

**DOLBY  
ATMOS**

Dolby Atmos is a separate type of immersive format that also uses object based audio.

Dolby Atmos metadata contains

- Height information, a
- A vector location in 2D space
- Versioning//personalisation ID - the program audio could be composed of multiple languages and program description all in one file.

An example of this could be Live Sport. Dolby Atmos was first used in football. The resulting audio file contained the captured audio from the array of microphones around the stadium but also English commentary, Spanish commentary, French commentary etc. all in one container.

This provides greater access to all assets in the file which could help when editing the broadcast later, for things such as highlight reels.

**IMMERSIVE  
AUDIO**

Immersive audio is simply the addition of height channels/overhead speakers to an already pre existing surround sound format. Some examples of this could be:

- 5.1 --- 5.1.2
- 7.1 --- 7.1.4
- 9.1 --- 9.1.6

Depending on the capabilities of the listeners receiver, immersive audio formats can add Front Overhead, Middle Overhead and Rear Overhead speakers to the listening environment - providing a more 'immersive' experience for the listener.

**OBJECT  
BASED  
AUDIO**

Object based audio is a combination of beds and objects. A bed is the immersive speaker configuration, for instance 5.1.2 or 7.1.4. These beds are constant and provide the overall ambience of the piece, an example of this could be room tones or wind. These sounds are necessary for the overall ambience of the production - however they needn't have pan positioning to create the desired effect.

Objects are diegetic sounds that are introduced into the production and are given a location/vector position in a 2d space. They can relate to a specific element on screen or an element heard off screen but provides context to the story. The classic example of this is a helicopter - this sound could fade in and begin from behind the listening position (starting in the rear and rear overhead speakers) before playing out in our front set of speakers. Therefore providing a perceived movement effect.

**THE 5 POINT CHECKLIST**

**ATMOS**

**FOR PLOUT, POST,  
AND BROADCAST**

**ADM**

An **ADM WAV** is essentially a DAMF file contained within a wrapper. It contains 3 separate bits of data within the file:

- Audio/WAV - up to 128 channels
- CHNA Chunk (Channel ID map)
- AXML Chunk (Atmos metadata)

ADM WAVs are a common file type when it comes to ATMOS audio as this type of a file is not Dolby exclusive meaning there is a no need for a specific piece of software of decoder in order to read it.

**Codecs**

**DAMF** - this contains 3 separate files:

- Atmos (an index file)
- Audio (a raw audio file)
- Metadata (positioning, channel labelling)
- Video (sometimes packaged)

**ADM WAV:**

- Audio/WAV - up to 128 channels
- CHNA Chunk (Channel ID map)
- AXML Chunk (Atmos metadata)
- This type of file is not exclusive to Dolby

**Dolby Digital Plus/AC-3 Bitstream:**

- Dolby Atmos is backwardly compatible with AC-3
- Dolby Atmos can be decoded by Dolby Digital Plus compatible devices.

**ED2** - occupies 4 streams

- Dolby ED2 builds upon Dolby E. Dolby Atmos may require a carriage of more than 8 channels of audio (Dolby E's limit). For example, in formats such as 5.1.4 or when there are objects present in the mix. Dolby ED2 supports these higher channel counts by providing metadata that describes the position of each audio asset distributed across multiple Dolby ED2 substreams.