

## A brief Photographic Glossary

### **35mm**

The most popular film size; 35mm wide with punched sprocket holes and made for both still and motion picture cameras. In 1913, Oscar Barnack, of 'Leitz ' first used it in a still camera when he created the 'Leica' prototype using movie film stock. The format is 24 x 36mm, unchanged from Barnack's prototype. In relation to other formats, 35mm gives the best compromise between image quality and versatility. (see *Format*)

## A

### **Ambient Light**

The available light. Already existing in an indoor or outdoor setting which is not caused by any illumination created by the photographer. (see *Existing light* )

### **Aperture**

The opening in a lens through which light passes to expose the film. Aperture size is usually calibrated in f-numbers, the larger the number, the smaller the lens opening, therefore the slower the shutter must be! (see *f-stop*)

### **Aspect Ratio**

The ratio of width to height in an image. Wide-screen TV 16x9 and traditional TV 4x3. Still photography offers many aspect ratios, from square format (such as 6x6 cm) to various panoramic formats. (see *Format*)

## B

### **B ("Bulb")**

Shutter setting on which the shutter will stay open as long as the release is depressed. Used for exposures longer than the numbered shutter speed settings. (see *Shutter speed*)

### **Backlighting**

Light from behind the subject, and towards the camera lens, so that the subject stands out against the background. This sometimes can produce a silhouette effect.

### **Bayonet**

All modern 35mm SLR cameras now use a "bayonet" lens fitting (a quarter turn clockwise or anti-clockwise will remove or attach the lens). Each camera manufacturer has its own type of fitting, therefore as an example a Canon lens cannot be attached to a Nikon camera body. (see *Screw mount lens, 35mm & SLR*)

### **Bit Depth**

The amount of colour information associated with a digital image. An image with a higher bit depth can display more gradations of colours. The most common colour bit depth for digital photos (especially jpeg files) is 8 bits per colour, (a 24-bit RGB image). Professional digital cameras capture 16 bits per colour when shooting RAW files. (see *RAW*)

### **Bounce**

Flash or tungsten light bounced off a reflector (such as the ceiling, walls or broolly) to give the effect of natural light. (see *Brollies*)

### **Burning-in (or Burn-in)**

To make an area of a print darker. This is accomplished after the basic exposure by extending the exposure time (or opening the aperture) to allow extra image-forming light to darken areas of the print while holding back the light from the rest of the image (with hands or card etc.); also called printing-in. (see *Dodging & Exposure* )

### **Byte**

A unit of digital information most often consisting of eight bits. File sizes and storage capacities are commonly described in thousands of eight-bit bytes (kilobytes), millions (megabytes), billions (gigabytes) or trillions (terabytes). (see *Bit*)

## **C**

### **Cable release**

Flexible cable for firing a camera shutter. Useful for long exposures where touching the camera release by hand could cause camera-shake blur. (see *Exposure Shutter & Shutter speed*)

### **Cast**

(see *Colour Balance, Colour Cast & Colour correction*)

### **CCD**

Charge Coupled Device (CCD). The Digital camera's 'film'; a CCD converts light into a digital photograph of pixels. When a picture is taken the CCD is struck by light coming through the camera's lens; each of the millions of tiny pixels that make up the sensor converts this light into electrons. (see *CMOS & Pixel*)

### **Centre Weighted**

A camera metering system which concentrates the light reading mostly to the central portion of the viewfinder and feathering out to the edges. Although in the hands of an inexperienced photographer a 'Matrix' style meter will achieve more correct results many professionals still prefer to use their cameras in manual mode with the meter set to 'centre weighted'! Now regarded as a 'classic', this metering system is included in all quality 35mm SLR cameras.

(see *Matrix, finder, 35mm & SLR*)

### **Close-up lens**

A lens attachment used in front of the camera lens; pictures then could be taken at a closer distance than normal. (see *Extension tubes & Macro*)

### **CMOS**

Complementary Metal-Oxide Semiconductor (CMOS). An image sensor used in some digital cameras. Its basic function is the same as the CCD. (see *CCD*)

### **Colour balance**

How a particular colour film reproduces the colours of a scene. All Colour films are formulated to be exposed by light of a certain colour quality (daylight or tungsten). It also describes an adjustment in colour photo processes that ensure a neutral scale of grey tones is reproduced accurately, i.e. a grey subject will have no colour cast or bias. (see *Daylight film & Tungsten film*)

### **Colour cast**

Overall bias towards one colour in a colour photograph or trannie. (see *Colour Balance*)

### **Colour correction**

Filters which help balance the colour rendition of a scene to match the colour response of the eye. (see *CC filters*)

### **Colour Management System**

A system for communicating colour reproduction information about digital images between input, display and output devices.

Improves fidelity of image reproduction when properly configured by all involved in a production workflow.

### **Colour Profile**

Colour space information can improve colour fidelity when embedded into a digital image file and referenced within a 'Colour Management System' reproduction workflow.

### **Colour sensitivity**

The response of a sensitive material to the colours of the spectrum

### **Colour Space**

A three-dimensional representation of a colour profile, useful in digital imaging to understand colour performance between input, display and output devices. (see: *Colour Management System*)

### **Colour temperature**

Measured in Kelvin, expressed on a scale (i.e.3400K) this indicates the colour content and quality of a light source light such as a lamp. (see *Tungsten film*)

## **Compact Flash**

The removable CF card is a popular Digital Camera photo storage system. Although they are larger than SD, Smart Media, XD Picture Card and Memory Sticks 'Professional' use has made them widely available and in very large sizes, currently up to 32 Gigabytes.

(see *Memory Stick, Micro Drives, SD, Smart Media & XD Picture Card*)

## **Composite**

The act of combining two or more images. Today usually accomplished digitally using 'Photoshop'. (see *Photoshop*)

## **Compound lens**

Lens system consisting of two or more elements.

## **Compression**

A digital file is compressed by removing redundant information. Some image file compression methods discard visual information that may degrade image quality. (see *JPEG* and *Lossy*)

## **Contrast**

A subjective judgment of the difference in brightness and density between shadow and highlight areas in an image. Contrast is affected by lighting, lens flare, film type, degree of development, enlarger type and quality of printing.

## **Converter**

A supplementary lens that can double the length of a telephoto lens (e.g.: 2x converter). Usually fitted between lens and camera body.

## **Copyright**

A legal property right in an original work of any physical medium of expression, such as photographs. Copyright is more than the right to copy, the owner of copyright holds the exclusive right to reproduce, publicly display, adapt, distribute and to authorize others to do the same.

## **Correction filter**

A filter which alters the colour rendition of a scene to suit the colour response of the eye. (see *Colour correction*)

## **Cropping**

Printing or using only part of the image that is in the original negative or trannie, usually for a more pleasing composition. Could also refer to the framing of the scene in the viewfinder.

(see *Clean & Tight*)

## **CMYK**

A colour system based on the four colours used in colour printing: Cyan, Magenta, Yellow and Black. Can also be a colour mode used to define colours in a digital image. All Digital cameras & scanners are RGB devices, a colour method based on combinations of the primary colours Red, Green & Blue this is the same as your TV and PC monitor. CMYK is primarily used when preparing digital images that will be printed using the process colours by a printer or publisher on a four colour printing press. (see *RGB*)

## **D**

### **Dedicated flash**

A flashgun designed for use with a specific camera. It links directly with the internal camera circuitry to help produce perfectly exposed photos.

### **Density**

The blackness of an area in a negative or print. Sometimes referred to as contrast. (see *Contrast*)

### **Depth of field**

The distance between the nearest and farthest objects that appear in acceptably sharp focus in a photograph. Depth of field depends on the lens aperture, the focal length of the lens, and the distance from the subject. (see *Aperture & Focal length*)

### **Depth of focus**

Very narrow zone on the image side of the lens within which slight variations in the position of the film will make no appreciable difference to the focusing of the image.

## **Digital SLR**

A digital SLR is simply a SLR camera that takes photos digitally (electronically) rather than using traditional film; popular examples are the Nikon D90 and Canon EOS 50D. (see *SLR*)

## **Dodging**

'Local' control of density in photographic printing achieved by shading (using your hands, small pieces of card or various other dodging tools), therefore, holding back the image-forming light from a part of the photo to make that area of the print lighter. (see *Burning-in*)

## **DPI (Dots Per Inch)**

A measurement unit describing the resolution of hardware, such as a computer monitor or digital printer. Although strictly incorrect, it is now often used as the resolution unit for a digital image.

## **D-SLR**

D-SLR is a Digital SLR camera. (see *SLR & Digital SLR*)

## **E**

## **EOS**

A popular autofocus 35mm SLR camera system made by Canon. "EOS" (Electro Optical System) is also the name of the goddess of dawn in Greek mythology. First introduced to the world in March 1987 with the EOS650 camera. (see *SLR & 35mm*)

## **EF lens**

The lens of the Canon EOS autofocus camera system. (see *EOS & Bayonet*)

## **E-TTL**

E-TTL (Evaluative-Through The Lens) flash metering. A Canon EOS flash exposure system that uses a brief pre-flash before the main flash in order to obtain a more correct exposure. (see *Balanced Fill Flash & EOS*)

## **EXIF data**

EXIF (Exchange image file format). This is a standard that allows information stored with the digital photograph (camera setting and exposure information) to be used to achieve a balanced colour when the photo is output on a EXIF data-compliant printer. Many programs can also read and display this information.

## **Existing Light**

Available light, includes all natural lighting from moonlight to sunshine; and for photographic purposes, existing light is also the light that is already on the scene. Therefore it takes in: room lamps, fluorescent lamps, neon signs, candles, daylight through windows, and artificially illuminated night scenes.

## **Exposure**

The quantity of light allowed to act on a photographic material; the lens aperture controls intensity or amount of light, and the shutter speed (or the enlarger timer in printing) controls the time. (See *Aperture, Shutter speed & Over exposed*)

## **Exposure compensation**

To obtain the best results with certain subjects it may be necessary to alter the exposure from the value suggested by the camera. An exposure compensation button [+/-] is now found on most modern auto cameras. Positive compensation may be needed when the main subject is darker than the background and negative compensation may be needed for a subject lighter than the background.

## **Exposure latitude**

The amount by which you can over or under expose a light-sensitive material with standard processing, and still achieve an acceptable result.

## **Exposure meter**

An instrument for measuring the amount of light (available or flash) falling on or being reflected by a subject, and converting this measurement into usable information: shutter speed and f stop. (see *Existing light, f-stop & Shutter speed*)

## **Extension tubes**

Metal tubes added to 35mm or medium format cameras, to extend the lens film distance, enabling a magnification greater than x 1 (life size). (see: *Close-up lens & Macro*)

## **F**

### **f - Stop**

A number that indicates the size of the lens opening. The common f-numbers on 35mm cameras are f1.4, f2, f2.8, f4, f5.6, f8, f11, f16, and f22. The larger the f-number, the smaller the lens opening, f22 is the smallest in this series. Also called the aperture, they work in conjunction with shutter speeds to indicate exposure settings. The number sequence is printed on the lens barrel, each higher f number halves the exposure of the preceding one.

The f-number itself is effectively the number of times the aperture diameter will divide into the lens focal length. For example, f4 aperture diameter is one quarter the focal length (i.e. 25mm aperture diameter in a 100mm focal length lens). (see: *Aperture*)

### **Fast film**

Film with an emulsion that is very sensitive to light. Such films have high ISO ratings (i.e.: ISO1600). They are all, however, more grainy than their slower counterparts. (see *Grain & ISO*)

### **Fast lens**

A lens with a wide maximum aperture (f2.8 is a fast lens in a 35mm telephoto design). Often used in low light situations or when a fast shutter speeds are always required. (see *Aperture, Shutter speed & Tele*)

### **File Format**

The form or type of file used in Digital photography and to store images and other information on computers. Some popular examples of file formats are TIFF, JPEG, psd and dng. (see *JPEG, TIFF and RAW*)

### **File size**

The size of an image in digital photography, measured in kilobytes (K), megabytes (MB), or gigabytes (GB). File size is proportional to its pixel dimensions; images with more pixels may produce more detail at a given printed size, but they require more disk space to store and are slower to edit, print and e-mail as an attachment. (see *Pixel & Image resolution*)

### **Fill-in**

Light from an additional lamp, flash, or reflector; used to soften or 'fill in' the shadows caused by the brighter main light, often the Sun. Called fill-in flash when flash is used. (see *Reflector*)

### **Film Speed**

The sensitivity of a film to light, indicated by a number such as ISO 100. The higher the number, the more sensitive or faster the film. (ISO stands for International Standards Organization.) (see *Fast film, Slow film & ISO*)

### **Filters**

A piece of glass or other transparent material used over the lens which alters the nature, colour or quality of the light passing through it. (see *CC filters*)

### **Finder**

Also known as a viewfinder. A viewing aid in a camera, used for composing, and usually focusing the subject. It would normally also display exposure information in smaller formats. (see *Exposure & Focusing screen*)

## **G**

### **Giclée Print**

The term 'Giclée' first appeared in fine art marketing at the end of the 80's. Giclée (pronounced "zhee-clay") is french for "squirt" or "spray." Produced by a large format ink jet printer on art-quality paper or canvas. The term, however, offers no standard for quality or print longevity. (see *Fine Art & Ink Jet Print*)

## **Gigabyte (GB, Gig)**

A measure of file size and storage capacity. Most consider a kilobyte to be 1,024 bytes, a megabyte to be 1,024 kilobytes, and a gigabyte to be 1,024 megabytes. However, some key standards groups assume a kilobyte to be 1,000 bytes, a megabyte to be 1,000 kilobytes, and a gigabyte to be 1,000 megabytes. Many data storage manufacturers use this latter measurement to define their device sizes, which leads to computers showing less storage capacity on a drive than the specifications suggests. (see *Kilobyte & Megabyte*)

## **Grain**

The sand-like, granular appearance of a negative, print or trannie. Graininess becomes more noticeable with fast films and increased size of enlargement. (Granularity: The amount of grain clumping that has occurred within an emulsion. Also referred to as graininess.) (see *Emulsion, Enlargement & Fast film,*)

## **Guide number**

The number which indicates the effective power of a flash unit. For a given film speed, the guide number divided by the distance between the flash and the subject gives the appropriate f stop to use.

## **H**

### **High key**

Term describing a photograph which contains large areas of light tones, with few mid-tones or shadows. (see *Low key*)

### **High Resolution (High Res)**

Refers to a relatively larger number of pixels per inch in a digital image or scan, which yields a large digital file.

### **Highlights**

The brightest areas of the subject or photograph.

### **Hold-back (shading)**

Photo printing method to make parts of a picture lighter than it would normally have been. (see *Burning-in & Dodging*)

### **Hood**

A tube, usually made of metal or rubber, that prevents unwanted light from falling on the lens surface. (see *Flare*)

### **Hot shoe**

The electrical fitting on a camera that holds a small portable flash and links the gun to the camera shutter mechanism.. This direct flash-to-camera contact eliminates the need for a flash sync. cord. (see *Accessory Shoe, Flash sync. & Shutter*)

### **Hunting**

An autofocus system that has trouble finding the focus in a low contrast image or in poor light 'hunts'; this is where the lens moves continuously from close-up to infinity looking for the correct point of focus.

## **I**

### **Image resolution**

Digital photography: The number of pixels displayed per inch of printed length in an image, usually measured in dots per inch (dpi) or pixels per inch (ppi) The amount of detail in an image depends on its pixel dimensions, while the image resolution controls how much space the pixels are printed over. You can modify an image's resolution without changing the actual pixel data in the image all you change is the printed size of the image. (see *Pixel & File size*)

### **Image Size**

The dimensions of a digital image, most clearly expressed in its pixel count, horizontally and vertically. (see *Pixel*)

### **Infinity**

Focusing point at which the lens gives a sharp image of very distant objects, such as the far horizon.

## **Ink Jet Print**

An image on paper or other material such as a canvas produced by a process that sprays dyes or pigments through tiny nozzles onto the material. (see *Giclée Print*)

## **Iris**

(see *diaphragm*)

## **ISO (International Standards Organization)**

The modern speed rating for photographic materials used instead of ASA or DIN\*. The scale is identical to ASA (American Standards Association) where the rating is based on an arithmetical progression, using an average gradient system. Therefore ISO 200 film is twice as fast as ISO 100 film but only half as fast as ISO 400 film. (see *ASA & DIN*)

## **J**

### **JPEG**

JPEG (Joint Photographic Experts Group) is a file compression method used in Digital Photography that shrinks a file's storage size, but which can also cause image degradation as a result of data loss. (see *Lossy*)

## **K**

### **Kelvin(K)**

Unit of temperature in the SI (Système International) system of units. Kelvin is used to measure the colour temperature of light. Daylight films are designed for colour temperatures between 5200K and 5800K.

### **Keystoning**

Converging verticals can make a building appear to be falling down (wider at the bottom than the top), this can be corrected by making sure the film plane is parallel to the photographed surface using either a Shift Lens or camera movements. It can also be corrected within Photoshop. Keystoning is also the term for the effect of a tilted (up or down) projector. (see *Camera movements, Converging angles, Movements, Photoshop, Rising front & Shift*)

### **Kilobyte (KB, K)**

A measure of file size and storage capacity referring to 1,000 or 1,024, 8-bit data units or characters. (see *Gigabyte*)

## **L**

### **Large format**

As the name implies this is the largest of modern film formats (the most popular being 5"x4" & 10"x8"), and they are especially suitable for high quality commercial work. (see *Medium format*)

### **Latitude**

The range of camera exposures from under to over exposure that will still produce an acceptable image from a specific film. (See *Exposure & Exposure latitude*)

### **Lens shade or hood**

A Bellows or Hood at the front of a lens that keeps unwanted light from striking the lens and causing image flare. Should be sized to the particular lens to avoid vignetting. (see *Bellows, Flare, Hood & Vignetting*)

### **Lens Speed**

The largest lens opening, e.g. f2 not f16. A fast lens transmits more light and has a larger opening than a slow lens. (see *f-stop & Slow lens*)

### **Light meter**

(see: *Exposure meter*)

### **Long lens**

Term describing a lens in which the focal length is much greater than the diagonal of the film format (or standard lens) with which it is used. e.g. 300mm on 35mm format where the standard is just 50mm. (see *Focal length, Standard lens & Tele*)

## **Lossy**

Many file formats use compression to reduce the file size of bitmap images (digital photo). Lossless techniques compress the file without removing image detail or colour information; lossy techniques remove detail. JPEG is the most common file format in digital photography but this is a "Lossy" file format. TIFF with LZW(Lemple-Zif-Welch) compression is the most popular lossless file format. (see *JPEG & TIFF*)

## **Low key**

Term describing a photograph in which the tones are mostly dark and there are few highlights. (see *High key*)

## **Low Resolution (Low Res)**

An image file that is one megabyte or less in size when opened in an image editing application. Useful for presentation purposes but insufficient for high quality printed reproduction except at small sizes. (see *Megabyte*)

## **M**

### **Macro lens**

A lens that provides continuous focusing from infinity to extreme life-size 1:1 close-ups. Also used as a copy lens because of its highly corrected design and close-focusing. Macro lenses can also be used at ordinary subject distances. (see *Copy, Close-up lens & Extension tubes*)

### **Macrophotography**

Close-up photography in the range of magnification between life-size 1:1 and about ten times 10:1.

### **Manipulate**

To change a photograph either by a computer program, optical processes or by skilled hand.

### **Matrix Metering**

Multi-segment metering (originally devised by Nikon for its FA SLR of 1983 under the name AMP: Automatic Multi-Pattern metering). Matrix was introduced to the world in 1988 with the Nikon F4. Now available from most manufactures under varying names.

Light coming from the subject passes through the lens into the viewfinder where it strikes a 10 segment light meter (in the current Nikon F6), this gives the camera a better chance of obtaining the correct exposure for the main component of a particular image.

### **Medium format**

A larger format than the popular 35mm size, which can provide the image quality necessary for commercial reproduction, using 120, 220 or 70mm film. Various sizes can be shot, the most popular are 6cmx6cm, 6cmx4.5cm and 6cmx7cm. (see *35mm*)

### **Megabyte (MB)**

A measure of file size and storage capacity referring to between 1,000,000 and 1,048,576, 8-bit data units or characters. (see *Gigabyte*)

### **Megapixel**

The manufacturers way of describing the resolution of a Digital camera; a 6 megapixel camera has a resolution of 6 million pixels. (see *Pixel*)

### **Memory Stick**

A Sony memory card. Like Compact Flash and Smart Media it is a flash memory based storage system for use in digital cameras. For a description of *Memory Stick Pro* go to [MemoryCards.co.uk](http://MemoryCards.co.uk) (see *Compact Flash* and *Smart Media*)

### **Metadata**

Data embedded and stored within a digital image file. It provides information concerning copyright, credit, restrictions, captions, keywords, or other characteristics. There are several forms of image metadata including EXIF which is used by digital camera makers and provides large amounts of photo information including the make & model, date & time, aperture and shutter-speed. (see *EXIF data*)

## **Meter**

An instrument with a light-sensitive cell that measures the light reflected from or falling onto a subject. Some types can also measure Flash light. (see: *Exposure meter & Incident light*)

## **Micro Drives**

Very small Hard Drives (HD) designed for Digital cameras. Compact 'flash memory' cards are now available in similar sizes. (see *Compact Flash*)

## **Micro lens**

The Micro-Nikkor is the Nikon Corporation's name for their close-up 'Macro' lens. (see *Macro lens*)

## **Microphotography**

(see *Photomicrography*)

## **Mirror (Mirror lens)**

A long lens that uses mirrors within its construction. This allows an extremely long focal length lens to fit within a relatively short barrel. Also known as reflex or catadioptric (cat). (see *Long lens*)

## **Multicoating**

Modern lenses are made up of many individual glass elements, these elements improve the overall image quality compared with a simple 'single' or 'double' element lens, however, extra elements can reduce the performance by absorbing incoming light. A transparent lens 'Coating' (single or multi) aids the passage of light, reduces 'flare' and also improves contrast. (see *Flare*)

## **Multi-bracketing**

(see *Bracketing*)

## **N**

### **Neg. (Negative)**

Developed film that contains a reversed image of the original scene (in a colour negative the colours are also reversed, and appear as their complementaries.). Light shone through the transparent negative will make a positive (normal) print on photographic paper.

### **Neutral density filter**

A neutral grey camera filter which is used to reduce the amount of light entering the camera when a slow shutter speed or wide aperture is needed. (see *Aperture & Shutter speed*)

### **Noise Reduction**

A major picture quality difference between a digital compact and a DSLR is that the compact produces photos with more noise, similar to the 'grain' of a high ISO traditional film. When a high ISO is set the camera has to amplify the signal received from the sensor and this increases background electrical noise. The larger image sensor of the DSLR has bigger photosites therefore more light gathering capacity and a larger signal to noise ratio.

To overcome this problem manufacturers have incorporated noise reduction systems into their cameras. These do reduce noise but also introduce a smoothing effect. Creating a 'smearing' mostly revealed in grass, brickwork and any subject with a fine, repetitive pattern. (see *ISO & DSLR*)

## **O**

### **Over exposed**

A situation in which too much light reaches the film, which produces a dense negative or a very light transparency.

## **P**

### **Panning**

Technique for photographing a moving subject. While the shutter is open, the camera is swung following the moving subject. This creates a blurred background, but a sharp subject. The technique works best with slower shutter speeds. (see *Shutter speed*)

**Panoramic camera**

Camera with a special type of scanning lens which rotates. Or a static lens camera with a wide format e.g. 6cm x 17cm.

**Parallax error**

The difference between the image seen by the viewing system and that recorded on the film. Problems occur as the subject moves closer to the taking lens when using TLR cameras. Only through-the-lens viewing systems can avoid parallax error. (see *TLR*)

**Pentaprism**

Optical device, found on SLR cameras, which corrects the image (reversed by the lens), allowing eye-level viewing and focusing via the viewfinder.(see *Finder, Focusing screen, & SLR*)

**Perspective control lens**

(see *Shift*)

**Photoflood**

Bright tungsten filament bulb used as an artificial light source. The bulb is over-run and so has a short life. (see *Tungsten light*)

**Photoshop**

Best known and well used Image manipulation computer program (by Adobe Systems); which has gradually entered the photographers vocabulary with words like: 'Photoshoped' meaning retouched or manipulated.(see *Retouching*)

**Pincushion effect**

Lens aberration (distortion) causing parallel, straight lines at the edge of the image to curve inwards. (see *Aberration, Distortion & Barrel distortion*)

**Pinhole Camera**

A camera without a lens, just a light tight box with a small hole at one end. (see *Camera obscura*)

**Pixel**

A single picture element of a digital photo. Digital Bitmap images (raster images) use a grid of colours known as pixels to represent images. Each pixel is assigned a specific location and colour value. The whole image would contain millions of individual pixels. (see *Image resolution & File size*)

**Plug-in**

A software module that can be used by Photoshop (and other image editing applications) to provide additional functions including: import of RAW camera files, file format conversions and creative image filters. (see *Photoshop & RAW*)

**Post Production**

Everything after the photo shoot. Post production includes editing, colour correction, cropping, etc. (see *Colour correction and Cropping*)

**Prism**

Glass block which bends light to varying degrees, depending on wavelength, so separating it into its component colours. Also sometimes the given name to pentaprism finder. (see *Pentaprism & Finder*)

**Pushed (Pushing)**

Increasing the development time of a film to increase its effective speed, e.g. 200 ISO instead of its recommended 100 ISO. (See *Uprating & ISO*)

**R****Rangefinder**

A device included on many direct vision cameras as an aid in focusing. It assesses subject distance (usually by comparing two images), and displays this information in the viewfinder. This device may be linked directly to the lens focus control, to give a coupled rangefinder. (see *Coupled rangefinder*)

## **RAW**

An unprocessed digital file direct from the camera. Not a 'standard' file format like TIFF or JPEG. Usually the camera manufactures software or 'plug-in' must be used to open a RAW image file. RAW files are usually used to obtain the best theoretical quality from a given camera. (see *JPEG, TIFF & Plug-in*)

## **Resin-coated paper (RC)**

Printing paper with a water-repellent base. RC papers can be processed faster; requires less washing, and dry far more quickly than fibre-based papers. (see *Fibre (FB) & Multigrade*)

## **Retouching**

After-treatment carried out on negatives, trannies, prints or Digital files to remove blemishes or change tonal values. Now, carried out by 'Photoshop' rather than by hand. (see *Photoshop*)

## **RGB**

The way that the colours are recorded in Digital imaging. A large percentage of the visible spectrum can be represented by mixing Red, Green and Blue coloured light in various proportions and intensities. (see *CMYK*)

## **Ring Flash**

Type of flash unit which fits around the lens to produce flat and shadow less lighting.

## **S**

### **Secure Digital**

Secure Digital (SD). A small memory card which uses flash memory as a base for storing digital photos.

### **Screw mount lens**

Lenses with screw mounts are probably still available but these are generally only needed for older cameras, the last popular 35mm SLRs fitted with a screw mount were the Pentax of the late sixties and the Praktica of the early seventies. (see *Bayonet & SLR*) see *Compact Flash*

### **Sharpening**

A post production process that increases contrast and adds apparent clarity or sharpness to a digital image. The most common method is called unsharp masking (USM). (see *Post Production & Contrast*)

### **Shutter**

Blades or a curtain that controls the time during which light reaches the film. (see *Focal plane shutter & Between-the-lens Shutter*)

### **Shutter speed**

The time in which the shutter stays open to light, measured in fractions of seconds, (1/8000th a second is a very fast shutter speed and 1/2 second is very slow).

### **Slow lens**

A lens with a small maximum aperture. (i.e. f8). (see *Aperture & Fast lens*)

### **SLR**

(Single Lens Reflex) A Camera in which you view the scene through the same lens that takes the picture thanks to a system of mirrors and prisms. (see *Prism & TLR*)

### **Smart Media**

A wafer-thin sized memory card which uses flash memory as a base for storing digital photos. (see *Compact Flash*)

### **Snoot**

Cone-shaped shield used on lights to direct a small patch of light over the subject.

### **Soft box**

A 'framed' diffuser that fits over the Light and creates a more natural soft light. (see *Diffuser*)

### **Soft Lighting**

Lighting that is low in contrast, such as on an overcast day. (see *Contrast & Diffuser*)

### **Speed**

Sensitivity of a photographic emulsion to light. Films are given ISO numbers which denotes its speed. The term is also used to denote the maximum aperture of a lens. (see *Fast film, Fast lens, Film speed, Slow film, Slow lens & ISO*)

**Spot meter**

Narrow-angle exposure meter used to take accurate reflected light readings from a small area of a subject; can also be used from some distance away. (see *Exposure meter*)

**Standard lens**

A lens that makes the image in a photo appear in perspective similar to the original scene. It has a focal length approximately equal to the diagonal of the film format with which it is used (e.g. 50mm with 35mm cameras). Also known as a normal lens. (see *Format, Tele, Wide & Zoom*)

**Stop down**

Changing the lens aperture to a smaller opening; for example, from f4 to f5.6. This increases depth of field. (see *Aperture, Depth of field & f-stop*)

**Stop**

(see *Aperture & f-stop*)

**Strobe**

Generic term for electronic flash.

**Stroboscopic Flash**

Stroboscopic or Repeating Flash is a 'mode' available on some flashguns where under certain lighting conditions it can produce multiple exposures in a single frame. A good use of this feature would be 'the swing of a golfer' or the movement of a bouncing ping pong ball .

**Synchronized flash**

(see *Flash sync.*)

**T****T Setting**

A 'Time' setting mark found on some shutter controls. This setting is used for shutter speeds that are longer than the specified timed settings. The first press on the shutter leaves the shutter open, and it stays open until the shutter is pressed for a second time. (see *Shutter*)

**Tele (telephoto)**

A telephoto lens has a longer focal length and narrower field of view than a normal lens and enlarges distant subjects. Depth of field decreases as focal length increases. (Telephoto lens construction: this allows a long focal length with short back focus, making for relative compactness). (see *Depth of field, Long lens , Standard lens & Wide*)

**35mm**

The most popular film size; 35mm wide with punched sprocket holes and made for both still and motion picture cameras. In 1913, Oscar Barnack, of 'Leitz ' first used it in a still camera when he created the 'Leica' prototype using movie film stock. The format is 24 x 36mm, unchanged from Barnack's prototype. In relation to other formats, 35mm gives the best compromise between image quality and versatility. (see *Format*)

**TIFF**

TIFF (Tagged Image File Format) is a common file format used in Digital Photography. This high quality file (which is lossless compared with a JPEG) can also contain colour management profiles and be colour separated. (see *JPEG & Lossy*)

**Tilt**

A Large Format camera movement. Tilt the lens or film standard to increase or decrease the depth of field. (see *Depth of field, Movements & Standard*)

**Tone**

Cold tones (bluish) and warm tones (reddish) refer to the colour of the image in both black-and-white and colour photographs. (see *Colour Cast*)

**TTL**

Through The Lens: A metering system in which a light meter within the camera body measures exposure from the image-forming light that has passed through the lens. (see *Meter*)

**Tubes**

(see *Extension tubes*)

## **Tungsten film**

Colour film balanced for non-daylight sources (usually studio-type tungsten lamps) of 3200 or 3400K. (see *Colour balance*)

## **Tungsten light**

Artificial light from either tungsten filament or tungsten halogen lamps. (see *Blonde, Redhead & Tungsten film*)

## **U**

### **Ultraviolet(UV)**

A Band of wavelengths within the electromagnetic spectrum invisible to the human eye which are shorter than the blue end of the spectrum. All films are sensitive to some ultraviolet radiation. It shows as increased haze, particularly in distant views and at high altitudes, and may give a blue cast to a photograph.

### **Under exposed**

A condition in which too little light reaches the film, producing a thin negative, a dark trannie, or a muddy-looking print. (see *Contrast, Neg, Over exposed, Thin & Paper grade*)

### **Under printed & Under development**

A reduction in development which is usually caused by a shortened development time or a decrease in the temperature. It results in a loss of density and a reduction in contrast. (see *Contrast & Dev.*)

### **Uprating (up rated)**

A technique in which the suggested film speed is deliberately exceeded, by setting a higher speed on the camera, so causing underexposure, and then balanced by overdevelopment. Also known as "pushing". The opposite, shooting at an ISO rating below that suggested, and underdeveloping, is known as "pulling". (see *Pulled , Pushed & ISO*)

### **USM**

USM (Ultra Sonic Motor) is a Canon devised Autofocus SLR lens motor system. USM lenses are usually quicker to focus, more compact, with greater operational simplicity and virtually silent compared to their earlier 'Arc Form Drive'(AFD) cousins. USM lenses only work with the Canon 'EOS' camera system, introduced in 1987. (see *SLR & EOS*)

### **UV filter**

Filter which may be used to absorb UV radiation, to reduce its effect. (see *Ultraviolet*)

## **V**

### **Viewfinder**

(See *Finder*)

### **Vignetting**

Fall-off in illumination at the edges of an image. This can be caused by poor lens design, using a hood not matched to the lens, or using too many filters at the same time.

## **W**

### **Wide**

A Short focal length lens which takes in a greater angle of view than a standard lens. Depth of field increases as focal length decreases.  
(see *Focal length, Tele & Standard lens*)

### **Wide-angle lens**

(see *Wide*)

### **White Balance**

Depending on the lighting conditions, a pure white in a photograph may appear slightly yellow or blue. The white balance control settings on a "Digital Camera" will help to eliminate unwanted colour bias by actually controlling the camera's colour temperature response. C.C. filters or a specially balanced film must be used when a film camera is utilized under the same lighting conditions! (see *Colour Balance*)

## X

### **XD Picture Card**

A very small memory card which uses flash memory as a base for storing digital photos.  
(see *Compact Flash*)

## Z

### **Zoom**

A Lens which is constructed to allow a continuously variable focal length; in effect, this gives you many lenses of different focal lengths in one unit. (e.g. 80-200 mm). (see *Focal length, Standard lens, Tele & Wide*)