

Color Management Decision Guide

COLOR GRADING
COURSE
LEVEL 2 ·
INTERMEDIATE

RCM vs manual CST vs ACES — when to use each, the setup recipe for each, and how to choose per project instead of by habit.

Color management always does the same job — map camera space to display space — but exposes it three ways. All three give great results; the right one is whichever fits the job.

Route 1 — Manual CST pipeline

WHEN TO USE

You need explicit, node-level control over exactly **where** in the tree each conversion happens.

SETUP RECIPE

Input CST (camera space → DaVinci Wide Gamut) as node 1 → your grade in the middle → **output CST** (DaVinci Wide Gamut → Rec.709 / Gamma 2.4) as the last node.

WHY IT WORKS

Grade in the wide working space and funnel down to Rec.709 only on the way out — a hard push rolls off gracefully. A CST placed *first* squeezes you into Rec.709 early, so the same push clips instantly.

WATCH FOR

Cmd-drag to reorder nodes. Set the input CST once per camera on a **group pre-clip** node.

Route 2 — RCM (*Resolve Color Management*)

WHEN TO USE

Most single-facility jobs. Fastest to stand up, plenty of control — **start here by default**.

SETUP RECIPE

Project Settings → *Color Management* → Color Science: **DaVinci YRGB Color Managed**. Set **Timeline color space** (working space, DWG by default) and **Output color space** (Rec.709 / Gamma 2.4 for SDR). Right-click each clip → **Input Color Space** → tag its real camera pair.

WHY IT WORKS

Resolve handles every conversion invisibly — designate input and output once and a 200- or 2000-shot timeline normalizes automatically.

WATCH FOR

Leave the advanced custom preset (input/timeline/output spaces, working luminance) at defaults until you have a specific reason to change it.

Route 3 — ACES

WHEN TO USE

Collaborating across vendors, or you want the broadest industry interchange standard.

SETUP RECIPE

Color science → **ACEScct**. Each source is mapped in by an **IDT** (input transform) per clip. Grade in ACEScct. One **ODT** (output transform) maps the graded result to your target display (e.g. Rec.709).

WHY IT WORKS

Scene-referred — you work with light values as the scene really was. Controls protect shadows and highlights as you push, compressing instead of clipping.

WATCH FOR

ACES and RCM give subtly *different*, both-valid looks from the same clips — don't expect them to match exactly.

Choosing per project

Default

Start with RCM for most single-facility jobs.

Cross-vendor

Reach for ACES for the broadest interchange.

Explicit control

Drop to a manual CST pipeline for node-level precision.

ONE RULE THAT APPLIES TO ALL THREE

The output conversion belongs **last** — grade scene-referred, deliver display-referred. Whichever route, don't bake Rec.709 in before you've made your creative moves.