

## 1: What is Audio Return Channel (ARC)? - CNET

*Multichannel television sound, better known as MTS (often still as BTSC, for the Broadcast Television Systems Committee that created it), is the method of encoding three additional channels of audio into an analog NTSC-format audio carrier.*

Philippines for NTSC How MTS works[ edit ] The first channel is the stereo difference left minus right , used to add stereophonic sound to the existing monophonic the left plus right stereo sum audio track. A second signal MTS rides on top of this mono carrier wave. The stereo information is dbx - encoded to increase the signal-to-noise ratio at low levels , to aid in noise reduction. The original specifications called for a brick wall elliptical filter in each of the audio channels prior to encoding. The cutoff frequency of this filter was 15 kHz to prevent any horizontal sync crosstalk from being encoded. Manufacturers of modulators, however, used lower cutoff frequencies as they saw fit. Typically, they chose 14 kHz although some used filters as low as 12 kHz. The elliptical filter was chosen for having the greatest bandwidth with the lowest phase distortion at the cutoff frequency. The filter used during EIA testing had a characteristic that was 40 dB at 10 kHz. As transformer audio coupling was common at that time, the lower frequency limit was set to 50 Hz although modulators without transformer inputs were flat down to at least 20Hz. Typical separation was better than 35 dB. However, level matching was essential to achieve this specification. Left and Right audio levels needed to be matched within less than 0.5 dB. Maintaining the phase stability of the horizontal sync is essential to good audio in the decode process. During transmission, the phase of the horizontal sync could vary with picture and chroma levels. This was more of a problem with UHF transmitters of the day. This sub-carrier is at 5x horizontal sync and is also dBx encoded. A third PRO professional channel is provided for internal use by the station, and may handle audio or data. The PRO channel is normally used with electronic news gathering during news broadcasts to talk to the remote location such as a reporter on-location , which can then talk back through the remote link to the TV station. Specialized receivers for the PRO channel are generally only sold to broadcast professionals. This sub-carrier is at 6x horizontal sync. MTS signals are indicated to the television receiver by adding a 19 kHz pilot tone. The MTS pilot is locked or derived from the horizontal sync signal used to lock the video display. Variations in phase or frequency of the horizontal sync are therefore transferred to the audio. UHF transmitters in use in the 1970s generally had significant phase errors introduced in this signal making the transmission of stereo audio on UHF stations of that time nearly impossible. Later refinements in UHF transmitters minimized these effects and allowed stereo transmission for those stations. Because the pilot tone frequency at 19 kHz It remains in use in LPTV and in analogue cable television.

2: [www.enganchecubano.com](http://www.enganchecubano.com): Audio & Accessories Deals: Electronics

*However, the soundbar that plugs into the TV, which the other speakers communicate with, is all you have to connect directly to the TV to verify that the sound works. Contact the manufacturer of the speakers for specific steps on connecting the wireless speakers to the soundbar.*

Learn which audio formats are supported on Apple TV and the setup you need to play sound in the highest quality. From here you can choose the following: Plays audio on multiple speakers and a subwoofer, like a 5. Here are two setups that you can use: A Dolby Atmos enabled sound bar: This plays sound in Dolby Atmos without an AV receiver or extra speakers. Sends sound to multiple speakers that you have set up. To do both, you need a television or an AV receiver or sound bar that supports both Dolby Atmos and high-quality video formats. Under Atmospheric Audio, check that Dolby Atmos is on. You can also check while watching content that supports Dolby Atmos. Under Info, look for. Some movies in the iTunes Store might include audio tracks in alternate languages that might not support Dolby Atmos or surround sound even if the primary language supports it. If you turn on audio descriptions, then audio plays in stereo unless the content provider includes a higher-quality track. Information about products not manufactured by Apple, or independent websites not controlled or tested by Apple, is provided without recommendation or endorsement. Apple assumes no responsibility with regard to the selection, performance, or use of third-party websites or products. Apple makes no representations regarding third-party website accuracy or reliability. Risks are inherent in the use of the Internet. Contact the vendor for additional information. Other company and product names may be trademarks of their respective owners. Mon Sep 17

## 3: LG Home Entertainment: Best TV Ever. Theater Setup. Bold Colors | LG USA

*Connect cables from the analog audio output of the TV to a set of corresponding audio inputs on a soundbar, home-theater-in-a-box system, stereo receiver, home theater receiver, or powered speakers (speakers that have their own built-in amplifiers - such as many computer speakers).*

Stereo, Quad and 5. Our ability to judge visual depth and perception is based on interpreting the subtle differences between the images we see in our left and right eyes. Our ability to locate where sounds are originating is possible in part because we have learned to unconsciously understand the minute and complex time-difference relationship between the sounds from our left and right ears. If a sound comes from our left side the sound waves will reach our left ear a fraction of a second before they reach our right ear. In stereo production we are dealing with sound intended for our left and right ears, and the inherent differences represented. Therefore, recording and playing back stereo signals requires two audio channels. Creating the Stereo Effect In TV production there are several approaches to creating the stereo effect. First, there is synthesized stereo where stereo is simulated electronically. Here, a monaural one channel, non-stereo sound is electronically processed to create the effect of a two-channel, stereo signal. A slight bit of reverb reverberation, or echo adds to the effect. Although this is not true stereo, when reproduced through stereo speakers, the sound will be perceived as having more dimension than monaural sound. The elaborate audio board below can easily accomplish this. True stereo is only possible if the original sound is recorded with two microphones or a microphone with two sound-sensing elements. This process is fairly simple when the output of a stereo mic is recorded on two audio tracks and the two tracks are subsequently reproduced with two speakers. Things get much more complicated when you want to mix in narration, music, and visual effects. Typically in productions a monophonic non-stereo recording of narration is mixed into a background of stereo music or on-location stereo sound. The narration or primary dialogue in a dramatic production is typically placed "center stage" and the stereo track adds a left-to-right stereo dimension. But, what if you are micing a contemporary music session? In this type of production you typically need to mic each element separately and then create the best sound balance and mix in postproduction while keeping in mind the original visual perspective. The recorder shown on the right records tracks on two-inch, reel-to-reel tape. Note the 16 VU meters on the machine. Today, audiotape has been largely replaced by computer-type hard disks. This type of digital recording not only makes it possible to record and play back high quality digital sound, but to almost instantly find needed segments. By recording the various sources of sound on separate audio tracks, they can later be placed in any left-to-right sound perspective. In this case, the sound mix and balance are the responsibility of the conductor rather than an audio engineer. Two approaches to stereo micing are used: Each has its advantages. The X-Y Stereo Mic Approach The easiest approach to stereo recording is to use an all-in-one stereo mic, which is basically two mics mounted in a single housing, or, as shown on the left, two mics mounted outside of a housing. This approach to stereo is referred to as the coincident pair or X-Y technique. Single unit stereo mics are useful in on-location productions where things need to be kept simple and audio can be successfully miced from one location. However, this approach can limit stereo separation a clear and distinct separation between the left and right stereo channels, and the ability to control the left and right sound perspective. Although not as convenient, two separate mics can also be used in for X-Y recording. See first illustration below. With this approach two cardioid mics are pointed toward the subject matter, creating about a degree arc of sensitivity in green below. Although more technically complex, some engineers feel that the mid-side, or M-S technique on the right in the illustration provides greater stereo flexibility. In this case, bidirectional and unidirectional supercardioid mics are typically used together. The directional mic shown in dark blue in the illustration on the right above picks up the basic audio in the center of the scene. The areas of minimum sensitivity for this mic are oriented toward the camera, thereby suppressing unwanted production and studio noise. The outputs of both mics are fed through a complex audio matrix circuit that uses the phasing differences of the mics to produce the left and right channels. By adjusting the level of the mid center mic in relation to the side figure 8 mic level, the stereo image can be made narrower or wider without

moving the mics. As in the case of X-Y mics, MS mics are available that include both of these mic elements within a single housing. Maintaining The Stereo Perspective Stereo audio in TV production faces a major problem because of camera angle and distance shift with each new camera shot. So we have to compromise. However, for lengthy shots that clearly represent changes in stereo perspective, a pan pot can be used to subtly shift the ocean so that a true left-to-right stereo perspective is simulated. A pan pot consists of two or more faders volume controls ganged together. They can be used on an audio board during postproduction to slowly move a source of sound from one stereo channel to the other. This will avoid jarring shifts in sound perspective as shots are changed. Changes in the stereo placement end up being a creative decision. There are no rules but there are two guidelines. First, try to simulate the authentic stereo sound perspective whenever possible. Keeping Dialogue "Center Stage" For maximum sound clarity the dialogue for dramatic productions should be mixed to keep it in the center of the stereo perspective. In most cases this will conform to what you see on the screen. The momentary exception might be when someone or something enters from one side of a frame Even with center-stage dialogue a stereo perspective can be added by mixing in stereo background music and sound effects during postproduction. In sporting events background stereo sound of the crowd is typically mixed in with monophonic feeds of play-by-play narration. If there are two announcers, pan pots can be used to place them slightly to the left and right of center but never at the extreme ends of the left-right stereo perspective. For cuts to roving cameras focused on cheerleaders or sideline activity a stereo mic mounted on the camera can be faded into existing program audio when that camera is switched up. Stereo Playbacks Although many TV sets have stereo speakers built in, the distance between the speakers can limit the stereo separation and, therefore, the stereo effect. Ideally, a stereo signal should be reproduced by two good-quality speakers placed about one meter three feet on either side of an average-sized TV set. The distance between the speakers depends on the viewing distance and the size of the screen. The farther back the listener is the greater the distance can be between the speakers. If a noticeable audio "hole" seems to be present between the left and right sound sources, the speakers are too far apart. The stereo effect is often enhanced or even to a degree created in postproduction by introducing phasing differences between the left and right audio signals. Stereo covers about a degree frontal perspective. Surround-sound, quadraphonic sound and 5. Even though the number of homes equipped with full 5. The 6th channel which is the ". Hence, the system is referred to as 5. Bass is essentially nondirectional, so the speaker can be placed almost anywhere in the room. Of course, placing all these speakers in appropriate places and distances within a room strains most interior design schemes, so to tackle that problem researchers analyzed the way we hear sounds and came up with a surround-sound system that uses only two high quality speakers. To achieve the expanded effect, multi-channel audio recordings are digitized and fed into a computer during postproduction. Using this technique, even a vertical dimension can be suggested. Some of the new flat-panel TV sets, which have only two speakers in the front, make use of this approach to simulate sounds that seem to be emanating well off to the left or right of the TV set. Quadraphonic Mics Quad mics that detect sounds in nearly a degree perspective have four mic elements within a single housing. From these mic elements separate channels for five or even six speakers can be derived. Typically, an upper capsule contains two mic elements and picks up sound from the left-front and right-rear. Another capsule mounted below this one picks up sound from the right-front and left-rear. These are then recorded onto four audio tracks. Amplifiers will often have red and black terminal connections to indicate these differences. Among other things, you will experience sound cancellation effects and a loss of bass. Without "a load" of the speakers, some amplifiers can burn out.

### 4: TV, Video & Home Audio Electronics for sale | eBay

*Home Audio Power Amplifier System - 2X40W Mini Portable Dual Channel Surround Sound Stereo Receiver Box w/ LED - For Amplified Subwoofer Speakers, CD DVD Player, Theater via mm RCA - Pyle PCA2.*

I have picture and sound on the TV. Maybe a temporary fix would be to let you TV open, your laptop connected and restart the laptop. Then try opening only the movie you would like to watch. As I am typing this, I can see this screen on my TV, so we are connected properly. However, my laptop shows the Sony TV in my audio devices. Then on the playback tab in the window that opens press right click and check the show disabled devices and the disconnected and see if anything show up in the list. You havent tell me yet if you went to your TV settings and try looking at its audio settings. If not, look there too. The window that opens shows two icons: The first one is my default system audio, the other shows the Sony TV. The Sony TV has a little round green icon next to it with a telephone in the middle. When I right click in the Playback window to see disabled devices, nothing shows up. I believe the green icon next to the Sony TV is the indication that it is enabled. This allowed me to test the speakers on my Sony TV and the sound is loud and clear from the laptop to the TV when I do the test. Then you pick speakers which are TV speakers. Try going to Device manager and see if you find anything sound related. Also look if your laptop is projecting on maximum resolution on your tv. If yes change the resolution on one random and then set it back at maximum. If nothing works, i give up. Im getting too frustrated. Maybe more than you.

### 5: Flanner's Home Entertainment Home Entertainment, HDTV™s, Home Automation, West Allis, WI

*True stereo is only possible if the original sound is recorded with two microphones or a microphone with two sound-sensing elements.. This process is fairly simple when the output of a stereo mic is recorded on two audio tracks and the two tracks are subsequently reproduced with two speakers.*

Whisper at 3 meters 10 feet 30 "Silent" TV Studio 20 The second use of the term decibel, dBm for the milliwatt reference level is a unit of electrical power. In audio production we are primarily interested in dBm, which represents levels of electrical power going through various pieces of audio equipment. Two types of VU meters for measuring the loudness of sound are in wide use: Contrary to what logic might dictate, 0dBm generally just designated 0dB on a VU meter is not "zero sound" but, in a sense, the opposite, the maximum desirable sound level. The 0dB point on the meter is just a reference point. The animated versions above illustrate how digital meters respond to sounds. The VU meter on the right is the traditional analog meter that has been around in one form or another since the dawn of radio. Although easy to read, most versions do not accurately respond to short bursts of loud sound. The dB level going through audio equipment must be carefully controlled. If the signal is allowed to pass through equipment at too low a level, noise can be introduced when the level is later increased to a normal amplitude audio level. If the level is too high significantly above 0 dB or into the red areas on the VU meter , distortion will result -- especially with digital audio. To ensure audio quality, you must pay constant attention to maintaining proper audio levels. The animated meter shown here indicates a sound level that is a bit too high. Ideally, the needle should not go deeply into the red area this often. Frequency Frequency relates to the basic pitch of a sound -- how high or low it is. A frequency of 20 Hz would sound like an extremely low-pitched note on a pipe organ -- almost a rumble. At the other end of the scale, 20, Hz would be the highest pitched sound that most people can hear, even higher than the highest note on a violin or piccolo. A person with exceptionally good hearing will be able to hear sounds from , Hz. Since both ends of the ,Hz range represent rather extreme limits, the more common range used for television production is from 50 to 15, Hz. Because of the reduced sensitivity of the ear to both high and low frequencies, these sounds must be louder to be perceived as being equal to other frequencies. Listening Conditions Equipment and listening conditions also greatly affect how different frequencies will be perceived. To compensate for some of these problems, we can adjust bass and treble controls of playback equipment. More sophisticated equipment will include a graphic equalizer, which goes a step further and allows specific bands of frequencies to be individually adjusted for loudness. A graphic equalizer may be necessary to help match audio segments recorded under different conditions, or simply to customize audio playback to the acoustics of a specific listening area. Note that the graphic equalizer shown here can control nine specific frequency areas bands. Any piece of audio equipment -- microphone, amplifier, recorder, or audio speaker -- can adversely affect the fidelity of sound. Thus, the better the original audio signal, the better the final product will be. In an effort to create totally soundproof studios, early radio stations used to use thick carpets on the floors and heavy soundproofing on the walls. Therefore, a slight bit of reverberation is both desirable and realistic. Two types of soundproofing material are shown on the left. A room with a tile floor and hard, parallel walls will reflect sound so much that it interferes with the intelligibility of speech.

### 6: How to Get Sound on TV Using HDMI Cables? | [www.enganchecubano.com](http://www.enganchecubano.com)

*You can also choose from an array of other sound solutions for your home entertainment system, including wireless Bluetooth speakers and a collection of LG home audio speakers that will optimize your movie, sports, gaming and all-around TV-watching experience.*

This phenomenon is very curious, it approximates to the theory of binaural audition, and has never been applied, we believe, before to produce this remarkable illusion to which may almost be given the name of auditive perspective. The sound reproduction systems of the early "talkies" invariably only had a single set of speakers - which could lead to the somewhat disconcerting effect of the actor being on one side of the screen whilst his voice appeared to come from the other. Blumlein declared to his wife that he had found a way to make the sound follow the actor across the screen. The genesis of these ideas is uncertain, but he explained them to Isaac Shoenberg in the late summer of . His earliest notes on the subject are dated 25 September , and his patent had the title "Improvements in and relating to Sound-transmission, Sound-recording and Sound-reproducing Systems". The application was dated 14 December , and was accepted on 14 June as UK patent number , Some 70 claims include: A "shuffling" circuit, which aimed to preserve the directional effect when sound from a spaced pair of microphones was reproduced via stereo headphones instead of a pair of loudspeakers; The use of a coincident pair of velocity microphones with their axes at right angles to each other, which is still known as a " Blumlein Pair "; Recording two channels in the single groove of a record using the two groove walls at right angles to each other and 45 degrees to the vertical; A stereo disc-cutting head; Using hybrid transformers to matrix between left and right signals and sum and difference signals; Blumlein began binaural experiments as early as , and the first stereo discs were cut later the same year, twenty-five years before that method became the standard for stereo phonograph discs. These discs used the two walls of the groove at right angles in order to carry the two channels. Much of the development work on this system for cinematic use did not reach completion until . One of the techniques investigated was the "wall of sound", which used an enormous array of microphones hung in a line across the front of an orchestra. Up to 80 microphones were used, and each fed a corresponding loudspeaker, placed in an identical position, in a separate listening room. *Poem of Fire* , is the earliest known surviving intentional stereo recording. Synchronization was achieved by making the recordings in the form of three motion picture soundtracks recorded on a single piece of film with a fourth track being used to regulate volume expansion. This was necessary due to the limitations of dynamic range on optical motion picture film of the period, however the volume compression and expansion were not fully automatic, but were designed to allow manual studio "enhancement"; i. Stokowski, who was always interested in sound reproduction technology personally participated in the "enhancement" of the sound at the demonstration. The speakers produced sound levels of up to decibels, and the demonstration held the audience "spellbound, and at times not a little terrified", according to one report. One track was used for dialogue, two for music, and one for sound effects. The purpose for this form of multitrack recording was to make mixing down to a single optical track easier and was not intended to be a recording for stereophonic purposes. *Fantasound*[ edit ] Walt Disney began experimenting with multi-channel sound in the early s as noted above. As in the Carnegie Hall demonstrations six months earlier, *Fantasound* used a separate film containing four optical sound tracks. Three of the tracks were used to carry left, center and right audio, while the fourth track carried three tones which individually controlled the volume level of the other three. It was not until its re-release that stereo sound was restored to the film. In the early s, composer-conductor Alfred Newman directed the construction of a sound stage equipped for multichannel recording for 20th Century Fox studios. *Cinerama*[ edit ] Motion picture theatres, however, are where the real introduction of stereophonic sound to the public occurred. Amid great fanfare, Stereo sound was officially proven commercially viable for the public on September 30, with the release of a Cinerama demonstration film by Lowell Thomas and Mike Todd titled *This is Cinerama*. Similarly, the Cinerama audio soundtrack technology, developed by Hazard E. Reeves , a pioneer in magnetic recording, utilized seven discrete sound tracks on full-coat magnetic 35mm film, in order to envelop the theatregoer in an

aural experience just as spectacular as that playing on the screen: The advent of multi-track magnetic tape and film recording made high fidelity synchronized multichannel recording more technically straightforward, though costly. By the early s, all of the major studios were recording on 35mm magnetic film for mixing purposes, and many of these so-called individual angles still survive, allowing for soundtracks to be remixed into Stereo or even Surround. In April , while This is Cinerama was still playing only in New York City, most moviegoing audiences heard stereophonic sound for the first time with House of Wax , an early 3-D film starring Vincent Price and produced by Warner Bros. Only two other films featured this strange hybrid WarnerPhonic sound: Unfortunately, as of , the stereo magnetic tracks to both these films are considered lost forever. In addition, a large percentage of 3-D films carried variations on three-track magnetic sound: Widescreen[ edit ] Inspired by Cinerama , the movie industry moved quickly to create simpler and cheaper widescreen systems, the first of which, Todd-AO , was developed by Broadway promoter Michael Todd with financial backing from Rodgers and Hammerstein, to use a single 70mm film running at 30 frames per second with 6 magnetic sound tracks, for their screen presentation of "Oklahoma! Major Hollywood studios immediately rushed to create their own unique formats, such as Warner Bros. VistaVision took a simplified, low-cost approach to stereophonic sound; its Perspecta system featured only a monaural track, but through subaudible tones, it could change the direction of the sound to come from the left, right or both directions at once. To compensate, the premiere engagement of Carousel used a six-track magnetic full-coat in an interlock, and a re-release of The King and I, featured the film "printed down" to 70 mm , used a six-track stereo soundtrack as well. Todd-AO [ edit ] After this disappointing experience with their proprietary "wide gauge" system, Fox purchased the Todd-AO system and re-engineered it into a more modern 24 fps system with brand-new 65MM self-blinded production cameras Mitchell BFC Current DVDs of the two CinemaScope 55 feature titles were transferred from the original 55mm negatives, often including the separate 35MM films as extras for comparison. Back to mono[ edit ] However, beginning in , films recorded in stereo except for those shown in Cinerama or Todd-AO carried an alternate mono track for theatres not ready or willing to re-equip for stereo. This section needs additional citations for verification. Please help improve this article by adding citations to reliable sources. Unsourced material may be challenged and removed. June Main article: Dolby Stereo Today, virtually all films are released in stereophonic sound as the Westrex Stereo Variable-Area system developed in for Star Wars, which was no more expensive to manufacture in stereo than it was for mono. This important development finally brought stereo sound to so-called Flat Non-Wide-Screen films presented at the most common aspect ratio of 1. Producers often took advantage of the six magnetic soundtracks available for 70mm film release prints, and productions shot in either 65MM or to save money, in 35MM and then blown up to 70MM. In these instances, the 70MM prints would be mixed for stereo, while the 35MM reduction prints would be remixed for mono. Some films shot in 35MM, such as Camelot, featured four-track stereophonic sound and were then "blown-up" to 70MM so that they could be shown on a giant screen with six-track stereophonic sound. Unfortunately however, many of these presentations were only pseudo stereo, utilizing a somewhat artificial six-track panning method. Dolby, who did not approve of this practice, which results in loss of separation, instead used the Left Centre and Right Centre channels for LFE low-frequency enhancement utilizing the bass units of the otherwise redundant intermediate front speakers, and later the unused HF capacity of these channels to provide for stereo surround in place of the mono surround. Dolby Stereo was succeeded by Dolby Digital 5. Modern home audio and video[ edit ] The progress of stereophonic sound was paced by the technical difficulties of recording and reproducing two or more channels in synchronization with one another, and by the economic and marketing issues of introducing new audio media and equipment. A stereo system cost up to twice as much as a monophonic system, since a stereo system contains two preamplifiers, two amplifiers, and two speaker systems. In addition, the user would need an FM stereo tuner, to upgrade any tape recorder to a stereo model, and to have their phonograph fitted with a stereo cartridge. In the early days it was not clear whether consumers would think the sound was so much better as to be worth twice the price. Stereo experiments on disc[ edit ] This section needs additional citations for verification. April Learn how and when to remove this template message Early lateral, vertical and double-sided stereo[ edit ] Edison had been recording in a hill-and-dale or vertically modulated format on his

cylinders and discs since , and Berliner had been recording in a side-to-side or lateral format since shortly thereafter. Each format developed on its own trajectory until the late s when electric recording on disc, utilizing a microphone surpassed acoustic recording where the performer needed to shout or play very loudly into what basically amounted to a megaphone in reverse. At that time, AM radio had been around for roughly a decade, and broadcasters were looking for both better materials from which to make phonograph records as well as a better format in which to record them to play over the narrow and thus inherently noisy radio channel. As radio had been playing the same shellac discs available to the public, it was found that, even though the playback system was now electric rather than acoustic, the surface noise on the disc would mask the music after just a few plays. The development of acetate, bakelite, and vinyl, and the production of radio broadcast transcriptions helped to solve this. Once these considerably more quiet compounds were developed, it was discovered that the rubber-idler-wheel driven turntables of the period had a great deal of low-frequency rumble - but only in the lateral plane. Even though the stylus size remained the same as consumer records at either 3 mils or 2. Two-channel high fidelity and other experiments[ edit ] During the same period engineers got a bright idea. Split the signal into two parts, bass and treble, and record the treble on its own track near the edge of the disc in a lateral format so that there would be no high-frequency distortion, and then record the bass on its own track in a vertical fashion to get rid of the rumble. Unfortunately, vertical grooves take up more space than lateral grooves; so when the bass track was full, starting halfway through the disc and ending up at the center, the treble track had a large amount of unused space at the end. The alternative was to record it at a wider pitch i. These were manufactured on twin film-company recording lathes which ran in perfect sync with one another with no variation, and were capable of not only outside-in as well as inside-out recordings see Radio Programming Vinyl Sequence under Gramophone record but also counter-clockwise as well as conventional clockwise recording by mounting the cutting head wrong-way-out with a special adapter. One master was recorded conventionally and the other was recorded counterclockwise, each master was run separately through the plating process, lined up to match, and subsequently mounted in a press. This recording method was later used to record counter-clockwise discs by Mattel for one of its answers to the GAF Talking View Master in the mids. The dual-sided stereo disc was then played vertically, first in a system that featured two tonearms on the same post facing one another, and later on in an offset system where one tonearm was placed conventionally and the other tonearm was placed opposite, i. But, even with playing the disc vertically in a rotating clamp, the same trouble was observed with keeping the two tonearms in their respective synchronous revolutions. Five years later, Bell Labs was experimenting with a two-channel Lateral-Vertical system, where the left channel was recorded laterally and the right channel was recorded vertically, still utilizing a standard 3-mil RPM groove, over three times larger than the modern LP stylus of the late 20th Century. The trouble with that was, once again, all the low-frequency rumble was in the left channel and all the high-frequency distortion was in the right channel. Emory Cook[ edit ] In , Emory Cook " , who already had become famous by designing new feedback disk-cutter heads to improve sound from tape to vinyl, took the two-channel high-fidelity system described above and developed a somewhat misnamed "binaural" record out of it, which consisted of the same two separate channels cut into two separate groups of grooves running next to each other as described above, i. Each groove needed its own monophonic needle and cartridge on its own branch of tonearm, and each needle was connected to a separate amplifier and speaker. Cook recorded a vast array of sounds, ranging from railroad sounds to thunderstorms. Around recordings were made of various symphonies, most of which were seized by the Red Army at the end of World War II. The recordings were of relatively high fidelity , thanks to the discovery of AC bias. In the UK, Decca Records began recording sessions in stereo in mid, and by that time even smaller labels in the U. In addition, the price of the stereophonic recorder upon which to play the records may have been equal to, or greater than, the cost of a new car. In November , the small Audio Fidelity Records label released the first mass-produced stereophonic disc. Sidney Frey, founder and president, had Westrex engineers, owners of one of the two rival stereo disk-cutting systems, cut a disk for release before any of the major record labels could do so. Also in December , Bel Canto Records , another small label, produced its own stereophonic demonstration disc on multicolored vinyl so that stereo dealers would have more than one choice for demonstration. With the

supplied special turntables featuring a clear platter lighted from underneath to show off the color as well as the sound, the stunt worked even better for Bel Canto, whose roster of jazz, easy listening and lounge music, pressed onto their trademark Caribbean-blue vinyl sold well throughout and early into Affordable cartridges[ edit ] When Audio Fidelity released its stereophonic demonstration disc, there was no affordable magnetic cartridge on the market capable of playing it. By the end of March, the company had four more stereo LPs available, interspersed with several Bel Canto releases. In the s, satellite delivery of both television and radio programs made this fairly tedious process of synchronization unnecessary. The BBC made extensive use of simulcasting between and around After that it was used for many other music programmes, live and recorded, including the annual BBC Promenade concerts and the Eurovision Song Contest. Cable TV systems delivered many stereo programs utilizing this method for many years until prices for MTS stereo modulators dropped. One of the first stereo cable stations was The Movie Channel, though the most popular cable TV station that drove up usage of stereo simulcasting was MTV. Japanese television began multiplex stereo sound broadcasts in , [55] and regular transmissions with stereo sound came in Stereo for television[ edit ] Main article: Multichannel television sound In , The New York Times reported, "What has prompted the [television] industry to embark on establishing high-fidelity [sound] standards now, according to engineering executives involved in the project, is chiefly the rapid march of the new television technologies, especially those that are challenging broadcast television, such as the video disk. This uses two parallel omnidirectional microphones some distance apart, capturing time-of-arrival stereo information as well as some level amplitude difference information" especially if employed in close proximity to the sound source s. If you increase the distance between the microphones, you effectively decrease the pickup angle.

### 7: Audio - Headphones, Wireless Speakers, Stereo Shelf Systems | Samsung US

*3 Ft HDMI Male to HDMI Micro Male Cable Digital Audio Video v 34 AWG Cable Pigtail Audio Video Smartphone To TV HD TV to Phone MicroHDMI to HDMI Cable Add To Cart There is a problem adding to cart.*

### 8: LG Home Audio: Single- & Multi-Speaker Systems | LG USA

*Home Audio Accessories Finish the home theater of your dreams with all the right audio accessories. Find the speaker wire, HDMI cables, audio cables and connectors, and speaker stands that turn your equipment into a complete home audio system capable of surrounding you in a rich sound environment.*

### 9: Multichannel television sound - Wikipedia

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