Photography A to Z Glossary

Not sure how to tell your CCD from your CMOS, or your Aspherical Element from your Diffractive Optics? We've come-up with the definitive glossary of all things photographic.

A

AA - In the digicam world this refers to the most common power source, the AA-size battery. See also "NiCd" and "NiMH"

Aberration - Flaw in an image caused by imperfections or limitations of the camera, such as colour distortion or blurring.

Absolute Resolution - The resolution of the image given in pixels horizontally and vertically. For example; SVGA resolution is 800x600 pixels.

AC Power - Electricity supplied form a mains (domestic) socket, rather than from a battery, USB connection or from a vehicle. Running cameras and other accessories on AC power typically requires the purchase of an optional AC power adapter.

A-C Converter - A component of digital cameras: The analogue to digital converter which converts the signal from the image sensor to a digital format.

Add-On Lens - Some lenses have filter threads on the front edge that allow you to mount an auxilliary wideangle or telephoto lens in addition to the standard lens.

Adobe RGB - A colour space widely used in publishing.

AE - Auto Exposure, a system for automatically setting the proper exposure according to the existing light conditions. There are three types of AE systems:
• Programmed - the camera picks the best shutter speed and aperture automatically
• Aperture Priority - the user chooses an aperture value and the shutter speed is automatically determined by lighting conditions
• Shutter Priority - the user chooses a shutter speed and the aperture is automatically determined by lighting conditions

AE Lock - The ability to hold the current exposure settings and allow you to point the camera elsewhere before capturing the image. This is usually accomplished by half-pressing the shutter button and keeping it at that position until you're ready to capture the image.

AF - Auto Focus. A system that automatically focuses the camera lens.

AGC - Automatic Gain Control - a circuit which automatically adjusts gain in order to provide optimum signal and to protect the equipment from levels which might overload or damage it.

Aliasing - Refers to the 'jagged' appearance of diagonal lines when displayed on low resolution displays. Anti-aliasing software and graphics processors help to smooth out these lines and create a better image.

Ambient Light - The natural light on a scene.

Angle of View - The amount of a scene which a lens & camera can capture. This is dependant on the focal length of the lens: A low focal length (wide angle) lens will capture a wider angle of view. It is often given either in degrees, or the number of metres that the angle of view encompasses at 1km (1000m).

Anti-Shake - See "Image Stabilisation"

Aperture - The lens opening formed by the iris diaphragm inside the lens. A lower aperture number equates to a larger opening which allows faster shutter speeds to be used and gives a shallower depth of field. Aperture is measured in F-stops.

Aperture Priority AE - A metering mode used on many cameras where the exposure is calculated based on the aperture value chosen by the photographer. This allows for Depth of Field (Range of focus) control - a large aperture results in a shallow Depth of Field, whereas a small aperture gives a deep Depth of Field.

APO - Apochromatic lens - designed to reduce flare and give a high degree of colour accuracy.

APS-C - A type of digital camera sensor with an integral x1.5 magnification factor.

Archival Quality - Media (paper, ink, or optical media) designed for a long life, which will resist degrading. Cheap papers, ink and CDs can all loose quality over time as their materials degrade in contact with air and sunlight. Archival quality papers are ideal for important and sentimental pictures and data.

Artefact(ing) - Misinterpreted information from a JPEG or compressed image. Colour faults or line faults that visibly impact the image negatively.

ASA - American Standards Association - ASA is used as the standard measurement for light sensitivity. Higher rating films or digital camera settings are very 'fast' and useful for capturing fast-moving images, whereas lower numbers offer superior tone, sharpness and colour, but require a longer exposure time. ASA is used interchangeably with ISO.

Aspect Ratio - The proportions of a photograph's height to width. 35mm photographs are 2:3, HDTV is 9:16.

Aspherical Lens - A lens whose edges have been flattened so that it is not a perfect sphere. Lenses of this type produce a superior image.

Audio Annotation - A feature of some cameras which allows the photographer to record (via a built-in microphone) a verbal 'note' with a photograph which is then embedded in the image file. This is useful for retaining data such as where the image was taken or details of camera settings.

Automatic Exposure - The camera automatically adjusts the aperture or shutter speed or both for the proper exposure.

Autofocus - The camera lens focuses automatically, usually when the shutter release is half-pressed.

Auto Iris - A function on video cameras which automatically adjusts the camera idis to compensate for changes in lighting conditions.

AVI - Movie clip in Windows' AVI format. See "Movie clip"

AWB - Automatic White Balance - A system for automatically setting the white balance in today's digital cameras. See also "White Balance"

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B

B&W - Black and White.

Back Lit - The subject is heavily lit from behind which generally causes it to be underexposed unless you use critical spot metering.

Barrel Distortion - Image distortion causing the sides of the image to curve outwards making parallel lines appear bent. Common in cheaper camera lenses and particularly prevalent when using wide angle settings on compact digital cameras.

Barn Doors - Metal flaps attached to the front of studio lights in order to shape and control the light they produce.

Bit - The smallest unit of memory; a contraction from 'binary' and 'digit'. Binary digits are 0 and 1, also known as 'ons and offs'.

Bit Depth - This refers to the color or gray scale of an individual pixel. A pixel with 8 bits per colour gives a 24 bit image. (8 Bits X 3 colours is 24 bits.) 24 bit colour resolution is 16.7 million colours.

Bitmap - The method of storing information that maps an image pixel, bit by bit. There are many bitmapped file formats, .bmp, .pcx, .pict, tiff, .tif, .gif, and so on. Most image files are bit mapped. This type of file gives you the 'jaggies', when examined closely you can see the line of pixels that create the edges.

Blocked Shadows - Lack of detail in shadows, often caused by under-exposure.

Blooming - A flaw in an image where a bright object is surrounded by a halo of light.

Blow-Out - Loss of image detail due to overexposure.

BMP - Bit Mapped graphic file format popular with Windows computers. This is an uncompressed file format like TIFF.

Bracketing - see Exposure Bracketing.

Buffer - see DRAM Buffer.

Burning (to CD/DVD) - Recording data on to a DVD or other optical media.

Burning (image manipulation) - Darkening part of an image.

Burst Mode - The ability to rapidly capture images as long as the shutter button is held down.

Burst Rate - The number of consecutive images a camera can take in burst mode.

Bus - A connection between two computer or other electrical components.

Byte - A chunk of data consisting of 8 bits. A byte is typically used for holding a single component piece of data, such as a single character or number. A single True Colour pixel requires three bytes of memory.

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C

Cable Release - A shutter release control attached via cable. Allows a limited remote operation and - in conjuction with a stable mount or tripod - reduces camera wobble.

Card Reader - A device that you insert flash memory cards into to transfer the data to the computer. Much faster than the serial port! See also "PCMCIA" and "PC Card"

Cast - A picture dominated by a single colour is considered to have a cast. For example, an picture which is strongly balanced towards blue has a blue cast.

CCD - Charged Coupled Device, a light sensitive chip used for image gathering. In their normal condition these are greyscale devices. To create color a color pattern is laid down on the sensor pixels, using a RGBG color mask (Red, Green, Blue, and Green). The extra Green is used to create contrast in the image. The CCD Pixels gather the color from the light and pass it to the shift register for storage. CCDs are analog sensors, the digitizing happens when the electrons are passed through the A to D converter. The A to D converter converts the analog signal to a digital file or signal. See also "CMOS" below.

CD - CompactDisc - read only storage media capable of holding 650MB of digital data.

CD-R - CompactDisc Recordable - a CD that you can write to once that can not be erased but can be read many times, holds 650MB of digital data.

CD-ROM - CompactDisc Read Only Memory. Read-only storage media capable of holding around 650MB or more of digital data.

CD-RW - CompactDisc ReWriteable - the newest kind of CD-R that can be erased and re-used many times.

Center-Weighted metering - A term used to describe an autoexposure system that uses the center portion of the image to adjust the overall exposure value. See also "Spot Metering" and "Matrix metering"

CF - see CompactFlash

Chromatic Abberation - Also known as the "purple fringe effect." It is common in higher resolution digital cameras when a dark area is surrounded by a highlight. Along the edge between dark and light you will see a line or two of purple or violet coloured pixels that shouldn't be there.

CIFF - Camera Image File Format, an agreed method of digicam image storage used by many camera makers.

CMOS - Complementary Metal Oxide Semiconductor - Another imaging system used by digicams.

CMYK - Cyan, Magenta, Yellow, Black; These are the printer colours used to create colour prints. Most colour Printers; Ink-Jet, Laser, Dye-Sublimation, Thermal, and Crayon printers use these as their printer colors. (This is one of the colour management problems for computers as converting RGB files to CMYK causes colour shifts.) When used by a printer the CMYK is also known as a reflective colour since it is printed on paper or reflective films.

Coating - A treatment on a lens which is used to improve image quality and decrease light lost due to reflection.

Cold Shoe - Unpowered accessory mount. Also see Hot Shoe.

Colour Balance - The accuracy with which the colours captured in the image match the original scene.

Colour Depth - Digital images can approximate colour realism, but how they do so is referred to as colour depth, pixel-depth, or bit depth. Modern computer displays use 24-bit True Colour. It's called this because it displays 16 million colours; about the same number as the human eye can discern.

Colour Palette - The set of colours available for use by an application or hardware. Many computers use 'True Colour' which has a palette of 16 million colours. However some applications may use considerably less than this.

Colour Space - A range of colours which can be displayed on a monitor or printed. Baseline RGB is the most common standard, but Adobe RGB is common in publishing and offers a wider range of colours.

Colour Temperature - A scale for measuring the shade of light in degrees Kelvin. Daylight is 5000°K.

Collimation - Mechanical alignment of optics in binoculars.

CompactFlash Card - The most common type of digicam flash memory storage. It is removable, small and available in a variety of capacities. CF Type I is the original 5mm thick card. CF Type II cards and devices are 9mm deep.

COM port - A computer has serial communication ports which support the RS-232 standard of communication.

Compression - A digital photograph creates an image file that is huge, a low-resolution 640x480 image has 307,200 pixels. If each pixel uses 24 bits (3 bytes) for true colour, a single image takes up about a megabyte of storage space. To make image files smaller almost every digital camera uses some form of compression. See "JPG".

Continuous Autofocus - The autofocus system is full-time and works even before the shutter release is pressed.

Continuous Lighting - Also known as HMI, continuous lighting is daylight-balanced flicker-free lighting.

Contrast - The difference between the lightest and darkest shades of a picture. The greater the difference, the higher the contrast.

CPU - Central Processing Unit - The 'Core' part of a computer which performs most basic functions.

CRW - The RAW CCD file format used by Canon digicams.

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DC - Direct Current. This can refer either to battery power or power supplied by a 12v car cigarette lighter socket.

Default - The standard setting.

Depth of Field - Depth of field (DOF) Range of focus. Controlled by the aperture value of the lens. Large aperture yields shallow DOF. Small aperture yields deep DOF.

Diaphragm - Adjustable blades in the lens. These determine the aperture size.

Diffuser - Material placed over a light source to soften and diffuse the light.

Digital Film - Term used to describe solid state flash memory cards.

Digital Zoom - A digital magnification of an image. Digital zooms by nature generate less than sharp images because the new "zoomed" image has been interpolated.

Download - Transfer image data from the camera to the computer using a cable attached to either the serial port (slow) or USB port (faster.)

DPI - Dots Per Inch. A measurement value used to describe either the resolution of a display screen or the output resolution of a printer. A higher number means better image quality.

DPOF - Digital Print Order Format. Allows you to embed printing information on your memory card. Select the pictures to be printed and how many prints to make. Some photo printers with card slots will use this info at print time. Mostly used by commercial photo finishers.

DRAM - Dynamic Random Access Memory. A type of memory that is volatile - it is lost when the power is turned off.

DRAM Buffer - All digicams have a certain amount of fixed memory in them to facilitate image processing before the finished picture is stored to the flash memory card. Cameras that have a burst mode have much larger DRAM buffers, often as large as 32MB. This also makes them more expensive.

Driver - Software used in an electronic device (printer, graphics card, camera) which allows other software to interact with the device.

DSLR - Digital Single Lens Reflex camera where the viewfinder image is from through the camera lens.

DVD - Digital Versatile Disk. Optical media which can be used for storing a wide variety of data and can hold up to 4.7GB.

Dye Sub - Dye Sublimation is a printing process where the ink is thermally transferred to printing media. This print method is sually expensive but it yields prints that rival real, wet-processed photographs.

Dynamic Range - A measurement of the accuracy of an image in colour or grey level. More bits of dynamic range results in finer gradations being preserved.

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Effective Pixels - The number of pixels on an image sensor which are actually used to compose an image, as opposed to the total number of pixels on the sensor. Typically the number of effective pixels is less than the total number of pixels as some are used for colour referencing.

EPP - Enhanced Parallel Port - a bi-directional printer port on some computers. Some digicams and scanners use the EPP port to transfer data.

E-TTL - Canon's Evaluative-TTL exposure system that uses a brief pre-flash before the main flash to calculate the exposure index.

EV - Exposure Value, a very complex thing but in the digicam world it usually means the ability to override the autoexposure system to lighten or darken an image.

EVF - Electronic viewfinder.

EXIF - Refers to the embedded camera and exposure information that a digital camera puts in the header of the JPG files it creates. Many programs (Photoshop, Thumber, Qimage Pro, CameraAid) can read and display this information.

Exit pupil - Measured in mm, this is the diameter of the light beam leaving a viewfinder. A larger exit pupil gives a brighter image, which is especially important at dusk or in low light. The Exit Pupil is equal to the size of the objective lens divided by the magnification.

Export - Transferring a file to another file type or otherwise compressing it.

Exposure - The amount of light that reaches the image sensor and is controlled by a combination of the lens aperture and shutter speed.

Exposure Bracketing - A feature where the camera automatically takes a series of 3 or 5 pictures and slightly varies the exposure for each frame. This ensures that at least one of the pictures will be as close to perfectly exposed as possible.

Exposure Compensation - Lighten or darken the image by overriding the exposure system. Also known as EV Compensation.

Extender - Fits behind the lens and extends the focal length.

Extension Tube - Fits between the camera and the lens and enables close-up photography.

External Flash - An accessory flashlight, either attached to the camera or separated and triggered remotely.

Eye Relief - An eyepiece attachment allowing your eye to be a distance from the eyepiece but enabling you to view the full image. Useful for people who wear glasses.

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F-Stop - A numerical designation that indicates the size of the aperture. It is inversely proportional; a smaller number like F2.8 is a large opening whereas a larger number like F16 is a relatively small opening.

FDD - Floppy disk drive, the most common being a 1.44MB 3-1/2" drive like those used in computers.

Fill Flash - Use of a flash to illuminate and brighten dark areas of a shot, even when there is sufficient lighting, for example using a flashgun on a sunny day.

Filter (Optical) - A piece of glass or plastic placed in the optical path in order to block or refract some portions of light passing through, while not affecting others. Filters may be used to adjust colour balance, create effects, block undesirable light elements, and adjust contrast or sharpness.

Filter (Software) - A software tool which is used to modify a picture. Named after optical filters, as many software filters replicate optical filter results.

Filter Factor - The amount of exposure increase required to compensate for using a filter.

Firewire - Also known as "iLink" and officially designated as the IEEE1394 protocol. A high-speed data interface now being used on digital camcorders and some digital still cameras.

Firmware - Usually refers to the ROM-based software that controls a unit. Firmware is found in all computer based products from Cameras to Digital Peripherals.

Firmware Update - A software update downloaded to a digital device. Often these fix software or security issues, or offer improved functionality.

Fisheye Lens - A lens with a field of view greater than 180°.

Fixed Aperture - Normally when a zoom lens goes from wide angle to telephoto the aperture changes. If the camera has an option to fix the aperture value then it remains constant regardless of focal length.

Fixed Focus - A lens that is preset to a given focus distance, it has no autofocus mechanism, set to give the camera the maximum depth of field.

Flare - Unwanted light entering the lens.

Flash Memory - This is the "film" for digital cameras, it can be erased and reused many times. It is non-volatile memory; data is preserved even when it is not under power. They are several major types used in digital cameras.

Flash Memory Reader - See Card Readers

Flashpath - A device that allows a SmartMedia card to be inserted into a regular floppy disk drive and its data transferred to the computer. There is a Flashpath device for Memory Stick cards too.

Flash Sync - 1) The fastest speed which a camera will successfully synchronise with an external flash 2) A connection point for the attachment of an external flash (Hot Shoe for example).

Floppy Disk Adapter - A device that resembles a 3-1/2" floppy disk and allows a SmartMedia card or Sony Memory Stick modules to be read in a standard 1.44MB floppy disk drive.

Focal Length - A lens' angle of view, most commonly indicated as wide-angle, normal or telephoto. Usually compared to 35mm camera lenses as in "the camera has a wide-angle lens equivalent to a 38mm lens on a 35mm camera." See also "Zoom Lens".

Focus Assist - Some cameras employ a visible or invisible (infrared) lamp to illuminate the subject so the autofocus can work in low light or total darkness.

Focus Lock - Pre-focusing the camera and then moving it to re-compose the image before capturing it. Accomplished by half-pressing the shutter button and keeping it held at that position while moving the camera to another point before pressing it all the way to capture the image.

Focusing Screen - A screen to focus on when looking through the viewfinder.

Fringe - Unwanted pixels around a selected object.

Fringing - An abberation on digital images where colour appears to bleed over from one region to another, typically in high-contrast areas.

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Gain - Relationship between input and output signal on a visual or audio device. High gain amplifies the brightness or sound level, while a negative gain quietens the sound or darkens and softens the image.

Gamma Correction - In reference to displaying an image accurately on a computer screen, Gamma correction controls the overall brightness of an image. Images which are not properly corrected can look either bleached out or too dark.

Gamut - The complete range of colours that can be reproduced on a scanner, printer or monitor.

GB - Gigabyte - Either one billion bytes (1000 MB) or 1024 MB.

Gel - Coloured medium placed in front of a light source to adjust the colour of light.

GIF - A graphic file format used mainly for Web graphic or small animated files. Not good for photos as they only contain up to 256 colours.

Gobo - A device mounted in front of a spotlight to shape the light and/or create patterns.

Grey Scale - A series of 256 tones ranging from pure white to black.

GUI - Graphical User Interface - A program such as Windows which uses an intuitive visual interface, rather than less 'friendly' written commands.

Guide Number - The output power rating of a electronic flash unit.

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H

HAD CCD - Hole Accumulation Diode - A Sony CCD imager.

Hardware Calibration - Calibration of devices such as monitors and printers using other hardware. This is typically done in photography and image editing to ensure that colours are correctly reproduced.

HD - Hard drive (also known as HDD), the internal, large-capacity data storage unit used in today's PC computers.

HDD - Hard Disk Drive - See "HD".

Highlights - The brightest parts of a picture.

Histogram - A representation of all colours used in a picture. Useful for checking correct exposure.

HMI - Continous lighting.

Honeycomb - a light modifier which is attached in front of a light source to create directional light.

Hot Shoe - A flash connector generally found on the top of the camera that lets you attach a flash unit and trigger it in sync with the shutter. The hot shoe features electrical connectivity to power the flash.

Hot Swap - The capacity to add or remove devices without powering down or restarting a computer. USB and Firewire devices are both 'Hot Swap' (or 'Hot Swappable'), as they may freely be connected and disconnected.

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ICC Profile - A colour management standard which specifies colour attributes in order to ensure that colours are correctly reproduced. Thus, if all of your devices are properly calibrated, the image seen on your camera will look the same on your monitor and in print.

IEEE-1284 - This is a new high-speed bidirectional parallel port specification, used by printers and devices like card readers.

IEEE-1394 - Better known as FireWire, it is an input/output bus used by some digital video devices and PCs. It is typically used on Macs and is a rival to USB. Firewire offers faster data transfer than USB 1 and is in practice normally faster than USB 2.0.

iLink - Sony's term for the IEEE-1394 FireWire data port found on their camcorders.

Image Manipulation - Editing an image to improve the overall result. Today this normally means by using software on a computer, such as Adobe PhotoShop.

Image Resolution - The number of pixels making up a picture. A higher resolution picture is more accurate and looks more acceptable when scaled up.

Image Sensor - The electronic sensor in a digital camera which gathers image data. See "CCD" and "CMOS" as well as "Interlaced" and "Progressive Scan".

Image Stabilisation - An optical or digital system for removing or reducing camera movement. As well as being found on many digital cameras, it is also sometimes found only on extremely long focal length lenses.

Incidental Light Reading - An assessment of required exposure based on measuring the amount of light falling onto a subject.

Inkjet - A type of printer that sprays dots of ink on to paper to create the image. Modern inkjet printers now have very high resolutions and create true photo-quality prints.

Interlaced - Term used to describe an image sensor that gathers its data by first processing the odd lines and then the even lines. See also "Progressive Scan" for the other (preferred) method.

Internal Storage - The built-in memory of a camera, phone, MP3 player, or other digital device.

Interpolation - Software programs can enlarge image resolution beyond the actual resolution by adding extra pixels using complex mathematic calculations. See "Resolution" below.

IR - InfraRed (aka IRda) method of transferring data from camera to a computer using a beam of invisible light which requires no cables - just like your TV remote control. IR is a wavelength of light beyond the normal visible spectrum.

ISO - The speed or specific light-sensitivity of a camera is rated by ISO numbers such as 100, 400, etc. The higher the number, the more sensitive it is to light. (Sometimes known as ASA).

IT - Interline Transfer - A type of CCD, common in still digital cameras and low-end broadcast video cameras.

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J

Jaggies - Slang term for the stair-stepped appearance of a curved or angled line in digital imaging. The smaller the pixels, and the greater their number the less apparent the "jaggies". Also known as pixelisation.

JFIF - A specific type of the JPG file format. Also known as EXIF

JPEG - Same as "JPG".

JPEG2000 - The JPEG compression standard used in digital cameras and software from 2001. It features higher compression but with less image quality loss.

JPG - The most common type of image file format used in digicams. It is a lossy type of storage because even in its highest quality mode there is compression used to minimize its size.

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K

KB - Can be used to mean either a keyboard for a computer or more commonly "KB" means a kilobyte of data.

Kilobyte - See "KB"

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L

LAB Colour - A Colour Space designed to mimic the performance of the human eye.

Lag - Lag Time - See "Shutter Lag"

Landscape Mode - Holding the camera in its normal horizontal orientation to capture the image. The resulting image is wider than it is tall. See Portrait Mode.

LCD - Liquid Crystal Display - Two types: (1) a high-resolution colour display device like a tiny TV set. (2) A monochrome information display using black alphanumeric characters on a gray/green background.

LED - Light Emitting Diode - All those wonderful little red, green and yellow lights used on cameras, power supplies and the like. They typically last tens of thousands of hours and do not 'burn out' like bulbs.

Linear CCD - A type of CCD which is long and thin and captures an image by scanning it many times, which creates a composite image. These CCDs are best suited for still-life photography under steady lighting.

Lithium - Lithium ion batteries are lighter and more costly than NiMH or NiCd type of rechargeable cells and can also be rapidly charged.

Lossless - Storing the image in a non-compressed format, see TIFF.

Lossy - A process resulting in data loss which therefore has a detrimental effect on the final image, audio or data recording.

Low-Pass Filter - Often integral to the design of a digital camera or lens, such filters help reduce aberrations due to ghosting or infrared light.

Luminosity Factor - A measure of a binocular's ability to function well in poor light. Less than 10 indicates that the binoculars will only really be suitable for daytime use. 10-16 is a better bet for use at dusk and dawn.

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M

Mac - Refers to the Macintosh brand of computers, produced by Apple.

Macro - The ability of a lens to focus very close (less than 8" of 20cm) for taking pictures of small objects at a 1:1 ratio.

Magnification - The number of times that an image is magnified. A x10 magnification results in an image ten times its normal size.

mAh - A rating used in the consumption of power of an electronic device such as an LCD or the storage capability of a device like an NiMH or Nicad rechargeable battery (i.e. 1200mAh cell). It stands for milli Amp per hour.

Matrix metering - In many digicams there is a matrix metering option which uses 256 areas of the frame to calculate the best overall exposure value. see also: "Spot metering" and "Centre-weighted"

MB - MegaByte - memory term meaning 1024 KiloBytes (although sometimes described as 1000KB). Used to denote the size of a flash memory card such as 4MB, 8MB etc. (MB [megabyte] is often confused with Mb [megabit], there are 8 bits in a byte so 256Mb = 32MB.)

Media - A material that data can be written and stored on. This includes paper, memory sticks, CDs and DVDs.

Megapixel - CCD resolution of one million pixels. A megapixel digicam has an image resolution of 1280x960 pixels or greater. A larger Megapixel number typically indicates a larger picture.

Memory Card - A small plastic card housing one or more computer chips, used to store information. Typically used to store images on digital cameras, there are several formats of memory card available, although a given camera only normally accepts a single type of card. Memory cards are non-volatile and do not 'forget' data if removed from a power source or device.

Memory Stick - A flash memory card standard from Sony. They resemble a stick of chewing gum and can be used to carry all kinds of data (including photographs and video) and come in a large variety of capacities.

Metering - Used to calculate the exposure from the existing light conditions. See: "Matrix Metering", "Spot metering" and "Centre-weighted"

Microdrive - IBM's miniature hard disk drive for digital cameras and PDA devices. Packaged in a CompactFlash Type II housing and in a range of capacities. No longer available as they have been superceeded by other forms of Flash-based memory.

mm - millimeter, used to denote the focal length of a lens (i.e. 50mm)

Moiré - An aberration which causes patterns on an image to be misinterpreter and misrepresented by a digital camera's image sensor. For example; lower quality and lower resolution sensors often misrepresent 'herringbone' weave on clothing.

Monocular - A small telescope or single-eye binocular.

MOV - Apple QuickTime MOVie file. See "Movie clip"

Movie clip - A sequence of motion captured in AVI, MOV or MPEG format. Some digital cameras can capture short movie sequences and some can also record sound.

MP - MegaPixel - i.e. 8MP or 8MPixel

MPEG - Motion JPEG movie file. See "Movie clip"

Multi Spot Focusing - The autofocus systems uses several different portions of the image to determine the proper focus.

Multi Zone Focusing - Some cameras now offer multi zone focusing. The camera will automatically determine which zone (centre, left, right, upper, lower) to use to perform autofocusing. You no longer have to make sure that your subject is dead-center to be properly focused.

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N

NEF - Raw image data file format used by the Nikon D1 pro digicam.

NiCd - Nickel Cadmium (aka Nicad), a type of rechargeable battery. Nicad was the original type of rechargeable battery and has been pretty much replaced by the NiMH type.

NiMH - Nickel-Metal Hydride, a type of rechargeable battery. NiMH is the more modern type of rechargeable battery and has been touted as having no memory effect as is common with Nicad type batteries when they are charged before they have been fully discharged.

Noise - Pixels in your digital image that were misinterpreted. Usually occurs when you shoot a long exposure (beyond 1/2-second) or when you use the higher ISO values from 400 or above.

NTSC - Term used to describe the video output standard used in the U.S. See also "PAL" and "Video Out"

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O

Optical Viewfinder - An eyelevel viewfinder that is used to compose the photograph.

Optical Zoom - Means that the camera has a real multi-focal length lens, this is not the same as a "Digital Zoom" which magnifies the centre portion of the picture.

Orientation Sensor - A special sensor in some cameras that "knows" when your turn the camera in portrait orientation to take a vertical shot and "tells" the camera to display it that way later when viewed on the TV screen during playback.

Overexposure - An image that appears too light. All the highlights and colours are totally lost and usually unrecoverable even by software.

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PAL - The video output standard used in Europe and many other places. See also "NTSC" and "Video Out"

Panorama - Capturing a series of images to create a picture wider than what you could capture in a single image. Requires special "stitching" software to combine and blend the images into one finished image.

Parallax - An effect seen in closeup photography where the viewfinder does not see the same as the lens due to the offset of the viewfinder and the lens. This is a non-issue if using the LCD as a viewfinder or if your camera is a SLR type.

PC - In camera terms it denotes a type of flash synch connector, popular on most film cameras.

PC Card - Refers to a credit card-sized device which can be a flash memory card, a network card, a modem or even a hard drive. Comes in two flavours: Type I/II which is a single slot height and Type III which requires a double-height card slot.

PCMCIA - The card slots on laptop computers to use PC Cards. Most commonly used for rapid transfer of data from a CompactFlash or SmartMedia type memory card to the host PC. See also "Type I, II, III"

PhotoCD - Kodak's professional service where they process your film and then scan the images using a very expensive drum scanner and output these images to a CD. You get several different sized resolution images of each of your film pictures, from small to very large. PhotoCD is multi-session which means more than one roll of pictures may be put on each PhotoCD disc.

Pixel - The individual imaging element of a CCD or the individual output point of a display device. This is what is meant by the figures 640x480, 800x600, 1024x768, 1280x960 and etc when dealing with the resolution of a particular digicam.

Pixelisation - The stair-stepped appearance of a curved or angled line in digital imaging. The smaller the pixels, and the greater their number, the less apparent the "pixelisation" of the image. Also known as the "jaggies".

PNG - An image file format. PNG stands for Portable Network Graphics. It is a compressed file format similar to JPG.

Point and Shoot - A term used for a simple, easy to use camera with a minimum of user controls. Generally the user turns the camera on, aims it at the subject and presses the shutter button. The camera does everything automatically.

Portrait Mode - Holding the camera in a vertical orientation to capture the image. See also Landscape Mode.

PPI - Pixels Per Inch - A measurement to describe the size of a printed image. The higher the number the more detailed the print will be.

Pre-Flash - Some digicams use a low-power flash before the main flash to set the exposure and white balance. This does not allow the use of a normal photo slave strobe as it will be triggered by the pre-flash.

Programmed AE- the camera picks the best shutter speed and aperture automatically, also called "Automatic" or "Point-and-Shoot" mode.

Progressive Scan - Term used to describe an image sensor that gathers its data and processes each scan line one after another in sequence. See also "Interlaced" for the other method.

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Q

QuickTime - A motion video standard created by Apple. They have an entire QuickTime web site to explain it. QuickTime video sequences can contain an audio track and are stored as .MOV files.

QVGA - Refers to a Quarter-VGA resolution (320 x 240) motion video sequences.

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R

Rangefinder - The viewfinder on most cameras is a separate viewing device that is independent of the lens. Often mounted above and to the right or left of the lens. It exhibits a problem known as parallax when trying to frame subjects closer than five feet from the camera so it is advisable to use the colour LCD when shooting closeups for this very reason.

Red-Eye - An effect caused by an electronic flash reflecting off of the human eye and making it look red. Compact cameras with the flash located close to the lens suffer the worst from this problem. Pro photographers use a bracket to hold an external flash unit above and off to the side of the lens to eliminate red-eye.

Red-Eye Reduction Mode - A special flash mode whereby a pre-flash or a series of low-powered flashes are emitted before the main flash goes off to expose the picture. This causes the pupil in the human eye to close and helps eliminate red-eye.

Resize - Usually means to take a large image and downsize it to a smaller one. Most graphic viewing and editing programs offer a Resize option for this purpose.

Resolution - The quality of any digital image, whether printed or displayed on a screen, depends in part on its resolution (the number of pixels used to create the image). More and smaller pixels adds detail and sharpens edges.
• Optical Resolution - an absolute number that the camera's image sensor can physically record
• Interpolated Resolution - adds pixels to the image using complex software algorhythms to determine what colour they should be. (It is important to note that interpolation doesn't add any new information to the image - it just makes it bigger!)
Camera makers often specify the resolution as: QVGA (320 x 240), VGA (640 x 480), SVGA (800 x 600), XGA (1024 x 768) or UXGA (1600 x 1200)

RF - Range Finder - a type of camera viewfinder that uses one lens to frame your subject and another lens to capture the image. See "SLR" for the other type.

RGB - Red, Green and Blue - the basic colours from which all other colours are derived.

RS-232 - Standard type of serial data interconnection available on most PC type computers. It is the slowest way to transfer image data from a camera.

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S

SCSI - A high-speed input/output bus used mainly in Macintosh computers but also popular in many high-end PCs.

Sepia - The (brown) mono-toned images from the "good ole days" now often found as a special image effect on some digicams.

Serial Port - Same as "RS-232" above.

Shutter - The physical device that opens and closes to let light from the scene strike the image sensor. Digicams use both electronic and mechanical shutters.

Shutter Lag - The time between pressing the shutter and actually capturing the image. This is due to the camera having to calculate the exposure, set the white balance and focus the lens.

Shutter Priority AE - the user chooses a shutter speed and the aperture is automatically determined by lighting conditions. Shutter speed priority is used to control motion capture. A fast shutter speed stops fast action, a slow shutter speed blurs a fast moving subject.

Slow Sync - A special mode in digicams that opens the shutter for a longer than normal period and fires the flash just before it closes. Used for illuminating a foreground subject yet allowing a darker background to also be rendered. Good for night time shots of buildings with people in the foreground.

SLR - Single Lens Reflex - Means the camera has one lens that is used for both composing the frame and capturing the image to memory. The other type is "RF" above.

SmartMedia - (aka SSFDC), flash memory card, 2 types 3.3v and 5v most cameras that use these types of cards MUST have either the 3.3v (most common) or the 5v type (usually only Fuji cameras).

Spot Metering - The camera's autoexposure system is focused on a very small area in the center of the viewfinder to critcially adjust the overall exposure value ONLY for that area. see also: "Center-weighted" and "Matrix metering"

SSFDC - Solid State Floppy Disc Card - See "SmartMedia" above

SVGA - Refers to an image resolution size of 1024 x 768 pixels.

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T

Telephoto - The focal length that gives you the narrowest angle of coverage, good for bringing distant objects closer.

TFT - Refers to the type of hi-res color LCD screen used in digicams. TFT = Thin Film Transistor.

TIFF - Tagged Image File Format - An uncompressed image file format that is lossless and produces no artifacts as is common with other image formats such as JPG.

Time-Lapse - Capturing a series of images at preset intervals.

TTL - Through the Lens, used when talking about either an autofocus or autoexposure system that works through the camera's lens. It's also (incorrectly) used to mean SLR, see "SLR" above.

Type I, II, III - Denotes various PC ATA storage devices both flash memory and removeable hard disk drives. Type I and II fit in the single-height card slots, Type III only fit in the double-height slots. See also "PCMCIA" and "PC Card"

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U

Underexposure - A picture that appears too dark because insufficient light was delivered to the imaging system. Opposite of overexposure.

USB - Universal Serial Bus - the latest hi-speed data port on digicams and newer Pentium and iMac computers. Many times faster than serial port or parallel port.

UXGA - Refers to an image resolution size of 1600 x 1200 pixels.

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V

VGA - Refers to an image resolution size of 640 x 480 pixels.

Video Out - Means the digicam has the ability to output its images on television screens and monitors using either NTSC or PAL format.

Viewfinder - The eyelevel device you look through to compose the image.

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W

White Balance - Refers to adjusting the relative brightness of the red, green and blue components so that the brightest object in the image appears white. See also "AWB"

Wideangle - The focal length that gives you the widest angle of coverage.

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X,Y,Z

XGA - Refers to an image resolution size of 1024 x 768 pixels.

Zoom Lens - A variable focal length lens. The most common on digicams has a 3:1 ratio. See "Focal Length"