

# DSLR Lens Acquisition Guidelines

**This article is intended to help you make an informed decision when it comes to purchasing lenses.**

As you probably are aware, there are so many lenses and off-brands to choose from when purchasing one for your DSLR - how do you choose?! There are lenses that fill specific needs, and there are specialty lenses (like fisheye or tilt-and-shift lenses), and veteran photographers have their favorites. This guide is just that - a guide to help you make an informed decision when considering a purchase of a new lens or a lens upgrade.

## THREE LENSES EVERY DSLR SHOOTER SHOULD CONSIDER

Here are some general guidelines for newcomers to DSLR photography. The three lenses described here will provide the most versatility when shooting in almost any situation.

### The general purpose zoom

For the smaller-than-full-frame APS-C sensor cameras (the majority of DSLR's today), something in the 18-50mm range is best... for 35mm format cameras (full-frame sensors), a 24-70mm will work. This will give you the ability to go fairly wide while also being able to zoom into objects off in the distance. This lens might be your "kit" lens (the one that comes in the popular camera kits), but it should preferably be fairly fast (a fixed f/2.8 if possible). This will give you greater creative control over depth-of-field. It makes a great "walk-around" lens when you aren't sure what you will be shooting.

### The macro lens

The length of this lens isn't as important as its ability to create a 1:1 magnification of subjects. 50mm f/2.8 Macro lenses are small and light... easy to carry around for when you might need it. It makes a decent portrait lens (very sharp and the f/2.8 provides a fairly shallow area of focus), and the level of detail you can get when shooting objects up close is fantastic. Having a macro lens opens up a whole new world of tiny objects to photograph. Also, if you do any type of product photography (jewelry, food, etc.) this lens will allow you to capture a much greater level of detail than is possible with standard lenses.

### The telephoto zoom

The telephoto zoom should be in the general range of 70-200mm with a maximum aperture of at least f/4 (a faster f/2.8 is even better, but considerably larger and therefore more expensive). This will give you a lot of distance to work with and a very shallow depth of field to bring better attention to your subjects. For faster moving objects (wildlife, sports, etc), the bigger aperture will allow you to shoot at faster shutter speeds which will help capture and freeze the motion. Additionally, this is an excellent portrait lens as the focal length minimizes distortion and narrows the angle of view to fill the frame with your subject and blur out distracting backgrounds.

## A SURVEY OF THE MOST POPULAR DSLR LENSES - DECEMBER 2009

The folks running a popular photography website ([www.Digital-Photography-School.com](http://www.Digital-Photography-School.com)) asked their large readership what lenses were preferred. The overwhelming majority were Canon and Nikon users, and so the report is based on those brands. If you shoot other brands, let this be a guide for you when making purchase decisions with respect to what focal lengths and minimum apertures you might consider.

### POPULAR CANON DSLR LENSES

(Note: Canon “EF” lenses are designed for 35mm Full-Frame sensors but can be used for APS-C sensors. Canon “EF-S” lenses are the smaller ones optimized for APS-C sensors)

**Canon EF 50mm f/1.8 II Lens** – for its price perhaps the best value lens in terms of the quality of output.

**Canon EF 70-200mm f/2.8L IS USM Telephoto Zoom Lens** – fast, great for portraits, weddings, sports, versatile focal length. Quite a heavy lens and not cheap.

**Canon EF 50mm f/1.4 USM Standard & Medium Telephoto Lens** – a step up from the f/1.8 in terms of build quality and results but more expensive.

**Canon EF 24-105mm f/4 L IS USM Lens** – often compared with the 24-70mm below this lens is not as fast but has image stabilization and an extra 35mm reach. A worthy contender for a great walk around lens.

**Canon EF 24-70mm f/2.8L USM Standard Zoom Lens** – a great walk around lens. Faster than the 24-105 but no image stabilization (pictured right).

**Canon EF 70-200mm f/4L USM Telephoto Zoom Lens** – not as fast as the 70-200mm f2.8 and without image stabilization but still a very sharp lens, a considerably cheaper option and lighter too. Note: between these two lenses is also a 70-200 f2.8 lens without image stabilization (this lens came in at #11).

**Canon EF 85mm f/1.8 USM Telephoto Lens** – a prime lens that gets great reviews. Also check out the f/1.2 version which is super fast but pricey.

**Canon EF-S 17-55mm f/2.8 IS USM Lens** – another alternative for a walk around lens if you take wide angle shots. A fast lens and loved by many.

**Canon EF 17-40mm f/4L USM Ultra Wide Angle Zoom Lens** – I love this lens. It’s not as fast as some but has been great for landscapes.

**Canon EF 100mm f/2.8 Macro USM Lens** – another of my personal favorites. If you want to take Macro shots this is well worth considering. Interestingly it also takes great portraits.

## POPULAR NIKON DSLR LENSES

(Note: Nikon “DX” lenses are the smaller ones optimized for AFS-C sensors. Non-DX lenses are designed for 35mm Full-Frame sensors but can be used for APS-C sensors.)

**Nikon 18-200mm f/3.5-5.6 G ED-IF AF-S VR DX Lens** (For APS-C sensors) – this lens makes a great option for everyday shooting with a fantastic focal range which gives both a reasonably wide angle and reach. The vibration reduction makes it particularly attractive and it is a reasonably affordable lens (pictured right).

**Nikon 50mm f/1.8D AF Nikkor Lens** - Nikons ‘nifty 50’ is a much loved lens and similar to the Canon version – for its price and quality it is a must have in your bag.

**Nikon 70-200mm f/2.8G ED-IF AF-S VR Zoom Nikkor Lens** – this lens has had some great reviews and is renowned for being a high quality camera. Again it has vibration reduction, is relatively fast and is great for portraits, weddings, sports. It’s not cheap though.

**Nikon 105mm f/2.8G ED-IF AF-S VR Micro-Nikkor Lens** – it is interesting that Macro lenses feature on both Nikon and Canon lists. This one however has vibration reduction making its fast aperture even more useful.

**Nikon 80-200mm f/2.8D ED AF Zoom Nikkor Lens** – lenses in this focal range featured heavily in both the Canon and Nikon lens and it is no wonder – its a really handy focal range. This one is quite a bit cheaper than the previous 70-200 but you lose Vibration reduction. Those mentioning it in our survey raved about it.

**Nikon 17-55mm f/2.8G ED-IF AF-S DX Nikkor Zoom Lens** (For APS-C sensors) – another fast zoom lens with wide angles yet a little length – making it a good choice for every day use if you don’t need lots of reach. On Amazon this lens has 52 reviews and only 3 of them didn’t give it a perfect score of 5 stars (and two of those gave it 4 stars). I guess it isn’t just DPS readers who love this lens.

**Nikon 24-70mm f/2.8G ED AF-S Nikkor Wide Angle Zoom Lens** – another zoom with a 2.8 aperture and a reasonable focal range. Those recommending it say its sharp, fast focusing and a joy to use.

**Nikon 10.5mm f/2.8G ED AF DX Fisheye Nikkor Lens** (For APS-C sensors) – rounding out the Nikon list is a fisheye lens which looks like being a lot of fun.

## Other Popular Lenses

**Sigma 10-20mm f/4-5.6 EX DC HSM Lens (Nikon) (also for Canon)** – this lens was actually mentioned quite a few times – almost as many as the most popular Canon and Nikons. It looks like a fun wide angle lens to have in your camera bag (pictured).

**Sigma 70-300mm f/4-5.6 DG APO Macro Telephoto Zoom Lens for Canon – (also for Nikon)** – this lens certainly has a wide focal range and is certainly on the more economical end of the spectrum of lenses in this category.

## WHAT DO ALL THESE LENS DESIGNATIONS AND ACRONYMS MEAN?

### CANON LENSES

**L:** Used to indicate a Canon professional-level lens. These lenses use better glass elements, are weatherproofed and can take quite a bit of abuse. They cost significantly more than lenses without the L. These lenses are branded with a red stripe around the barrel.

**IS:** Canon's Anti-Shake technology, and it stands for **I**mage **S**tabilization. When a lens has IS, it allows you to use slow shutter speeds and still get clear photos even when holding the camera in your hands. IS is also very useful for lenses with long focal lengths (200mm or longer) since these telephoto lenses magnify camera shake.

**USM:** This acronym stands for **U**ltra-**S**onic **M**otor, and it means that the lens focusing mechanism is dead quiet. USM lenses also tend to focus faster and than their non-USM counterparts, even when both lenses are attached to the same camera. These silent lenses are ideal for wildlife photographers who don't want to disturb their subjects, but also work for anyone who wants to be discreet about their photography.

**AF:** Auto Focus

**EF & EF-S:** These lenses are designed for 35mm Full-Frame sensors but can be used for APS-C sensors with a focal-length multiplier. Canon "EF-S" lenses are the smaller ones optimized for APS-C sensors.

**DO:** Stands for Diffractive Optics, an optical technology developed by Canon for manufacture of telephoto lenses that are significantly shorter and lighter than previously possible, while simultaneously improving optical performance by reducing chromatic aberration.

**TS-E:** Specialist tilt/shift lenses that allow correction of perspective distortion and control over the focus range. These lenses are often used for architectural interiors and exteriors.

**MACRO:** Denotes a Canon macro lens, also known as a close-up lens. Macro lenses have the ability to focus an image on the film or sensor that is at least as large as the subject. This is a magnification of 1:1.

### NIKON NIKKOR LENSES

**D:** Stands for Distance. These lenses take the distance between the subject and camera into account for metering. They have a physical aperture ring which needs to be locked.

**G:** These lenses have the same technology as D lenses, but they do not have an aperture ring. The G doesn't stand for anything. It's just a D lens without a physical aperture ring.

**VR:** Stands for Vibration Reduction. These lenses minimize blur caused by camera shake.

**ED:** Stands for Extra Low Dispersion Glass. This is the best glass Nikon makes, giving you better color, contrast, and sharpness. ED doesn't just mean pro, though, as it's in many Nikon lenses.

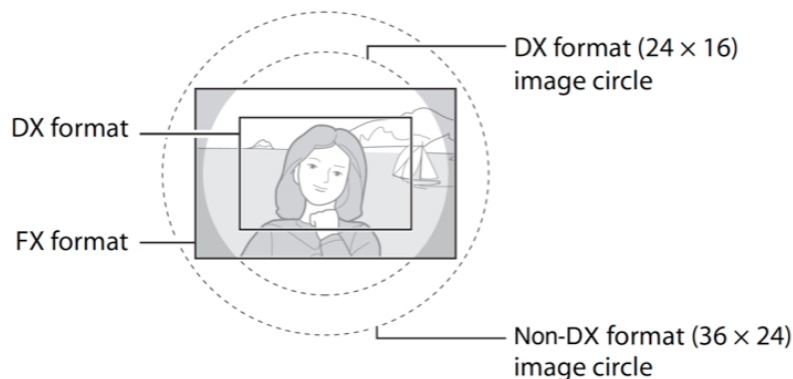
**N:** Stands for Nano Crystal Coat. This is a new type of lens element designed to reduce ghosting and flare, especially off really bright specular highlights. The 105 micro was the first lens to have this element.

**AF-S** or **SWM:** Stands for Auto Focus Silent Wave Motor. These lenses are quiet and fast, and the AF motors are built into these lenses.

**IF:** Stand for Internal Focusing. This is usually on higher-end lenses that have constant aperture (typically f/2.8) where the barrel doesn't extend, and the front element doesn't rotate.

**Aspherical:** These lenses have a certain amount of wide-angle correction built in.

**DX:** Stands for the DX Format. There are no FX lenses, only DX or not. If it doesn't say DX, it's a full frame lens. DX will work on FX camera, but only uses a portion of the sensor and makes it ~5MP.



## SONY LENSES

**G:** Stands for Gold and is supposed to describe lenses of the highest quality.

**D:** D-Series lenses include distance-encoding device which enables improved calculation for flash exposure when used on cameras with ADI (Advanced Distance Integration) support. A very common misunderstanding is that D mark means "Digital" which is absolutely wrong. D series lenses are in no way optimised better for digital cameras than non D lenses.

**DT:** Stands for "digital technology" and is supposed to describe lenses particularly optimized for digital cameras. In practice there is only one important thing about DT lenses you should be aware of; unlike non DT lenses these are covering image circle smaller than conventional 35mm lenses and are made with APS-C sized sensors. While you can mount these lenses on FF (film) cameras you will get severe vignetting due to reduced image circle.

**SSM:** Stands for the Supersonic-wave Motor used in the autofocus mechanism.

## OLYMPUS ZUIKO LENSES

**SHG:** The SHG Series of lenses stands for “**Super High Grade.**”

**ED & SUPER ED:** Stands for Extra Low Dispersion Glass, giving you better color, contrast, and sharpness

**SWD:** This is the ultra-fast Autofocus (**AF**) system

## HANDY RESOURCES FOR DSLR SHOOTERS

***DTown TV (kelbytv.com/dtowntv)*** : Scott Kelby and Matt Kloskowski developed *DTownTV*. The site provides free short training videos for the DSLR shooter. The first season (2009) was solely focused on Nikon DSLRs, but the new season is aimed at the general DSLR shooter. Lots of great tips and shopping guides. You can also subscribe via the iTunes Music Store, listed under Podcasts.

***The Lens Simulator (tinyurl.com/ybf6b3j)***: Although it’s on a Nikon site, it’s a great interactive demo for any DSLR shooter who wants to understand more about the differences between “full-frame” and “APS-C” sensors, and how this affects lens choice. You’ll see how the “crop-factor” works. The URL provided above is a shortened URL which is safe for you to use.

***The Digital SLR Guide Newsletter (www.digital-slr-guide.com)***: You can either subscribe to their email newsletter, or visit their site for great articles and tips for DLSR shooters.

***Camera & Lens Manufacturer Websites:*** Many camera and lens manufacturers feature wonderful educational material on their websites. Check your camera manufacturer’s website as well as the website of the third-party lens manufacturers listed in the call-out box.

***Third-Party Lens Manufacturers:*** For the budget conscious photographer looking for new lenses, there is a solution: third party manufacturers (See callout box below). They offer quality products. When you take into account that they cost half the price of the “official” ones, it is worth investigating. Study all the specifications. With third-parties you *may* lose a bit of focus speed and the image quality *may* not be as good, but you spend much less, the warranty *may* be better, and you generally get a broader choice of lenses. Whatever you do, ***research all your options well!***

### Third-Party Lens Manufacturers (for Nikon & Canon Bodies)

Sigma	<a href="http://www.SigmaPhoto.com">www.SigmaPhoto.com</a>
Tamron	<a href="http://www.Tamron.com">www.Tamron.com</a>
Tokina	<a href="http://www.Tokinalens.com">www.Tokinalens.com</a>