Ingest QC Gate Checklist

Design the QC gate before you ask a vendor for a quote: pick one house mezzanine format, define the automated check set, set the safety and loudness gates, and place QC at ingest and after the encode. Engineering guidance — re-verify spec editions and vendor capabilities live, they change.

1 · HOUSE MEZZANINE FORMAT (pick one, require it)

- ☐ **Standardize on one mezzanine codec.** A near-lossless intermediate master — ProRes (SMPTE RDD 36), DNxHR (VC-3), or JPEG 2000 — that every delivery file is re-encoded from. Never master from a lossy delivery file.
- ☐ **Budget the storage.** ProRes 422 HQ ≈ 100 GB/hour. 500 titles × 1.5 h × 100 GB = 75 TB before any encode. Tier active masters to fast storage, archive the rest.
- ☐ **For premium catalogs, use IMF** (SMPTE ST 2067): track files + a Composition Playlist, so versions reuse parts. Netflix requires IMF App #2E.
- ☐ **Your house format:** _____ · **archive tier after:** _____ days

2 · AUTOMATED CHECK SET (video + audio)

- ☐ **Video:** black & freeze frames, blockiness, color bars, dead pixels, field order, letterbox/pillarbox, legal levels / gamut, and conformance (resolution · frame rate · codec · bit depth).
- ☐ **Audio:** silence, clipping, channel mapping, true-peak, and loudness. **A–V sync (lip-sync)** spans both — the classic 'fine in the edit, wrong on delivery' fault.
- ☐ **Run file-based, not baseband.** File-based QC runs faster than real time and in parallel — the only way to keep up with a catalog of thousands of hours.
- ☐ **Checks enabled:** video _____ audio _____ lip-sync _____

3 · THE SAFETY & LOUDNESS GATES (measured, not guessed)

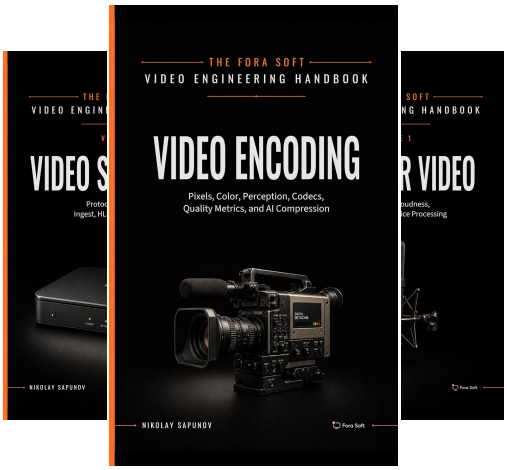
- ☐ **Photosensitive epilepsy (PSE).** Screen for harmful flashing per ITU-R BT.1702-3 (2023): opposing luminance change ≥ 20 cd/m², over 25% of screen, faster than 3 Hz. UK Ofcom mandates it; screen everywhere.
- ☐ **Loudness.** Measure with ITU-R BS.1770-5; enforce ONE catalog target (-23 LUFS broadcast / ~ -27 LKFS on-demand) with a true-peak ceiling. Set the target in your track plan, enforce it here.
- ☐ **PSE gate on?** _____ · **loudness target:** _____ LKFS · **true-peak:** _____ dBTP

4 · GATE PLACEMENT & HUMAN REVIEW

- ☐ **QC at ingest, before transcode** — a bad master multiplies across every rung. **QC again after the encode** — confirm the delivery files are clean and conformant.
- ☐ **Post-encode VMAF floor.** Set a target perceptual score (VMAF, in FFmpeg) and flag any rung below it — a content-aware quality floor, not a guess.
- ☐ **Automated + human.** Machine checks every file; a person reviews flagged files + a random sample for what no metric catches (wrong episode, subtitle feel, grade).
- ☐ **VMAF floor:** _____ · **human-review rule:** flagged + _____% random

THE ONE SANITY CHECK BEFORE YOU LOCK THE GATE

QC the master at ingest, not just the output. File-based QC runs faster than real time — a 2-hour master is checked in about an hour of compute, a small fixed cost. Skip it and a single defect (say a stretch of black frames) is transcoded into all six ladder rungs, packaged into segments, pushed to the origin, and warmed into every CDN cache — then a viewer finds it, and you re-encode all six rungs, re-package, purge every cache, and re-deliver, paying the entire chain twice plus the support and reputation cost. One hour of QC at the front door versus the whole encode-package-deliver chain paid twice: catch it at the gate, not in production. And never trust the green light alone — automated QC gives coverage, a human pass gives the judgment that catches the wrong-episode and bad-subtitle faults no metric flags.



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This checklist fixes the house mezzanine, the automated check set and where the QC gate sits. Our seven-volume handbook covers the whole video stack; start with Volume 1 for encoding and quality metrics such as VMAF, then Volume 4 for loudness and LUFS, and Volume 2 for packaging into HLS and DASH.

WHAT YOU WILL FIND INSIDE

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