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LENS GUIDE

Focus Motors

Some autofocus lenses have a built-in motor to drive the autofocus mechanism whereas some others are driven by motors in the camera body.
Lenses with their own motors focus quicker

Magnification

Most DSLR cameras are crop sensor and not 'full frame' and will not display the same field of view with the same focal length lens.
For Nikon & Sony DSLR's magnify the focal length by 1.5 to get the full frame equivalent and 1.6 for Canon

Full Frame Compatibility

Lenses designed for full frame cameras can usually be used on crop sensor cameras, however the opposite is not usually the case because the area of light projected from a crop sensor lens is not big enough to cover the full frame sensor.

Filter Thread

A small thread is located on the inside edge of the end of the lens. This facilitates the attachment of a variety of filters or attachments to the lens.
The thread and filter diameters are measured in mm.

Lens Mounts

Each camera body manufacturer has its own design of lens mount and most are not compatible with others, e.g. a Canon lens mount will not fit a Nikon camera body.
Independent lens manufacturers make lens mounts to fit the different manufacturers, e.g. a Sigma lens with Canon mount.

Maximum Aperture

Wider apertures let in more light to allow you to increase shutter speed for motion-freezing shots. They also allow you to create a shallow depth of field.

LENS TYPES EXPLAINED

Standard Zoom

Most DSLR's come with a standard zoom lens, also known as a 'kit lens', with a moderate zoom range, 18-55mm, for example. These lenses are adequate for most purposes, however there are alternatives that offer superior image quality

Fixed Focal

Fixed focal length lenses, also known as Prime lenses, usually offer superior image quality and wider apertures.
A 50mm lens is excellent for low light photography, 85-105mm is great for portraits and a 300mm+ telephoto lens is ideal for sports shoots

Macro

A true macro lens is designed to magnify a very small subject to 1:1 size or bigger (life size).
Macro lenses come in various focal lengths and additional extension tubes can be used for greater magnification.

Wide Angle Zoom

Wide Angle Zoom lenses allow you to capture a wide angle of view, enabling you to get more into the shot.
Wide Angle Lenses are perfect for landscape and architecture photography.
Most popular lenses are 10-20mm and 12-24mm ranges.

Telephoto Zoom

The true definition of a Telephoto lens is a lens that gives a longer effective focal length than the physical distance from the back lens surface to the cameras sensor.
For shooting wildlife and sport a telephoto is the lens of choice. In addition short telephoto lenses are ideal for portraits.
Telephoto lenses can magnify camera shake (the slight movements of your hands when holding the camera freehand) so consider one with image stabilization.

Super Zoom

Shorter zoom lenses will have superior image quality, however a super zoom lens is handy when needing to shoot from a distance.
Do not expect pin-sharp quality or the ability to develop large prints from super zoom images and aberration is common amongst the cheaper range of lenses.

MANUFACTURERS LENS ABBREVIATIONS GUIDE

AD	Tamron Anomalous elements	DG	Sigma's designation for all lenses	FE	Tokina floating element lens	N	Nikon's Nano Crystal Coating	SWD	Olympus Supersonic Wave Drive
AF-DC	Nikon defocus feature	Di	Tamron lenses for full -frame sensors	G	Nikon lenses without an aperture ring	OS	Sigma's Optically Stabilised lenses	SWM	Nikon lenses with a Silent Wave motor
AF-S	Nikon lenses with silent wave motor	Di-II	Tamron lenses designed for APS-C	HF	Sigma Helical Focusing	PRO	Tokina's professional range of lenses	TS-E	Canon Tilt and shift lens
APO	Sigma Apochromatic lenses	DO	Canon diffractive optical element lenses	HID	Tamron's High Index Dispersion glass	RF	Sigma & Nikon Rear Focusing	UD	Canon Ultra Low Dispersion glass
ASL	Tamron lenses featuring aspherical elements	DT	Sony lenses for ASP-C sized sensors	HLD	Tokina low dispersion glass	SD	Tokina's Super Low Dispersion element	USM	Canon lenses with an Ultrasonic Motor
ASP	Sigma lenses featuring aspherical elements	DX	Nikon's designation for digital lenses	HSM	Sigma's hypersonic motor	SDM	Pentax's Sonic Direct Drive motor	VC	Tamron's Vibration Compensation
AT-X	Tokina's advanced Technology Extra Pro	ED	Low Dispersion elements	IF	Internal Focusing	SF	Canon lenses with Soft-focus feature	VR	Nikon's Vibration Reduction feature
CRC	Nikon's Close range Corrections system	EF	Canon's full-frame lenses	IRF	Tokina's Internal Rear Focusing lenses	SHM	Tamron's Super Hybrid Mount	XR	Tamron Extra Refractive Index glass
D	Nikon lenses that communicate distance info	EF-S	Canon lenses for ASP-C sized sensors	IS	Canon's Image Stabilized lenses	SIC	Nikon's Super Integrated Coating	ZL	Tamron's Zoom Lock feature
DA	Pentax lenses optimised for ASP-C sensors	EX	Sigma's 'Excellent' range	L	Canon's 'Luxury' range of lenses	SLD	Sigma Super Low Dispersion elements		
DC	Sigma's designation for digital lenses	FC	Tokina's Focus Clutch mechanism	LD	Tamron Low Dispersion glass	SP	Tamron's Super Performance range		
DF	Sigma lenses with dual focus facility	FE	Canon's fish eye lenses	M-OIS	Mega Optical Image Stabilisation	SSM	Sony/Minolta Supersonic Motor lenses		