Dolby Digital is the common version with up to six discrete channels of sound. Dolby digital is the name for audio compression technologies developed by Dolby Laboratories. The audio compression is usually lossy. The first use of Dolby Digital was to provide digital sound in cinemas from 35mm film prints. It is now also used for other applications, DVDS and Blue-ray and game consoles.

DTS is a series of [multichannel audio](http://en.wikipedia.org/wiki/Surround_sound) technologies owned by DTS, Inc. DTS-ES™ uses existing digital multichannel technology to deliver the "5.1" channels of regular DTS, plus it adds a discrete, full-bandwidth back surround channel. Commonly refers to the company's lossy encoding scheme, which greatly reduces the size of digital audio data by discarding information that, in theory, cannot be perceived.

Dolby Pro Logic is a [surround sound](http://en.wikipedia.org/wiki/Surround_sound) processing technology developed by [Dolby Laboratories](http://en.wikipedia.org/wiki/Dolby_Laboratories), designed to decode soundtracks encoded with [Dolby Surround](http://en.wikipedia.org/wiki/Dolby_Surround). [Dolby Stereo](http://en.wikipedia.org/wiki/Dolby_Stereo) was originally developed by Dolby in 1976 for analog [cinema](http://en.wikipedia.org/wiki/Movie_theater) sound systems. Adapted to be used in homes in 1982 as [Dolby Surround](http://en.wikipedia.org/wiki/Dolby_Surround).; it was then replaced by the newer and improved Pro-Logic system in 1987. However, the term "[Dolby Surround](http://en.wikipedia.org/wiki/Dolby_Surround)" is still used to describe the encoding technology or matrix-encoded sound track, where as Pro Logic refers to the decoding technology and processor.

The name MP4 player is a marketing term for inexpensive [portable media players](http://en.wikipedia.org/wiki/Portable_media_player), usually from little known device manufacturers. Since most MP4 players through 2007 were incompatible with the *.mp4* container format. Instead, the term refers to their ability to play more file types than just MP3.

SRS stands for Sound Retrieval System. It is a patented [psychoacoustic](http://en.wikipedia.org/wiki/Psychoacoustic) 3D audio processing technology. The SRS technology applies [head-related transfer functions](http://en.wikipedia.org/wiki/Head-related_transfer_function) (HRTFs) to create an immersive 3D soundfield using only two speakers, widening the "[sweet spot](http://en.wikipedia.org/wiki/Sweet_spot_(acoustics))," creating a more spacious sense of ambience, and producing strong localization cues for discrete instruments within an audio mix. SRS is not a [Dolby matrix surround](http://en.wikipedia.org/wiki/Dolby_Pro_Logic) decoder but works with normal stereo recordings.

WMA9 is short for “Windows Media Audio 9”, a lossy high-resolution stereo / multichannel codec developed by Microsoft for internet audio streaming. The WMA family also includes a stereo-only codec (WMA9) and

WMA9 Lossless, an archiving/mastering codec.

Mixing in Surround In a surround mix, sounds can appear to originate from many more or almost any direction depending on the number of speakers used, their placement, and how audio is processed. Mixing in [surround](http://en.wikipedia.org/wiki/Surround_sound) is very similar to mixing in stereo except that there are more speakers, placed to surround the listener. In addition to the horizontal panoramic options available in stereo, mixing in surround lets the [mixing engineer](http://en.wikipedia.org/wiki/Mix_engineer) pan sources within a much wider and more enveloping environment.

Reissuing Back Catalog Material one of the unintended by-products of older, classic projects that are being reissued into surround sound by the record companies is the resurrection and the rescue of their older analog and digital masters that are aging and are so badly documented to the point that restoration becomes a monumental task.

Introduction - By investing in a surround monitoring system and learning the basic tools and techniques of mixing and mastering media for surround. The ability to understand and work in new and upcoming technologies can help give your career a marketing edge. Customers demand realistic entertainment. surround sound works because multiple audio [channels](http://www.webopedia.com/TERM/C/channel.html) are received through [speakers](http://www.webopedia.com/TERM/S/speaker.html) that are positioned at various locations in the room. This is programmed into the source and the sound tracks are decoded when the source is played. Surround sound adds realism and a new field of depth to your listening experience. This is accomplished not only because you have more speakers for output but because the sound recording itself contains more audio channels.

Past to the Present - Fantasia was the first to introduce multichannel sound to the public. The final mix of Fantasia was printed onto four master optical tracks for playback using a special RCA system called “Fantasound.” RCA stopped making this system after setting another one up at the Carthay Circle Theater in Los Angeles. Since the beginning, surround sound had been used in motion picture soundtrack production with great success. Dolby noise reduction and multichannel audio was introduced in the theaters. Sound was strictly a lo-fi mono experience until the early 80’s. In 1982 Dolby Labs introduced “Dolby Surround,” an extension of their professional Dolby Film Sound Project. By 1987, millions of homes were beginning to be fitted with consumer receivers and high-end audio systems that were integrated with video. With the introduction of Dolby Pro Logic, a system was put into place that allowed phase information to be extracted from the two tracks of stereo program to reproduce the L/R/C Surround field. It became possible for discrete 5.1 surround sound to be encoded directly with the new visual entertainment medium of the early 21st century, known today as the DVD.

Monitoring in 5.1- 5.1 surround sound is the most common format. It includes a total of six channels — five full-bandwidth channels with 3-20,000 Hz frequency range for front left and right, center, and left and right surrounds, plus one "low frequency effects" (LFE) subwoofer channel for frequencies from 3-120 Hz. Also 6.1 and 7.1 surround sound systems are also available, and simply add another full-bandwidth channel to the mix. In a 5.1 surround setup the speakers should be placed at equal distances to the listener (at the center position). Three of the speakers are placed to the front, with the center speaker being dead placed dead center and the left/right speakers being placed at 30 degrees arcs to the center point. The surround speakers are then placed behind the listener at 110 degrees arcs to the center point.

Active / Passive Monitors in Surround - Active monitors include a powered amplifier(s) within their design, whereas passive monitors require an external power amp to be used to power their drivers. Many of the newer high-end audio interfaces now include a master volume that can be programmed to control all of the channels in a surround sound system, since dedicated hardware monitor controls can be costly. With regard to LFE channel, almost all surround sub speakers are actively self-powered but many of the systems provide active crossover outputs for diverting the low-frequency energy to the sub speakers while sending the highs out to all 5 speakers. Take precautions and do research on the variables that come with setting up of your system.

Surround Interfacing - Surround Interfacing requires at least six output channels. The audio should be either a dedicated audio interface with at least two inputs and six outputs and a multichannel audio interface (ex: 8 in’s x 8 outs). Over time USB/FireWire interfaces have fully supported surround sound. These devices allow audio easily and affordably routed from your host DAW or application to an external amp or active monitor system. The various output buses of a DAW are designed to route to the first six outputs in a L/R/C/S/LS/RS configuration and can be change to fit program and mastering requirements.