

Film Sound Glossary

Acoustics - The characteristics, such as how sound is reflected and absorbed, that give a space such as a living room, concert hall, or cinema an identifiable sonic "signature."

Ambience - Low-level sounds (including sound reflections) that set a mood or suggest the character of a particular place.

Analog vs. digital soundtrack - The width of an analog soundtrack varies in a way that is directly analogous to the varying soundwaves of the original sound. When played back, the varying width of the track is translated to a varying electrical voltage which ultimately causes the theatre's loudspeaker cones to move back and forth to recreate the original sound. With a digital soundtrack, points along the soundwaves of the original sound are assigned a numeric (or digital) value, consisting of ones and zeroes represented as tiny dots on the track. When a digital track is played back, the numeric values are converted to the varying electrical voltage needed to drive the speakers. (See [Optical soundtrack](#).)

Atmospheres - Low level background sounds, such as wind or traffic noise, on a film's soundtrack which add to the reality of a scene. These sounds are sometimes recorded separately at a shooting location, creating what is called a wild track for mixing into the soundtrack later.

Dolby Digital - The most widely used multichannel digital sound format in the world, used for everything from 35 mm films in the cinema to HDTV broadcasts and DVD discs in the home. Dolby Digital provides up to 5.1 channels (left, center, right, left surround, right surround, and low-frequency effects).

Dolby Digital Surround EX - A variation of Dolby Digital that enables 5.1-channel Dolby Digital soundtracks to carry a third, center-rear surround channel for greater realism and more precise sound placement. Surround EX prints are compatible with all Dolby Digital cinemas, whether or not equipped to play the additional surround track.

Dolby noise reduction - Complementary (record-play) signal processing system that reduces the noise inherent in analog recording media without affecting the sound being recorded.

Dolby SR - The most powerful analog Dolby system, Dolby SR (spectral recording) is used today for the analog soundtracks on virtually all releases, including those with digital tracks. Dolby SR soundtracks provide a dynamic range rivaling that of digital, are compatible with any 35 mm theatre, and provide backup in case of playback problems with digital tracks.

Dolby Stereo - The original name for Dolby Laboratories' multichannel analog soundtrack technology, whereby four channels of sound (left, center, right, surround) are encoded onto two soundtracks on the film, and then recovered in the cinema by means of a Dolby cinema sound processor.

Dolby Surround - The umbrella term used to identify the analog home surround-sound format derived from the Dolby 35 mm analog soundtrack format.

Dolby Surround Pro Logic - The advanced form of Dolby Surround decoding found in virtually all home theater systems, providing at home from video sources the same four-channel surround sound heard in cinemas from Dolby analog theatrical films.

Dubbing theatre - A theatre equipped for and dedicated to mixing film soundtracks. The sound systems in dubbing theatres where Dolby soundtracks are mixed and those in cinemas equipped for Dolby playback are calibrated to the same standards. This helps makes it possible for audiences to hear the sound the director heard-and intended-when the soundtrack was mixed.

Dynamic range - The range between the loudest and softest sounds a soundtrack and/or sound system can reproduce properly.

Effects - Sound effects, i.e., the non-musical elements on a soundtrack other than dialogue.

Foley - The art of recreating incidental sound effects, such as footsteps or rustling clothes, in sync with the picture. Named after one of its first practitioners.

LFE - The LFE, or low-frequency effects, channel on Dolby Digital 5.1-channel soundtracks carries the powerful low bass frequencies (explosions, rumbles, etc.) that are felt more than heard.

Magnetic soundtrack - Narrow stripes of oxide material (similar to the coating on recording tape) added to a developed release print, then recorded in real time with the film's sound. Introduced in the 1950s to provide the first stereo sound in the cinema, magnetic soundtracks have been superseded today by advanced analog and digital optical soundtracks, which are more practical and durable.

Mix - The blend of dialogue, music, and effects which comprises a film's soundtrack. Also, when used as a verb, the process of assembling and balancing these elements electronically, thereby creating the final soundtrack.

Optical recorder - The machine that transforms a completed mix on tape or disc into an optical soundtrack. It creates a photographic negative of the optical track, which is combined ("married") with a negative of the picture to create a release print (see [Printer](#)).

Optical soundtrack - Photographic strips on movie prints that vary in some way with the variations in sound. Analog optical soundtracks vary in width, while digital optical soundtracks have patterns of dots (see [Analog vs. digital](#) and Variable area). As the film is pulled through the projector's soundhead, a narrow light beam passes through the moving soundtrack, which causes the intensity of the beam to vary. The varying light falls on a sensor, creating electrical signals, which the theatre's loudspeakers convert back to sound.

Printer - A machine that exposes raw film stock to negatives of the movie's soundtrack and picture, at speeds up to 20 times faster than film is projected, to create a release print. The rapid, simultaneous printing of sound and picture contributes significantly to the relatively low cost of 35 mm optical release prints (see [Optical soundtrack](#)).

Release print - The actual film played in the cinema. A release print consists of reels approximately 20 minutes long which are played consecutively without interruption either by alternating between two projectors, or by splicing the individual reels together into one large reel called a platter. Prints are recorded at 16 frames per foot and played at 24 frames per second.

Stereo - Sound recording and reproduction by more than one (mono) channel. In home music reproduction, "stereo" came to mean two channels (left and right), while in the film industry, "stereo" is understood to include surround and center channels in addition to left and right. To avoid confusion, multichannel stereo is often referred to as "surround sound."

Subwoofer - A loudspeaker dedicated to reproducing very low bass. Dolby Digital soundtracks provide a separate low-frequency effects (LFE) channel specifically for playback over subwoofers.

Surround sound - The reproduction of ambience, atmospheres, and occasional special effects that are recorded on one or more dedicated channels, and played through speakers placed along the sides and rear of the auditorium to surround the audience.

THX - A trademark identifying compliance with the playback performance parameters of Lucasfilm THX for commercial and home theatre sound systems. THX develops standards for the playback environment, regardless of film format. THX-certified theatres use professional Dolby cinema processors for playing Dolby soundtracks (which is why both logos can appear on the same cinema marquee), and THX-licensed home theater systems are based on Dolby Surround Pro Logic and Dolby Digital decoding.

Variable area - The technical term for the analog optical soundtrack whose width varies with the sound. A Dolby analog optical soundtrack sometimes is referred to as an SVA track, for "stereo variable area." An earlier type of optical track, variable density, varied the track's photographic shading (rather than its width) with the sound.