



Photography – Terms & Acronyms

Digital Camera Terms and Acronyms

If you are beginning your photographic journey, there will be some terms and expressions you could be confused by! Fear not as there are always places you can find answers and I have tried to set out a few here in this short report. Some of the terms also relate to the “old” technology of film!

ADC or Analogue to Digital Converter

Part of every digital camera and scanner that converts analogue or continuous tone images to digital information.

Aliasing

The jaggy edges that appear in bitmap images with curves or lines at forty-five degrees. There are anti-aliasing functions in most image-editing packages that use softening around the edges of images to help make the problem less noticeable.

Ambient Light

This refers to the existing, available light that is in the area of the required image. The light is natural or man-made, but not supplied by the photographer with either a flash or static lamps.

Angle Of View

A measure of how much a lens can see of a scene from a particular position; usually measured in degrees, horizontally or vertically. The longer the focal length of the lens, the smaller the angle of view. A zoom lens has an adjustable angle of view.

This leads to other terms! Short, normal and long focal lengths! Very simply, it is the distance from the lens to the digital sensor, when focused on a subject at infinity

Aperture

This refers to the camera lens opening through which light passes to expose the sensor (or in the “old days”, the film!). The size of aperture can be fixed or adjustable, depending on the camera / lens type. Aperture size is calibrated in f-numbers. The larger the number (f16), the smaller the lens opening....leading to yet another term, Depth of Field. See below.

Aspect Ratio

The relationship between the width and height of a picture. The maintaining of an image's aspect ratio means that this relationship will remain the same even when the image is enlarged or reduced. The aspect ratio can usually be found in dialog boxes concerned with changes of image size.

Bit or Binary Digit

The smallest part of information that makes up a digital file. It has only a value of 0 or 1. Eight of these bits make up one byte of data.

Bitmap

The form in which digital images are stored, made up of a matrix of pixels.

Brightness Range

The range of brightness between shadow and highlight areas of an image.

Byte

The standard unit of digital storage: One byte is made up of 8 bits and can have any value between 0 and 255. 1024 bytes is equal to 1 kilobyte. 1024 kilobytes is equal to 1 megabyte. 1024 megabytes is equal to 1 gigabyte.

Bracketing

The taking of more than one shot with a different f-stop (aperture) above and below a recommended setting; usually used in tricky light situations to try to make up for light problems and catch the image. Digital SLR cameras may have an automatic exposure bracketing setting (AEB) to simplify this procedure.

CCD or Charge Coupled Device

The device which, placed in a large quantity in a grid format, comprises the sensor of most modern digital cameras.

CMYK

A color mode in which all the colors in an image are made up of a mixture of Cyan, Magenta, Yellow and Black (K). CMYK is the most common mode in the printing industry and is used by most high-quality digital printers.

Color Mode

The way that an image represents the colors that it contains. Different color modes include RGB, CMYK and greyscale.

Compression

The process in which digital files are made smaller to save on storage space or transmission time. Compression is available in two types – “lossy”, where parts of the original image are lost at the compression stage, and lossless, where the integrity of the file is maintained during the compression process.

Composition

This is the “staging” of image elements to make a desirable / suitable picture, taking in to account the foreground, background and main subject. See also “Rule of Thirds” below.

Cropping

This refers to the “taking out” of a part of a picture to make a more pleasing arrangement. It can also make a picture a different shape

Depth of Field

This refers to the amount of distance between the nearest and farthest objects that appear in acceptably sharp focus in a photograph.

Digitization

This is the process by which analogue images or signals are sampled and changed into digital form.

DPI

Dots per inch, a term used to indicate the resolution of a scanner or printer.

Duotone

A greyscale base image with the addition of another single colour other than black. Based on a printing method in which two plates, one black and one a second colour, were prepared to print a single image.

DSLR

Digital single lens reflex: In a (D)SLR, the photographer sees the image through the actual picture lens. To compose the picture, a mirror reflects the light from the lens to the viewfinder. When the picture is taken, the mirror momentarily flips out of the way to allow the light to pass through the lens diaphragm to the CCD or CMOS sensor (or to film in an analog **SLR**). Through-the-lens viewing enables precise manual focusing because tiny LCD screens do not have sufficient resolution. In addition, holding the camera against the face helps steady it. With the first digital SLRs, the LCD screen was used to review the recorded image, not to preview it for picture taking. In 2006, Olympus introduced the first DSLR with an LCD "live preview," and other camera vendors followed soon after

Dynamic Range

The measure of the range of brightness levels that can be recorded by a sensor.

Enhancement

Changes in brightness, colour and contrast designed to improve the overall look of an image.

Exposure

The time and strength of light allowed to land on the light sensitive sensors that produce the "finished" picture

Exposure Compensation

A technique adjusting the brightness of an image.

Fast lens

Refers to a lens that has a very wide aperture and lets more light in to the sensor. Typically a lens of f/1.8 or f/2.8 description would be a fast lens

File Format

The way in which a digital image is stored. Different formats have different characteristics. Some are cross-platform, others have inbuilt compression capabilities.

Filter

In digital terms, a filter is a way of applying a set of image characteristics to the whole or part of an image. Most image-editing programs contain a range of filters that can be used for creating special effects.

Fill flash

A technique used to to brighten shadow areas by using a flash very often using a “bounce” of reflected light to prevent harsh shadows or red-eye (see below).

Fisheye Lens

Lens that gives a 180 degree field of view

Flare

Flare is the Internal reflection or scattering of light from the lens elements. Flare usually shows as a bright area in an image. It often occurs when shooting “into the light” particularly if there is a strong light source. Lens hoods can be used to prevent most of this effect.

Focal Length

Very simply, it is the distance from the lens to the film / digital sensor, when focused on a subject at infinity. The focal length of the lens on most adjustable cameras is marked in millimeters on the lens mount.

Focus

The adjustment of the distance setting on a lens to define the subject sharply.

Focus Point(s)

These are electronic dots or boxes inside your viewfinder that can be used to select the area or point(s) for the camera to focus on. They can be set to manual or automatic.

Full Frame Sensor

Size of a sensor that is the same as a 35mm film frame.

Graininess

Graininess is the granular appearance of a film negative, print, or slide. Graininess becomes more pronounced with faster film and the degree of enlargement. NOW the “graininess” refers to the image “noise” (yet another term!) or the prominence of the image pixels.

Gamma:

The contrast of the midtone areas of a digital image.

Gamut

The range of colours or hues that can be printed or displayed by particular devices

Gaussian Blur

A filter which, applied to an image or a selection, softens or blurs the image.

Greyscale

A monochrome image containing 256 tones ranging from white through a range of greys to black..

Histogram

A graph that represents the spread of pixels within a digital image.

Hue:

The colour of the light as distinct from how light or dark it is.

Hyperfocal distance

The focus point where all objects can be brought into acceptable focus up to infinity at a given aperture.

ISO Speed

The emulsion speed (sensitivity) of the film as determined by the standards of the International Standards Organization. In these standards, both arithmetic (ASA) and logarithmic (DIN) speed values are expressed in a single ISO term. For example, a film with a speed of ISO 100/21° would have a speed of ASA 100 or 21 DIN.[sensitivity of sensor/film. Higher ISO Brighter exposure and more noise/grain]

Lens

One or more pieces of optical glass or similar material designed to collect and focus rays of light to form a sharp image on the film, paper, or projection screen.[The thing you mount on a dSLR]

Lens Shade/Hood

A collar or hood at the front of a lens that keeps unwanted light from striking the lens and causing image flare. May be attached or detachable, and should be sized to the particular lens to avoid vignetting.[The black thing on top of lens to block light entering from the sides of the lens, professionals put it on to make their lens look bigger]

Lens Speed

The largest lens opening (smallest f-number) at which a lens can be set. A fast lens transmits more light and has a larger opening than a slow lens.[See Aperture]

Looking Space

Commonly associated with portrait and automotive photography, also links in with "Rule of Thirds". Making sure your subject has looking space means to allow some blank space in front of your model or car's face for them or it to "look" into

Macro Lens

A lens that provides continuous focusing from infinity to extreme close-ups, often to a reproduction ratio of 1:2 (half life-size) or 1:1 (life-size).[Lens to shoot really close, great for bugs and flowers]

Metering

Measurement of light on the subject using desired setting in camera or an external light meter. Helps determine exposure.

Monopod

A single leg usually used for heavier lenses while shooting for a long time. Used to take the weight off of one arm.

Noise

Colorful dots you see on the photo when using too high of an ISO.

Normal Lens

A lens that makes the image in a photograph appear in perspective similar to that of the original scene. A normal lens has a shorter focal length and a wider field of view than a telephoto lens, and a longer focal length and narrower field of view than a wide-angle lens.[Usually a 50mm lens on a Full Frame Body]

Overexposure

A condition in which too much light reaches the film, producing a dense negative or a very light print or slide, and the image looks too bright or washed out.

Panning

Using a longer exposure to show motion in a photo, usually used for fast moving objects like cars, sports players. Focus is on the subject and the background is "smeared".

A technique used to accentuate motion of a moving subject by following the motion of the subject (through the viewfinder) for the duration of the exposure.

Polarizing filter

Transmits light of a particular polarization while absorbing light that is of a perpendicular polarization. Light reflected by shiny materials is partly or fully polarized. Polarizing filters are turned to change the polarization direction.

Prime Lens

Lens that you can't zoom on, usually has great image quality.

Red Eye

"Red Eye" refers to the light reflection from the back of the eye when a direct light source is used to light a family or individual.

Rule of Thirds

The common technique of putting the subject slightly off-centre, about a third of the way from either the left, right, upper or lower part of the photograph. Not always the best option, but generally can help a photograph's composition. [For example, if your subject was a tree, you might have the trunk a third of the way from the right-hand side of the viewfinder to help composition].

Stopping Down

Changing the lens aperture to a smaller opening; for example, from f/8 to f/11. [Changing the aperture down]

Teleconverter

A piece of lens equipment you can mount between the lens and camera body to increase the focal length of a lens. Usually come in 1.4X and 2.0 flavors. The benefit is that you have a longer focal length without buying a new lens, the draw back is that you lose 1 stop of light with the 1.4X and 2 stops of light with the 2.0X.

Sync speed

Usually referred to as the maximum shutter speed usable for flash photography.

Telephoto lens

A long lens, usually above 70mm, also meaning the physical lens is shorter than its focal length.

Tripod

Three legged thing that you put your camera on. Used for heavy lenses or night shots to prevent motion shake.

Vignetting

A fall-off in brightness at the edges of an image, slide, or print. Can be caused by poor lens design, using a lens hood not matched to the lens, or attaching too many filters to the front of the lens.[Black thing in the corners of photos]

Wide-Angle Lens

A lens that has a shorter focal length and a wider field of view (includes more subject area) than a normal lens. (What people call fisheye...and they are wrong)

White Balance

Color Temperature of the image. Setting depend on the lighting available.

Zoom Lens

A lens in which you adjust the focal length over a wide range. In effect, this gives you lenses of many focal lengths.[Not Prime lens]

Acronyms often used within the photography business

As with most subjects there develops a “language” that is used to reference a topic, piece of equipment or process that is related to the particular subject! These can also cause some confusion and again I would like to help by adding some of them here – if there are any you come across not mentioned, my apologies. Rather than “overload” these are just some of the more common acronyms. The brand specific ones have also been kept to a minimum.

f/#= f/ number/aperture

PP= Post Processing

ROT= Rule of Thirds

PS=Photoshop

IS=Image Stabilization

OS=Optical Stabilization (Canon)

ETTL=Evaluative through-the-lens

P&S=Point and Shoot

SLR=Single Lens Reflex

OOF= Out of Focus

IQ=Image Quality

LR=Lightroom

VR=Vibration Reduction

AWB=Auto White Balance

iTTL=intelligent through-the-lens (Nikon)

TTL=Through the lens

EXIF=Exchangeable image file format

DSLR=Digital Single Lens Reflex

Have FUN!

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My very best wishes to you – **get that camera out and take some pictures!**

A handwritten signature in black ink that reads "Mike". The signature is stylized with a large, looped "M" and a long, sweeping underline that extends to the right.

Take photographs as much as you can and gradually you WILL learn while you do it.

It's FUN!

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