

April, 2019



2019 Assigned Subjects
 April-Bugs
 May-Cars
 June-Round Things
 July-Blue Hour

Inside this issue:

Current News	1
Educational Series	1
Photo Contests	4
Photo Opportunities	4
Photo Editing Feature	5
New Product	5
Workshops and Tours	6

Lebanon Camera Club

News

April Meeting: Tuesday, 4/2/19 6:30 pm

Mini-Program: "Lightroom Basics: The Library Module" by Deb Kreider

Digital Competition Assigned Subject: Bugs

Photography Educational Series—What Makes a Camera Work

SLR (single lens reflex) refers to a camera with a single lens and a reflex mirror to bend the light path to the optical viewfinder for framing. This means the image you see in the viewfinder (or LCD) will be the same as what appears on film or as your digital image.

A DSLR is a digital SLR (no film), meaning it has a digital sensor to record images. Digital SLRs have many advantages compared to their film counterparts.

What is a DSLR (Digital SLR) Camera?

A DSLR is a digital camera that uses a mirror mechanism to either reflect light from a camera lens to an optical viewfinder (which is an eyepiece on the back of the camera that one looks through to see what they are taking a picture of) or let light fully pass onto the image sensor (which captures the image) by moving the mirror out of the way. Although single lens reflex cameras have been available in various shapes and forms since the 19th century with film as the recording medium, the first commercial digital SLR with an image sensor appeared in 1991. Compared to point-and-shoot and phone cameras, DSLR cameras typically use interchangeable lenses.

How DSLR Cameras Work

When you look through a DSLR viewfinder / eyepiece on the back of the camera, whatever you see is passed through the lens attached to the camera, which means that you could be looking at exactly what you are going to capture. Light from the scene you are attempting to capture passes through the lens into a reflex mirror (#2) that sits at a 45 degree angle inside the camera chamber, which then forwards the light vertically



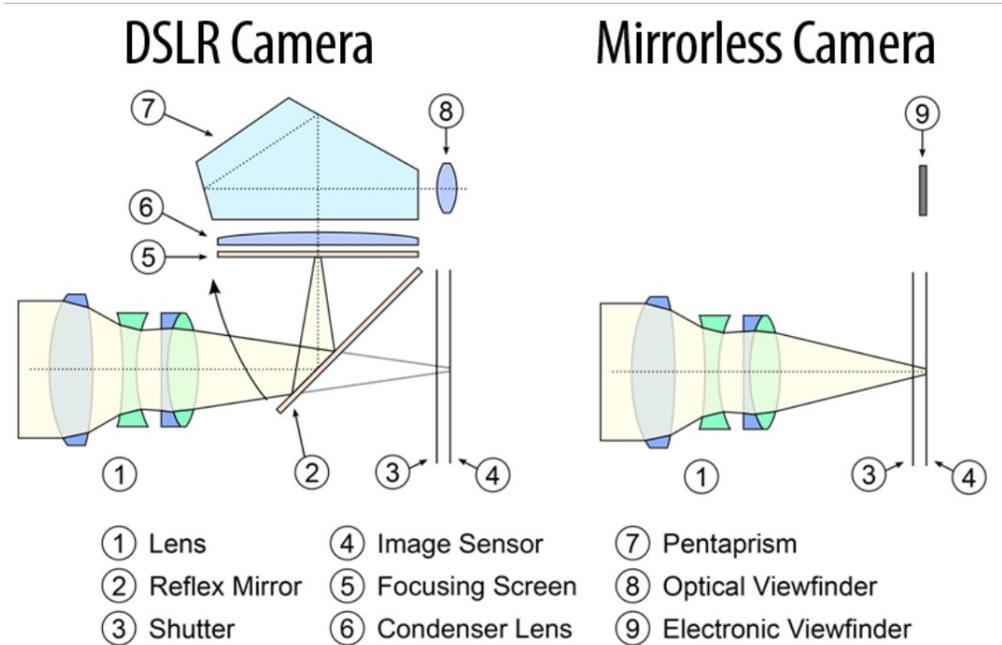
“When words become unclear, I shall focus with photographs. When images become inadequate, I shall be content with silence.”
— Ansel Adams



How Camers Work cont'd.

to an optical element called a “pentaprism” (#7). The pentaprism then converts the vertical light to horizontal by redirecting the light through two separate mirrors, right into the viewfinder (#8).

When you take a picture, the reflex mirror (#2) swings upwards, blocking the vertical pathway and letting the light directly through. Then, the shutter (#3) opens up and the light reaches the image sensor (#4). The shutter (#3) remains open for as long as needed for the image sensor (#4) to record the image, then the shutter (#3) closes and the reflex mirror (#2) drops back to the 45 degree angle to continue redirecting the light into the viewfinder.



Obviously, the process doesn't stop there. Next, a lot of complicated image processing happens on the camera. The camera processor takes the information from the image sensor, converts it into an appropriate format, then writes it into a memory card. The whole process takes very little time and some professional DSLRs can do this 11+ times in one second!

How SLR Cameras Work

In an SLR camera, you see the actual real image that the film will see. If you take the lens off of an SLR camera and look inside, you'll see how this works. The camera has a slanted mirror positioned between the shutter and the lens, with a piece of translucent glass and a prism positioned above it. This configuration works like a periscope -- the real image bounces off the lower mirror on to the translucent glass,

Cont'd

How Cameras Work cont'd.

which serves as a projection screen. The prism's job is to flip the image on the screen, so it appears right side up again, and redirect it on to the viewfinder window.

When you click the shutter button, the camera quickly switches the mirror out of the way, so the image is directed at the exposed film. The mirror is connected to the shutter timer system, so it stays open as long as the shutter is open. This is why the viewfinder is suddenly blacked out when you take a picture.

In this sort of camera, the mirror and the translucent screen are set up so they present the real image exactly as it will appear on the film. The advantage of this design is that you can adjust the focus and compose the scene so you get exactly the picture you want.

How Mirrorless Cameras Work

In contrast, a mirrorless camera is much simpler mechanically – light passes through the lens (#1) directly onto the image sensor (#4) and the optical viewfinder is replaced with an electronic viewfinder (#9) that replicates the image sensor. In normal operation, the mechanical camera shutter (#3) stays open and is only typically utilized at the end of exposure. Due to lack of both mirror and pentaprism, the flange distance (which is the distance between the lens mount and the image sensor) on mirrorless cameras can be shortened significantly, as the illustration above shows. Because of this, most mirrorless camera bodies are thinner and lighter compared to DSLRs.

Mirrorless cameras have many advantages over DSLR cameras. Aside from the potentially lighter weight and bulk of the camera itself, the use of an electronic viewfinder can bring many benefits to photographers. Since everything is duplicated directly from the image sensor, camera settings such as white balance, saturation and contrast can be seen through the viewfinder directly and additional information overlays including live histograms can be placed within the viewfinder, allowing photographers to see exactly what they are about to take a picture of. When combined with fast contrast-detection or on-sensor phase detection system, one can take advantage of being able to zoom in on a subject to verify focus, use focus peaking, face detection and other powerful features to ensure that focus is achieved precisely with every shot. When shooting in daylight conditions, one can utilize the electronic viewfinder to review images, instead of relying on the back LCD of the camera.

At the same time, mirrorless cameras have their list of disadvantages. First, the electronic viewfinder can only be active when the camera is turned on and power is provided to the image sensor, which can significantly affect the battery life of a camera. Second, electronic viewfinders can have noticeable lag, blackouts and high contrast, which can make it difficult for some photographers to get used to. When it comes to autofocus, although the latest mirrorless camera models can be very fast and accurate, they still do not do as well when shooting fast action, especially in low-light situations.



“What I like about photographs is that they capture a moment that’s gone forever, impossible to reproduce.”

— Karl Lagerfeld



Photo Contests

Rennen Photography
2019 Contest [https://
photocontestguru.com](https://photocontestguru.com)

Great American Photo
Contest Monthly Baby
Photo
[www.greatamericanphoto
contest.com](http://www.greatamericanphoto.com/contest.com)

Various Photo Contests
(Many Different Topics)
[https://
www.photocontestinsider.co
m/](https://www.photocontestinsider.com/)
and
<http://www.voubs.com>
and
[https://
www.outdoorphotographer.](https://www.outdoorphotographer.com/)

com/photo-contests/

[http://
www.photocrowd.com](http://www.photocrowd.com)

and

www.life-framer.com/



Photo Opportunities

April 12-15
Kennel Club “Blue & Gray Cluster” Dog Show
Farm Show Complex, Harrisburg
www.hkc.org

April 12
Kite Flying Festival
Markets at Shrewsbury
[https://
www.marketsatshrewsbury.com/
event/kite-festival/](https://www.marketsatshrewsbury.com/event/kite-festival/)

April 22
**Wonders of Wildflowers
Hawk Mountain – Visitors
Center**
<http://www.hawkmountain.org/>

April 26
Cruise Night
Markets at Shrewsbury
[https://
www.marketsatshrewsbury.co
m/events/cruise-night/](https://www.marketsatshrewsbury.com/events/cruise-night/)

April 27
Go Fly a Kite Day
Berks County Youth Rec-
reation Facility
[http://www.co.berks.pa.us/
Dept/Parks/Pages/
KiteDay.aspx](http://www.co.berks.pa.us/Dept/Parks/Pages/KiteDay.aspx)

Photo Editing Feature of the Month—How to Buy Adobe Photoshop

Now that Adobe no longer sells CS6 applications, the only professional version available from Adobe is Photoshop CC, which you get through a paid Creative Cloud membership. The only non-subscription version of Photoshop currently for sale is Photoshop Elements, or you can use a non-Adobe Photoshop alternative.

The main difference is that Adobe Photoshop CS you own and is only a one time payment. With Adobe Photoshop CC you only lease the software and need to pay forever a monthly subscription fee. They are the same thing, just how different people

refer to the same program by Adobe: Photoshop.

All non-CC (Creative Cloud) versions of Photoshop are no longer supported, no updates, no guarantees that it will work with your computer, and will have no bug fixes. The safest way to purchase a permanent Photoshop version would be to go with purchasing CS6 directly from Adobe. (There are rumors you can still purchase this directly via Adobe [or Ebay]).

You can subscribe to Creative Cloud for about \$10 per month.

For a \$9.99/month subscription, you will get the following products:

- Adobe Photoshop CC+
- Adobe Lightroom.
- Lightroom Classic
- 20 Gb of cloud storage

Adobe Photoshop Elements can be purchased (no subscription) for \$99.99.

New Product of the Month—Artificial Intelligence

AI Cameras

While artificial intelligence is rapidly permeating imaging software, it hasn't yet made the leap to traditional cameras. We think that's going to change. AI software requires notorious amounts of computational muscle, but smartphone vendors have already demonstrated that it's possible to run AI algorithms on smartphone processors and a new class of neural processing chips. Traditional cameras will likely be the beneficiaries of these developments.

There are a few elements of photography that could be ripe for an AI boost. Take scene recognition. It's something cameras already perform, but they do so according to fairly crude inputs—relative brightness, distance to subject, subject motion and other factors. Thanks to breakthroughs in machine vision, AI algorithms can do that plus recognize what actual objects are and optimize exposure for them. What's more, they can (in theory) apply image tags to metadata at the moment of capture, taking some of the grunt work out of your workflow. The reduction of noise and atmospheric haze are other promising areas for AI-powered cameras

Source: <https://www.pdnonline.com/gear/the-photography-tech-and-trends-were-excited-about-for-the-year-ahead/>

Workshops and Tours

Apogee Photo Magazine

For more information log on to
[http://www.apogeephoto.com/
photography_workshops.shtml](http://www.apogeephoto.com/photography_workshops.shtml)

Wildlife and Nature Travel

www.wildlifeandnaturetravel.com

Art Wolfe Photography Workshops

www.artwolfeworkshops.com

Don Smith Photography

www.donsmithphotography.com

Brenda Tharp

www.brendatharp.com/

M&M Photo Tours

<http://www.mmphototours.com/>

Arizona Highway Photo Workshops

<http://www.friendsofhighways.com/>

John Shaw 2-Day Nature & Digital Photography Seminar

<http://www.photosafaris.com/>

Jack Graham Photography

<http://jackgrahamphoto.com/>

Rocky Mountain Reflections

www.rockymtnrefl.com/photographyworkshops.html

Slonina Photography—Explore Wild America

<http://www.sphotography.com>

Darwin Wiggett Tours & Workshops

<http://oopoomoo.com/workshopsandtours/>

Outdoor Photo Workshops

<http://www.outdoorphotoworkshops.com>

Photo Workshop Adventures

www.photoworkshopadventures.com

Michael Francis Photo Shoots

www.michaelfrancisphoto.com

Osprey Photo Workshops & Tours

www.ospreyphoto.com

Tom Dwyer Tours & Workshops

www.tomdwyerphoto.com

Horizon Photography Workshops

www.horizonworkshops.com

Below is a link of online pdf files from
past monthly meeting presentations:

[http://www.bellalum.kotay.net/public/
program/LebanonCameraClub/](http://www.bellalum.kotay.net/public/program/LebanonCameraClub/)

2019 Officers

President: Paul Hess
rvdoc@comcast.net

Vice President: Ed Gundrum,
ejgun@evenlink.com

Secretary: Tammy Wolfe,
lebanoncamera@gmail.com

Treasurer: Joni Bonus O'Ship
mjoship@comcast.net

Program: Keith Kotay
keith@kotay.net

Newsletter: Connie Fullenlove
connief922@gmail.com

Competition: Melodie Bechtel,
bechs@verizon.net

Community Affairs: Bill Sypher,
sypher1@comcast.net

Meetings are the first Tuesday of each month!

If you would like to do a program on anything digital related or know someone who would, please let us know.

Or

If you have something of interest for our members, please email them to the Newsletter Editor, Connie at lebanoncamera@gmail.com.

MONTHLY MEETING
Be Connected. Be Heard. Be Informed.

Everyone is invited to attend our regular monthly meetings.

Unless otherwise noted we meet the first Tuesday at 6:30PM in St. Stephen's Christian Fellowship Church, 1100 Hunter Chase Lane, Lebanon PA.

Directions: From Rt 72 N of Lebanon where N 12th St becomes Jonestown Road at the McDonalds, follow Jonestown Road north past the Turkey Hill. Jonestown

Road will become Sandhill Road. Keep on Sandhill road until it branches to the left into Grace Avenue. Church is on the left 3/10 of a mile from the split *before* you pass Youth for Christ and Fisher Bus..

The club is a member of the Photographic Society of American (PSA).

Cancellation or last minute changes of events will normally be sent to members via email and broadcast on radio station WLBR, AM 1270.

Only members may enter competitions. Dues are \$25 per year and include the newsletter and monthly meeting minutes.

Digital Competition entries are due at least one day prior to the scheduled competition.

Competition Committee will keep winning Print entries for the end of year competition unless the member requests return of entries before then. In that case, the member would be responsible for re-submitting them for the end of year competition.

Products and services of interest to photographers are presented as a service without review or endorsement.

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Dates and times of events may change. Please check local listings.