the camera records ambient light. Do not worry about the light on your subject.

3. Test Shot—With Flash

Turn your Speedlite on in E TTL mode. Adjust position, zoom, modifier, etc.

4. Test Shots—Adjust the Flash

Take a series of test shots. Use Flash Exposure Compensation (FEC) on Speedlite or on camera (but not in both places) to fine-tune flash power.

5. Shoot [see #9 in right column]

Gear Suggestions—see *Speedlites Handbook* for specific brands and models.

Novice Speedlitter

- 3'/1m coiled E TTL cord
- Rogue FlashBender Large
- 42" 5-in-1 Reflector Kit

Intermediate Speedlitter (add)

- Convertible, shoot-thru umbrella
- Swivel adapter/Monoball swivel
- 8'–10' Light stand
- 32'/10m straight E TTL cord
- Color-correction gel kit

Advanced Speedlitter (add)

- Apollo Orb softbox
- Additional Speedlites, stands, swivel adapters, and modifiers

Advanced OCF Portrait Workflow

Use this workflow when you master the Simple OCF Portrait Workflow.

1. Ambient

Set your camera exposure to capture ambient light as you want it to appear.

2. Purpose

Decide on each Speedlite's job: key, fill, background, or rim/hair.

3. Position

Place each Speedlite in a position suitable for its job.

4. Shape

Modify each Speedlite with umbrella, softbox, grid, flag, etc. to shape the light/shadow to fit your vision.

5. Color

Use gels on each Speedlite to blend flash with ambient light or to create a colorful, dramatic effect.

6. Sync*

Select 1st-curtain, 2nd-curtain, or high-speed sync as appropriate.

7. Mode*

If subject-to-flash distance is fixed, use Manual mode. If subject-to-flash distance varies, use E TTL.

8. Power*

In Manual mode, adjust power on Speedlite. In E TTL mode, fine-tune power with FEC on Speedlite or on camera (but not in both places).

9. Shoot

It is not uncommon to spend 90% of your time setting up and testing your lighting and 10% actually shooting.

* If shooting Canon wireless, make these adjustments on the master only. The slaves will change their settings instantly when the master fires.