Audio Delivery Specs

https://portal.amazonstudios.com/hc/en-us/articles/15986851525147-Delivery-QC

Audio

Near Field Loudness Levels

Follow the Loudness guidelines noted below for Near Field 5.1/2.0 mixes only. Does not apply to Dolby Atmos audio. Refer to the Post – Asset Technical Specifications - Audio section for asset specifications.

Audio Codec	PCM
Audio Sample Rate	48kHz
Audio Bit Depth	24-bit
Audio Bit Rate	Uncompressed
Loudness Target	-27 LKFS ± 2 LU
Loudness Scale	1770-1 with Dialogue Gating exclusion algorithm by Dialogue Intelligence
Maximum True Peak	-2dbTP
LFE Channel Filter	Low-Pass filter @ 120Hz 24 dB/octave

Amazon Studios recommends that the 1770-1 (with Dialogue Gating exclusion algorithm/ Dolby Dialogue Intelligence) loudness scales is measured throughout the mixing process.

The Loudness specifications provide parameters to ensure consistent audio levels and optimize customer experience when streaming content.

Amazon Studios reference measurement model is Nugen Audio VisLM2. VisLM2 Amazon Studios preset files are available here.

QC Guidelines for Loudness

QC Facilities should measure loudness with the following scale:

- BS 1770-1 loudness scale with dialogue gating exclusion algorithm/Dolby Dialogue Intelligence

Include the values for the loudness scale for 5.1 and Stereo within the QC Report.

- If the 1770-1 loudness scale with dialogue gating exclusion algorithm/Dolby Dialogue Intelligence is not within -27 +/- 2 LU range, please flag as a rejection on the QC report.

Dolby Atmos

When creating a Dolby Atmos mix for a title AMS prefers that all channel-based audio to be derived from the Dolby Atmos Printmaster or Recorder Session. A Near Field Dolby Atmos Printmaster ADM WBF file is required for Prime Video Distribution and must be put through a QC and receive a passing QC report. Dolby Atmos audio does not have a loudness standard requirement.

M&E

All M&E tracks should be fully-filled and include all music (Source, Score, etc.), sound effects (SFX), room tone (Ambience/Backgrounds) and Foley as they occur in the domestic mix. Any production effects (PFX) that overlap with dialogue must be replaced/covered with cut SFX or Foley.
Note: Non-fully-filled M&E files will automatically be rejected for fixes.

Please see additional Unscripted, Documentary, and Animated Program requirements below.

Elements to Include in the M&E

- Kissing, grunting, groaning, coughing, sneezing, breathing, reactions, or other noises / vocal intonations not discernible as specific language made by principal or ancillary characters who do not speak / have no adjacent dialogue lines.
  - Note: These elements above should only be placed in the M&E if they are sourced from an SFX library or are “in the clear” and do not have any vocal tone attached to them.
- Generic crowd noises, walla, groups, cheers, or reactions with no discernible language or dialogue of any kind.
- Background/ambience and room tone beds.
- Baby crying if the baby has no discernible dialogue or is from an SFX library.
- Sourced (licensed footage) clips with audio (e.g., movies, TV shows, radio broadcasts, commercials) without discernible language or dialogue (see below if dialogue is present).
- Instrumental music separated from any performance/cast vocals. Live “on set” instrumental performances must be re-recorded clean of vocals.
  - Note: If performances are recorded live, and vocals are married to the accompanying music, the instrumentals need to be re-scored/re-recorded free of vocals and included in the M&E. These instrumentals must match the domestic mix(es) levels, treatments, fades, and tone. The original married performance should also be supplied “as-is” in an Optional stem (See Optional Stems).

Elements Not to Be Included in the M&E

- Discernible dialogue of any kind. This includes foreign language and discernible dialogue in groups or walla. Unless approved by Localization due to creative reasons, discernible dialogue lines should always be removed, replaced, and/or obscured with generic “clean versions” in the M&E. Please place the elements with distinct dialogue in the optional tracks.

- Vocals or non-verbal sounds made by main or ancillary characters adjacent to, or overlapping, dialogue lines (e.g., kissing, grunting, groaning, coughing, sneezing, breathing). These elements will likely be re-recorded by foreign language voice talent (See Optional Stems).
- Dialogue from licensed media (sourced for movies, TV shows, radio broadcasts, commercials, etc.) when possible.
- Dialogue that has been scripted/created for playback as a movie, TV show, radio broadcast, commercial, etc.
- Discernible futzed dialogue (Intercoms, PA announcements, radio “chatter”, TV, phones).
- Reverb sounds or dialogue “treatments”.

Optional Stems

Optional stems should be delivered along with the M&Es and can be provided across multiple sets of stems when the events overlap or occur simultaneously.

AMS requires the delivery of M&E/optional track mapping documentation if available.

Materials should be provided at the same time the event occurs during program, meaning the Optional stem(s) should run the entire duration of the feature.

All program material in the Optionals should play in sample accurate sync with Printmaster and not create any phasing when played with the M&E.

Any program material in the Optionals should include the treatment heard in Printmaster (i.e. futz, reverbs, panning).

Elements to Include in the Optionals (If Applicable to Title):

- All on-screen performances or cast vocals (clean/separated from accompanying music).
- If performances are recorded live, and vocals are married to the accompanying music, the instrumentals must be re-scored/re-recorded free of vocals and supplied in an Optional stem. These instrumentals must match the domestic mix/es level, treatments, fades, and tone. The original married performance should also be supplied as-is in an additional Optional stem.
- If two or more characters are singing at the same time, vocals should be split-out into two optional stems (if recorded separately).
- Non-OV (Foreign) language lines (even if the non-OV language is spoken by a character who speaks the OV language). Overlapping foreign dialogue lines by different characters need to be placed in separate optional tracks, if possible.
- Walla or group recordings with discernible foreign dialogue lines.
  - Note: This should only be done when the foreign dialogue in the walla is “story relevant”. The default approach should be to provide “clean” walla in the M&E whenever possible.
- Kissing, grunting, groaning, breathing, sneezing, coughing, reactions, or vocal intonations from speaking characters that have been omitted from the M&E, provided they do not overlap dialogue.
- Source (licensed footage clips) with audio that includes discernible language should be provided AS-IS in one set of Optional stems.
- An additional Optional stem should also be supplied to replicate the sourced footage, free of any discernible dialogue. Any MX, FX, video ambiance, etc. that was married to dialogue in the source footage (i.e., audience clapping or laughing, doorbells, TV static, commercial jingle music, etc.), should be recreated with suitable sound-alikes.

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