

Flash Photography Presentation
Presented to Santa Ynez Valley Camera Club 1/9/08
By Shawn Miner

$f/ = \text{power}/\text{distance}$ (at 100 ASA)

power = 100 and distance = 10 ft then

$100/10 = f/10$

that was the 'old days'!

Flash is controlled by Aperture, NOT shutter speed. (shutter speed controls background exposure)

'TTL' thru the lens now e-TTL and e-TTL II where the camera controls the flash...

Now, the new 'thing' is adding a thyristor on the flash to let the flash control the camera...

auto anything can be fooled!

suggest using Manual mode. Set the f/stop manually by subject distance and how powerful the flash is and then set the shutter speed for the 'ambient' light.

Bounce flash (change flash source and soften light BUT flash bounced off of COLORED backgrounds can be UGLY!)

Flash modifiers (soften the light) or, Focus the light...

Setting 'fill flash'... + or - from the 'normal' exposure (exposure compensation) to fill in the shadows from a backlit scene...

From Canon:

http://www.usa.canon.com/consumer/controller?act=MultiMiscPageAct&key=Learning_Station&fcateoryid=2533

and choose

(you may be able to click directly on the blue link below, if not use the link above...)

[Speedlite Flash Online Tutorial](#)

EX Series:

Fully automatic functions available in EX Series Speedlite flash units provide all the benefits of professional exposure and light control techniques. When mounted on an EOS camera, a

Speedlite automatically receives information such as the lens focal length, exposure control mode and aperture. It then makes adjustments accordingly, working together with the camera as an integrated unit to achieve the most natural possible exposure. When photographers use a Speedlite, they reap the rewards of sophisticated flash photography with the press of a shutter button.

E-TTL II

E-TTL II is Canon's latest proprietary automatic flash exposure control system. By employing multiple metering zones to measure both ambient light and preflash, then comparing the two and taking metering distances into account, this sophisticated system automatically adjusts the flash level to achieve natural reproduction with ideal exposure of both the background and subject.

In various shooting situations, even when the background is highly reflective, E-TTL II can use distance information from the lens to eliminate underexposure and achieve optimal automatic flash exposure control.

E-TTL II autoflash system operation flow

1. Shutter button pressed halfway. Autofocusing and evaluative metering (with the multi-zone sensor linked to the focusing point) are executed simultaneously. The ambient light is thereby metered.



2. Shutter button pressed completely. A preflash is fired, and the reflected light is metered by the multi-zone evaluative metering sensor.



3. The meter readings of the ambient light and preflash are compared and the ideal main flash output is calculated and stored in memory.



4. The reflex mirror goes up, the first shutter curtain starts to open, the main flash fires, the imaging sensor is exposed, the second shutter curtain closes, and the reflex mirror goes back down.



5. The flash exposure confirmation lamp illuminates.

Slow sync

E-TTL II technology

Light and subject merge to create an unforgettable image.



Slow-sync

EF24-105mm f/4L IS USM, 1.5sec., f/4

Slow-sync flash is ideal for night scene portraits.



Regular flash
without slow-sync

When photographing people against illuminated buildings, city lights, the setting sun, or dimly lit backgrounds, there emerges a large gap between the brightness of the subject and background. In such situations, it is easy to make mistakes such as overexposing the subject or underexposing the background. But EX Series Speedlites can accurately assess the situation and bridge the brightness gap, providing natural lighting results.

Primarily use Aperture Priority AE (automatic exposure) mode

In the Full Automatic and Program AE (P) shooting modes, EOS cameras prioritize securing a fast shutter speed (no slower than 1/30 sec.) to prevent camera shake. Selecting the Aperture Priority AE (Av) mode automatically activates slow-sync flash, taking the background into account to achieve appropriate automatic flash exposure control.

Beware of camera shake and subject blurring

When shooting with slow-sync flash, the slow shutter speed demands use of a tripod to prevent camera shake.

#####

I turn "Slow Sync" OFF! using one of the Canon Custom Functions (CF-2 or 3) that locks the shutter speed to 1/250 in Aperture/flash mode)

#####

1st & 2nd curtain sync

Versatile Functions

Streaks of light add dynamism to photos.



2nd curtain sync flash

EF24-105mm f/4L IS USM, 2sec., 1/4

Second curtain sync flash for natural light streaks.



Flash units normally fire when the first shutter curtain is fully open. Since the time lag

between pressing the shutter button and firing the flash is extremely short, this method is ideal for seizing fleeting shutter opportunities. However, any movements of light sources after the flash fires and before the exposure ends are also recorded in the image. This can be a problem at slow shutter speeds.

With EX Series Speedlites, photographers have the option of firing the flash right before the second shutter curtain begins moving. This second curtain sync flash function captures moving light sources before the main subject, resulting in images that convey a more natural sense of movement.

An excellent Flash article/tutorial:

<http://photonotes.org/articles/eos-flash/index.html>

[http://www.usa.canon.com/consumer/controller?act=MultiMiscPageAct&key=Learning_Station
&fcategoryid=2533](http://www.usa.canon.com/consumer/controller?act=MultiMiscPageAct&key=Learning_Station&fcategoryid=2533)

#####

<http://www.shortcourses.com/guide/guide2-28.html>

Looks to be a good 'basic flash' short course for "further reading" ...
shawn