Multichannel Audio History - Timeline Cheat Sheet

Fora Soft Learn

From 1881 stereo to 2021 Apple Spatial Audio: dates, formats, channels, and what each file stores.

The 60-year timeline

YEAR	FORMAT	CHANNELS	WHAT THE FILE STORES
STEREO ERA			
1881	Ader theatrophone	2	Two earpiece feeds (demo)
1931	Blumlein patent	2	L + R; coincident mic, 45/45 groove
1933	Bell Labs / Stokowski	3	Three live telephone-line channels
SURROUND ERA			
1940	Fantasound (Fantasia)	~3 + surr	First commercial multichannel film
1953	CinemaScope	4	4 magnetic feeds (L,C,R + surround)
1971	Quadraphonic (failed)	4	Format war: SQ / QS / CD-4
1976	Dolby Stereo	4>2>4	Lt/Rt matrix in two optical tracks
1992	Dolby Digital 5.1 (AC-3)	5.1	Six compressed speaker feeds
1993	DTS	5.1	5.1 on synced CD-ROM (Jurassic Park)
1999	Dolby Surround EX	6.1	Sixth (rear-centre) matrixed in
2010	Dolby Surround 7.1	7.1	Eight discrete feeds (Blu-ray)
IMMERSIVE ERA			
2012	Dolby Atmos	<=64 feeds	Bed + up to 128 objects + metadata
2015	MPEG-H / DTS:X	layout-free	Channel + object + scene bitstream
2021	Apple Spatial Audio	2 (rendered)	Atmos master -> HRTF binaural

Reading the channel notation

5.1 = 5 full channels + 1 LFE (bass-only). The .1 is the subwoofer, not a full channel.

7.1 = 7 ear-level channels + 1 LFE.

7.1.4 = 7 ear-level + 1 LFE + 4 OVERHEAD (height). Third number = ceiling speakers.

9.1.6 = 9 ear-level + 1 LFE + 6 overhead = 16 speakers total.

Remember

- [ ] Channel count jumped whenever a cheap delivery medium made the extra channels affordable.
- [ ] Quad failed from a 3-way format war and unclear benefit - not bad engineering.
- [ ] Object-based audio stores sounds + positions; the renderer maps them to your speakers.
- [ ] One object-based master plays correctly from headphones to a 64-speaker cinema.
- [ ] Tier-1 anchors: ITU-R BS.775 (5.1 layout), ATSC A/52 (AC-3), ISO/IEC 23008-3 (MPEG-H).