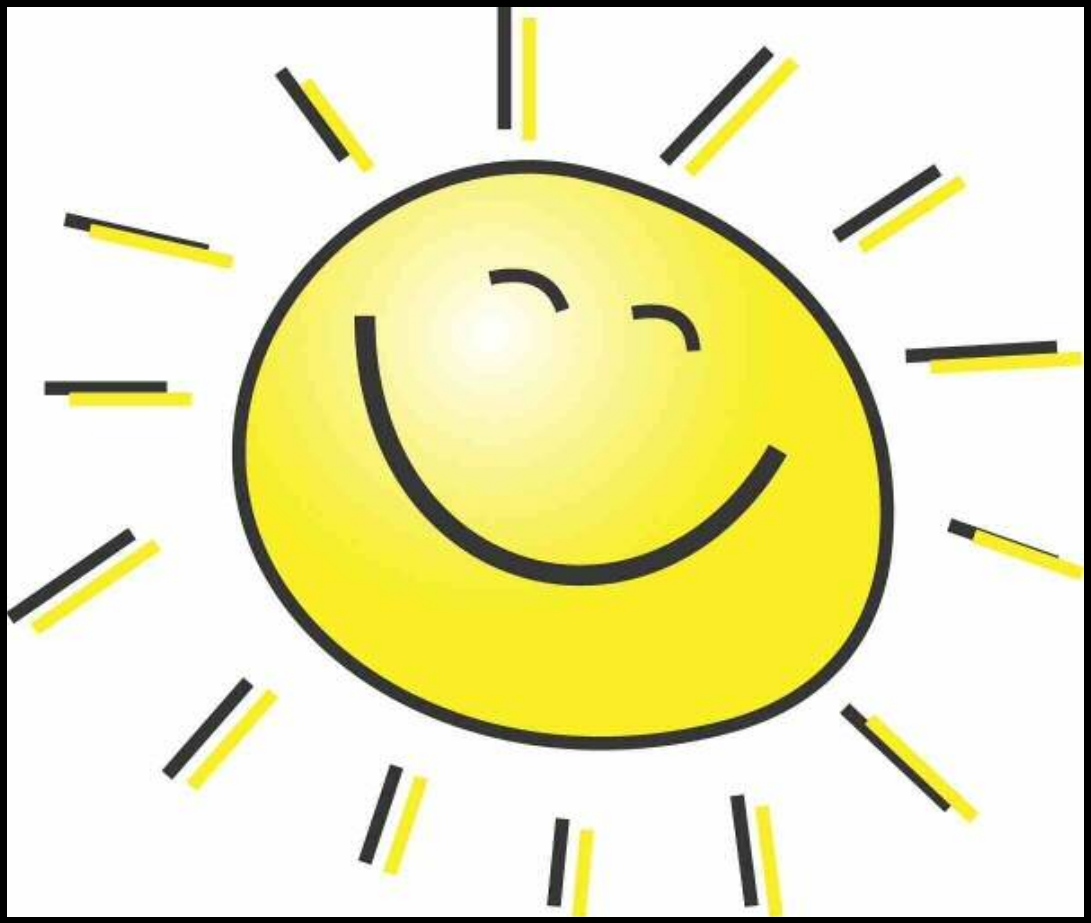
Are you tired of your the deer in the headlights flash Images?

Understanding Flash Photography

Electronic Flash Photography Can Add Light To:

- What You Want
- When You Want
- Where You Want It

Think of Flash As Your Miniature Sun



Camera Pop-up Flash VS Portable Electronic Flash

- Almost all of today' DSLR's come with a pop-up flash that you can set to engage when the camera's light meter dictates (TTL) or can fire manually. (You Set the Exposure).
- The pop-up flash has limited light output.
- Tonight's class will deal with external electronic Flash Units.

In Example

- Portable electronic flash unit mounted on the camera's hot shoe, or used off camera with a remote trigger.

Photographing with Available Light Is Always My First Choice

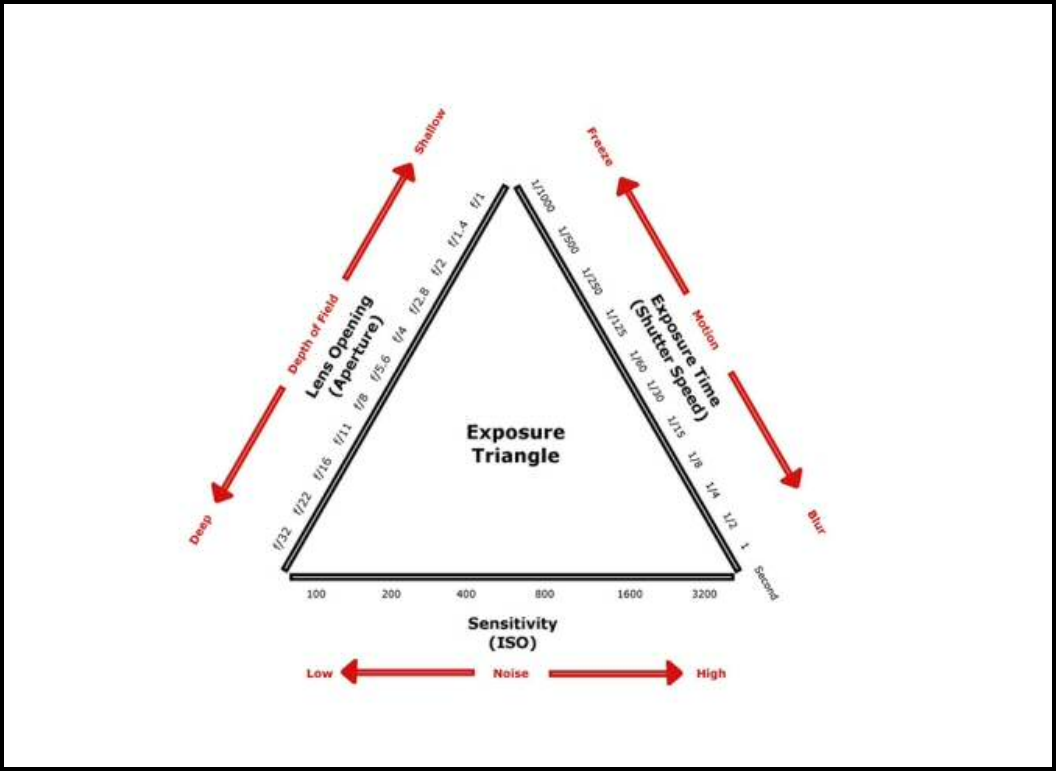
- It is generally easier and requires less equipment.
- However my flash is almost always with me.
- In Changing light conditions, a flash gives me the ability to add light to the person or thing I am photographing.
- In some difficult lighting situations I may bracket 3-7 shots and combine in Lightroom HDR.


Camera set to maual mode
5 shot Bracket, HDR in
Lightroom cc

Camera set to maual mode
5 shot Bracket, HDR in Lightroom cc

The Photographic Triangle When Using Electronic Flash

- One simple fact, everything you have learned about the Photographic Triangle still applies when using electronic flash.



Two Rules For Flash Photography

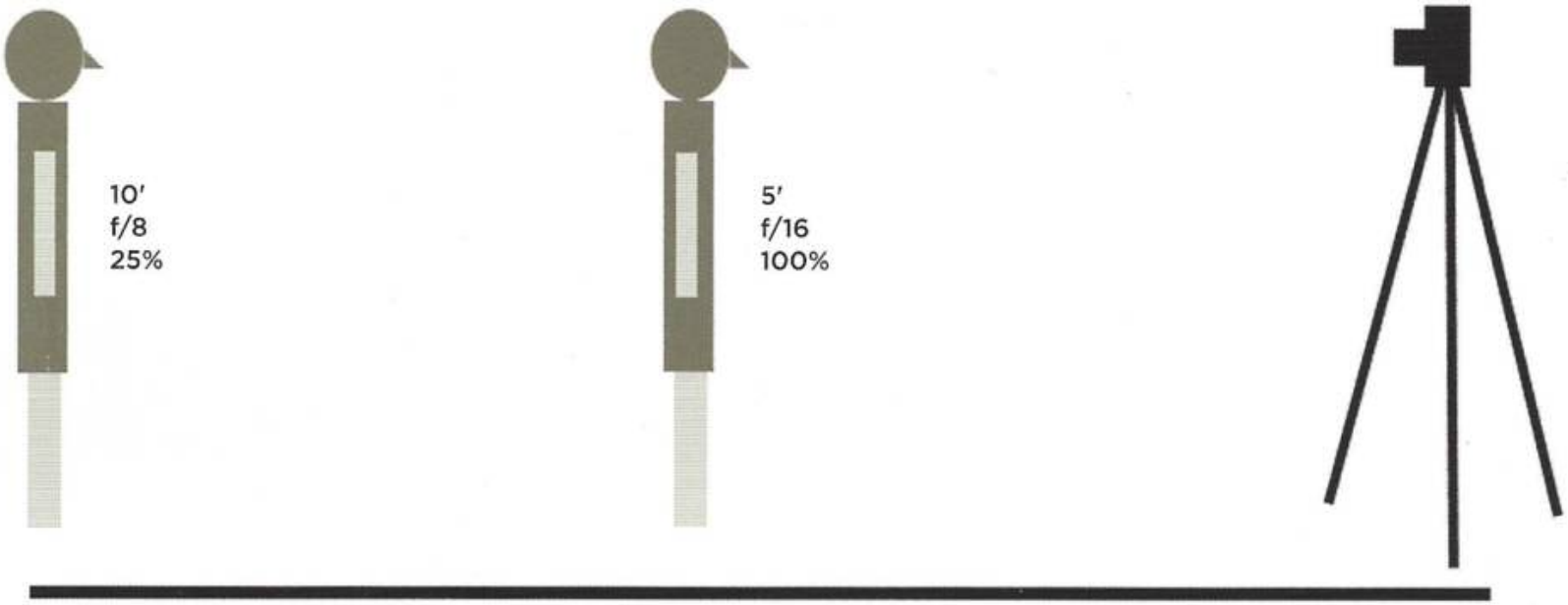
- Flash photography follows the same principals as manual exposure in natural light. The only difference is the addition of supplemental light from a portable miniature sun.
- With that in mind, there are two rules important to remember

- 1. The **Aperture** controls the amount of electronic flash light allowed to expose the picture. All flash exposures are 100% dependent on the right aperture being selected and right flash to subject distance that corresponds to that aperture. And with the ability to adjust the flash power your aperture choice is virtually guaranteed.

- 2. The **Shutter speed** controls the amount of time that any ***Ambient Light*** is allowed to expose that same picture for which you're also using a flash for.

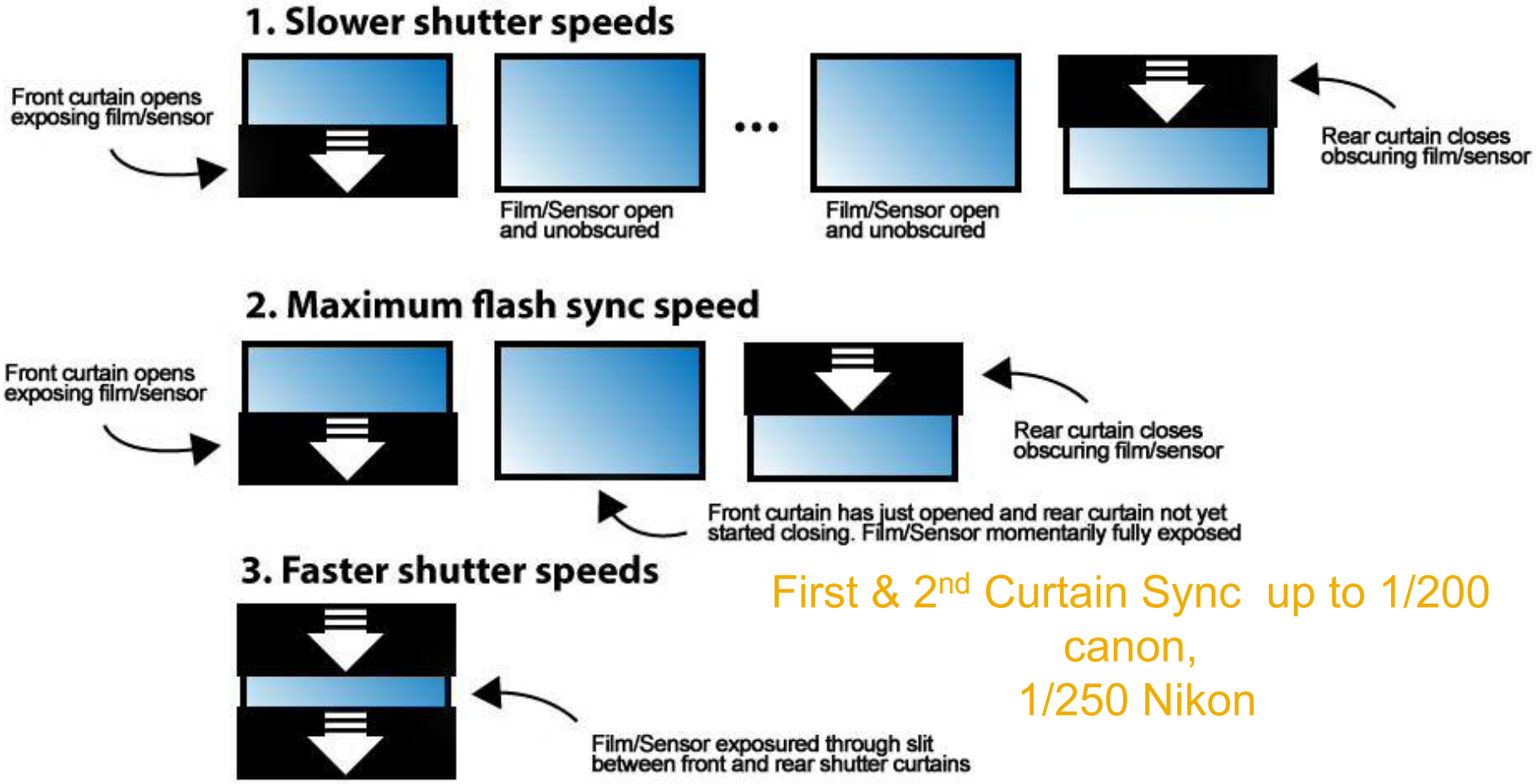
The Inverse Square Law and Light Falloff

- Simply put, the Inverse Square Law states that as the flash-to-subject distance Doubles, the light reaching the subject is only 25 percent of the original light that left the flash.



THIS DIAGRAM ILLUSTRATES *the Inverse Square Law. Let's say your subject is 5 feet from the camera and your perfect exposure is f/16. When the subject is moved to 10 feet away, or double the distance from the flash, only 25 percent of the light from your flash will still reach the subject. Because of this, the new f/stop would be f/8, or 2 stops more than at 5 feet, to let in more light.*

Focal Plane Shutters

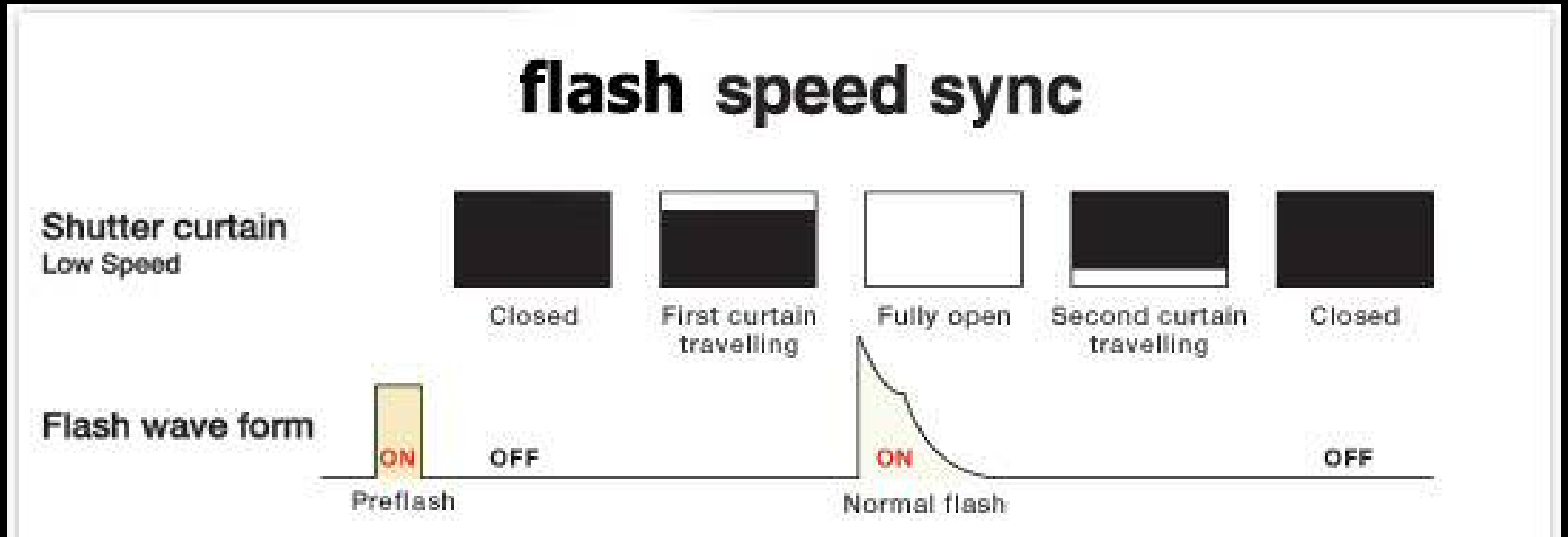


First & 2nd Curtain Sync up to 1/200 canon,
1/250 Nikon

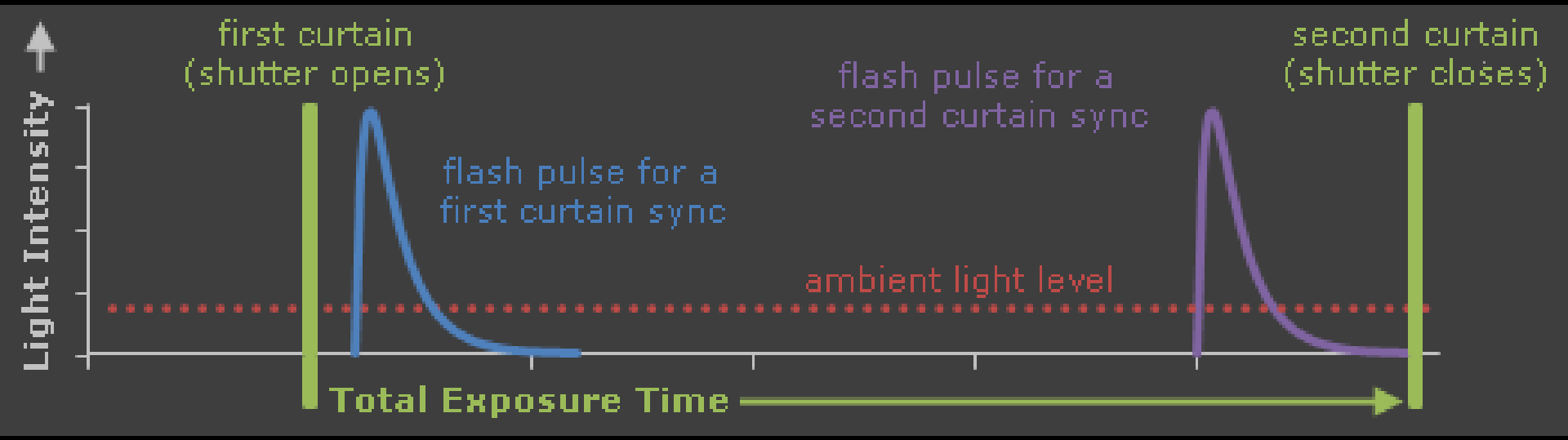
DLSR Sync Settings

- First Curtain Sync
- 2nd Curtain Sync
- High Speed Sync (HSS Canon) (Auto FP Nikon)

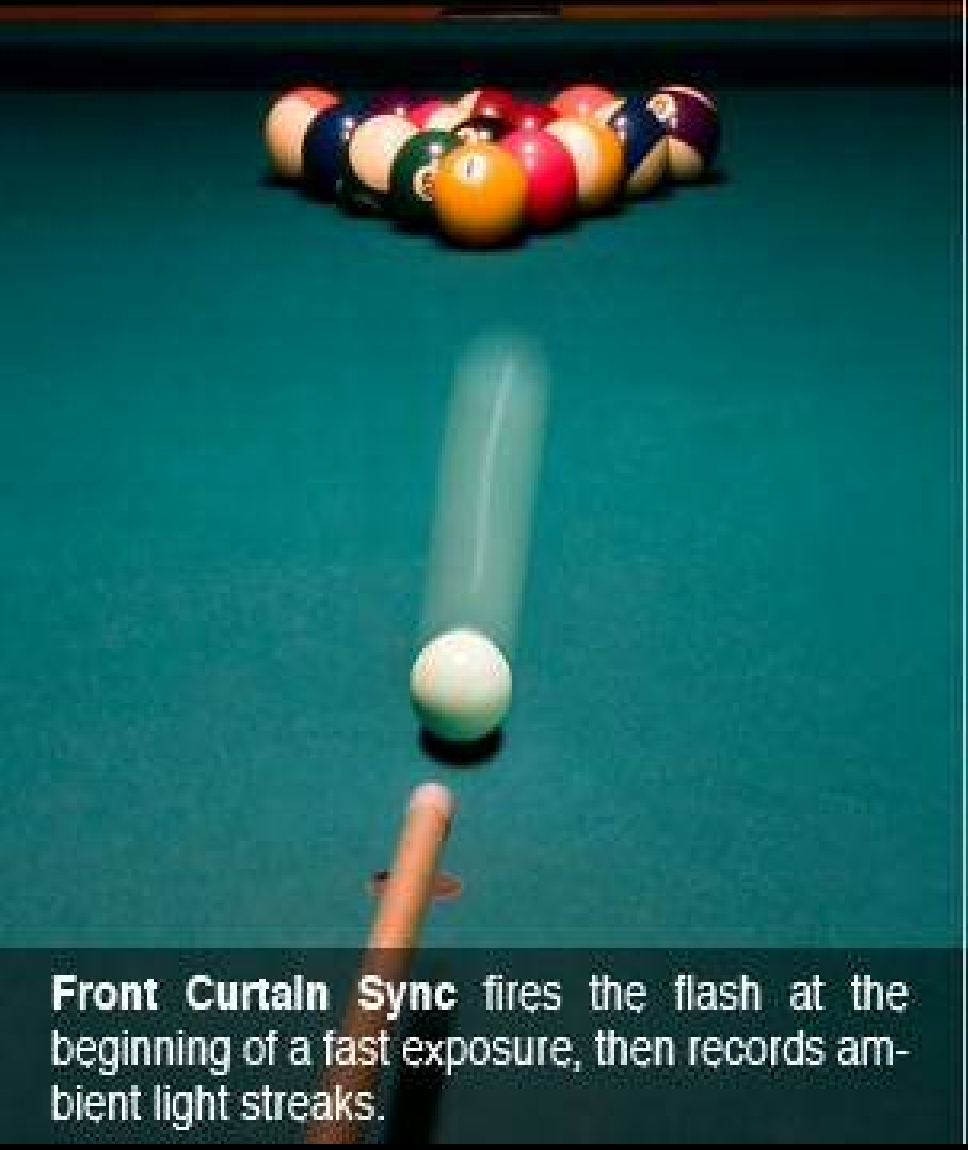
First Curtain Sync



First and Second Shutter Flash Sync

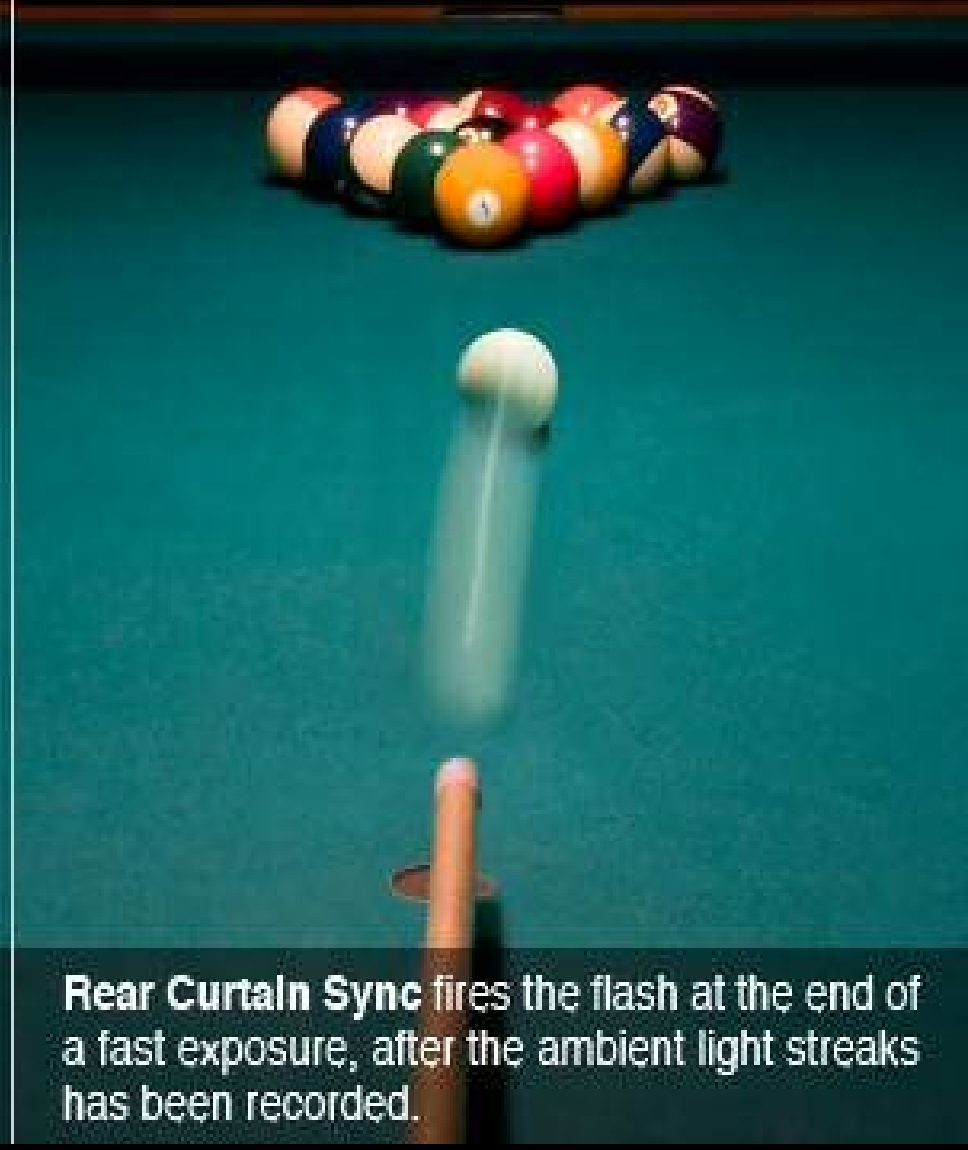


FRONT CURTAIN SYNC



Front Curtain Sync fires the flash at the beginning of a fast exposure, then records ambient light streaks.

REAR CURTAIN SYNC

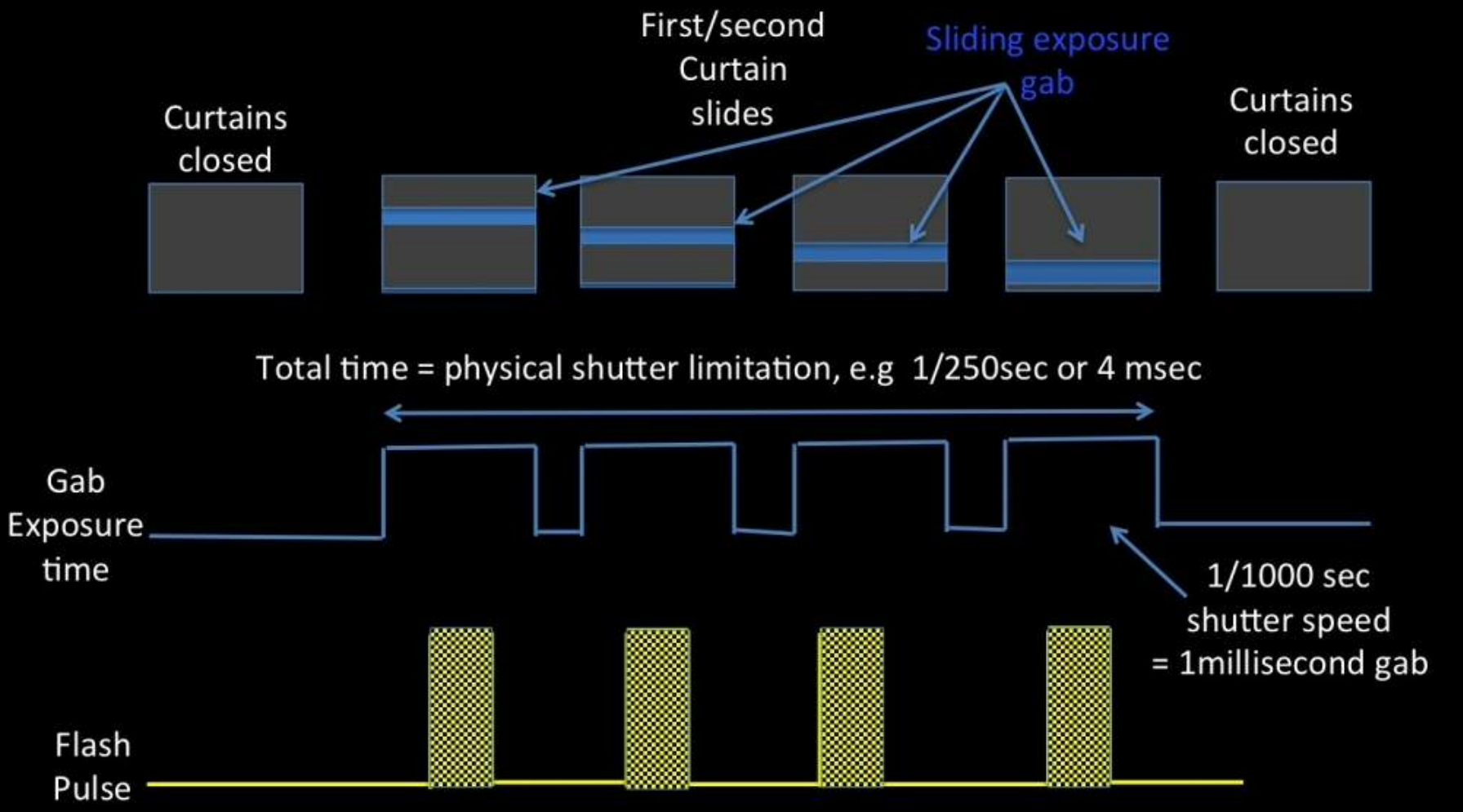


Rear Curtain Sync fires the flash at the end of a fast exposure, after the ambient light streaks has been recorded.

Second Shutter Sync

Can Provide Amazing Flash Effects

High Speed Flash Sync



High Speed Sync Shutter 1/250 Aperture f/8 ISO 100

Manual vs TTL Flash

- TTL works on the premise of first sending out a “pre-Flash”- an infrared beam or white light that strikes your intended subject, travels back to the camera, and tells your flash’s computer how much flash power is needed to create a correct exposure based on the amount of light that comes back to the camera’s meter.
- TTL makes sense if you are an Event, Wedding photographer or photojournalist. However, TTL has a difficult time reading some lighting conditions. White or black subjects may fool the light meter. IE, A black back ground and a white dress, the final white dress image may be an ugly gray.

Manual Camera Setting and Manual Flash Setting

- Setting both the camera and electronic flash in manual mode, allow the photographer maximum control over how the subject and background are lighted.

- **Aperture** controls the light from the flash.
- **Shutter** controls the ambient light.
- **Flash** is adjusted to light the subject
- The flash is moved closer or farther away from the subject. (the inverse Square Law)

Guide Number

- An important element is flash power, which relates to the total distance you flash light can travel. The guide number describes your flash's total flash output. The higher the guide number the more power the flash possesses.

- The guide number is the product of the maximum flash-to-subject distance and the f-number of the aperture that will correctly expose film or a digital sensor with the specified sensitivity.

- GN = distance × f-number

A FLASH PHOTOGRAPHY PRIMER

How to Use Guide Numbers

The four flash exposure variables are: F/stop, distance, power and ISO. You plug in any three, and the calculator spits out the fourth.

Play around with your buttons a bit and you will see how yours works. What I like to do is to already know my ISO, my desired shooting aperture and an estimated flash-to-subject distance. Now, by setting up my GN calculator, I just dial in the different manual power settings until my desired f/stop lines up with my flash-to-subject distance.

Nikon

Canon Flash Distance Indicator

Steps for Shooting Manual Flash

- Find your composition
- Get your ambient exposure correct through your F stop and shutter speed settings.
- To shoot people with a light background, In Camera Manual, set background exposure (close aperture 1 or 2 stops to darken)

- Set your flash to manual mode and set the power to 1/1

- Use a colored gel to alter the color of the flash if desired

- If you have a flash meter you can use it to find out how much light the flash is outputting.

- If you don't have a meter, experiment by setting your flash power to 1/4 power. Make a test exposure. If the flash is too bright, lower the setting. Too dark? Raise the setting.
- Check your exposure with the histogram. Don't trust the camera LCD.
- Fill in available light shots by powering down your flash.

Practice & Experment

- Flash is simply a supplementary tool that we add to our tool box to enhance the light in certain situations.
- When you operate with that understanding, and once you've mastered the manual exposure operation of your flash, you will be able to get a better flash exposure every time.