

Dolby Atmos Delivery Guide

Delivery specs for Apple Music, Tidal, Amazon Music, Spotify,
YouTube, and CD/DDP. Binaural render settings. QC process.
Common rejection errors and how to fix them.

Audio Matters | andres.audio

v2.0 – April 2026



01 FUNDAMENTALS

Universal Specs

— The technical base every Atmos project needs

PARAMETER	VALUE	NOTE
Sample Rate	48 kHz	44.1kHz fails QC. 96kHz optional – most distributors require 48k.
Bit Depth	24-bit	Minimum required. 32-bit float for internal session, export to 24-bit.
Frame Rate	24 fps	Dolby Music standard. Sync renderer and PT session.
File Format	ADM BWF (.wav)	Audio Definition Model Broadcast Wave. Audio + spatial metadata.
Integrated Loudness	-18 LKFS	Dolby Music target. Measured on binaural/5.1 render with BS.1770-4.
True Peak	∅ -1 dBTP	Absolute. Cloud encoder can create intersample peaks on encode.
Stereo Fallback	WAV 48k/24b	Required by all distributors. Normalized to -14 LUFS.

Why -18 LKFS? At -18 LKFS integrated, the binaural render and stereo fold-down land automatically near -14 LUFS – the normalization standard of all streamers. The extra headroom prevents clipping in the renderer's object summing.

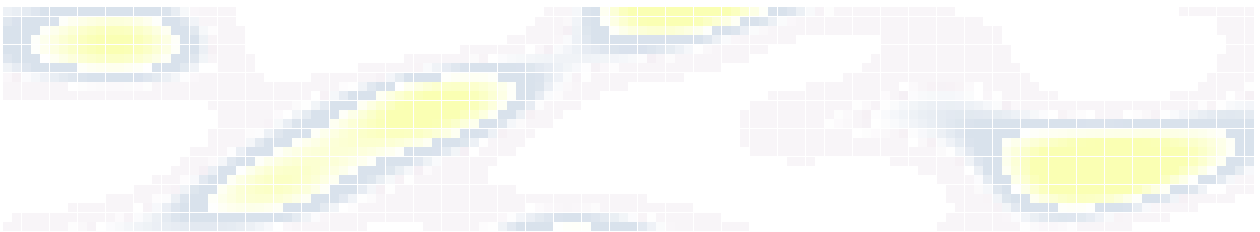
What to Deliver

FILE	DESCRIPTION
ADM BWF Master	The complete Atmos mix – via Renderer
Stereo Fallback	WAV 48k/24b · -14 LUFS normalized
Secondary ISRC	Unique for the Atmos release
DBMD Metadata	Embedded in BWF header

Naming Convention

Artist_Title_ADM_Master_v01_48k24.wav
 Artist_Title_Stereo_Ref_v01_48k24.wav

No spaces – use underscores. Version at end: _v01, _v02. Sample rate: _48k24. ADM and Stereo clearly separated.





02 PLATFORMS – DOLBY ATMOS

Platforms with Dolby Atmos

Apple Music / iTunes

SPATIAL AUDIO

Format	ADM BWF (.wav)	Delta duration	∅ 50ms vs stereo ref
Sample Rate / Bit	48 kHz / 24-bit	ISRC	Unique secondary
Frame Rate	24 fps	Upmix	NOT ALLOWED
Loudness	-18 LKFS	Delivery	Transporter / distributor
True Peak	-1 dBTP max		

- Apple uses its own renderer (AC-IMS) for binaural on AirPods.
- Dynamic Head Tracking on AirPods Pro uses personalized HRTF.
- Spatial Audio royalties: up to +10% extra vs stereo streams.
- Album badge only if ALL tracks have Atmos delivered.

Tidal

DOLBY ATMOS MUSIC

Format	ADM BWF (via distributor)	Playback norm	-14 LUFS (album)
Sample Rate / Bit	48 kHz / 24-bit	Codec	DD+ JOC
Loudness	-18 LKFS	HiRes	FLAC 24/192kHz
True Peak	-1 dBTP max		

- Album-level normalization preserves relative dynamics between tracks.
- Atmos via DD+ JOC – lossy but with complete object metadata.
- MQA eliminated July 2024 – replaced by FLAC.





02 PLATFORMS – DOLBY ATMOS (cont.)

Amazon Music

3D AUDIO

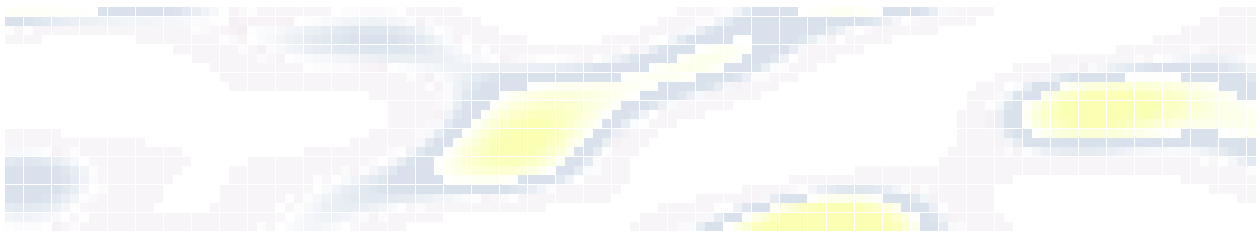
Format	ADM BWF (via distributor)	Playback norm	-14 LUFS
Sample Rate / Bit	48 kHz / 24-bit	Codec	DD+ Atmos
Loudness	-18 LKFS	Ultra HD	FLAC 24/192kHz
True Peak	-2 dBTP	Compatible	Echo Studio, Fire TV, AVR

- "3D Audio" is Amazon's name for Dolby Atmos – same technology.
- Only turns volume down if above target, never up.

Stereo Streaming Specs

Required alongside every Atmos delivery – the stereo fallback master.

PLATFORM	LUFS	TRUE PEAK	NORMALIZES	CODEC
Spotify	-14 LUFS	-1 dBTP	Yes (up/down)	Ogg Vorbis 320k
Apple Music	-16 LUFS	-1 dBTP	Yes (down only)	AAC 256k / ALAC
Tidal (stereo)	-14 LUFS	-1 dBTP	Yes (down only)	AAC 320k / FLAC
Amazon (stereo)	-14 LUFS	-2 dBTP	Yes (down only)	MP3/FLAC/ALAC
YouTube Music	-14 LUFS	-1 dBTP	Yes	AAC 256k
YouTube (video)	-14 LUFS	-1 dBTP	Yes	Opus/AAC



Binaural Render Modes

The Binaural Render Mode defines how each object/bed sounds on headphones. Configured in the Dolby Atmos Renderer (Pro Tools, Logic, Nuendo or Binaural Settings Plug-in). It's metadata – defines the HRTF processing of the decoder, not the raw audio.

MODE	PERCEPTION	RECOMMENDED USE	SPEAKER EQUIVALENT
	No spatialization	LFE channel exclusively. Do not spatialize.	Dry channel / LFE
NEAR	Very close / intimate	Intimate vocals, "in the ear" elements. Use sparingly.	Near-field monitor
MID	Speaker distance · DEFAULT	Most objects. Starting point. Default.	Speaker 1-3m
FAR	Distant / large room	Reverbs, ambiences, distant height objects.	Distant speaker

Pro Tip – Binaural Workflow in Pro Tools

1. Start ALL objects at MID. Do the mix on speakers.
2. Enable binaural monitor in the Renderer. Listen with reference headphones.
3. Adjust NEAR/FAR per object for creative depth.
4. Confirm LFE is set to OFF – no binaural render.
5. Final QC: play the complete mix in binaural from the ADM BWF before delivery.



04 COMPANION DELIVERABLES

CD / DDP

— Stereo companion for physical distribution

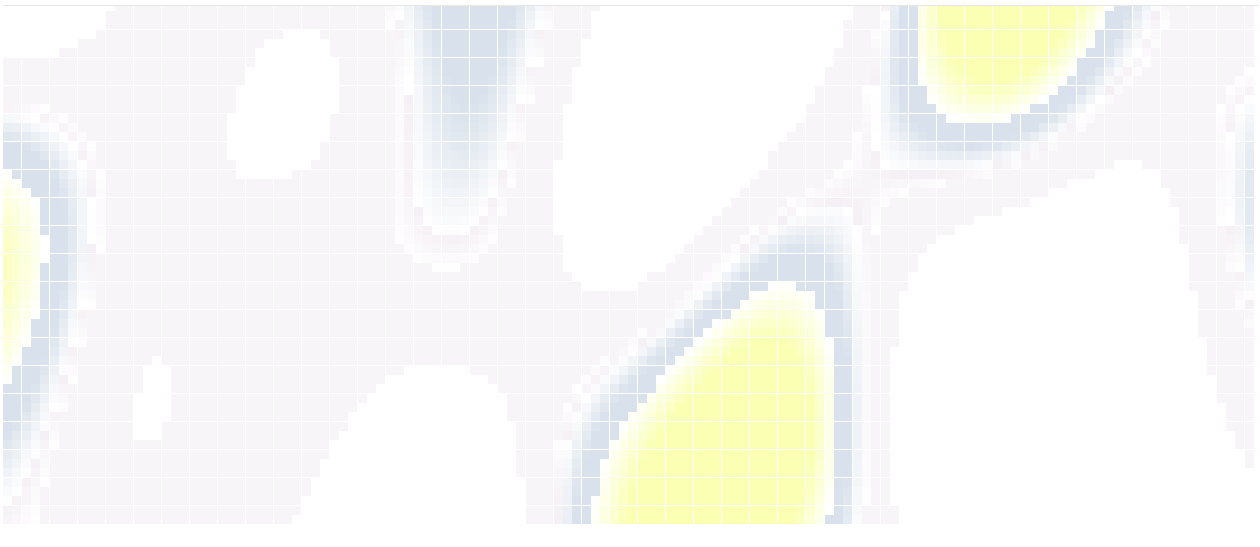
PARAMETER	VALUE
Master format	DDP (Disc Description Protocol)
Sample Rate	44.1 kHz
Bit Depth	16-bit
Loudness ref.	-9 to -12 LUFS
True Peak	-0.3 dBTP
ISRC	1 per track
MD5 checksum	Required

- DDP via FTP/upload – no risk of physical damage vs CD-R.
- Tools: Sonoris DDP Creator, WaveLab, HOFA DDP Player.
- Confirm with the plant that they accept DDP before sending.

Dolby.io – B2B Direct Delivery

Portal for partners, labels, and post-production houses to deliver directly to the Dolby network without third-party distributors. Requires approved partner account.

PARAMETER	VALUE	NOTE
Portal	professional.dolby.com	Requires approved account
Format	ADM BWF (.wav)	Identical to distributor specs
Loudness	-18 LKFS / -1 dBTP	Same target as streaming
Cloud Encoder	Dolby processes to DD+ JOC	ADM BWF > DD+ in MP4
Auto QC	Yes – rejection on non-compliance	No exceptions

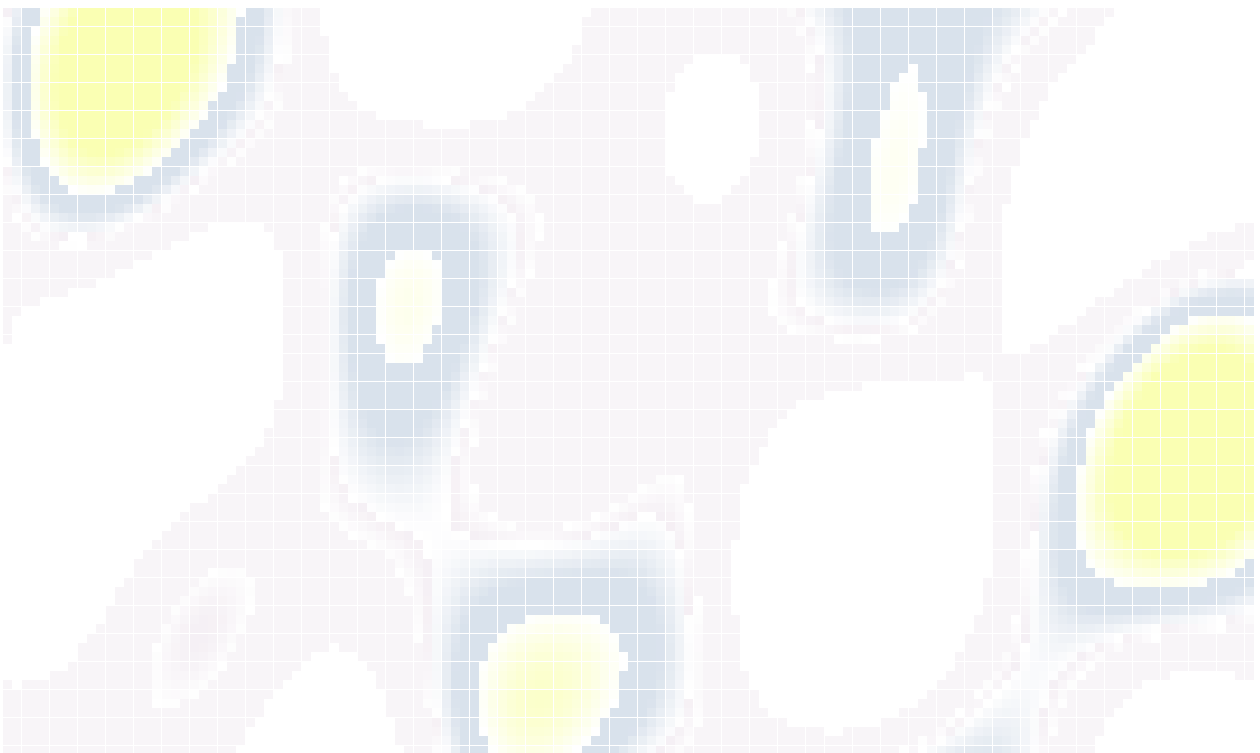




85 COMMON REJECTION ERRORS

Errors to Avoid

ERROR	CAUSE	FIX
LOUDNESS TOO HOT	Integrated above -18 LKFS	Measure with Renderer meter during mix. Re-gain and re-export.
WRONG SAMPLE RATE	Session at 44.1kHz in Atmos project	PT > Setup > Session > confirm 48kHz before starting.
UPMIX FROM STEREO	Stereo mix uploaded to renderer as Atmos	Apple rejects automatically. Use real multitracks or stems.
DURATION DELTA	>50ms between ADM BWF and stereo ref (Apple)	Export both from the same point. Verify with ruler.
BINAURAL METADATA	Objects without Near/Mid/Far assigned	Binaural Settings Plug-in before export. LFE = OFF.
DUPLICATE ISRC	Same ISRC for stereo and Atmos	Atmos needs a unique secondary ISRC.
FILE NAMING	Spaces, special characters, no version	Save naming template in the project folder.
TRUE PEAK EXCEEDED	TP above -1 dBTP on any channel	Cloud encoder creates intersample peaks. Measure multi-channel.



Specs at a Glance

PLATFORM	FORMAT	LUFS	ATMOS	TRUE PEAK	CODEC
Apple Music	ADM BWF	-18 LKFS	YES	-1 dBTP	AAC/ALAC
Tidal	ADM BWF	-18 LKFS	YES	-1 dBTP	DD+/FLAC
Amazon Music	ADM BWF	-18 LKFS	YES	-2 dBTP	DD+/FLAC
Spotify	WAV/FLAC	-14 LUFS	NO	-1 dBTP	Ogg 320k
YouTube Music	WAV/FLAC	-14 LUFS	NO	-1 dBTP	AAC 256k
YouTube video	WAV/FLAC	-14 LUFS	NO	-1 dBTP	Opus/AAC
CD / DDP	DDP image	-9 to -12	NO	-0.3 dBTP	PCM 16/44.1

About this Guide

Specs change. Platform specifications get updated. This guide has version and date – verify with official sources (Dolby, Apple, distributors) before each important release.

Sources: Apple Music Provider Support · DistroKid Help Center · Dolby Professional Support · Production Expert · ITU-R BS.1770-4 · AES TD1008 · Official documentation from each distributor.

Disclaimer: This guide consolidates public information from multiple sources. It does not replace official documentation from Dolby, Apple, or your distributor. For B2B with Dolby.io consult directly with Dolby.

License: Personal non-transferable use. © andres.audio 2026. Redistribution or resale prohibited.

