



BWAV ADM Creation Guidelines

INTRODUCTION

This document outlines best practices for creating BWAV ADM files as 5.1 or Atmos sound mix streaming deliverables for GEM. It focuses on workflows using Dolby Atmos Renderer and Pro Tools (version 2023.12 or newer). GEM accepts sound mix deliveries in BWAV ADM format from any Digital Audio Workstation (DAW) capable of producing standards-compliant BWAV ADM files.

While examples are provided, this document does not cover every possible stem, bed, and object configuration. In Atmos mixing, beds and objects can be configured with any channel width and content separation level, but must always be group labeled as Dialogue, Music, Effects, or Narration. See the appendix for a full list of valid Group labels.

Delivering sound mixes via BWAV ADM allows stem creation within the GEM platform, reducing file creation complexity for sound facilities. This workflow is preferred but not mandatory.

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PRO TOOLS 5.1 SOUND MIX BWAV ADM CREATION FROM STEMS

- Requires Pro Tools 2023.5 or newer.
- The summed 5.1 mix stems must equal the intended 5.1 printmaster.
- Use True Peak limiters set to -2.3 dBFS for all material routed to the renderer.
- Select “Internal Renderer” in “I/O Setup” dialogue; configure 3x 5.1 beds named Dialogue, Music, Effects, and optionally Narration.

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- Route 5.1 stems to 5.1 beds on stem tracks.
- Choose “Bounce Mix” under “File.”
- Select “WAV (Dolby Atmos)” as File Type.
- Name the BWAV ADM Printmaster logically.

Example:

chefs_table_s02e02_v04_PM_Nearfield_6ch_ADM_48k_24b_23976.wav

- Check “Offline” box and click “Bounce” to render.
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AVID PRO TOOLS ATMOS SOUND MIX BWAV ADM CREATION

- Requires Pro Tools 2023.5 or newer.
- Atmos beds and objects, when summed, must include all content representing intended Atmos printmaster.
- Use True Peak limiters set to -2.3 dBFS.
- Select “Internal Renderer” in “I/O Setup” Dolby Atmos tab; configure beds/objects as Dialogue, Music, Effects, and optionally Narration.
- Refer to appendix for valid Group labels.
- Assign tracks matching required channel widths (e.g., beds 7.1.2, objects mono).
- Bounce Mix and select “WAV (Dolby Atmos)”.
- Name the BWAV ADM Printmaster logically.

Example:

chefs_table_s02e02_v04_PM_Nearfield_Atmos_ADM_48k_24b_23976.wav

- Check “Offline” box and bounce.
-

DOLBY ATMOS RENDERER 5.1 SOUND MIX BWAV ADM CREATION

- Sum 5.1 mix stems to represent intended 5.1 printmaster.
- Use True Peak limiters at -2.3 dBFS.
- Configure DAW per Dolby Atmos Renderer User’s Guide:
 - Audio via Dolby Audio Bridge
 - Sync via Dolby LTC Generator
 - Metadata via DAW IP settings
- Define 3x 5.1 beds, no objects
- Use Group labels Dialogue, Music, Effects, and optionally Narration.
- Record .atmos file in real time using “Record In/Out.”
- Export via File > Export Audio > ADM BWF.

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DOLBY ATMOS RENDERER ATMOS SOUND MIX BWAV ADM CREATION

- Sum Atmos beds and objects for full printmaster representation.
- True Peak limiter at -2.3 dBFS.
- Configure DAW as above.
- Define beds and objects accordingly.
- Use pre-defined Group labels.
- Record .atmos file real time with "Record In/Out."
- Export ADM BWF as above.

APPENDIX: RECOGNIZED GROUP LABELS

Group labels are case-insensitive. List current as of Feb 3, 2025.

Dialog/Dialogue Labels:

"adr object", "aud", "audience", "d", "dia", "dia group", "dial", "dial bed", "dial objects", "dialog", "dialog bed", "dialog obj", "dialog objects", "dialogue", "dials", "dx", "dx adr bed", "dx bed", "dx object", "dx objects", "foreign grp", "frn", "group", "group bed", "group obj", "grp", "grp bed", "grp object", "m&e option", "opt 1", "opt 2", "opt 3", "opt 4", "opt a", "opt b", "opt c", "opt d", "opt1", "opt2", "opt3", "opt4", "option", "optional a", "optional b", "optional c", "optional d", "optional dialog 1 (bg)", "optional dialog 2 (crowd walla)", "optional dialog 3 (tv radios)", "optionals", "optionals 2", "optionals 3", "optionals 4", "walla", "walla bg dials", "odx bed 71", "ogrp bed 71", "odx obj", "ogrp obj", "opt", "opt (dx)", "opt_walla", "opta", "optb", "optc", "optd", "diastem", "dialog option", "dialogue option", "optional", "dialog_option 1", "dialog option 2", "dialog option 3", "dialog option 1", "fdialstem", "crwd obj m", "crwd obj st", "dx_obj", "optional dialog", "interviews", "option 1", "option 2", "option 3", "option 4", "dx obj", "dx_bed", "dialogue optionals", "dialog optionals", "opt dialog", "opt a efforts", "opt c foreign", "opt d archive", "opt e walla", "primary", "st37741wla", "dub mix", "secondary audio program", "st37741sap", "st37741prm", "dx group", "alternate language audio", "st37741dx", "group adr", "st37741grp", "optional dialogue", "lang", "dia obj", "bed dia", "cwd", "cw bed", "dx stem", "opt stem", "frn stem", "optional object", "optional objects", "dubbed dialogue", "dubbed dialogue bed", "dubbed dialogue stem", "option1", "option2", "option3", "option4", "optional 1", "optional 2", "optional 3", "optional 4", "dub dx", "dub dx bed"

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Music Labels:

"instrumental music", "m", "mus", "music", "music bed", "music obj", "music objects", "mx", "mx bed", "mx group", "mx object", "mx objects", "omx bed 71", "omx obj", "mxstem", "opt (mx vox)", "music option", "vocals", "music vox", "mx obj", "mx_bed", "opt b song", "st37741voc", "st37741mx", "song", "vocal", "voc", "mx vox", "mx stem", "vox", "m&e", "m&e bed", "m&e stem", "comp", "mx score", "mx source"

Effects Labels:

"amb", "backgrounds", "bg", "bg bed", "bg obj", "bg object", "bg2", "bgfxfol", "bgs", "e", "effects", "efx", "fly", "fo bed", "fo", "fol", "fol bed", "foley", "foley bed", "fx", "fx bed", "fx group", "fx obj", "fx object", "fx objects", "hfx", "se", "spots", "sync fx", "ofx bed 71", "obg bed 71", "ofol bed 71", "ofx obj", "obg obj", "ofol obj", "ambience", "sfx", "fx obj m", "fx obj st", "fxstem", "folstem", "crowd", "bg obj m", "bg obj st", "fx_bed", "bg group", "st37741ffx", "st37741fx", "fol group", "st37741fol", "ffx", "fl", "crowds", "st37741bg", "ambiences", "st37741crd", "nat", "nat sound", "filled fx", "fffx", "cx bed", "effect", "fx_foley", "atmos", "fx+bg", "sfx bed", "sfx object", "pfx", "background", "ambiance", "sfx obj", "fx stem", "cx", "fx ext"

Narration Labels:

"narration", "vo", "narr", "nar", "vo narration", "voice over", "st37741nar", "descriptive video", "audio description", "st37741dv", "narr stem", "narration stem", "vo stem"]