

ROKSAN

Glossary of Terms

Term	Definition
802.11	An industry standard for a type of wireless computer LAN.
3D pass-through	Technology in AV receiver that allows 3D signal to pass in and out of the HDMI inputs
A/D converter (ADC)	Analog-to-digital converter, a device that transforms incoming analog signals into digital form.
AAC	An acronym for Advanced Audio Codec. AAC is the default audio codec format used by Apple's iTunes Music Store.
Accessories	Supporting devices (such as universal remote controls, touchpads, or digital media adapters) that make the content in your home theater accessible from another location.
Acronym	An acronym for A Contrived Reduction Of Nomenclature Yielding Mnemonics.
Active 3D	Higher resolution 3DTV performance that requires 'active' 3D glasses
Active loudspeaker	A loudspeaker with built-in amplification for all the drivers. Some speakers have an amplifier built-in for bass only, but these are not regarded as active. Most loudspeakers are passive, not active.
Adiabatic	Literally, it means "not to pass through." In describing the high-density foam used inside the HR Series studio monitors, it means that internal reflections within the cabinet are absorbed by the foam. In physical terms, it means the mechanical energy of the sound wave is converted into heat energy.
AES	AES is the acronym for Advanced Encryption Standard - the US specification for encryption of electronic data
AES/EBU	Audio Engineering Society/European Broadcasting Union. A digital audio communication standard most commonly seen in professional audio applications. Electrically it is only subtly different to the consumer-oriented S/PDIF standard, the main variation being a different method of handling the clocking signal, and it generally being carried by balanced connections. Nevertheless implementations are seen that seem to be fully compatible with unbalanced S/PDIF.
AFL	An acronym for After Fade Listen, which is another way of saying post-fader solo function.
AirPlay	AirPlay is an Apple-designed wireless streaming format that allows audio, video and photo information to be transferred between devices
Aliasing	This is a type of distortion caused during the analog-to-digital conversion process. If the frequency of the analog signal exceeds one-half the sampling rate, spurious signals and harmonics not present on the original signal may be created (see Nyquist Theorem). Careful design and filtering before the sampling stage can reduce this aliasing to a minimum.
Amplifier	An electronic device that increases (or 'amplifies') the power of an electrical input signal.
Analog	A type of telecommunications signal (audio or video) that is translated into electronic pulses with varying strength or frequency.
Anti Skate	A device on a turntable's tonearm to counteract skating. This sometimes consists of an adjustable spring-loaded device near the tonearm's pivot, or weight on a string (where the torque applied by this arrangement remains constant throughout the range of travel).
Aptx	aptX has revolutionised the Bluetooth® Stereo listening experience by significantly reducing the bit rate without affecting audio quality or introducing latency issues

Aspect ration	The width of a video display compared to its height and defined as a ratio, such as 16:9 for widescreen and 4:3 for a traditional TV.
ATSC	A technical standard developed by the Advanced Television Systems Committee that is synonymous with digital TV, or DTV. HDTV is a subset of ATSC.
Attenuation	The weakening of an audio signal as it travels over a cable. Use the shortest cables possible to lessen sound degradation in a home theater.
Audio sources	Devices in a home theater system that provide audio-only playback, such as CD players/recorders, AM/FM tuners, satellite radio tuners, audio cassette players, and turntables.
Audiophile	A person who places (or would like to place if circumstances permitted) a high priority on having a home audio system that performs very well, offering a level of reproduction that sounds like the original recorded event to them. As we all listen in different ways and can indeed train ourselves to hear for different 'cues' in music, it is a very subjective issue as to the 'best' system; indeed there is no 'best', just each listeners sense of best.
Azimuth	Because the music recorded in the two walls of a 'V'-shaped record groove, it is obviously essential that the stylus of the pick-up cartridge sits perfectly vertical in the groove, rather than leaning into one or other of the groove walls. This adjustment is called the Azimuth Adjustment and it can be checked in a fairly simple way. Take a small, thin mirror (some manufacturers sell mirror-plated alignment gauges) and place it on the record platter. Put the cartridge onto the mirror's surface and rotate it by loosening off the small screws at the bearing end of a tonearm. When the alignment is correct, the cartridge and its reflection will be perfectly in line with each other
Balanced input	An input consists of two leads, neither of which is common to the circuit ground. This is a "differential pair", where the signal consists of the difference in voltage between the two leads. Balanced input circuits can offer excellent rejection of common-mode noise induced into the line.
Balanced output	In a classic balanced audio circuit, the output is carried on two leads (high or + and low or -) which are isolated from the circuit ground by exactly the same impedance. A symmetrical balanced output carries the same signal at exactly the same level but of opposite polarity with respect to ground. A special case of a balanced output carries the signal on only one lead, with the other lead being at zero voltage with respect to ground, but at the same impedance as the signal-carrying lead. This is sometimes called impedance balanced.
Banana plugs	Speaker cable connectors resembling a pin connector that bows out in the middle. Comes in both single and dual configurations.
Bandwidth	Either the range of frequencies which a component can deal with competently (often specified as the range across which the attenuation is no more than 3dB), or the frequency range required to carry a signal. For example, the bandwidth required for a composite video signal is somewhat more than 5MHz.
BASS	Low frequency sounds, typically below around 150 hertz, although the dividing line between bass and midrange is one of opinion. The human ear is less sensitive to bass than to midrange, particularly with regards to location of source.
Bass Extension	An imprecise term concerning how low in frequency a loudspeaker or subwoofer can still operate to produce usable output. A typical bookshelf-sized speaker may manage a bass extension of 80 hertz (say, at -10dB), a good floor standing speaker may manage 30 or 40 hertz, an inexpensive subwoofer 40 hertz, a middling one 25 to 30 hertz, an expensive one 16 hertz.

Bass Reflex	A design for the enclosure of a loudspeaker. With bass reflex speakers the enclosure has a port that permits air to flow between the interior and exterior of the cabinet. The port is a hole, usually backed by a tube. The dimensions of the port are carefully calculated so that it permits bass at a selected frequency to be produced from the interior of the enclosure (driven by the back of the woofer's cone). This arrangement permits a bass reflex speaker to generally achieve greater efficiency than an acoustic suspension speaker, and it extends the depth at which bass may be produced without significant attenuation. However for frequencies below the band produced by the port, the output drops off rapidly.
BD-Live	An Internet-related feature set included with some Blu-ray disc players. Provides access to Internet sites supplying information related to the movie or program you are watching, as well as other features such as online chat.
Bipole	A pole position of speakers in which the drivers are on two faces, opposite each other. Bipole speakers are designed for side or rear surround sound in a home theater. They fire their cones at the same time, in phase.
Bit	The smallest component of a digital word, represented by either a one or a zero.
Bit Depth	The size of the number that records each digital sample. Since the system is digital, the number relates to powers of two. The compact disc uses a bit depth of 16, which allows 65,536 different levels to be used to track the analogue source signal. DVDs usually also use 16, but may also use 20 bits (which gives over a million levels) or 24 bits (which gives more than 16.7 million levels). The greater the bit depth, the lower the harmonic distortion and quantization noise, and the more storage space required for the signal. Audio recording studios use 20bit and 24bit, which is reduced down to 16 bit for compact disc. Specialist audio companies are now offering 20 or 24 bit audio for download, this offers super audio CD quality and above.
Bit Rate	The number of digital bits a system transfers per second. In general, the higher the bit rate, the higher the quality of the signal. In every case, the higher the bit rate, the more data space required. With audio bit rates are measured in the hundreds of kilobits per second (kb/s). With DVD video, they are measured in megabits per second (mb/s).
Bitstream	A continuous stream of bits (binary digits) transmitted over a communications path, such as a cable connecting components in a home theater system.
Bluetooth	Bluetooth is a wireless technology for exchanging data (including video and audio) over short distances.
Blu-ray discs	A high-definition optical media storage alternative to DVDs, developed by Sony Corporation. The name Blu-ray is derived from the blue-colored laser that reads the disc inside a Blu-ray disc player.
Bluetooth	Bluetooth is a wireless technology standard for exchanging data over short distances (using short-wavelength UHF radio waves in the ISM band from 2.4 to 2.485 GHz[4]) from fixed and mobile devices, and building personal area networks (PANs). Invented by telecom vendor Ericsson in 1994,[5] it was originally conceived as a wireless alternative to RS-232 data cables. It can connect several devices, overcoming problems of synchronization.
Bonus View	A feature set that provides enhanced menus and other extras for some Blu-ray disc players. Includes secondary audio and video circuitry that allows picture-in-picture and audio voiceovers.
Bridged mono	A mode of operation for a stereo amplifier that routes a single input to both channels, but inverts the signal on channel 2, thereby providing twice the voltage of an individual output by connecting the speaker between the two positive output terminals (the negative output terminals are not used).
Brightness	The level of black that you see on a video display. The brightness control on a display enables you to adjust this setting.

Bypass	Term used to when converting an integrated amplifier into a power amplifier i.e. bypassing the per-amp stage.
CableCARD	A smartcard with an embedded chip that descrambles premium channels. You rent a CableCARD — which plugs in to a slot on your HDTV — from your cable service provider.
Cantilever	The thin rod within a turntable's cartridge that transmits the movement of the stylus in response to a record's groove to the interior components of the cartridge that generate the electrical signal.
Cardioid	Heart-shaped. In sound work, cardioid refers to the shape of the sensitivity vs. direction plot for a particular style of directional microphone. A cardioid mic rejects sound arriving from the rear.
Cartridge	The device that converts the movements of a stylus in the grooves of an LP record to electrical signals. The cartridge is a small, light-weight device, secured to the end of a turntable's tonearm by means of two screws mounted 12.5mm apart. The movements of the stylus are transmitted through a cantilever to some form of electrical generating device. The two main types of cartridge are ceramic and magnetic. The latter is further subdivided into moving magnet and moving coil types.
CAT-5e	A long-run Ethernet cabling system most commonly used in homes to carry audio and video signals for computer networks and a whole-home theater network.
CAT-6	A long-run Ethernet cabling system used to carry audio and video signals for computer networks and a whole-home theater network; suitable for very fast computer networks.
Central wiring panel	A place in your home where you locate the infrastructure devices that enable you to connect your home theater to other parts of the house in a whole-home theater system.
Centre Speaker	A centre speaker is the centrally place unit in either a 5.1 or 7.1 surround system and is placed directly in front of the viewer or listener as close to the video source as possible. It is mainly speech information that is processed through a centre speaker.
Chorusing	A time-based effect available in some digital delay effects units and reverbs. Chorusing involves a number of moving delays and pitch shifting, usually panned across a stereo field. Depending on how used, it can be lovely or grotesque.
Chrominance	The color portion of the two-component video signal that runs through a video cable (the other component is luminance).
Class A	A power amplifier in which a sufficient DC bias voltage is applied to the power transistors so that the output signal always operates entirely in the positive or negative part of the cycle, entirely avoiding crossover distortion. This makes them quite wasteful of power since even at idle a considerable voltage is being generated. The DC bias is filtered out before being fed to the speakers. The real benefit of this design is in the sound qualities. Class A designs have no crossover distortion, which is audible.
Class AB	A power amplifier in which a certain amount of DC bias voltage is applied to the power transistors so that, at low power outputs, the output signal operates entirely in the positive or negative part of the cycle, avoiding crossover distortion. Thus, at low outputs, a Class A/B amplifier operates in Class A mode. At higher outputs the signal does cross over the zero point, effectively entering Class B territory. This design is a compromise between the efficiency of Class B amplifiers (in which there is no DC bias) and the elimination of crossover distortion in Class A designs. The DC bias is filtered out before being fed to the speakers.
Class D	A very efficient amplifier design. Digital amplifiers use a form of pulse width modulation (with low pass filtering to reduce ultrasonic noise) to drive the loudspeakers. There are some interesting amplifier products appearing that incorporate class D designs. The jury is out on whether they ultimately offer the same fidelity as more conventional class A/B designs.

Clipping	A form of severe audio distortion that results from peaks of the audio signal attempting to rise above the capabilities of the amplifier circuit. Seen on an oscilloscope, the audio peaks appear clipped off. To avoid clipping, reduce the system gain in or before the gain stage in which the clipping occurs. Also see headroom.
Clock signal	Signal used to synchronise items of equipment which are communicating digital audio or video signals to each other. The lack of a suitable clocking signal would allow their timing to drift apart from each other, since their internal clocking signals would not be identical, so digital samples would be lost. The effect when using a very high quality clock in audio components such as CD players, is to produce a high quality sound. The additional costs associated with this means that only the best CD players (and usually the most expensive) implement this in their products.
Coaxial	1. (noun) A digital audio interconnect cable with RCA jacks on each end, used to connect home theater components to the A/V receiver. 2. (noun) A cable (also called coax) with an F connector, used to connect a cable TV feed, antenna, or satellite dish to a home theater.
Coaxial Digital	The digital audio output signal of a DVD player in an electrical format, rather than optical. The data format accords with the S/PDIF specification.
Co-axial in	A coaxial input socket receives data from an electrical component which can be either audio or video information
Co-axial out	A coaxial output socket sends data from an electrical component which can be either audio or video information
Codec Compression/Decompression	A system which compresses a signal in some way for storage or transportation and then decompresses it at the point of delivery. Examples are MPEG, Dolby Digital and DTS. These systems use a codec to reduce the amount of data in the signal. Other forms of codec, particularly in the days of analogue audio systems, compressed and then decompressed the dynamic range of the signal, not to reduce the size of the signal but to reduce noise levels. One consumer system was called 'dbx'. Digital data storage for audio use several software systems to take complete 16 bit (or higher) files in WAV and compress to nearly half their size. When uncompressed, the files are again identical WAV files. One common compression program is known as FLAC.
Codecs	Programs that can compress (for efficient storage and distribution) and decompress (for playback) music and other file types into either lossless or lossy digital files.
Color depth	A measure of the number of digital bits used to store the color information for a high-definition TV source.
Colouration	An unwanted alteration in the character of audio. Significant colouration of sound can make instruments and voices sound unrealistic. It may be caused by harmonic distortion, vibrations of component parts (for example, the panels of an inadequately braced loudspeaker enclosure) or, most commonly, through an uneven frequency response.
Comb filter	Separates the color and brightness parts of a video signal into their component parts and sends them to the appropriate internal circuitry. Comb filters are more effective than notch filters, and include these types: 2-D, 3-D, and digital.
Common mode	A signal which is referenced to the circuit common point, usually chassis ground.
Component video	A type of short-run analog video connection that provides one path for brightness information and two separate paths for color information. These cables typically have red, green, and blue connectors; a better alternative to composite video or S-video.
Composite video	A type of short-run analog video connection in which both color and brightness (the two components to a video signal) are combined into a single signal. The comb filter inside a display then separates these signals. These cables are usually color-coded yellow.

Compressor	This is a dynamics processor used to smooth out any large transient peaks in an audio signal that might otherwise overload your system or cause distortion. The amplitude threshold and other parameters such as attack time, release time, and tire pressure are adjustable.
Condenser	Another term for the electronic component generally known as a capacitor. In audio, condenser often refers to a type of microphone that uses a capacitor as the sound pickup element. Condenser microphones require electrical power to run internal amplifiers and maintain an electrical charge on the capacitor. They are typically powered by internal batteries or "phantom power" supplied by an external source, such as a mixing console.
Contrast	The level of white that you see on a video display. The contrast control on a display enables you to adjust this setting.
Contrast ratio	A numeric ratio (such as 800:1) that measures how well a display can show bright compared to nuanced darks. A higher ratio is better, but this measurement isn't standardized so you can't easily compare numbers between manufacturers.
Controller	Short for A/V controller. A device that performs switching (between audio and video sources) and pre-amplification tasks in a home theater. One of three separate components (along with a power amplifier and radio tuner) that can be used in place of an all-in-one A/V receiver.
Crest factor	The ratio of the peak value to the RMS value. Musical signals can have peaks many times higher than the RMS value. The larger the transient peaks, the larger the crest factor.
Cross Talk	Where a signal (particularly audio) leaks from one channel to another. Thus a voice may be intended to be entirely in the left channel of a stereo recording, but some portion of it appears in the right, dragging the apparent position of the voice somewhat towards the centre of the sound stage. Normally specified by the inverse of crosstalk: separation.
Crossover	A small discontinuity (or, at least, nonlinearity) in a signal when a transistor-based amplifier circuit switches from positive to negative operation. This is addressed by Class A and Class A/B designs. Sometimes called 'zero cross distortion'.
Crossover distortion	A small discontinuity (or, at least, nonlinearity) in a signal when a transistor-based amplifier circuit switches from positive to negative operation. This is addressed by Class A and Class A/B designs. Sometimes called 'zero cross distortion'.
Crossover frequency	The frequency at which a signal is handed from one component to another. This applies in loudspeaker crossover networks and base management systems.
Crossover network	The set of components in a loudspeaker that divides up the incoming signal, sending the bass to the woofer, the treble to the tweeter and, sometimes, the middle frequencies to a midrange driver. The crossover network uses resistors, capacitors and inductors (coils) to divide up the signal. Some systems use active crossover networks. In such cases, the division is made before the signal is amplified, so a separate amplifier is required for each driver.
Current	The quantity of electrical charge moving through a circuit over a given time. The unit for current is amps or amperes.
D/A converter (DAC)	Digital-to-analog converter, a device that transforms incoming digital signals into analog form.
DAB	DAB stands for Digital Audio Broadcasting. It is a digital broadcasting standard used mostly within Europe to eventually replace the traditional FM. The audio quality can differ between broadcasts and the audil material, worth most stations using the 128 or 160kbits/s (MP2) bit rate.
DAC	An acronym for Digital Analog Converter. One of two chips in an A/V receiver that decodes surround-sound formats. The DAC converts digitally encoded music signals into analog signals that a receiver's amplifier and the surround speakers can understand.

Damping	Damping factor is a number that represents the ratio of the impedance of the load to the output impedance of the amplifier. In practical terms, it is a measure of how well the amplifier can control the movement of a speaker's cone. The greater the damping factor, the better its ability to control the cone's movement. A low damping factor (high amplifier output impedance) allows a woofer to continue to move after the signal stops, resulting in an indistinct and mushy low frequency response. A high damping factor (200 or above) provides excellent control over low frequency woofers and produces a tight, clean bass.
Damping factor	A specification for power amplifiers which suggests the degree of control that the amplifier exercises over a connected loudspeaker. It is the ratio of the nominal impedance of the speaker (and is typically quoted for eight ohms) to the internal impedance of the output stage of the amplifier. A high internal impedance for the amplifier means that its frequency response will vary with real-world speakers since their impedance varies across their frequency range. It also means that the driver, which wants to do its own thing under the influence of air, its suspension and so forth, rather than what the signal is telling it to do, will face a relatively high impedance to the voltage it is generating back into the amplifier. Consequently it will be freer to do its own thing, rather than what the amplifier is telling it to do. However the damping factor quoted for amplifiers does not take into account the impedance of the wiring between amplifier and loudspeakers, nor the impedance of the speakers' own voice coils. Consequently there is only a modest performance gain between a damping factor of, say, 60 and one of 600.
DAT	Digital Audio Tape is a recording/playback system where analog signals are converted to digital form and stored on magnetic tape. It offers all the benefits of digital audio including low noise and wide dynamic range.
DAW	Digital Audio Workstation is a dedicated recording/editing software application and hardware system, used for hard disk (non-linear) random access recording and playback. Many DAWs are used with personal computers using Windows® or Macintosh® operating systems, though some use their own proprietary computers.
dB	See decibel.
dBA	Sound Pressure Level (SPL) measured with an "A" weighting filter.
dBm	A unit of measurement of power in an electrical circuit, expressed in decibels referenced to 1 milliwatt. The "m" in dBm stands for "milliwatt." In a circuit with an impedance of 600 ohms, this reference (0 dBm) corresponds to a signal voltage of 0.775 VRMS (because 0.775 V across 600 ohms equals 1 mw).
dBu	A unit of measurement of audio signal voltage in an electrical circuit, expressed in decibels referenced to 0.775 VRMS into any impedance. Commonly used to describe signal levels within a modern audio system. Nobody is really sure if "u" stands for anything.
dBv	A unit of measurement equal to the dBu no longer in use in the US, but sometimes still in Great Britain. It was too easy to confuse a dBv with a dBV, to which it is not equivalent.
dBV	A unit of measurement of audio signal voltage in an electrical circuit, expressed in decibels referenced to 1 VRMS across any impedance. Commonly used to describe signal levels in consumer equipment. To convert dBV to dBu, add 2.2 dB.
Decibel (dB)	The dB is a ratio of quantities measured in similar terms using a logarithmic scale. Many audio system parameters measure over such a large range of values that the dB is used to simplify the numbers. A ratio of 1000:1=60 dB. Since dB is a unit less quantity, it doesn't matter if it's volts or dollars. (just try asking the chief engineer for a 3 dB raise) When one of the terms in the ratio is an agreed upon standard value such as 1.23 V, 1 V or 1 mw, the ratio becomes an absolute value, i.e., +4 dBu, -10 dBV or 0 dBm.
Deep color	A system supported by high-end HDTVs that provides higher (than typical) levels of color depth, capable of supporting millions of colors.

Delay	In sound work, delay usually refers to an electronic circuit or effects unit whose purpose it is to delay the audio signal for some short period of time. Delay can refer to one short repeat, a series of repeats or the complex interactions of delay used in chorusing or reverb. When delayed signals are mixed back with the original sound, a great number of audio effects can be generated, including phasing and flanging, doubling, Haas precedence-effect panning, slap or slapback, echo, regenerative echo, chorusing and hall-like reverberation. Signal time delay is central to many audio effects units.
Diffraction	The bending of sound waves around an obstacle (Huygens Principle). The longer the wavelength in comparison to the obstacle, the more the wave will diffract around it.
Digital audio file	Just like any other file on your computer, except they contain digitally encoded music files that you can play back on your computer, on a portable device, or in your home theater.
Digital cable-ready	A feature of most HDTVs that enables you to connect a coaxial cable from the wall directly to the TV, skipping a set-top box (for nonscrambled channels).
Digital rights management; DRM	A music or video system that places restrictions on copying or recording digital assets. Protects the copyright interests of music, movie, and other content owners.
Digital Theater Systems	DTS is a company that has invented and developed several surround-sound encoding schemes, including the lossless surround-sound format known as DTS-HD.
Dipole	A pole position of speakers in which the drivers are on two faces, opposite each other. Dipole speakers are designed for side or rear surround sound in a home theater. They fire their cones at different times, out of phase.
Dipping	The opposite of peaking, of course, used in audio to describe the shape of a frequency response curve. A dip in an EQ curve looks like a valley, or a dip. Dipping with an equalizer reduces a range of frequencies.
Direct-view display	A type of display in which the image is created directly on the screen you are watching. Includes old-fashioned tube TVs, plasma displays, and LCD TVs.
Discrete	A sound signal contained in each of the available audio channels that is distinct and independent from each of the others.
Display	The device in a home theater that shows the picture. Includes direct-view displays (tube, plasma, or LCD TVs) and the separate screen in a front-projection system.
Distortion	An inaccuracy in the reproduction of a signal. In the case of audio, it is normally regarded as being composed of harmonic distortion and intermodulation distortion. But used more broadly, it can also encompass frequency response variations and noise. In the case of lossy compression technologies, some distortion consists of spurious noise (not harmonically related) surrounding the signal. When 'distortion' is quoted as a specification without qualification, it normally refers only to harmonic distortion.
Dither	This is an interesting technique to reduce the audibility of low level noise in a digital recording. Low level random noise is added to the analog signal before the sampling stage, reducing an effect called quantization error.
DLP	An acronym for Digital Light Processor. DLP is a method of projecting video in projector systems, developed by Texas Instruments. Uses a special video chip with millions of microscopic mirrors that are moved by computer command to create images.
Dolby Digital	An all-digital surround-sound format developed by Dolby Laboratories (in 1997) that handles audio compression, available only for digital content.
Dolby Digital Plus	An all-digital surround-sound format developed by Dolby Laboratories that is an improvement on the older Dolby Digital and Dolby Digital Surround EX systems. Enhancements include an increased bit rate, improved sound encoding, more discrete channels of sound, and backward compatibility.

Dolby Digital Surround EX	An all-digital surround-sound format developed by Dolby Laboratories that improves on the older Dolby Digital system. Includes an additional rear (center) surround speaker with a matrixed (intermixed) signal from the left and right surround channels.
Dolby Pro Logic	An older surround-sound format developed by Dolby Laboratories that includes four channels and five speakers of matrixed (intermixed) multichannel surround sound. An improvement on the Dolby Surround Sound format. Newer enhanced versions include Dolby Pro Logic II and Dolby Pro Logic II.x.
Dolby Surround Sound	The original surround-sound format developed by Dolby Laboratories that encodes four analog audio channels into two channels.
Dolby TrueHD	An all-digital lossless surround-sound format developed by Dolby Laboratories that supports up to 13.1 channels of surround-sound.
Doubling	A delay effect, where the original signal is mixed with a medium (20 to 50 ms) delayed copy of itself. When used carefully, this effect can simulate double-tracking (recording a voice or instrument twice).
Driver	The moving part, or parts, of a loudspeaker. These are usually woofers (bass drivers), midrange drivers and tweeters (high frequencies). There are a number of different driver designs. Virtually all woofers use the traditional speaker cone (some light material, often paper pulp or polypropylene) held in place by a suspension and backed by a coil inserted into the magnetic field of a strong permanent magnet. The amplifier's signal is fed into the coil, generating its own magnetic field, causing the coil and the attached cone to move. Midrange drivers, which are relatively rare these days, usually use either cones or domes (often polypropylene or a light metal such as magnesium), although there are some ribbon midrange drivers. Tweeters are most commonly domes (often polypropylene, silk or some other textile, or a light metal such as aluminium or titanium), but cheaper ones use cones. Some use inverted domes (that is, they are concave rather than convex), while some expensive speakers use ribbon tweeters. There was even, for a while, a 'plasma' tweeter where the high frequencies were generated by a pulsating ball of superheated air. Some speakers do not use what could be conventionally called drivers, for example electrostatic speakers.
Drivers	1. (noun) The round elements inside a speaker enclosure that move back and forth and create changes in the air pressure (sound waves). 2. (noun) Software files that integrate hardware devices with a PC's operating system.
Dry	Usually means without reverberation, or without some other applied effect like delay or chorusing. Dry is not wet, i.e., totally unaffected.
DSD	Direct Stream Digital. The digital audio format used in the SACD. Unlike the PCM system normally used, DSD uses a stream of single bits of information. The momentary level of the analogue wave form being represented by the bitstream is determined by the density with which the bits are 'on' rather than 'off'. It is modified by using noise shaping to increase the effective dynamic range in the main audible band. DSD uses for each channel a bit rate of 2,822,400 bits per second.
DSP	Digital Signal Processing can accomplish the same functions found in analog signal processors, but performs them mathematically in the digital domain, with more precision and accuracy than its analog counterpart. Since DSP is a software-based process, parameters and processing functions are easily changed and updated by revising the software, rather than redesigning the hardware. DSP can be found in an outboard effects device, such as a reverb or delay unit, or it can be integrated into a DAW or digital mixing console.
DSS	An acronym for Digital Satellite Service. DSS is a TV source that receives a signal from a satellite dish. The two main DSS services in the U.S. are DirecTV and DISH Network.

DSS receiver	A device that decodes television signals feeding in from a satellite dish so that your TV can display the programming.
DST	Direct Stream Transfer. Lossless compressed DSD.
DTS-HD	A lossless surround-sound format on Blu-ray discs and players that can provide up to 7.1 channels of surround sound. There are two variants: DTS-HD High-Resolution Audio (similar to Dolby Digital Plus) and DTS-HD Master Audio (similar to Dolby TrueHD).
Dual mono	A mode of operation for a stereo amplifier that routes a single input to both channels, but still allows independent level control over each amplifier output.
Dual-layer disc	A DVD or Blu-ray disc in which you can store media on both sides of the disc, doubling the capacity of a single-layer disc.
DVD	1. (noun) A high-capacity optical disc resembling a CD, used primarily for storing video (such as movies) and data. 2. (noun) Other forms of the term DVD indicate a standard for the way data is stored on the disc, such as DVD+RW for a rewriteable disc format.
DVD decoder	A device that performs hardware-based decoding of the MPEG video on DVDs. This frees up your computer's main processor for other tasks (recommended if you have a slower PC that you want to use in your home theater).
DVD-A	DVD-Audio. A newer digital audio format on DVD that offers higher-quality sound and greater capacity than a CD. The DVD-Audio format is not intended for video.
DVI	An acronym for Digital Visual Interface. DVI is a digital video technology that was developed as a means to connect computers to digital LCD screens and projectors.
DVR	Digital video recorder. A home theater device that records video onto a standard computer hard drive. DVRs (also called PVRs) connect to a program service, usually via a telephone line. TiVo is a major manufacturer of DVRs.
Dynamic microphone	The class of microphones that generate electrical signals by the movement of a coil in a magnetic field. Dynamic microphones are rugged, relatively inexpensive, capable of very good performance and do not require external power.
Dynamic range	When pertaining to audio CDs, the difference between the softest and loudest musical passages on a compact disc. The range between the maximum and minimum sound levels that a sound system can handle. It is usually expressed in decibels as the difference between the level at peak clipping and the level of the noise floor.
Dynamics processor	A type of processor that only affects the overall amplitude level of the signal (sometimes as a function of its frequency content), such as a compressor, expander, limiter, or gate.
EBU	EBU stands for the European Broadcasting Union, an alliance founded in 1950 and best-known for producing the musically dubious Eurovision Song Contest!
Effects device or effect processor	An external signal processor used to add reverb, delay, spatial or psychoacoustic effects to an audio signal. An effects processor may be used as an insert processor (serial) on a particular input or subgroup, or it may be used via the aux send/return system (parallel). See also echo, reverb.
EIN	Equivalent Input Noise. A specification that helps measure the "quietness" of a gain stage by deriving the equivalent input noise voltage necessary to obtain a given preamp's output noise. Numerically, it's the output noise at a given gain setting minus the gain. EIN is usually measured at maximum gain and typically ranges from -125 to -130 dBm.
EMI	Electro-Magnetic Interference. This refers to current induced into the signal path as a result of an external magnetic field. In audio systems, this is usually manifested as a 60 Hz or 120 Hz hum or buzz (50 Hz or 100 Hz in 50 Hz systems). The source of this noise can be from a ground loop or from the signal wire coming too close to a strong magnetic field such as a transformer or highcurrent linecord

Enclosure	The box of a loudspeaker. In any half decent speaker, this is not merely a device to keep the drivers off the floor, but an integral part of the design of the whole loudspeaker, contributing greatly to -- or, if done badly, detracting from -- its performance. The most common enclosure designs are bass reflex and acoustic suspension. Good quality enclosures include strong bracing to resist sympathetic vibrations in their panels, which can lead to sound colouration
Encoding formats	File formats used for converting digital content (audio and video files) to smaller file sizes. Some audio encoding formats include MP3, WMA, and AAC. Some video encoding formats include WMV and MPEG.
Enclosure	A loudspeaker enclosure or loudspeaker cabinet is an enclosure in which speaker drivers and associated electronic hardware, such as crossover circuits and, in some cases, amplifiers, are mounted.
EQ	Short for equalization.
EQ curve	A graph of the response of an equalizer, with frequency on the x (horizontal) axis and amplitude (level) on the y (vertical) axis. Equalizer types and effects are often named after the shape of the graphed response curve, such as peak, dip, bell, shelf, or notch.
Equalization	Equalization (EQ) refers to purposefully changing the frequency response of a circuit, sometimes to correct for previous unequal response (hence the term, equalization), and more often to boost or cut the level at certain frequencies for sound enhancement, to remove extraneous sounds, or to create completely new and different sounds. Bass and treble controls on your stereo are EQ; so are the units called parametrics and graphics and notch filters. A lot of how we refer to equalization has to do with what a graph of the frequency response looks like. A flat response (no EQ) is a straight line; a peak looks like a hill, a dip is a valley, a notch is a really skinny valley, and a shelf looks like a plateau (or a shelf). The slope is the grade of the hill on the graph.
Fader	Another name for an audio level control. Today, the term refers to a straight-line slide control rather than a rotary control.
Family of curves	A composite graph showing on one chart several examples of possible EQ curves for a given equalizer or equalizer section.
FCC	Federal Communications Commission. The controlling regulatory authority for broadcasters, cable companies, and telephone companies in the United States.
Filter	A simple equalizer designed to remove certain ranges of frequencies. A low-cut filter (also called a high-pass filter) attenuates frequencies below its cutoff frequency. There are also highcut (low-pass) filters, bandpass filters, which cut both high and low frequencies but leave a band of frequencies in the middle untouched, and notch filters, which remove a narrow band but leave the high and low frequencies alone.
FireWire	A digital video connection used for some devices in a home theater (originating from the computer industry). Now becoming more common for audio home theater connections.
Flanging	A term for an effect similar in sound to phasing. Before we had electronic delay units, flanging was accomplished by playing two tape machines in synchronization, then delaying one slightly by rubbing a finger on the reel flange. Get it?
Flutter	The box of a loudspeaker. In any half decent speaker, this is not merely a device to keep the drivers off the floor, but an integral part of the design of the whole loudspeaker, contributing greatly to -- or, if done badly, detracting from -- its performance. The most common enclosure designs are bass reflex and acoustic suspension. Good quality enclosures include strong bracing to resist sympathetic vibrations in their panels, which can lead to sound colouration.
FM	FM, or Frequency Modulation is the carrying of information over a wavelength via electromagnetism. Most used in FM radio broadcasting for high quality stereo sound quality.
FOH	An acronym for Front Of House. See house and main house speakers. Nobody involved with audio ever goes to the Back of House because they never have time to drink enough beer.

Freesat	Freesat is a free to air (no subscription) satellite broadcast venture between the BBC and ITV in the UK. It allows High Definition broadcasts to be viewed.
Freeview	Freeview is another free to view television service but is digital terrestrial as opposed to satellite. Versions also exist in New Zealand and Australia. Presumably these broadcasts are upside down!
Frequency	The number of times an event repeats itself in a given period of time. Generally the time period for audio frequencies is one second, and frequency is measured in cycles per second, abbreviated Hz, honoring the physicist Dr. Heinrich Hertz (who did not invent the rental car). One Hz is one cycle per second. One kHz (kilo- hertz) is 1000 cycles per second. The audio frequency range is generally considered to be 20 Hz to 20, 000 Hz. This covers the fundamental pitch and most overtones of musical instruments.
Frequency range	A specification for a receiver that is measured in Hertz (Hz). The lower frequency ranges (for bass sounds) require more amplifier power than the higher frequency ranges.
Frequency Response	A measure of how accurately a system reproduces different frequencies. In the case of audio in a home theatre system, it is desirable for the frequency response of a whole system, including speakers and subwoofer, to be from 10 hertz to 20,000 hertz $\pm 3\text{dB}$. This performance requires a very expensive system indeed and, in practice, very few systems will produce bass down to anything like that bottom limit. Manufacturers who claim a frequency response for speakers of, say, 20 to 20,000 hertz without specifying decibel boundaries are telling you nothing. A tinny two inch transistor radio speaker can reproduce that range, although you won't actually hear it at either extreme because its output will be so low. Even subtle variations of less than half a decibel across the audio band can be quite audible, especially if they're spread over a fairly wide band of frequencies, and can thus change the character of the sound. Indeed, with speakers the single measure most closely related to their sound is the frequency response.
Front Row	A media center application developed by Apple, for the Macintosh. Includes the Front Row software (built into the operating system) and a remote control. This application enables you to use a Mac with your home theater.
Front Speaker	The main pair of stereo speakers in a AV multi-speaker system that are always forward facing.
Front-projection system	A type of projection system in a home theater that includes two parts: a front projector unit and a separate screen. The light is projected from the projector unit onto the screen.
Gain	The measure of how much a circuit amplifies a signal. Gain may be stated as a ratio of input to output voltage, current or power, such as a voltage gain of 4, or a power gain of 1.5, or it can be expressed in decibels, such as a line amplifier with a gain of 10 dB.
Gain stage	An amplification point in a signal path, either within a system or a single device. Overall system gain is distributed between the various gain stages.
Gate	A dynamics processor that automatically turns off an input signal when it drops below a certain level. This can reduce the overall noise level of your mix by turning off inputs when they are not in use. Threshold, attack time, hold, and release time are some of the adjustable gate parameters.
Gauge	The thickness of speaker cables, such as 16-gauge or 14-gauge (the lower the gauge, the thicker the conductors inside the cable).
Graphic EQ	A graphic equalizer uses slide pots for its boost/ cut controls, with its operating frequencies evenly spaced through the audio spectrum. In a perfect world, a line drawn through the centers of the control shafts would form a graph of the frequency response curve. Or, the positions of the slide pots give a graphic representation of boost or cut levels across the frequency spectrum. Get it?

Ground	Also called earth. Ground is defined as the point of zero voltage in a circuit or system, the reference point from which all other voltages are measured. In electrical power systems, ground connections are used for safety purposes, to keep equipment chassis and controls at zero voltage and to provide a safe path for errant currents. This is called a safety ground. Maintaining a good safety ground is essential to prevent electrical shock. Follow manufacturer's suggestions and good electrical practices to ensure a safely grounded system. Never remove or disable the grounding pin on the power cord. In sensitive electronic equipment, tiny currents and voltages riding on the ground (so it's not truly zero volts) can cause noise in the circuits and hamper operation. Often a ground separate from the power ground is used as the reference point for the electronics, isolating the sensitive electronics from the dirty power ground. This is called a technical ground. Quality audio equipment is designed to maintain a good technical ground and also operate safely with a good safety ground.
Ground loop	A ground loop occurs when the technical ground within an audio system is connected to the safety ground at more than one place. This forms a loop around which unwanted current can, and does flow, causing noise in the audio system. Never disable the safety ground in an attempt to solve hum problems.
Haas precedence effect	A psychoacoustic effect in which the time of arrival of a sound to the left and right ears affects our perception of direction. If a signal is presented to both ears at the same time and at the same volume, it appears to be directly in front of us. But if the signal to one ear, still at the same volume, is delayed slightly, the sound appears to be coming from the earlier (non-delayed) side.
Harmonic	The box of a loudspeaker. In any half decent speaker, this is not merely a device to keep the drivers off the floor, but an integral part of the design of the whole loudspeaker, contributing greatly to -- or, if done badly, detracting from -- its performance. The most common enclosure designs are bass reflex and acoustic suspension. Good quality enclosures include strong bracing to resist sympathetic vibrations in their panels, which can lead to sound colouration.
HD Radio	A digital radio broadcast that can be incorporated into a home theater without paying a monthly fee. Not all receivers are capable of receiving HD Radio.
HDCP	An acronym for High-bandwidth Digital Content Protection. HDCP is a strong copy protection system used with DVI. It can limit your ability to make a digital copy of what you're watching.
HDMI	An acronym for High-Definition Multimedia Interface. HDMI is a short-run analog video interconnect that is used to connect home theater components to high-definition TVs. The HDMI interface carries both audio and video signals over the same cable, and is quickly becoming the connection of choice for high-definition systems.
HDMI in	HDMI input that receives data.. High Definition Multimedia Interface is a cable that transfers uncompressed video and digital data. Used to connect digiboxes or devices such as DVD/Blu-ray players.
HDMI out	HDMI output that sends data. High Definition Multimedia Interface is a cable that transfers uncompressed video and digital data. Used to connect digiboxes or devices such as DVD/Blu-ray players.
HDTV	High-definition TV. A subset of ATSC technology. The HDTV offers spectacular high-definition picture quality in a widescreen format and is now considered a must for home theater systems. HDTV content is available in the form of broadcast programming and Blu-ray discs.
Headroom	The difference between nominal operating level and peak clipping in an audio system.
Hertz	The unit of frequency, equal to 1 cycle per second. Abbreviated Hz. kHz 1000 Hz, and is usually pronounced "kay" (with "Hertz" implied) by sound professionals who ask for "a little more two and a half K" when they want you to boost 2.5 kHz.

Hi-Fi	Hi-Fi' is frequently used a generic noun for any stereo sound system. But it should more properly be regarded as an adjective, taking due note of the Latin roots of the word fidelity, which means 'truth'. Originally high fidelity described a sound reproduction system that gave a more accurate rendition of the recording than was commonly available. The greater the accuracy, the higher the fidelity. In absolute terms, the term changes over time - as audio systems improve, so do those properly described as 'high fidelity'. A very fine high fidelity system from 1970 would not qualify for the term today.
Home Theater PC; HTPC	A personal computer (that can be considered a high-quality source device) that you attach to the A/V system of your home theater. An HTPC can feed audio and video content into (and receive content from) your home theater system. You can create a home theater PC out of an existing PC, purchase a new home theater PC, or even build your own.
Home-theater-in-a-box; HTIB	An integrated home theater system that bundles together a receiver, DVD (or Blu-ray) player, surround-sound speakers, and cables. Other configurations are also available.
Horn loaded driver	A loudspeaker driver in which a horn is placed over the front of the driver. The primary advantage of this is to increase the efficiency of the transfer of mechanical energy from the driver to the air. However it usually results in reduced dispersion of sound, particularly for higher frequencies which tend to be 'beamed' from the horn, and can colour the sound. Nevertheless, some speaker makers have specialised in using horns, especially Klipsch, and they are frequently used in professional sound-reinforcement installations. The increase in efficiency can be quite marked. Klipsch loudspeakers tend to offer around nine decibels higher output than equivalent non-horn loaded loudspeakers, which means they can produce the same output from just one eighth of the power required for conventional speakers. This can, in turn, mean lower harmonic distortion because driver excursion is significantly reduced.
Hotspotting	A characteristic of the screen in a front-projection system in which one part of the screen is brighter than the other parts. Choose a low-gain (less-reflective) screen to avoid this problem.
Hub	The centralized connection point for the audio and video equipment in a home theater, which is typically the A/V receiver.
Hz	Short for Hertz.
Image scaler	An advanced video processor (an internal device) that can convert a video signal to a custom resolution that is most suitable for a specific projector or other type of display.
Imaging	The sensation produced in a stereo or surround system of sounds coming from between, behind and/or in front of the loudspeakers. The imaging is described in various subjective ways relating to how tightly focused those sounds appear, whether they seem to offer a fore-aft depth, whether they give an impression of height as well as width and depth.
Impedance	A specification for an amplifier that measures electrical resistance. Most amplifiers are rated at 8 ohms impedance. The A.C. resistance, capacitance, and inductance in an electrical circuit, measured in ohms. In audio circuits (and other ac circuits) the impedance in ohms can often be much different from the circuit resistance as measured by a dc ohmmeter. Maintaining proper circuit impedance relationships is important to avoid distortion and minimize added noise.
Infinite baffle	Another term for acoustic suspension. The term is descriptive, in that if the baffle of a loudspeaker were to be infinitely extended in all directions, there could be no movement of air between the front and back of the driver. Of course, with a real infinite baffle speaker the baffle is wrapped around into a convenient package.
Input module	A holdover from the days when the only way that real consoles were built was in modular fashion, one channel per module. See channel strip.

Input Sensitivity	A measure of the efficiency with which loudspeakers turn the electrical energy provided by a power amplifier into acoustic energy. The more sensitive, the greater the volume for a given amount of power. This is normally measured as the sound pressure level in decibels (dB SPL) achieved by the loudspeaker in an anechoic chamber at a distance of one metre with a 2.83 volt 1kHz signal applied (2.83 volts is the voltage required to deliver one watt to an eight ohm load.) Sensitivities generally range from not much more than 80dB up to 100dB. Each 3dB increase in sensitivity is equivalent to doubling the amount of power, so for a loud system it is far better to choose sensitive loudspeakers rather than pay for a higher-powered amplifier.
Insert	Noun – a place where a signal path can be broken and a processing device placed in line with the signal. It's usually a TRS jack with one conductor being an output (send) and the other being an input (return). The jack is wired with a normal connection so that with nothing plugged in, the send and return are connected together, as if it wasn't even there.
Integrated Amplifier	An amplifier consisting of both a preamplifier and a power amplifier. If properly designed, an integrated amplifier should offer better sound qualities, due to less connectors and cables between components. It is still the case however, that most of the high end amplifiers are offered as two boxes, generally because the amount of electronics in each make it difficult to build a sensible one box solution.
Interconnects	Short-run cables that you use to connect home theater components that are located within a few feet of each other (or in the same room).
Interlaced scan	One of the two scanning methods that draws the picture on the TV screen. Traditional TV systems use an interlaced scan, where half of the picture appears on the screen at a time (the other half follows 1/60th of a second later).
IPTV; Internet Protocol TV	A type of television service provided by a phone company. Uses the same Internet systems used for carrying Web pages, e-mail, and Web video to your TV, via a broadband Internet connection.
IR	Infrared.
Isolation	Top-end Hi-Fi equipment such as CD players, amplifiers and loudspeaker mountings / feet require complete Isolation to perform at the highest level
Jitter	The phenomenon of a drift in the digital audio data delivered so that it does not precisely match the sampling frequency, causing confusion in the receiving equipment as to the appropriate value of the sample. A host of audible problems with CDs and other digital formats have been laid at the feet of jitter. There is no doubt that very precise master and up sampling clocks can help to make CD players sound better.
Knee	A knee is a sharp bend in a curve (an EQ frequency response or compressor gain curve) not unlike the sharp bend in your leg.
LAN	Local area network. A computer network that links two or more computers together within a limited range. You can add a computer LAN to your home theater infrastructure, resulting in a whole-home computing system that can make use of your home theater.
LCD	1. (noun) An acronym for liquid crystal display. An LCD is a flat-panel TV display with pixels consisting of liquid crystal molecules held between two sets of transparent electrodes. 2. (noun) The technology used in LCD panels, computer monitors, LCD projectors in a front-projection system, and many other devices.
LCoS	An acronym for Liquid Crystal on Silicon. LCoS is a newer type of projection system that reflects light off of the liquid crystals. This results in a significantly brighter image than an LCD projection system.
Letterboxing	An approach used to display widescreen (16:9) content (such as movies) on a standard (4:3) television. Letterboxing maintains the original aspect ratio by displaying horizontal black bars at the top and bottom of the screen.

Level	Another word for signal voltage, power, strength or volume. Audio signals are sometimes classified according to their level. Commonly used levels are: microphone level (-40 dBu or lower), instrument level (-20 to -10 dBu), and line level (-10 to +30 dBu).
Line level	A signal whose level falls between -10 dBu and +30 dBu.
LNB	An acronym for Low Noise Blocker. The LNB is a horn-shaped device connected to the front of the parabola of a satellite dish, used to block extraneous signals.
Long runs	A type of cable that makes up the infrastructure of a whole-home audio and video network. Long-run cable is designed to minimize signal loss due to interference. The longer the signal has to travel over cable, the more likely that signal will be audibly degraded.
Lossless	A category of codecs in which all the music information in the audio file is preserved when the file is compressed and stored on a computer, with no loss and very large file sizes. Some lossless codecs include Windows Media Lossless, Apple Lossless, PCM, and Free Lossless Audio Codec (FLAC).
Lossy	A category of codecs in which part of the music information in the audio file is discarded when the file is compressed, resulting in smaller file sizes. In many cases, the loss of these bits of audio isn't noticeable. Some lossy codecs include MP3, WMA, and AAC.
Low Frequency Effect channel	An audio channel encoded in the soundtrack of a movie or other surround-sound source that provides the low-frequency bass sounds that you hear from the subwoofer. The LFE channel is the ".1" in 5.1 and other surround-sound formats.
LP	Long playing. A phonograph record, often referred to as vinyl, that plays at 33-1/3 revolutions per minute.
Luminance	The brightness portion of the two-component video signal that runs through a video cable (the other component is chrominance).
Macros	Sequential code combinations in a remote control that can perform multiple tasks with the push of a button. For example, you can program a macro that turns on your TV, receiver, and DVD player; sets the receiver to the appropriate source and output modes; and starts the DVD that is in the tray.
Main (house) speakers	The main loudspeakers for a sound reinforcement system. These are usually the largest and loudest loudspeakers, and are usually positioned so that their sound seems to come from the area of the main stage.
Mains	Short for main or house speakers in a sound reinforcement system.
MC phono	An MC phono is a phono stage amplification boost needed to connect a Moving Coil cartridge used with a vinyl record replay system. Moving Coil designs are lower in output than a MM or Moving Magnet but sound more detailed.
Media Center extender	A specialized type of media adapter that enables you to view Windows Media Center on your TV without requiring the PC to be locally connected to your home theater. You can either purchase a standalone Media Center extender or get an Xbox 360, which has the Media Center extender functionality built in.
Mic amp	See mic preamp.
Mic level	The typical level of a signal from a microphone. A mic level signal (usually but not always coming from a microphone) is generally lower than -30 dBu. With a very quiet source (a pin dropping?) the signal can be -70 dBu or lower. Some microphones, notably vintage or vintage-style condenser mics, deliver a higher signal level than this for the same sound pressure level. A "hot" mic output level isn't necessarily a measure of the microphone's quality, it's just an option that the designer chose.
Mic pre	Short for mic preamp.
MIDI	Acronym for Musical Instrument Digital Interface. MIDI is the music industry's standard serial communication protocol for the interface and control of musical instruments.
Midrange driver	A type of speaker driver that handles midrange frequencies (200 Hz to 2000 Hz).

Mixer	An electronic device used to combine various audio signals into a common output. Different from a blender, which combines various fruits into a common libation.
MM phono	An MM phono is a phono stage amplification boost needed to connect a Moving Magnet cartridge used with a vinyl record replay system. Moving Magnet designs are higher in output but lower in price than a MC or Moving Coil but often sound a little less detailed.
Monaural	Long for mono. Literally, pertaining to or having the use of only one ear. In the audio field, monaural describes a signal or system which carries audio information on a single channel with the intent of reproducing it from a single source. One microphone is a mono source; many microphones mixed to one channel is a mono mix; a stereo (or, to be picky, a two-channel) mix of many microphones panned left and right is a stereo mix of mono sources. Monaural listening, and therefore mono compatibility of a stereo mix, is more important than you may realize. Most people hear television audio in mono. Most clock radios are mono.
Monitor	In sound reinforcement, monitor speakers (or monitor headphones or in-the-ear monitors) are those speakers used by the performers to hear themselves. In the video and broadcast world, monitor speakers are often called foldback speakers. In recording, the monitor speakers are those used by the engineer and production staff to listen to the recording as it progresses. In zoology, the monitor lizard is the lizard that observes the production staff as the recording progresses.
Mono	Short for monaural.
Monopole	A pole position of speakers in which all the drivers are on one face of the enclosure. Monopole speakers are also known as direct radiating speakers and can be used anywhere in a home theater system.
Moving Coil	A magnetic cartridge in which the stylus moves a coil via the cantilever, while the magnet is fixed in position. Moving coil cartridges tend to have lower moving mass than moving magnet cartridges, but also tend to be lower in output by an order of magnitude. There are, however, high output MC cartridges available that produce comparable levels to MM cartridges. Because the coil must be wired to the outputs, they also tend to be somewhat lower in compliance than MM cartridges, so are not normally amenable to very low tracking weights (they typically operate best at around two grams). The sound qualities are generally thought to be better than any other cartridge type.
Moving Magnet	A magnetic cartridge in which the stylus moves a magnet via the cantilever, while the coil is fixed in position. Moving magnet cartridges tend to have a higher output than moving coil cartridges, but also tend to have a higher moving mass (possibly reducing their ability to deliver fine detail from record). Because the magnet is able to freely move, MM cartridges generally offer a higher compliance than MC cartridges, so the cartridges with the very lowest tracking weights (0.75 to 1 gram) come from the MM camp.
MP3	A shortened form of MPEG-1 Audio Layer 3. MP3 is a common audio file format for digitally storing music and other audio files on a computer or other device. Uses a form of lossy data compression.
MPEG	An acronym for Motion Picture Experts Group. MPEG is a group that meets regularly to develop standards for compressed audio and video formats, such as MPEG-2, which is currently the most common standard used in the video world.
Mult	Short for multiple. In audio work, a mult is a parallel connection (in a patch bay or with specially built cables or wiring) used to feed an output to more than one input. A "Y" cable is a type of mult connection. Also used a verb, as in "Why did you mult the flanger into every input in the board?"
Multizone system	A home theater system that extends beyond a single room, allowing simultaneous access to different audio sources of the home theater in multiple rooms.
MW	MW is the acronym for milliwatt, or the measure of one thousandth of a watt.

Networked PVR	A cross between a personal video recorder (PVR) and video-on-demand (VoD), offered by a service provider such as a cable company. The hard drive that records and stores the video content you want to watch is located in the service provider's office.
Networking	Networking is the ability to send and receive data throughout an environment, either work or domestic, using either wired or wireless media.
Noise	Whatever you don't want to hear. Could be hum, buzz or hiss; could be crosstalk or digital hash or your neighbor's stereo; could be white noise or pink noise or brown noise; or it could be your mother-in-law reliving the day she had her gallstone removed.
Noise floor	The residual level of noise in any system. The lower the noise floor and the higher the headroom, the more usable dynamic range a system has.
Normal	A wiring method which electrically ties together two jacks or two poles of one jack so that in normal operation, there is signal flow between them. Inserting a plug breaks this connection, allowing the signal path to be modified. Normal wiring is common in patchbays and insert jacks.
Notch filter	Separates the color and brightness parts of a video signal into their component parts and sends them to the appropriate internal circuitry. Not as effective as a comb filter.
NTSC	A technical standard developed by the National Television Standards Committee that is synonymous with analog TV — regular (non-HD) television programming.
Nyquist sampling theorem	This theorem states that, when an analog signal is converted to a digital signal, it must be sampled at a frequency that is at least twice the highest audio frequency present in the analog signal. If the audio frequency should exceed one-half the sampling frequency, aliasing can result. Thus, if an analog-to-digital converter is sampling at 44.1 kHz, the audio signal should not exceed 22.05 kHz.
Octave	A range of frequencies of some form of repetitive wave, where the highest frequency is precisely twice the lowest frequency. In music, for example, the fundamental frequency of A below Middle C is 220 hertz. The A above Middle C is 440 hertz.
Ohm	A unit of electrical resistance or impedance. In a DC circuit, the number of ohms of resistance offered by a component can be calculated by dividing the voltage across the component by the current (in amps) flowing through it.
Omnipole	A pole position of speakers in which the drivers radiate sound in all directions. Omnipole speakers are popular for outdoor applications
Optical digital	A method of communicating digital audio between components using light carried on optical fibre. See TOSLink. The data format accords with the S/PDIF specification.
Optical in	The input socket for an optical or TOSlink cable, which transfers digital audio and video information.
Optical out	The output socket for an optical or TOSlink cable, which transfers digital audio and video information.
Output Power	The audio signal exiting a component.
Overhang	As the stylus tracks across the record, it is important that the stylus remain tangent to the groove. Setting overhang we are aligning the cartridge to follow that ideal arc across the record. In a radial tracking tonearm, there are only a couple of points when it actually is
PA	Acronym for Public Address. Today, people who work with PA systems like to say they're working in "sound reinforcement". See SR.
Pan and Scan	An approach used to display widescreen (16:9) content (such as movies) on a standard (4:3) television. With Pan and Scan, a decision is made as to what constitutes the action area in each frame of the movie. That part of the film frame is retained, while the rest of the frame is lost.

Pan, pan pot	Short for panoramic potentiometer. A pan pot is used to position (or even dynamically move) a monaural sound source in a stereo mixing field by adjusting the source's volume between the left and right channels. Our brains sense stereo position by hearing this difference in loudness when the sound strikes each ear, taking into account time delay, spectrum, ambient reverberation and other cues.
Parallel mono	A mode of operation for a stereo amplifier that routes a single input to both channels, but combines the outputs of both channels into a single output by strapping the positive output terminals together, thereby providing twice the current of an individual output.
Parametric EQ	A "fully" parametric EQ is an extremely powerful equalizer that allows smooth, continuous, and independent control of each of the three primary EQ parameters: frequency, gain, and bandwidth. "Semi" parametric EQs allow control of fewer parameters, usually frequency and gain (i.e., they have a fixed bandwidth, but variable center frequency and gain).
Passive 3D	Passive 3D refers to 3D televisions where a pair of non-active 3D glasses are required to watch. These work continuously and do not need to be powered on or switched on like Active 3D glasses.
Passive loudspeaker	A loudspeaker without built-in amplification for all the drivers. Most domestic Hi-Fi loudspeakers are passive, not active.
Patchbay	A collection of usually a large number of jacks allowing convenient access to various points in a system's interconnect wiring. A patchbay can make rerouting signals very convenient without having to fish around with cables in the back of racks or consoles. See spaghetti.
PCM	Pulse Code Modulation. An older system for encoding analog music into a lossless digital format. Music CDs and many computer-based sound files (such as .wav files) are based on PCM.
Peaking	The opposite of dipping, of course. A peak is an EQ curve that looks like a hill, or a peak. Peaking with an equalizer amplifies a band of frequencies.
Peer-to-peer; P2P	A type of network that allows multiple users to download and share files simultaneously, using a direct connection between computers (without the need for a file server).
PFL	An acronym for Pre Fade Listen. Broadcasters would call it cueing. Sound folks call it being able to solo a channel with the fader down.
Phantom power	A system of providing electrical power for condenser microphones (and some electronic pickup devices) from the microphone input jack. The system is called phantom because the power is carried on standard microphone audio wiring in a way that is "invisible" to ordinary dynamic microphones. Most quality condenser microphones are designed to use +48 VDC phantom power. Check the manufacturer's recommendations. Generally, phantom power is safe to use with non-condenser microphones as well, especially dynamic microphones. However, unbalanced microphones, some electronic equipment (such as some wireless microphone receivers) and some ribbon microphones can short out the phantom power and be severely damaged. Check the manufacturer's recommendations and be careful!
Phasing	A dynamic effect in which the phase relationship between the fundamental and overtone components of a sound is continually changing. This is done by passing the signal through an automatically sweeping filter. The effect is often simulated by mixing original signal with a delayed (1 to 10 ms) version of itself. The time of the delay is slowly varied, and the combination of the two signals results in a dramatic moving combfilter effect. A comb filter can be found in your back pocket.
Phone jack	Ever see those old telephone switchboards with hundreds of jacks and patch cords and plugs? Or the plug on the end of a headphone cable? Those are phone jacks and plugs, now used widely with musical instruments and audio equipment. A phone jack is the female connector, and we use them in 1/4" two-conductor (TS) and three-conductor (TRS) versions.
Phone plug	The male counterpart to the phone jack.

Phono jack	Short for RCA phono jack.
Phono plug	Short for RCA phono plug.
Phono Stage (RPP)	The aim of the RPP was to further develop the sonic achievements of the renowned previous Roksan Reference Phono Stage. The highest possible quality components are used throughout the circuit to ensure the best possible sound quality. The result is a highly detailed and insightful performance, which possesses bass weight and involving rhythmic speed along with upper frequency sweetness and a wide, deep soundstage. Designed to match the current Caspian M series, it fits both perfectly, both sonically and aesthetically, into any current Roksan high-end system.
Pixels	The individual points (or picture elements) that combined, form an image on a display.
Plasma	1. (noun) Sometimes called a PDP (plasma display panel). A type of flat-panel display that contains millions of gas-filled cells (pixels) wedged between two pieces of glass. The most common sizes of plasma displays are 42-, 50-, 56-, and 65-inch sizes. 2. (noun) The ionized gas inside a plasma display.
Podcasts	Digital audio or video files that are available for downloading from a Web site. Usually available in a series that are often packaged like daily newscasts or commentary.
Post-fader	A term used to describe an aux send (or other output) that is connected so that it is affected by the setting of the associated channel fader. Sends connected this way are typically (but not always) used for effects.
Pot, potentiometer	In electronics, a variable resistor that varies the potential, or voltage. In audio, any rotary or slide control.
Power Handling	The amount of energy expended per unit time. The common unit is the watt. Power (in watts) in a DC circuit equals voltage times current (in amps). Things are a bit more complicated with AC.
Preamp out	Preamp out is the stereo (left and right RCA) output from a preamp or integrated amp to connect a power amplifier.
Pre-fader	A term used to describe an aux send (or other output) that is connected so that it is not affected by the setting of the associated channel fader. Sends connected this way are typically (but not always) used for monitors (foldback). See post-fader.
Proximity effect	The property of many directional microphones to accentuate their bass response when the source-to-mic distance is small, typically three inches or less. Singers generally like this effect even more than singing in the shower.
Pulley	The part of the motor on a turntable that the drive belt is driven by
PVR	Personal video recorder. A home theater device that records video onto a standard computer hard drive. PVRs (also called DVRs) connect to a program service, usually via a telephone line. TiVo is a major manufacturer of DVRs.
Q	A way of stating the bandwidth of a filter or equalizer section. An EQ with a Q of .75 is broad and smooth, while a Q of 10 gives a narrow, pointed response curve. To calculate the value of Q, you must know the center frequency of the EQ section and the frequencies at which the upper and lower skirts fall 3 dB below the level of the center frequency. Q equals the center frequency divided by the difference between the upper and lower 3 dB- down frequencies. A peaking EQ centered at 10kHz whose -3 dB points are 7.5 kHz and 12.5 kHz has a Q of 2.
Quantization	The digital representation of an analog signal involves sampling the amplitude of the signal at a fast rate. Quantization is the measurement of the amplitude at the time of each sample, expressed as a digital word. Where an analog signal will be continuous as if it were going up a smooth path, quantization will have discrete steps (similar to stair steps).
RAM	Random Access Memory is a type of computer memory that can be read from and written to.

RCA out	RCA out is an output from one device to another for audio or video data using cable with RCA connectors
RCA phono jack	Long for RCA jack or phono jack. An RCA phono jack is an inexpensive connector (female) introduced by RCA and originally used to connect phonographs to radio receivers. The phono jack was (and still is) widely used on consumer stereo equipment and video equipment but was quietly fading into obscurity in the professional and semi-professional sound world. Then phono jacks began cropping up in early project-studio multitrack recorders, which (unfortunately) gave them a new lease on life.
RCA phono plug	The male counterpart to an RCA phono jack.
Rear Speaker	Rear speakers are the speakers mainly used for effects and ambience in a multichannel audio or video set up.
Rear-projection TV	RPTV. A type of projection system in a home theater in which both parts of the front projector (the projector and the screen) are housed in a single box. The projector illuminates the back of the screen instead of the front.
Receiver	A/V receiver. A device that controls your home theater by selecting audio/video sources, decoding surround-sound formats, amplifying sound, and tuning in radio programming.
Resolution	A measure of the precision and sharpness of a video display's picture, based on the pixels or lines of resolution available on the screen. For HDTVs, display vendors typically focus on the vertical lines of resolution, usually 720 or 1080.
RFI	Radio Frequency Interference. High frequency radiation that often results from sparking circuits. This can be manifested in a number of ways in audio systems, but is usually evident as a high-frequency buzz or hash sound.
RG6	A type of coaxial long-run cable that you can use to connect your home theater to the rest of your house.
RMS	An acronym for root mean square, a conventional way to measure the effective average value of an audio signal or other AC voltage. Most AC voltmeters are calibrated to read RMS volts, though on many meters that calibration is accurate only if the waveform is sinusoidal.
ROM	Read only memory is a type of computer memory that cannot be written to, but only read from.
RPTV	Rear-projection TV.
RS-232	Short for Recommended Standard 232. RS-232 is more commonly known as a serial connection. You might use this type of connection between a modem and an older PC. USB has replaced most RS-232 connections.
Rumble	Low frequency noise, usually from a turntable. Given that RIAA equalization boosts the bass signal from a cartridge by an enormous amount (17dB at 50 hertz), the highest quality bearings and excellent isolation from the turntable's motor are required to control rumble.
Running in	An often recommended process for the installation of new Hi-Fi equipment. Essentially, running in is operating the new equipment for some hours, or tens, or hundreds of hours, to bring it up to peak performance. Loudspeakers are physical systems with suspensions and surrounds that do definitely benefit from being run in. Running in cables does seem to improve their performance, and it is certainly true that capacitors and some other components in electrical circuits sound 'better' when run in for some time. None of this is measurable and there are sceptics who say this is all baloney. Use your own ears to decide!
S/PDIF	Sony/Philips Digital Interface Format. A widely used digital audio protocol. It is used as the protocol for all consumer home entertainment equipment. It is distinguished from the professional AES/EBU protocol by incorporating the clock timing information in the main signal. Originally designed for 44.1 and 48 kHz and 16 bits, it now carries up to 96kHz and 24 bits, plus the bitstreams for the various compressed digital audio standards. The connections used are generally coaxial or optical.

Sa value	A measure of the relative liveness of a room. A low Sa means a very live room, and a high Sa means a dead room. $S =$ the total surface area of the room, and $a =$ the average absorption coefficient of all the surfaces
SACD	An acronym for Super Audio Compact Disc. SACD is a newer digital audio format that offers higher-quality sound and greater capacity than a CD.
Sampling frequency	This is the rate at which an analog signal is sampled during the analog-to-digital conversion process. The sampling rate used for compact discs is 44.1 kHz, but professional recordings are often sampled at higher sample rates, such as 96 kHz or even 192 kHz (that's 192,000 samples per second!).
Satellite radio	A service that offers digital radio programming broadcast by satellite to your home theater or car. Satellite radio services such as XM Radio and Sirius offer more than 100 radio stations and charge monthly access fees.
Sensitivity	A measure of the efficiency with which loudspeakers turn the electrical energy provided by a power amplifier into acoustic energy. The more sensitive, the greater the volume for a given amount of power. This is normally measured as the sound pressure level in decibels (dB SPL) achieved by the loudspeaker in an anechoic chamber at a distance of one metre with a 2.83 volt 1kHz signal applied (2.83 volts is the voltage required to deliver one watt to an eight ohm load). Sensitivities generally range from not much more than 80dB up to 100dB. Each 3dB increase in sensitivity is equivalent to doubling the amount of power, so for a loud system it is far better to choose sensitive loudspeakers rather than pay for a higher-powered amplifier.
Separation	A measure of the degree to which leakage from one channel of sound to another channel (crosstalk) is limited. This is typically measured in decibels (e.g. -90dB at 1kHz). While great emphasis is placed on this figure, the reality is that very modest figures like -20 or -30dB (typical of LP records) provide excellent stereo separation and imaging. More important is that the separation should not vary widely between different frequencies, since this could lead to a positioning mismatch between the fundamental and harmonic frequencies for particular instruments.
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Sharpness	The fine details in the picture of a video display. Most displays enable you to adjust the sharpness setting.
Shelving	A term used to describe the shape of an equalizer's frequency response. A shelving equalizer's response begins to rise (or fall) at some frequency and continues to rise (or fall) until it reaches the shelf frequency, at which point the response curve flattens out and remains flat to the limits of audibility. If you were to graph the response, it would look like a shelf. Or more like a shelf than a hiking boot. See also peaking and dipping.
Short runs	Connections between home theater components that are sitting just a few feet from each other or at least in the same room.
Signal to noise ratio	A specification for the level of noise produced by a system. This is normally expressed in the decibel difference between the measured noise and some reference signal.
Signal-to-noise ratio (S/N)	This is a specification that describes how much noise an audio component has compared to the signal. It is usually expressed in dB below a given output level.
Single-layer disc	A DVD or Blu-ray disc in which you can store media on only one side of the disc.

Slap, slapback	A single-delay echo without any repeats. Also see echo.
Sound reinforcement	A system of amplifying acoustic and electronic sounds from a performance or speech so that a large audience can hear clearly. Or, in popular music, so that a large audience can be excited, stunned, or even partially deafened by the tremendous amplification. Means essentially the same thing as PA (Public Address).
Sound Stage	A movie set where audio is recorded along with video. But in the home entertainment (audio) context, the sound stage is area between a pair of stereo speakers from which they appear to make the various sounds appear. High quality audio systems will make the sound stage actually wider than this space, and provide sensations of both vertical sound placement and depth in the stage, offering a 'holographic' or multi-dimensional audio effect.
Sources	Home theater components (devices) that provide the content that you watch or listen to, such as DVD or Blu-ray disc players, DVRs, gaming consoles, CD players, AM/FM tuners, turntables, or home theater PCs.
Spade lugs	U-shaped speaker cable connectors that fit behind a screw on a five-way binding post. Spade lugs provide one of the most secure cable connections.
Spaghetti	That mess of wires and cables in the back of your rack and/or console. You really can tame this.
Speakers	Devices in a home theater system that supply the sound that you listen to. Most home theaters include a surround-sound speaker system with two front speakers, one front center speaker, two side speakers, two or four rear speakers, and a subwoofer.
Speed control (RPM)	The RPM is the new high-specification, ultra-accurate statement speed control for use with the Xerxes 20+. Consisting of an entirely new and highly advanced digital speed control PCB and audiophile-grade components, The RPM represents a significant upgrade from the previous and long-established reference speed control as featured in the discontinued DX2. Featuring a very high quality crystal speed control system, it maintains pitch perfect speed stability for both 33/45rpm. One new feature of the RPM is its ability – thanks to the new advanced digital speed control PCB – to either increase or decrease the speed (up to 6.25% either way). This is a very useful addition for customers in areas or countries for unstable or poor currency voltage to attain the exact, correct speed.
Speed of propagation	Physical waves, whether sound or electromagnetic, have a typical speed of propagation through various media. This varies depending on the medium. Light travels through a vacuum at 3×10^8 metres per second. Sound travels through room-temperature air (20C) at 343.5 metres per second. The speed varies slightly according to temperature, increasing to 349.3m/s at 30C, falling to 337.6m/s at 10C.
SR	An acronym for Sound Reinforcement, which refers to the process (or a system for) amplifying acoustic and electronic sounds from a performance or speech so that a large audience can hear clearly. Or, in popular music, so that a large audience can be excited, stunned or even partially deafened by the tremendous amplification. The term "SR" is to "PA" (Public Address) as the term "environmental cleanup technologist" is to "garbage collector".
Steradians	Just as a radian is an angular unit of measure in 2-dimensional space, so a steradian is an angular unit of measure in 3-dimensional space (solid angle).
Stereo	or Stereophonic. In the home, an audio system which delivers two channels of music, left and right, to create the illusion of a plane of sound facing the listener. High quality audio systems will make the sound stage actually wider than this space, and provide sensations of both vertical sound placement and depth in the stage, offering a 'holographic' or multi-dimensional audio effect.

Stereo	Believe it or not, stereo comes from a Greek word that means solid. We use stereo or stereophony to describe the illusion of a continuous, spacious sound field that is seemingly spread around the listener by two or more related audio signals. In practice, stereo often is taken to simply mean two channels.
Stop Band Rejection	The amount of attenuation given to unwanted signals occurring outside of the test passband region
Streaming	A method of sending audio or video content in which the content plays while it is delivered over your home network, the Internet, or both.
Stylus	A small diamond on the end of a cartridge's cantilever. This sits within the groove of an LP and picks up the vibrations recorded therein. The stylus is generally spherical or elliptical in shape, although other variations have been developed, all with a view to more accurately tracking the groove while reducing damage to it. Elliptical styli are only suitable for tracking weights of less than around two grams because their low contact area with the groove can cause damage.
Subwoofer	A speaker in a home theater surround sound system that is designed to play low-frequency (bass) sounds. Typically placed along the front wall of the room.
Surround sound	A feature in a home theater system that enables you to take full advantage of all the audio signals in your source content (such as television programs and DVD or Blu-ray movies).
S-video	A type of short-run analog video connection in which color and brightness are separated onto two separate signal paths, so the signal can bypass the display's comb filter. Typically results in a clearer picture than composite video (but not component video).
Sweep EQ	An equalizer that allows you to "sweep" or continuously vary the frequency of one or more sections.
THD	All the harmonic distortion components added together to give a summary measure, though often misleading. The imperfection resides in the fact that, audibly, some of the harmonic components are worse than others. In particular, odd-ordered harmonics from the fifth and up are particularly audible in audio systems, whilst even harmonics (produced by valves) are practically inaudible. Solid state amplifiers typically offer THD ratings of less than 0.1% at rated power output but can still have audible harmonic distortion characteristics (often heard as a sheen or 'metallic' overlay to the sound. Valve amplifiers might offer a 2% THD but sound extraordinarily clean and musical.
Three-way loudspeakers	A loudspeaker which divides the incoming signal into three different frequency bands for distribution to drivers. It sends high frequencies to the tweeter, the middle frequencies to the midrange driver, and the low frequencies to one or more woofers.
Time alignment	Systems for ensuring that audio signals from various loudspeakers or drivers arrive at the listener at the correct time. For example, high end loudspeaker makers will recess the tweeter further into the enclosure to ensure that the high frequencies arrive at the listener at the same time as lower frequencies, with a view to delivering a more coherent sound. With surround sound it is important that the sound from the surround speakers does not arrive early, even though these speakers are often situated closer to the listener than the main speakers; so home theatre receivers incorporate a system to allow the sound to these speakers to be (adjustably) delayed by some milliseconds.
Tinnitus	The ringing in the ears that often results from prolonged exposure to very loud sound levels. A sound in the ears, such as buzzing, ringing, or whistling, caused by volume knob abuse!
TiVo	The major manufacturer of DVRs. With TiVo, you can record video content onto a hard drive of a standalone device. Two models are available: a standard definition model or an HD DVR, which records high-definition content. Both require a monthly service plan.

Tone controls	Labelled 'bass' and 'treble', fitted to a preamplifier these provided a means of boosting or cutting the bass or treble of the signal. They typically provide up to ten decibels of boost or cut at 50 hertz for bass and 10,000 hertz for treble. Best avoided for high fidelity.
Tonearm	Position the attached cartridge in the correct alignment to play an LP record. Is normally pivoted at the back and provides for an adjustable tracking weight by the use of a spring-loaded or weight-loaded mechanism; and usually have a damped cueing lever to allow the stylus to be gently lowered to the surface of the record. Over the years some makers have provided parallel movement tonearms which do not use a pivot. In theory these should track the LP better, but are difficult to design to work well.
Toslink	An optical audio interconnect cable used in home theaters to connect DVD players, HDTV tuners, video game consoles, and more to the A/V receiver or controller. Toslink cables use fiber optics that carry the digital signal as pulses of light.
Tracking Weight	The correct downforce and anti-skate setting to a cartridge, so it reads the most information possible from the record wall without causing damage to the cartridge or the record.
Transformer	A device used to alter the voltage of AC electricity. This typically consists of an iron ring of some kind with two coils of wire wound around it. The input current is fed to one of the coils, which generates a magnetic field in the iron ring and which, in turn, generates a voltage in the other coil. The proportion of input voltage to output voltage is the same as the proportion of the number of coil windings on the input (called the 'primary') and output ('secondary'). Most transformers use either a square-shaped ring with the primary and secondary windings on opposing sides, or are toroidal, which means that the ring is shaped like a donut and the primary and secondary windings cover the entire surface, overlapping each other. Transformers do not work with DC electricity because while DC can generate magnetism in the iron core, a magnetic field cannot in turn induce electricity in a wire unless it is changing (or the wire is moving with respect to it).
Treble	The audible frequencies typically constituted by frequencies above about 5,000 hertz, although the dividing line between midrange and treble is one of opinion. The human ear is less sensitive to treble than to midrange frequencies.
TRS	Acronym for Tip-Ring-Sleeve, the three parts of a two-conductor (plus shield) phone plug. Since the plug or jack can carry two signals and a common ground, TRS connectors are often referred to as stereo or balanced plugs or jacks. Another common TRS application is for insert jacks, used for inserting an external processor into the signal path.
TS	Acronym for Tip-Sleeve, the two parts of a single conductor (plus shield) phone plug. TS connectors are sometimes called mono or unbalanced plugs or jacks. A 1/4" TS phone plug or jack is also called a standard phone plug or jack.
Turntable	A device to rotate at the correct speed a vinyl LP recording. More generally, the word can refer to the turntable itself along with an installed tonearm and cartridge. The platter on the turntable (the rotating part) is powered by a small electric motor. Different types of turntables are defined by the drive mechanism used to connect motor to platter. The three most common types are idler-wheel, belt drive and direct drive. Belt drive turntables use a rubber-like belt or band running around a pulley on the motor shaft and a rim on the underside of the platter. These appear in a wide range of turntables, from inexpensive ones through to some of the most prestigious models available. In direct drive turntables the motor runs slowly and the spindle at the centre of the platter is connected to the shaft. These appear in some very high quality turntables and offer particular advantages of high acceleration to speed, plus electronic speed control and stability.
Tweak	A subtle change to home audio or A/V intended to improve the sound. This could range from merely adjusting the system's controls, through replacing cables and experimenting with speaker positions, to all kinds of damping and isolating procedures.

Tweeter driver	A type of speaker driver that handles the high-frequency treble range (above 2000 Hz).
Two-way loudspeakers	A loudspeaker which divides the incoming signal into two different frequency bands for distribution to drivers. It sends high frequencies to the tweeter and low frequencies to one or more woofers.
Unbalanced	An electrical circuit in which the two legs of the circuit do not have the identical impedance to ground. Often one leg is also at ground potential. Unbalanced circuit connections require only two conductors (signal "hot" and ground). Unbalanced audio circuitry is less expensive to build, but under certain circumstances is more susceptible to noise pickup.
Universal remote controls	Remote control devices used in a home theater that are supposed to work with any electronics device via onboard code databases. Some programmable remotes allow you to create macros that perform multiple tasks at one time.
Upconversion	A scaling of the resolution of a video signal to a higher resolution. This process can occur inside a DVD or Blu-ray disc player, an A/V receiver, or an HDTV. For example, an A/V receiver with upconversion takes lower-resolution video input (such as composite or S-video) and converts it to a higher-resolution format (such as component video or HDMI).
USB	An acronym for Universal Serial Bus. USB is a serial bus standard that allows you to connect peripheral devices to a computer.
Video sources	Devices in a home theater system that provide video content (TV or movies), such as DVD players, Blu-ray disc players, VCRs, satellite TV receivers, and digital video recorders.
VoD	Video-on-demand. A service that provides movie rentals online, similar to pay-per-view (but the content is available at any time, rather than at set times). Many cable companies now offer VoD as part of their digital cable services
Volume	The sound level in an audio system. Perhaps the only thing that some bands have too much of.
VRMS	Acronym for Volts Root Mean Square. See RMS.
VTA	When an original record master is cut, the cutter sits at a slight angle to the record surface because the cutter head needs to be lifted slightly above the record surface. This angle is called the Vertical Tracking Angle (VTA) and can vary from record to record. In the 1960s most records were cut with a VTA of 15 degrees, but by the 1980s the standard became 20 degrees. Yet even though we have these 'standards', many successful cutting engineers still make their own choice of VTA in order to give the sound a particular character, which is their trademark.
Wet	A signal with added reverberation or other effect like echo, delay or chorusing.
Wi Fi	A trademark for products that are based on 802.11 wireless computer LAN standards.
Windows Media Center	Media software included in certain versions of the Microsoft Windows Vista operating system (Window Vista Home Premium and Windows Vista Ultimate). Using a PC with Windows Media Center is one of the easiest ways to incorporate a computer into your home theater system.
Wireless	Wireless is the connectivity of one device to another that requires no physical cabling
Wireless access point	A device that acts as a base station of a wireless LAN, connecting one or more wireless devices to a wired LAN
WMA	An acronym for Windows Media Audio. WMA is the standard audio format used by Windows Media Player. Most WMA files use a lossy data compression system.
Woofer driver	A type of speaker driver that handles the low-frequency bass range (below 200 Hz).
Wow and Flutter	A defect affecting analogue audio signal sources that rely on rotating the medium, particularly LPs and compact cassettes. Wow is a slow, repetitive speed variation, typically repeating at less than once per second. If an LP or audio cassette undergoes this, it produces slow variations in the playback frequency. Wow is specified in per cent and specifications of more than around 0.1% are

XLR	An XLR connector is a type of electrical connector used mostly in professional audio and video electronics cabling applications such as for stage microphones and other analog sound equipment, as opposed to home audio/video equipment using RCA connectors. It is characterized by a large cylindrical connector body, commonly with three prongs or pins, but other variants have anywhere from two to six pins.
XLR In/out	The XLR connector was an incremental variant that started from the Type O connector made by Cannon (ITT Cannon), which featured an oval-shaped body and receptacle with three prongs and a latch locking mechanism. Its actual predecessor was the X series without a locking mechanism, and by 1950 one was added and it became the XL series. By 1955, the female connector was modified to have synthetic rubber insulation surrounding the female contacts and this was now the XLR connector. As with all types of connectors, there are a male and a female version. The latter is designed to have the ground pin (or pin 1) make contact first during insertion and last during removal. This ensures that only minimal noise is picked up during mating of the connectors, allowing for live hot plugging or swapping without any major noise going to the speakers such as the case with RCA connectors.
XLR out	XLR out is the socket out stage for an XLR balanced connection
Y-Cable	A cable with one input and two outputs, used to mult a source to two inputs.