

Video Jargon Explained

Aspect Ratio

Simply put, is the ratio between screen height and width ie 4:3 = 4 parts long & 3 parts high.

4:3 aspect ratio is standard normal PC monitors & Televisions.

16:9 aspect ratio is wide screen Television. Pixel

A colour controllable dot on a display screen.

Contrast Ratio

This is the difference in light intensity between the brightest white and the darkest black.

Resolution

Simply put, is the number of pixels that make up a screen or display and with a computer fed Image or when presenting Images from say a digital camera, usually means the higher the resolution the sharper the Image. Higher resolution ie more than 852 x 480 on a plasma screen is of less Importance when connecting a video source.

NTSC

United States broadcast standard for video and broadcasting.

PAL

PAL is a broadcast standard that is the predominant video system or standard mostly used In Europe & Internationally PAL, 25 frames are transmitted each second. Each frame is made up of 625 individual scan lines.

SECAM

Sequential Couleur avec Mmoire

The television broadcast standard in France, the Middle East, and most of Eastern Europe, SECAM broadcasts 819 lines of resolution per second. SECAM is one of three main television standards throughout the world.

Candela

The measurement used referring to brightness.

DVI

Digital Visual Interface.

BNC

A bayonet type connector commonly used on video equipment.

RS-232

A connection used for signalling devices.

PIP

Picture In Picture

Colours

Displayable colours ie 16.77 million.

AC-3

Is the former name for Dolby Digital.

CAM

Stands for Conditional Access Module. This is a device used in conjunction with a smart card to decrypt digital pay-TV services, such as BskyB. Some are built into the receivers whilst others take the form of plug-in cards. Most plug-in CAMs adhere to the Common Interface (CI) standard.

CD-R

Stands for CD-Recordable. Is a Write-Once, Read Many times (WORM) version of a CD, with a 650 MB data capacity. With a video capture card, MPEG1 Video CDs can be produced.

CD-RW

Stands for CD-Rewritable. Consists of a 650MB CD format disc similar to a CD-R, but can be erased and reused thousands of times.

Coaxial Cable

Is a low noise cable in which the conductor is surrounded by a grounded braid. These types of cables are used to carry RF signals from TV aerials. They are also used with the electrical digital audio signal from DVD players.

Component Video

Also known as the YUV. Comprises a luminance/sync channel (Y), plus two colour difference channels (U and V). In terms of performance potential, only RGB comes close to component video.

Composite Video

Used by analogue transmitters, this signal combines luminance (brightness), synchronisation and chrominance (colour) components. It is not ideal because careful filtering is needed to separate the Y/sync and C information (however, note that modern TVs use a comb filter, which does a good job here). Superior pictures can be obtained by using S-video, RGB or component connections.

dB

The dB rating of a speaker is simply a measure of its efficiency, the higher the dB the more sound you get for a given input.

D-VHS

Stands for Digital VHS. D-VHS recorders can record a bitstream from an IEEE1394 port. Current D-VHS VCRs record and playback analogue video, which is compressed using MPEG2.

DIGIBOX

Is the name given to the digital satellite receivers specific to the BskyBs service. They feature an internal CAM for the Mediaguard digital encryption system.

DLP

Stands for Digital Light Processing. Is Texas Instruments answer to the LCD, as used in many high-end video/data projectors. The DLP imaging device comprises thousands of microscopic mirrors, each representing a single pixel, which are angled towards (or away from) the light source to make the projected image darker or lighter. Three of these digital micromirror devices (DMDs) are used for colour. They are more efficient at transmitting light than LCDs, meaning they are brighter.

DNR

Stands for Digital Noise Reduction. Is a feature built into many TVs and VCRs, plus high-end DVD players, that seeks to reduce grain from tapes and terrestrial broadcasts received via imperfect aerials.

Dolby Surround

Is the early surround sound format derived from Dolby Stereo film sound and has now been eclipsed by Dolby Pro-Logic.

Dolby Pro-Logic

Is a four-channel surround sound system available from stereo TV broadcasts, VHS movies and most DVDs. It sends information to speakers at front left, front right, front centre and two rear speakers which share a mono signal.

Dolby Pro-Logic II

Is a digitally implemented matrix decoding system designed to make the most of existing Dolby Stereo-encoded material. It will also generate simulated 5.1 surround sound from normal stereo recordings, as can DTS Neo:6.

Dolby Digital

Also known as Dolby Digital 5.1. Dolby Digital is a six-channel surround system found on many DVDs which sends discrete audio information to speakers at front left, front right, front centre, rear left, rear right and a dedicated bass speaker, known as a subwoofer. It is this bass (or LFE) channel which provides Dolby Digital 5.1, the .1 part of its name.

DTS

Stands for Digital Theater Surround. Is one of the two mainstream 5.1 multichannel audio systems in present use. Compared with Dolby Digital, it has a relatively low data compression rate, which makes some people believe that it sounds better. The majority of DTS releases are still Region 1 (NTSC), although there are an increasing number on Region 2 (PAL), including Gladiator, Ali and Hannibal.

DTS ES Discrete 6.1, DTS ES Matrix 6.1

Is a new 6.1-channel surround sound format. The extra channel is intended to drive one or more back surround, or centre rear speakers located between the left and right rear ones. The sixth channel will be ignored by regular 5.1 DTS decoders, hence the need for DTS ES Matrix 6.1. This format like Dolby Digital EX, encodes the back-surround channel via an analogue matrix, and delivers it via the rear channels.

DTS NEO: 6

Is a matrix decoding algorithm that generates simulated 6.1-channel sound from any two-channel source. Compare with Dolby Pro-Logic II.

DV

Stands for Digital Video. Is a popular video format in worldwide use. It employs a compression similar to MPEG in basic principle. There are two tape sizes, the full sized 3 hour one, which is fairly rare, and the mini 1 hour version used in camcorders.

DVB

Stands for Digital Versatile Broadcasting. Is a set of standards which define MPEG2 terrestrial and satellite digital broadcasting. Both the UKs digital terrestrial signal and Sky digital are DVB-compliant.

DVD

Stands for Digital Versatile Disc. Is a high-density storage medium that can be used to store video (DVD-Video), audio (DVD-Audio) and computer data (DVD-ROM). Most DVD-Audio movies are single sided, dual-layer discs, with a capacity of 4.7GB.

DVD-R/ DVD+R

Are recordable DVD modes that make discs which cannot be re-recorded. DVD-R is found on Panasonics DVD-RAM and Pioneers DVD-RW machines. DVD+R is found on Philips DVD+RW models.

DVD-RAM, DVD-RW, DVD+RW

Are the re-recordable modes of the three domestic DVD recording formats:

DVD-RAM (Panasonic) discs are protected by a caddy and can't be read by existing DVD decks. DVD-RW (Pioneer) requires no caddy and has two modes: The Video Recording mode offers Mini-Disc style editing features, but is incompatible with existing DVD-Video decks. Video mode recordings will play back on existing decks but cannot be edited. DVD+RW (Philips) recordings can be edited and discs are compatible with a claimed 80% of existing decks.

Electrical Digital Audio

Whereby Undecoded Dolby Digital and DTS soundtracks are transmitted from DVD decks to amplifiers in either optical or electrical form. Coaxial cables are used for the electrical signals.

Firewire

See IEEE1394

HDCD

Stands for High-Density Compatible Digital. Is a relatively new concept as around only 4000 commercial HDCD titles are in circulation. The technology is set to be surpassed by new super-fi standards like SACD and DVD-Audio.

HDTV

Stands for High-Definition television, with at least double the number of lines of standard TV signals. Is available in the US and Japan, but not the UK.

i.LINK

See IEEE1394

LCD

Stands for Liquid Crystal Display. Is a flat, light weight display technology that consumes 40% less power than the cathode ray tube (CRT) found in most modern TVs. Is also used by many projection systems.

LCOS

Stands for Liquid Crystal on Silicon. LCOS is an advanced form of LCD using a combination of liquid crystal and silicon processors. Manufacturers with LCOS products include Philips, Thomson, JVC and Hitachi.

LFE

Stands for Low-Frequency Effects. Dolby Digital and DTS 5.1-channel soundtracks feature a channel (.1) devoted entirely to low bass sounds, ranging from 20Hz to 120Hz. If played via the subwoofer, LFEs add fullness and depth to soundtracks, with action movies in particular having a superior impact.

MP3

Is a compressed audio format that has become immensely popular over recent years. The average MP3 file occupies 1/10 the space of the uncompressed CD original, and is well suited to Internet delivery. Many DVD players will play MP3s on CD-ROMs and CD-Rs.

MPEG

Stands for Motion Picture Experts Group. Is a set of lossy compression standards. With MPEG, information regarded as unimportant (i.e. imperceptible to the viewer or listener) is irretrievably discarded by means of a highly complex mathematical process. The data rate is considerably reduced, though. MPEG1, as used on Video CDs, is a low bitrate variant capable of VHS quality.

MPEG2 works at faster bitrates, and can yield high quality results-as demonstrated by DVD and DVB.

NICAM

Stands for Near Instantaneous Companding Audio Multiplex. Is the digital stereo audio system used for terrestrial analogue broadcasting in the UK (but not satellite).

NTSC

Stands for the National Television Standards Committee. Is a US-developed TV system employed principally in the US & Japan. Its typically combined with a 525-line picture and 30Hz frame rate.

Optical

Is a popular type of connector for interfacing audio equipment such as DVD players and Dolby Digital decoders. Electrical signals are converted by an LED at the transmitter end, and passed via an intermediate fibre optic light guide, to a phototransistor built into the receiver. The latter device converts the light back into an electrical signal. The main advantages of this system, also known as TOSlink (TOSHIBA LINK) are isolation and total immunity to interference.

PAL

Stands for Phase Alternate Line. Is a colour TV system employed in the UK, Western Europe, China and Australia. Normally partnered with 625-line pictures and a 25Hz frame rate.

PDC

Stands for Programme Delivery Control. If you enable ODC on your VCR and a flag (command), issued by the broadcaster via teletext, when the desired programme begins it tells your VCR to start recording. The VCR will only stop when the appropriate flag is received.

Progressive Scan

Is a superior way of viewing video images compared with the traditional interlaced method. With interlacing, the two fields of each video frame (the odd and the even horizontal lines) are shown one after the other. With progressive scanning all of the horizontal lines of the frame are displayed in one go.

The advantages are a lack of flicker and jagged edges, typical of interlaced displays like CRT TVs, and also smooth horizontal resolution. A number of DVD players can output video progressively, although it is only officially available with NTSC material. The signal must be fed to a non-interlaced display such as a plasma screen, or LCD or DLP projector. Certain TVs also feature progressive scan (or deinterlacing). Such sets analyse the video signal and insert extra scanning lines to increase the apparent resolution (compare with 100Hz scanning).

RCE

Stands for Regional Coding Enhancement. Is Hollywood's latest attempt at preserving regional coding. RCE is embedded in software (Region 1 DVD discs) to make them incompatible with hacked or modified DVD players.

Regional Coding

Eight global DVD regions exist therefore a disc sold in one won't play in a player intended for another. The UK is in Region 2 (R2) but many people want Region 1 (the US) discs, which are cheaper and have better features. Thus, many DVD players here can be made multi-region by handset hacking or can be modified by a dealer.

RGB

Is a video transmission system that differentiates and processes all colour information as separate red, green and blue channels. The best pictures from DVD are obtained using an RGB Scart connection or Component Video.

Scart

Is a 21-pin AV connector which can carry composite, S-video and RGB video, plus stereo audio and widescreen/4:3 switching signals.

SECAM

Stands for Sequentielle Couleur A Memoire. Is a French colour encoding system employed within Russia and France. A British PAL TV and VCR will yield black-and-white pictures when a Secam tape is played.

S-video

Is a video transmission associated with high-band (eg Hi8 and S-VHS) video formats. The chrominance (C) and luminance (Y) components are transmitted separately.

SVGA

Stands for Super Video Graphics Array. Is a display resolution of 800 x 600 pixels, which compares roughly to the 720 x 576 of UK TV broadcasts.

THX

Cinema systems bearing the THX logo comply with stringent performance parameters set by LucasFilm. Software can also be THX-approved. Two domestic variants also apply, THX Ultra, which applies to high-end home cinema equipment and THX Select, for midrange gear.

USB

Stands for Universal Serial Bus. Is a fast, but not as quick IEEE1394 serial interface.

XGA

Stands for eXtended Graphics Array and has a display resolution of 1,024 x 768 pixels.