



Why Dolby Atmos

## Your story made better in Dolby Atmos

Dolby Atmos has become the immersive audio standard for film and television content creation. Introduced first in the cinema, Dolby Atmos has been adopted by the most popular streaming services such as Apple TV+, Disney+, and Netflix, and is also being made widely available to mainstream audiences on millions of consumer playback devices. Once used primarily on big-budget Hollywood films, Dolby Atmos is being leveraged by content creators on a wider variety of content genres and types than ever before. This is your opportunity to hear first-hand from some of those content creators on how Dolby Atmos has enabled them to enhance their stories. This paper will demystify what Dolby Atmos is and why content creators should be creating all of their content in Dolby Atmos.

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– Scott Kramer | Netflix

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## Dolby Atmos: From cinema to home

First utilized on Pixar’s 2012 film, *Brave*, Dolby Atmos introduced a new paradigm of audio creation and delivery in cinema, enabling filmmakers to fully immerse moviegoers in their story’s soundscape. Today, that paradigm has also revolutionized the home entertainment experience, bringing Dolby Atmos technology to the living room and enabling content creators to immerse viewers more deeply into their stories. Many of today’s leading content services and their studio partners have adopted Dolby Atmos on feature films and episodic titles.

This adoption has led to the installation of Dolby Atmos systems in over 500 mix rooms and thousands of creative professionals worldwide working in Dolby Atmos to meet the aggressive demand for premium audio. The exponential growth of available premium content is fueled largely by the proliferation of streaming services, rapid adoption of UHD formats, and the increasing availability of premium format playback devices to mainstream consumers. Now more than ever, content creators looking to bring compelling stories to home viewers are adopting Dolby Atmos as their default audio-creation format.

## Much more than overhead sound

Filmmakers, creatives and content providers who are unfamiliar with Dolby Atmos might think of it as a niche technology for adding overhead sound effects to big budget theatrical productions. "People... might assume it's just 7.1 surround plus overheads," notes Cheryl Ottenritter of Ott House Audio in Washington DC Metro Area, who creates Dolby Atmos mixes mostly for documentary and non-fiction titles. "It's really all about the objects, and the ability to place, move, and size those objects within the sound field."

Even engineers new to working with the technology are surprised by it. "When I first started using it," says re-recording engineer Nick Fry, of The Farm in England, "I thought I can only use it if I have a plane moving overhead or if it's raining." But when working on Netflix's documentary series, *Formula One: Drive to Survive*, his understanding of Dolby Atmos evolved. "I began thinking beyond. If there's a huge crash in front of me, I can envelop the whole room with that crash. Once you're less literal about it,

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– Cheryl Ottenritter | Ott House Audio

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it becomes another incredibly powerful sound tool – and clients love it."

The main difference between surround sound and Dolby Atmos is "channel-based mixing" versus "object-based mixing." In traditional surround mixing, audio material is assigned to play out of specific channels – front three screen speakers, rear surrounds, or, in the case of 7.1 surround, side speakers. Dolby Atmos allows a mixer to take any track, whether an effect, voice, or music track element, and manipulate it as an object that can be placed or moved anywhere within the 3D space of the room – without directly assigning it to a particular speaker. For one film, *The River and the Wall*, Ottenritter notes, "The editor really wanted to walk through this field and hear the birds go by. He wanted to hear that bird right there, because that's how it was when he recorded it in the field. Instead of 'Oh, I hear it coming out of my left speaker,' we were able to create an immersive sound experience like he was back in the field again."

Moving objects around in 3D space using the panner – versus assigning sounds to specific channels in the 7.1 bed – can make all the difference in creating a clear, immersive soundscape for audiences. According to Tim Hoogenakker, re-recording mixer of Formosa Group, "It's never just about what you're putting in the heights. It's about filling in the space between the sides and the heights and the rears. You're creating a 3D space all around you." He says that even if you hardly pan anything to

the top channels, you still get a large amount of depth by opening up the sides and lifting

objects up a little bit. In addition, panning audio in 5.1 or 7.1 can create jumps

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– Tim Hoogenakker | Formosa Group

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between the speakers. Dolby Atmos helps ensure that sounds adapt to each viewer’s unique playback configuration, while moving fluidly and naturally around their listening environment.

## Your mix, your way

Ultimately, Dolby Atmos is a tool designed to enable content creators to tell their stories as they see fit. It wasn’t developed for one particular genre or specific method of use. Ed Hoxsie, SVP of Worldwide Product Production at Paramount Pictures, says, “Each mixer controls their paintbrush differently. Dolby Atmos is not meant to make one type of experience, such as a bombastic overhead mix, but rather provide the mixer variable controls to trim, balance, separate, and push hard or soft in aural spaces like never before.” He notes that some of the most impressive mixes are on quieter movies where Dolby Atmos helps create the ambiance of a scene instead of controlling it outright.

With Dolby Atmos, mixers can give different objects specific sizes to create contrast. “It allows you to take advantage of the full dynamics of cinema sound,” explains

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– Adam Daniel | Point1Post

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Point1Post (UK) re-recording mixer Adam Daniel (his father, Graham Daniel, helped to build the first Dolby Stereo cinema installations in the 1970s.) “You can go from the

biggest explosion to literally hearing someone's eyelid open, in a calm, gentle way. You can go as deep or as shallow as you want."

Mixing natively in Dolby Atmos also allows creatives to focus on one impactful mix that delivers different experiences depending on the required deliverables of a studio or viewers' playback configurations. Content created for or acquired by network and Over-the-Top (OTT) providers has to be available to viewers with every configuration: Dolby Atmos, 5.1 / 7.1, or 2.0 stereo. Starting with a Dolby Atmos mix, mixers can take advantage of the system's built-in algorithms to create accurate downward mixes

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– Nick Fry | The Farm

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automatically. "That's what I love about Dolby Atmos," says Nick Fry, "It's like a master tape that, with the flick of a switch, allows you to jump between formats while mixing to make sure everything translates smoothly." Mixing in Dolby Atmos isn't just for Dolby Atmos device owners. It delivers a better experience to any and all consumers – regardless of their playback device.

## Not just for big blockbusters

Many of the content services leading the charge on experience innovation through new technologies – including Netflix, AppleTV+, and Disney+ – have adopted Dolby Atmos as their premium audio format of choice. For example, Netflix has made hundreds of Netflix Original titles in Dolby Atmos available to their viewers – nearly half of which are episodic series across multiple genres. Newer OTT services AppleTV+ and Disney+ are also making Dolby Atmos a mainstay of their content portfolio. One of the first services to adopt Dolby Atmos was Netflix. Scott Kramer, Netflix's Manager of Sound Technology, says they "believe in optimizing every content experience. Each technology effort is part of bringing joy to our members. Therefore, pursuing premium sound experiences is inherent to what we do."

Leading services and studios around the world now expect their most valuable titles to be produced and provided in Dolby Atmos to ensure that they deliver the best possible viewer experience. Paramount's Ed Hoxsie says, "The ability to mix in Dolby Atmos has become a standard that we expect from all of our vendors." There is no question that over the past 10 years, the explosion of peak TV and streaming

has brought about an accelerated elevation of television production value. The rapid expansion of streaming and investment in original productions for the home will continue to fuel the race for providing content that best replicates the premium sight and sound experience of the cinema.

A proper Dolby Atmos experience that would have cost consumers thousands of dollars just a few years ago is now available at a mainstream pricepoint. Currently, there are over 250 different AVR and home-theater-in-a-box system models that support Dolby Atmos. Consumers can also enjoy a Dolby Atmos experience using Dolby Atmos-enabled soundbars, televisions with built-in speakers, and even across a broad range of more portable PCs, tablets and mobile devices. While each device might not deliver exactly the same experience, any Atmos device is able to leverage an Atmos mix to deliver a more immersive and spectacular experience. Every Dolby Atmos-enabled device has been designed and tuned in collaboration with Dolby and the device manufacturer to maximize the hardware capabilities and utilize the object mix to render the audio experience that best fits that particular device.

## Storytelling in Dolby Atmos

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– Ed Hoxsie | Paramount Pictures

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The growth of streaming services has led to an explosion of content and rapid innovation that has allowed premium content experiences to be delivered to ever-wider audiences. While the availability of ultra-high-definition (UHD) content may have been sparse just a few years ago, today many of the world’s leading streaming providers have made it their norm. Whether you’re a studio, a production company, a post facility, or an independent mixer, embracing Dolby Atmos not only offers an innovative audio toolbox to craft more compelling soundscapes and spectacular audio experiences, but it also ensures your relevance in the increasingly important home entertainment arena. Netflix’s Scott Kramer may have said it best: “Dolby Atmos is a format and not a particular sound. At Netflix, we feel the best mixes come when mixers have excellent technology and the freedom to use it in a way that best tells the story. Dolby provides the tech, then great mixers do their thing.”