

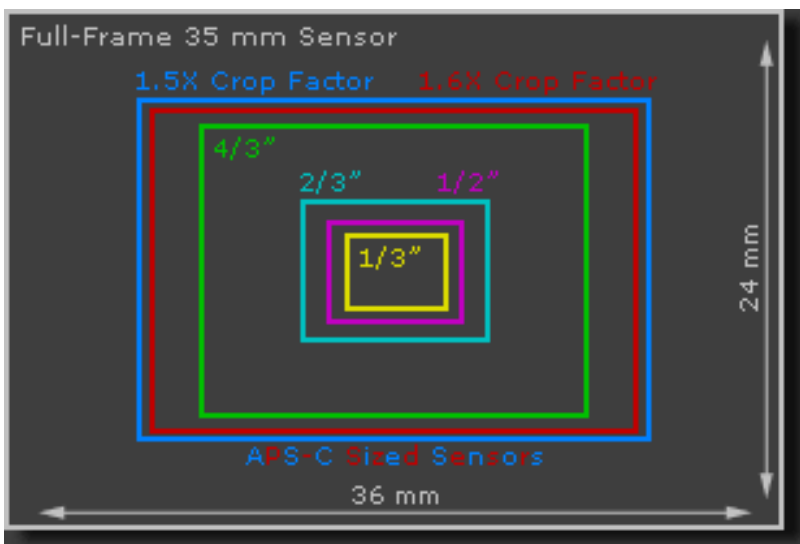
DIGITAL PHOTOGRAPHY

By
Mike Schlitt

<u>Camera-</u>	Point & Shoot	- 1/3 to 2/3 sensor
	SLR- Mid Line	- 4/3 to 1.5 crop factor sensor
	SLR- Pro Line	- Full frame 35mm x 24mm sensor
	Medium Format	- Full frame 54mm x 40mm sensor

Megapixels From 3 Mpixels up to 60 Mpixels

Sensor size



ISO = Film speed, 100, 200, 400, 800, 1600. By setting the ISO higher, the camera is able to use faster shutter speeds or higher apertures, allowing you more creative freedom and more ability to keep shooting in challenging lighting conditions. The higher the ISO setting on the digital camera, the more noise in the resulting image.

White Balance – Auto, Day Light, Tungsten, Florescent, Flash, Cloudy, Snow. A way of telling your digital camera how to compensate for the color of the light around you.

Mode- Auto, Program, Manual, Aperture priority, Shutter priority, Scene- Portrait, Night, Kids, Indoor, Snow, Beach, Macro

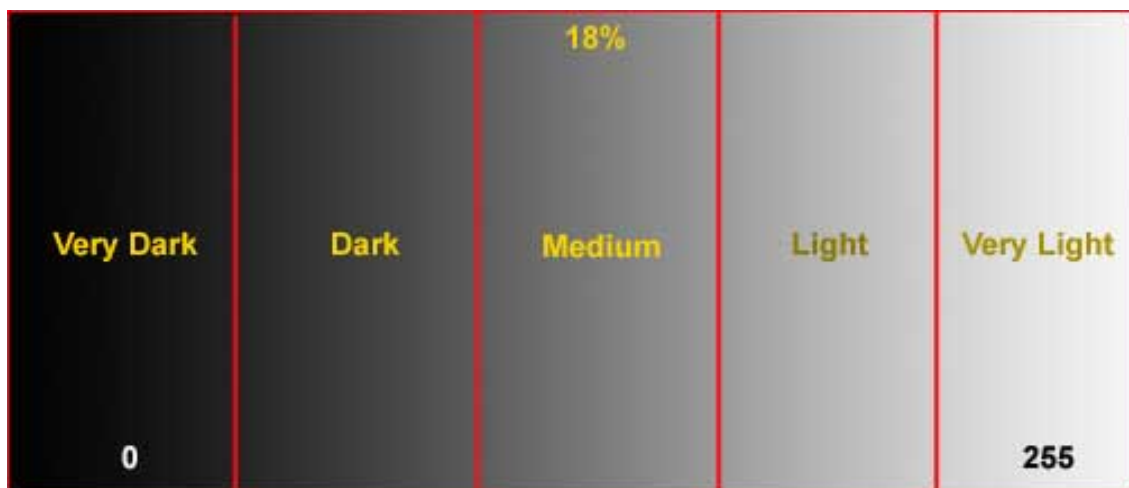
The aperture regulates how wide the lens opening is. The shutter speed regulates how long the shutter is left open. In an automatic mode, the digital camera chooses its own combination of aperture and shutter speed. In aperture priority, you control the lens opening while the camera chooses the appropriate shutter speed. In manual, you choose both lens opening and shutter speed.

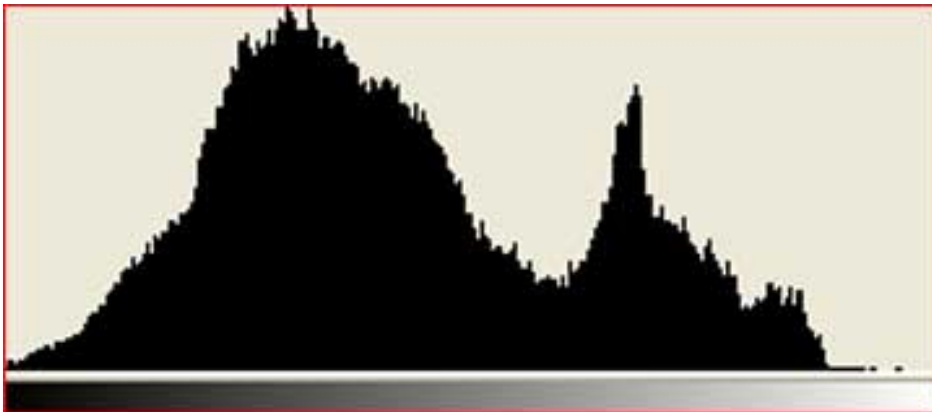
Example- Aperture priority mode allows you control over the depth of field of an image. The more open the lens is, the more shallow the depth of field is. Generally, for portrait and action photography small apertures are used so as to create a silky-smooth background behind a person kept in sharp focus. Conversely, in landscape photography large apertures are used to keep as much of the scene sharp as possible.

Display Screen - Records Histogram and Settings.

Image Stabilization - Helps get much sharper images when using long lenses and with all lenses in dim light. Please don't think this will replace the need for a tripod and good camera holding techniques.

Histograms A histogram is a graph counting how many pixels are at each level between black and white. Black is on the left and white is on the right. The height of the graph at each point depends on how many pixels are that bright. Lighter images move the graph to the right and darker ones move it to the left. General rule, try to get the histogram as close to the right as possible without touching it.

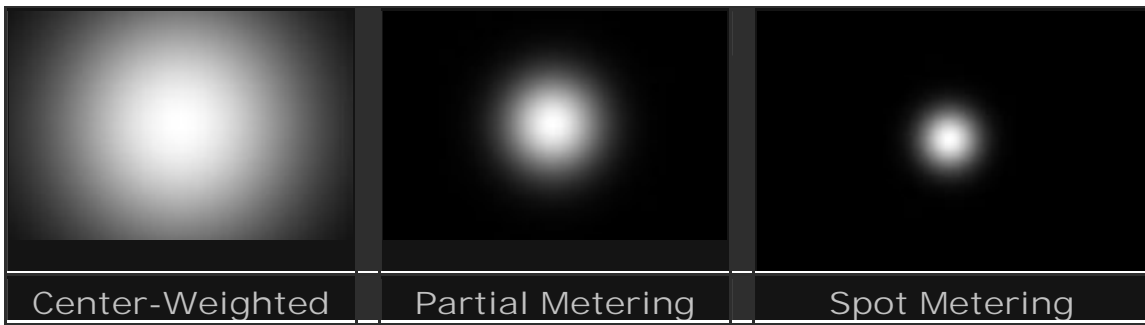




JPEG - Records maximum of 8 stops of light

RAW - Records maximum of 16 stops of light

Meter- Evaluative, Center Weighted, Spot



Resolution - set to highest

Exposure compensation- Adding and Subtracting Light - Exposure compensation is telling the camera “ even though you think the right exposure is this make it the way I want and do this”. In beach and snow the camera will often be fooled and always guess wrong at the exposure. The same with sunset images.



Single Shot, Continuous Shot, Self Timer- 2 sec. and 10 sec.

Storage cards

Flash - A typical problem with cameras using built-in-flash units is the low intensity of the flash; the level of light produced will often not suffice for good pictures at distances of over 8 to 10 feet. Dark, murky pictures with excessive image noise or grain will result. In order to get good flash pictures with simple cameras, it is important not to exceed the recommended distance for flash pictures. Using on-camera flash will give a very harsh light, which results in loss of shadows. Try using bounce flash, where the flash head is angled to bounce light off a wall, ceiling or reflector, or off-camera flash. Don't over look using flash in bright sunny days to fill in shadows.

Sharp Images – My number one criteria in evaluating my images. When I bought my first tripod, my satisfaction with my shots skyrocketed. For even more stability, use your camera's timer function or a remote release button with your tripod. Many SLR cameras have a custom function to remove the focus from the shutter button to another button. I highly recommend this change.

- How to hold your camera
- How to push the button
- Tripods
- Bean Bags
- Misc. Tree, Post, Rock







I use a Gitzo tripod (without a center post) and a kirk ball head for my main camera. I use small tripods for my point-and-shoot camera. I also use bean bags for many situations.

Correct Exposure – My number two criteria in evaluating my images. It is very important to understand that you have to add light for light conditions, (snow) and subtract light for dark conditions (black bear).

Understanding Light – Human Eye	20 stops of light (long term adaptation)
- Outdoor sunlight	17
- Computer monitor	9
- D-SLR PRO	10
- High end gloss print	7
- Compact Camera	6
- Med. Format	16
- Raw File	16
- Jpeg File	8

- Histograms

- Reciprocity Moving back and forth alternately. The interaction between the aperture and the shutter speed determines the volume of light hitting the sensor. The aperture and shutter speed settings go in opposite directions. The equivalent value or ratio must remain the same.

Aperture	Shutter Speed
f2.8 	1/500 sec.
f4.0 	1/250 sec.
f5.6 	1/125 sec.
f8 	1/60 sec.
f11 	1/30 sec.
f16 	1/15 sec.

- Adjusting Light - Exposure compensation

Composition – My number three criteria in evaluating my images.

- Avoid centering everything in the middle of your image.
- Get familiar with the rule of thirds.
- Look for foreground lead-in subjects.
- Get close. No, still closer. Closer. There. That's it.
- Before sunrise, after sunset, cloudy skies, stormy skies. As a general rule, the best natural light occurs in the hour before and after sunrise and sunset. I guarantee you that some of the best photography is shot during these hours.
- Start noticing the quality of light around you.
- Focus, hold shutter halfway down, and re-compose, shoot.
- Harsh lighting is not good. Clouds act as a giant softbox, diffusing and softening light.
- Shadows enhance wrinkles, can be good or bad.
- Learn the basic rules of composition.
- Change the perspective, (try different lenses) change the angle, Crouch down, Get a little higher.
- Portrait photography is an exacting art that takes years to master and is an art to be respected.
- One piece of advice that I received is to think about your photograph as a collection of layers. Composition is just one piece of the result. Light is another. You can be in the

most beautiful place in the world. Your composition can be perfect. But if the light isn't right, your photography will suffer.

Protect your camera - It is very important to protect your camera from water, impact, dust and sand. When coming in from the cold with your camera always put your camera in a plastic bag before it is exposed to the warm temperature, to prevent fogging internally. Use proper cleaning with a blower, brush and cloth.

Software – The software I use for most of my processing.

- Hasselblad Phocus
- Photoshop Elements 9.0
- Photomatix Pro
- Nik- Viveza 2

Printer – Epson R1900 is the printer I use.

Camera – The point & shoot camera that I use is a Canon S95 IS 10 Megapixel.

B&H Photo – Where I buy all of my camera equipment and supplies.

800.606.6969 / 212.444.6615 <http://www.bhphotovideo.com/>

Books – Digital Nature Photography (The art and the science) by John & Barbara Gerlach

- Digital Landscape Photography by John & Barbara Gerlach
- Complete guide to High Dynamic Range by Ferrell McCollough

Workshops- www.gerlachnaturephoto.com www.toddandbradreed.com

Tips - Keep your camera with you all the time.

- Make a list of shots you would like to take.
- Enjoy the learning process.
- Take advantage of the free resources to learn on line and with our club.
- Experiment with your camera's settings.
- Take photos regularly.
- Don't be afraid to experiment.
- Move in closer.
- Focus on your subject.
- Experiment with time exposures.
- Watch the weather.
- Always look for unusual lighting conditions.
- Be **BOLD**

