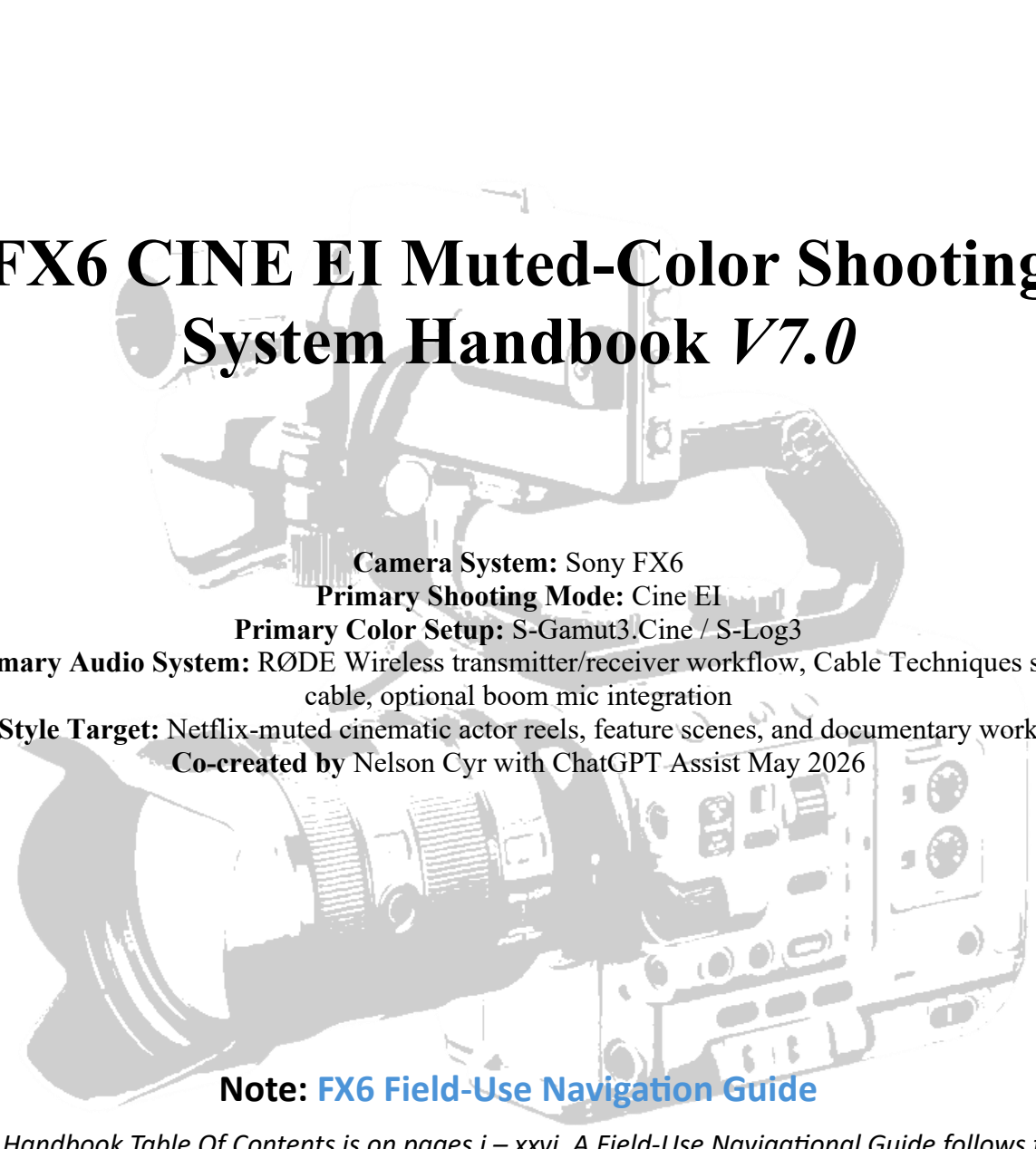




FX6 CINE EI Muted-Color Shooting System Handbook V7.0

Camera System: Sony FX6

Primary Shooting Mode: Cine EI

Primary Color Setup: S-Gamut3.Cine / S-Log3

Primary Audio System: RØDE Wireless transmitter/receiver workflow, Cable Techniques split cable, optional boom mic integration

Style Target: Netflix-muted cinematic actor reels, feature scenes, and documentary work

Co-created by Nelson Cyr with ChatGPT Assist May 2026

Note: [FX6 Field-Use Navigation Guide](#)

The Handbook Table Of Contents is on pages i – xxvi. A Field-Use Navigational Guide follows the TOC on pages xxvii – xxxix and is in front of the Handbook operational body text which starts on page 2. This Nav Layer does not replace, rewrite, shorten, or reorganize the canonical manual body. Most topics are hot-linked to relevant pages with return links back to Nav Guide or TOC.

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NOTE: For All FX6 Audio Setup and Operations, Refer to FX6 AUDIO FIELD SETUP GUIDE Ver. 1.0 instead. Audio information in this Handbook is for detailed background reference and learning. The Audio Guide is specially abbreviated for Field Setup and Operational Use and is specific to the TriGenFilms.com Sony FX6 Camera and Audio Equipment already setup.

FX6 Field-Use Navigation Guide

NOTICE: (All page links in Nav guide will take you “very close” to page requested)

Purpose

This section adds a Field-Use Navigation Guide in front of the Handbook Operational body text. It does not replace, rewrite, shorten, or reorganize the canonical manual body.

Source Status

- Canonical Master TOC remains the controlling TOC source.
- Canonical Master Operational Manual / Master Handbook v1.0 remains the controlling full-body source.
- This v4 page-corrected linked-return-nav document is a derivative navigation overlay only.
- Operational overlay page references below have been corrected to the actual rendered target start pages in this v4 derivative.
- Internal links are bookmark-based and are placed only in the front navigation overlay.
- No visible Return to Field Navigator links were inserted into the manual body text; return navigation is provided through the body-section footer, preserving body pagination.

Navigation Use Note

Use Ctrl+click to follow links in Word. To return to this Field Navigator after following a link, use Alt + Left Arrow in Word, or the Back button in PDF readers that support link history.

NAVIGATION HUB

Navigation Area	Jump Link
Start Here Field Map	Start Here Field Map
First 60 Seconds on Set	First 60 Seconds on Set
If This Happens Troubleshooting Index	If This Happens Troubleshooting Index
Scenario-Based Shooting Recipes	Scenario-Based Shooting Recipes
Audio Setup Paths	Audio Setup Paths
Cine EI Camera Setup Paths	Cine EI Camera Setup Paths
LUT / Monitor / Settings-Card Paths	LUT / Monitor / Settings-Card Paths
Muted-Color Cinematic Look Paths	Muted-Color Cinematic Look Paths
Pre-Shoot, Shoot-Day, and Post Paths	Pre-Shoot, Shoot-Day, and Post Paths

Navigation Area	Jump Link
Quick Reference Appendix Map	Quick Reference Appendix Map

START HERE - ONE-PAGE FIELD MAP

Choose the problem or task first. Then follow the linked page references into the preserved master manual body.

I need to...	Go to...
Set up one RODE lav	Proven one-transmitter baseline - p. 12 Full one-transmitter setup - p. 18 Quick reference Appendix A - p. 346
Set up two RODE lavs as split tracks	Split-track system - p. 37 Permanent split setup - p. 50 Quick reference Appendix B - p. 349
Add a boom mic	Boom setup Chapter 9 - p. 61 Quick reference Appendix C - p. 353
Check headphones / room noise	Headphone and room-noise control - p. 31 Room tone procedure - p. 36
Set Cine EI indoor shooting	White balance - p. 69 ND - p. 77 Shutter/aperture - p. 88 Focus - p. 97 Exposure monitoring - p. 114 Base ISO/EI - p. 122 Indoor quick reference - p. 355
Set Cine EI outdoor shooting	Outdoor ND workflow - p. 83 Exposure tools - p. 114 Outdoor Base ISO choices - p. 127 Outdoor quick reference - p. 359
Verify LUT / monitor	LUT/MLUT monitoring setup - p. 145 External monitoring - p. 151

I need to...	Go to...
Save/load FX6 settings	ALL/User/Scene files and settings card - p. 163 Settings-card checklist - p. 174
Shoot muted cinematic look	Muted-color rule set - p. 175 Actor reel lighting - p. 192 Feature lighting - p. 202 Documentary lighting - p. 212
Run pre-shoot / shoot-day checklist	Pre-shoot checklist - p. 245 Master shoot-day workflow - p. 254
Offload media safely	Full-card offload integrity - p. 303 Offload quick reference - p. 374
Import into Resolve/Premiere	Resolve/Premiere workflow - p. 319 Resolve/Premiere quick reference - p. 378

Field rule: Do not skip the 10-second technical test and playback review before serious recording. See [29.12 p. 252](#) / [29.13 p. 253](#) and [30.17 p. 261](#) / [30.18 p. 262](#).

THE FIRST 60 SECONDS ON SET

Use this sequence before the first real take. It compresses the shoot-day workflow without replacing the full procedure.

- [Load or confirm ALL File - p. 254](#)
- [Confirm physical switches - p. 255](#)
- [Confirm RODE receiver mode - p. 255](#)
- [Confirm Cable Techniques routing if using split mode - p. 256](#)
- [Confirm boom adapter if used - p. 256](#)
- [Set frame rate and recording format - p. 257](#)
- [Set Cine EI / Base ISO / EI - p. 257](#)
- [Set white balance - p. 257](#)
- [Set shutter - p. 258](#)
- [Set aperture - p. 258](#)
- [Set ND - p. 259](#)
- [Set LUT monitoring - p. 259](#)

- [Set waveform/zebras - p. 259](#)
- [Confirm focus - p. 260](#)
- [Confirm audio - p. 260](#)
- [Slate clip - p. 261](#)
- [Record test - p. 261](#)
- [Review - p. 262](#)
- [Record take - p. 262](#)
- [Log clip - p. 263](#)
- [Backup media - p. 263](#)

Stop condition: If audio, focus, LUT, waveform/zebras, or media identity is not verified, do not proceed as if the setup is safe.

IF THIS HAPPENS - TROUBLESHOOTING INDEX

Problem	Primary reference
No FX6 audio meters	Required RODE path to INPUT1 - p. 20 Center MIC position - p. 21 Final FX6 routing - p. 22 Reference level -30 dB - p. 23 Appendix A quick reference - p. 346
Audio too low / RODE gain stuck	RODE gain testing and button operation - p. 28 RODE button operation - p. 29 If RODE becomes stuck at low output - p. 30
Both lavs appear on both channels	RODE Merged mode versus Split mode - p. 39 TX1/TX2 channel test procedure - p. 46 What to do if both channels move equally - p. 48
One split channel is missing or thin	One channel missing or thin - p. 48 Split-track verification checklist - p. 49
Room noise, breathing, TV, HVAC, clothing rub	Headphone monitoring and room-noise control - p. 31 Mic placement correction - p. 34 Room tone recording procedure - p. 36
Need boom plus two lavs	Professional boom-addition solution - p. 61 Phantom-power decision tree - p. 65

XXX

Problem	Primary reference
	Appendix C boom quick reference - p. 353
Monitor image looks flat / no LUT	LUT / MLUT monitoring setup - p. 145 External monitoring setup - p. 151
Image looks overcooked / double-LUTted	Internal Rec MLUT Off - p. 147 Double-LUT warning - p. 149
Image too dark / muddy in S-Log3	Cine EI exposure monitoring - p. 114 Why not to underexpose for mood - p. 120 Do not underexpose for mood - p. 175
White balance shifts during takes	White Balance External Controls - p. 69 Avoid ATW - p. 70 White balance checklist - p. 77
Same filenames appear on cards	File-management doctrine - p. 264 Why same-name clips happen - p. 265 File-management master rule - p. 272
Need safe full-card offload	Full-card offload integrity - p. 303 Full-card copy procedure - p. 306 Appendix J offload quick reference - p. 374
Resolve/Premiere audio seems wrong	Resolve and Premiere workflow - p. 319 Left/right audio inspection - p. 323 Muting event does not prove separation - p. 324 Appendix K proxy/audio quick reference - p. 378

SCENARIO-BASED SHOOTING RECIPES

Recipe 1 - One-person actor reel, indoor, one RODE lav

- Audio: [Proven one-transmitter baseline - p. 12](#) | [Full setup - p. 18](#) | [Appendix A - p. 346](#)
- Noise check: [Headphone monitoring - p. 31](#) | [Mic placement - p. 34](#) | [Room tone - p. 36](#)
- Camera: [White balance - p. 69](#) | [Indoor ND workflow - p. 82](#) | [Shutter/aperture - p. 88](#) | [Focus - p. 97](#) | [Exposure monitoring - p. 114](#) | [Cine EI/Base ISO/EI - p. 122](#)
- Look: [Muted-color priorities - p. 175](#) | [Actor-reel lighting - p. 192](#) | [Appendix F - p. 364](#)

- Workflow: [Pre-shoot checklist - p. 245](#) | [Shoot-day workflow - p. 254](#)
- Post safety: [File naming doctrine - p. 264](#) | [Clip log system - p. 278](#) | [Full-card offload - p. 303](#)

Recipe 2 - Two-person interview, two RODE transmitters

- Split setup: [Receiver Split mode - p. 39](#) | [Cable Techniques routing - p. 40](#) | [Red XLR to INPUT1 - p. 43](#) | [Blue XLR to INPUT2 - p. 43](#)

Permanent split: [Permanent split setup - p. 50](#)

- Verification: [TX1/TX2 channel test - p. 46](#) | [Split-track verification checklist - p. 49](#) | [Appendix B - p. 349](#)
- Documentary lighting: [Documentary lighting layouts - p. 212](#) | [Appendix H - p. 369](#)
- Post: [Left/right audio inspection - p. 323](#) | [Two-transmitter split audio in post - p. 325](#)

Recipe 3 - Two lavs plus boom mic

- Input limit: [Both FX6 handle XLR inputs occupied - p. 61](#)
- Boom adapter: [Sony XLR-K3M / XLR-K2M concept - p. 62](#) | [CH3 = boom via Shoe CH1 - p. 64](#)
- Power: [Phantom-power decision tree - p. 65](#) | [Never send phantom power to RODE receiver - p. 66](#)
- Comparison: [Merged lavs plus boom alternate - p. 66](#) | [Three-track versus simpler alternate table - p. 68](#) | [Appendix C - p. 353](#)

Recipe 4 - Exterior muted-cinematic dialogue

- Audio path: [One lav - p. 18](#) | [Two-lav split - p. 37](#) | [Lav + boom - p. 61](#)
- ND: [Outdoor ND workflow - p. 83](#) | [Hold aperture with ND - p. 84](#)
- Shutter/aperture: [Shutter and aperture controls - p. 88](#) | [Two-person aperture recommendations - p. 93](#)
- Exposure: [Exposure tools - p. 114](#) | [Skin-tone exposure guidance - p. 118](#) | [Highlight protection - p. 118](#)
- Base ISO/EI: [Outdoor Base ISO choices - p. 127](#) | [Practical EI field rules - p. 129](#) | [Appendix E - p. 359](#)
- Look: [Exterior emotional close-up - p. 199](#) | [Exterior day dialogue - p. 208](#)

Recipe 5 - Documentary sit-down or run-and-gun

- Objective: [Covered production types - p. 4](#)
- Audio protection: [Room-noise control - p. 31](#) | [Audio protection - p. 227](#)
- Lighting: [Documentary lighting layouts - p. 212](#) | [Appendix H - p. 369](#)
- Fast setup: [Pre-shoot checklist - p. 245](#) | [Shoot-day workflow - p. 254](#)
- Field discipline: [Logging - p. 278](#) | [Slating - p. 295](#) | [Offload - p. 303](#)

Recipe 6 - Offload, import, proxy, and archive

- File management: [File-management doctrine - p. 264](#)
- Reel naming: [Production card and reel naming - p. 272](#)
- Logging: [Clip log system - p. 278](#) | [Minimal field logging - p. 290](#)
- Offload: [Full-card offload integrity - p. 303](#) | [Appendix J - p. 374](#)
- Post: [Resolve/Premiere import - p. 319](#) | [Appendix K - p. 378](#)
- Storage: [Proxy/storage/archive planning - p. 328](#)

AUDIO SETUP PATHS

Path	Go to	Field note
One transmitter / safety copy	2.1 p. 12 Chapter 3 starts p. 18 Appendix A p. 346	Use CH1 main and CH2 lower safety copy from INPUT1 MIC.
RODE gain operation	Chapter 4 starts p. 28	0 dB final gain; use left button to show gain and right button briefly to cycle.
Headphone and room-noise check	Chapter 5 starts p. 31	Meters show level; headphones reveal noise, rub, bleed, distortion.
Two transmitters / split tracks	Chapter 6 starts p. 37 Appendix B p. 349	Split mode; Cable Techniques TRS-to-dual-XLR; CH1=TX1, CH2=TX2.
Permanent split setup	Chapter 7 starts p. 50	Simplifies one/two transmitter use but loses old CH2 safety-copy workflow.
Onboard RODE recording	Chapter 8 starts p. 56	Backup depends on exact RODE model and must be retrieved after shoot.
Boom addition	Chapter 9 starts p. 61 Appendix C p. 353	Professional route uses Sony XLR-K3M/K2M for boom as separate source.
Post audio inspection	Chapter 38 starts p. 319 Appendix K p. 378	Verify channel separation after import; do not rely on assumptions.

CINE EI CAMERA SETUP PATHS

Control area	Go to	Field note
White balance	Chapter 10 starts p. 69	Avoid ATW for controlled work; use A/B/Preset deliberately.
ND control	Chapter 11 starts p. 77	Use ND to hold shutter and aperture; do not switch Clear/On while rolling.
Shutter and aperture	Chapter 12 starts p. 88	Shutter = motion; aperture = depth/lens character.
Focus	Chapter 13 starts p. 97	Use near-eye rule; know when AF helps and when it hurts.
Zoom and framing movement	Chapter 14 starts p. 105	Zoom is framing control, not exposure; push-ins often beat zoom-ins.
Exposure monitoring	Chapter 15 starts p. 114	Waveform is primary truth; zebras are fast warnings.
Base ISO and EI	Chapter 16 starts p. 122	Cine EI is not ordinary ISO/gain; change EI deliberately.
Recording format	Chapter 17 starts p. 130	Set codec, frame rate, audio channels, and post workflow together.
Assignable buttons / User Menu	Chapter 18 starts p. 137	Make field controls fast: waveform, zebras, LUT, focus, audio status.
Indoor quick reference	Appendix D p. 355	Use for indoor Cine EI field setup.
Outdoor quick reference	Appendix E p. 359	Use for outdoor Cine EI field setup.

LUT, MONITOR, AND SETTINGS-CARD PATHS

Task	Go to	Field note
MLUT logic	Chapter 19 starts p. 145	Separate camera color/gamma, SDI/HDMI MLUT, and Internal Rec MLUT.
Recommended MLUT settings	19.3 starts p. 146	VF/Proxy/Stream On, SDI/HDMI On, Internal Rec Off.
External monitor behavior	Chapter 20 starts p. 151	If FX6 sends MLUT, external monitor LUT should stay off.
LUT acquisition/import	Chapter 21 starts p. 154	Keep only a small LUT set; avoid random LUT packs.
ALL/User/Scene files	Chapter 22 starts p. 163	Know what is saved and what is not.
Settings card	22.14-22.18 starts p. 172 Settings-card checklist - p. 174	Dedicated card label: FX6 SETTINGS - DO NOT FORMAT.
Physical limitations	22.10-22.13 starts p. 170 RODE settings not saved - p. 170 External monitor settings not saved - p. 171 Boom adapter settings not saved - p. 171	Physical switches, RODE settings, monitor settings, and adapter switches are not saved by FX6.

MUTED-COLOR CINEMATIC LOOK PATHS

Look area	Go to	Field note
Overall muted-color rule set	Chapter 23 starts p. 175	Expose cleanly, light selectively, monitor accurately, grade carefully.
Actor reels	Chapter 24 starts p. 192 Appendix F p. 364	Performance clarity, readable face, sharp eyes, controlled background.

Look area	Go to	Field note
Feature scenes	Chapter 25 starts p. 202 Appendix G p. 366	Continuity, motivated direction, contrast, palette.
Documentaries	Chapter 26 starts p. 212 Appendix H p. 369	Truthfulness, clean faces, audio protection, speed.
Lens/movement/coverage	Chapter 27 starts p. 228	Lens choice, push-in/pull-back, support, focus during movement.
Production design/color control	Chapter 28 starts p. 238	Mute the environment, not the person; keep skin natural.

PRE-SHOOT, SHOOT-DAY, AND POST PATHS

Path	Go to	Field note
Night-before setup	29.1 p. 245	Prepare camera, cards, batteries, audio, LUTs, settings, logs.
Camera/format/LUT/WB/ND/focus/audio checks	29.2 Camera mode - p. 247 29.3 Recording format - p. 247 29.4 LUT - p. 248 29.5 White balance - p. 248 29.6 ND - p. 249 29.7 Focus - p. 249 29.8 Audio - p. 250	Use as pre-roll verification.
Physical switch / split cable / boom checks	Physical switch checklist - p. 251 RODE split cable checklist - p. 251 Boom adapter checklist - p. 252	Avoid menu/physical mismatch.

Path	Go to	Field note
10-second test and playback review	10-second technical test - p. 252 Playback review checklist - p. 253	Mandatory before serious recording.
Master shoot-day workflow	Chapter 30 starts p. 254	From ALL File through record take, log clip, and backup media.
File-management doctrine	Chapter 31 starts p. 264	Do not rely on camera filenames alone.
Reel naming system	Chapter 32 starts p. 272	Physical card labels, reel IDs, folder format.
Logging	Chapter 33 starts p. 278 Chapter 34 starts p. 290	Full log plus minimal field log.
Slating	Chapter 35 starts p. 295	Verbal, paper, phone, electronic, or smart slate workflow.
Offload integrity	Chapter 36 starts p. 303 Appendix J p. 374	Copy full card, verify, second backup, then format only after confirmation.
Large-card management	Chapter 37 starts p. 313	Avoid arbitrary splits; preserve full-card master.
Resolve/Premiere and proxies	Chapter 38 starts p. 319 Chapter 39 starts p. 328 Appendix K p. 378	Import full folders, inspect audio channels, and use proxies safely.
Created templates	Chapter 40 starts p. 337	Use log templates in field and post.

QUICK REFERENCE APPENDIX MAP

Use the appendices as the on-set quick reference layer after the full procedure has already been understood from the body chapters.

Appendix	Reference	Page
Appendix A	Appendix A. One-Transmitter RØDE Quick Reference	p. 346
Appendix B	Appendix B. Two-Transmitter RØDE Split Quick Reference	p. 349
Appendix C	Appendix C. Boom Mic Quick Reference	p. 353
Appendix D	Appendix D. Cine EI Indoor Quick Reference	p. 355
Appendix E	Appendix E. Cine EI Outdoor Quick Reference	p. 359
Appendix F	Appendix F. Actor Reel Lighting Quick Reference	p. 364
Appendix G	Appendix G. Feature Scene Lighting Quick Reference	p. 366
Appendix H	Appendix H. Documentary Interview Quick Reference	p. 369
Appendix I	Appendix I. File Naming Quick Reference	p. 371
Appendix J	Appendix J. Offload and Backup Quick Reference	p. 374
Appendix K	Appendix K. Resolve/Premiere Proxy Quick Reference	p. 378

WORKING COPY v4 PAGE-CORRECTED LINKED-RETURN-NAV INTEGRITY LEDGER

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Source file	Created from FX6_Field_Manual_WORKING_NAV_OVERLAY_v3_LINKED_RETURN_NAV.docx; footer return navigation preserved; operational overlay page text corrected.
Locked Master Operational Manual	Not modified.
Canonized Field Manual v1 baseline	Not modified.
Manual body	Preserved. No body rewrite, reordering, shortening, expansion, or summary operation was performed.
Body return links	Footer-based return navigation preserved from v3; no body-return paragraphs inserted.
Hyperlink method	Bookmark-based internal links from the front overlay only.

Item	Status
Page references	Operational overlay target page references were corrected to actual rendered target start pages in v4. Original Master TOC fields were not rebuilt.
Original TOC fields/bookmarks	Not recalculated or rebuilt.
Existing section breaks/page numbering/headers/footers	Not intentionally changed.

[End of FX6 Field-Use Navigational Guide.](#) The Handbook operational body text begins in the following section with **Part I - Project Control, Scope, and Operating Doctrine.**

PART I — PROJECT CONTROL, SCOPE, AND OPERATING DOCTRINE

Chapter 1. Project Purpose, Scope, and Master-Handbook Standard

1.1 Purpose of the Complete Project Master Handbook

This Complete Project Master Handbook preserves the full Sony FX6 production system developed for Cine EI shooting using RØDE Wireless audio, muted cinematic color, disciplined exposure practices, external control workflows, monitoring/LUT management, lighting strategy, file naming, slating, clip logging, offload integrity, and Resolve/Premiere post-production workflow.

The purpose is not merely to create a short camera settings sheet. The purpose is to preserve the complete operating system for the camera and related production workflow so the same proven configuration can be recreated, checked, tested, used, and handed off without losing critical details.

This handbook is designed to answer not only **what setting to use**, but also:

- why the setting exists,
- what problem it solved,
- what mistake it prevents,
- what physical switch must match the menu setting,
- what must be checked with headphones or meters,
- what is saved by FX6 files and what is not,
- what must be logged in the field,
- and what must be preserved for post-production.

The project began with practical FX6 audio setup questions and grew into a larger Cine EI production workflow. The complete scope now includes audio, camera controls, monitoring, lighting, file management, slate/logging procedure, card offload, and editing workflow. All of those areas are part of the working system and must remain together.

This handbook is therefore a **complete master reference** for the user's FX6 operating approach, not a general article about the FX6 and not a generic filmmaking guide.

1.2 Why this is not a condensed field guide

A field guide is intentionally short. It gives quick reminders. This complete project master handbook preserves the full operating logic. **Separate selected topical FX6 Field Guides have been extracted from this source handbook for operational field use.**

A condensed field guide might say:

Set RØDE to 0 dB, INPUT1 to MIC, CH1 dial 7, CH2 dial 5.

That is useful in the field, but it is incomplete because it does not preserve:

- the discovery that INPUT1 has a center MIC position,
- the reason LINE was wrong,
- the reason MIC+48V must not be used with the RØDE receiver,
- the difference between RØDE gain and FX6 channel dial,
- the fact that headphone volume does not change recording level,
- the safety-track logic for CH1/CH2,
- and the later conflict between the one-transmitter safety-track workflow and the two-transmitter split-track workflow.

This handbook must preserve those distinctions because they prevent real production failures.

A condensed field guide might also say:

Use A001_C0001 as a unique clip ID.

That is useful, but incomplete unless the handbook also preserves:

- why camera filenames repeat,
- why camera originals should not be renamed casually,
- why physical card IDs are not the same as reel IDs,
- why long filenames are dangerous,
- why full card structure should be copied,
- why arbitrary 100GB splits are risky,
- and how a verbal slate, paper field log, Excel log, and Resolve/Premiere bin structure work together.

Therefore, this handbook treats the FX6 workflow as a linked production system. Audio settings, camera settings, LUT settings, card settings, and post-production media organization are not isolated topics. They affect one another.

1.3 Covered production types: actor reels, features, documentaries

This handbook supports three primary production use cases: actor reels, feature-style scenes, and documentaries.

Production Type	Main Objective	Primary Risk	System Priority
Actor reels	Sell performance clearly	Over-stylizing or hiding the actor	Clean face, sharp eyes, clean dialogue
Feature scenes	Create repeatable cinematic grammar	Inconsistent coverage or lighting drift	Controlled look, continuity, coverage
Documentaries	Capture credible real people and events	Bad audio, uncontrolled light, missed moments	Reliability, speed, truthfulness

For actor reels, the camera system should never overpower the performer. The muted-color style should make the actor look cinematic but still emotionally readable. Skin should remain alive, eyes sharp, dialogue clean, and framing supportive.

For feature scenes, the system must support repeatability. Matching coverage matters. If one angle is soft, another is flat, a third is over-LUT'd, and audio changes between takes, the scene will not cut professionally.

For documentaries, reliability matters. A documentary interview can survive a less stylized image more easily than it can survive distorted audio, unusable focus, bad file management, or missing clips.

The same foundation applies to all three:

- Cine EI discipline,
- manual white balance,
- controlled monitoring,
- exposure tools,
- clean audio,
- careful file management,
- and verified offload.

The difference is emphasis.

1.4 Project-specific equipment baseline

This handbook is built around the equipment and workflow actually discussed and developed in the project.

Category	Project-Specific Baseline
Camera	Sony FX6
Primary camera mode	Cine EI
Color/gamma target	S-Gamut3.Cine / S-Log3
Primary audio system	RØDE Wireless GO-style transmitter/receiver workflow
One-transmitter camera input	FX6 INPUT1
One-transmitter routing	CH1 and CH2 both sourced from INPUT1 MIC
One-transmitter final gain	RØDE 0 dB, CH1 dial 7, CH2 dial 5, Reference -30 dB
Two-transmitter method	RØDE receiver in Split mode
Two-transmitter cable	Cable Techniques 3.5 mm TRS stereo male to dual XLR-3M male
Two-transmitter routing	Red XLR to INPUT1, Blue XLR to INPUT2
Headphones	Sony MDR-7506
Optional boom expansion	Sony XLR-K3M / XLR-K2M Multi Interface Shoe adapter
External monitor discussed	Elvid RigVision
Post tools discussed	DaVinci Resolve and Adobe Premiere Pro
File-log deliverables	Excel/XLSX and Word/DOCX clip log formats

The handbook avoids treating unverified gear as if it were already installed. For example, the boom mic workflow is preserved as a professional integration concept using the Sony shoe-mounted XLR adapter, but the exact boom mic model and its phantom-power requirement must still be confirmed before use.

Likewise, onboard transmitter recording depends on the exact RØDE model. Wireless GO II / Wireless PRO / Wireless GO Gen 3 support onboard recording; the original Wireless GO likely does not support the same onboard-recording workflow. That model dependency is part of the working instruction.

1.5 What “Netflix-type muted color” means in this project

“Netflix-type muted color” in this project means a controlled, restrained, polished cinematic image. It is not a technical preset. It is not just a LUT. It is not underexposure. It is a combined production approach involving camera capture, lighting, production design, monitoring, and grading.

A proper muted cinematic image has:

Image Element	Desired Result
Skin tone	Natural, readable, alive
Contrast	Shaped, not flat
Shadows	Rich but not crushed
Highlights	Controlled, not careless
Color palette	Restrained and intentional
Background	Supportive, not distracting
Wardrobe	Muted, texture-friendly, not loud
Practical lights	Controlled and motivated
Exposure	Clean enough to grade
LUT	Monitoring aid, not a rescue device
Grade	Subtle, not gimmicky

In this system, the muted look should be built in layers:

1. **Cine EI / S-Log3 capture** for a gradable image.
2. **Manual white balance** for color consistency.
3. **Clean exposure** to avoid muddy shadows.
4. **Selective lighting** to shape the face and background.
5. **Negative fill** to create contrast and mood.
6. **Muted production design** to reduce color chaos.
7. **Controlled LUT monitoring** to preview the intended direction.
8. **Careful grading** to finish the image without killing skin.

A muted image should still feel alive. The subject should not look gray, dead, noisy, or hidden.

1.6 What the muted look is not

The muted look is not achieved by simply making the image dark.

A bad muted look often comes from:

Bad Practice	Result
Underexposing S-Log3	Muddy shadows, noise, weak skin
Crushing blacks	Lost detail, cheap-looking contrast
Over-desaturating	Dead faces, lifeless frame
Random LUTs	Unpredictable contrast and color
Mixed room lighting	Sickly skin and inconsistent color
Flat overhead lighting	Video look, no shape
Ignoring wardrobe/background	Bright distractions fight the grade
Over-dark actor reels	Performance becomes unreadable

Bad Practice	Result
Over-stylized documentary	Credibility suffers

The muted style should not hide the actor's eyes, destroy skin tone, or make the scene look like the camera was simply underexposed.

The correct principle is:

Make the world restrained. Keep the person alive.

That means the background, wardrobe, and palette can be subdued, but the face must still carry emotion.

1.7 Core operating rule: expose cleanly, light selectively, monitor accurately, grade carefully

The central operating rule for this project is:

Expose cleanly. Light selectively. Monitor accurately. Grade carefully.

Each part of that rule has a practical meaning.

Rule	Practical Meaning
Expose cleanly	Do not starve S-Log3; keep skin and important shadows usable
Light selectively	Shape the subject with key, negative fill, background control
Monitor accurately	Use LUTs for viewing but waveform/zebras/meters/headphones for truth
Grade carefully	Preserve skin tone and avoid heavy-handed stylization

The wrong method is to underexpose in-camera and hope the image becomes moody.

The correct method is to capture a clean log image, then create mood through lighting ratio, controlled background, restrained palette, and grading.

For actor reels, this is especially important because the audience is judging the actor. The camera style should not make the actor difficult to see.

For feature scenes, it matters because shots must cut together.

For documentaries, it matters because credibility and intelligibility are more important than a forced "look."

1.8 Master control hierarchy

The FX6 should be operated by control function. Each control has a job. Problems happen when one control is used to do another control's job.

The hierarchy is:

Priority	Control	Main Job
1	Shutter	Motion rendering
2	Aperture	Depth of field and lens character
3	ND	Exposure control after shutter/aperture choice
4	White balance	Color consistency
5	EI	Exposure-rating / monitoring decision
6	LUT / MLUT	Viewing reference
7	Lighting / production design	Actual image style
8	Audio	Dialogue credibility
9	Media / logging	Post-production survival

This hierarchy prevents common mistakes:

- raising shutter just because the image is bright,
- changing aperture constantly and losing depth/focus consistency,
- using white balance to fake a look,
- assuming a LUT fixes lighting,
- relying on camera filenames alone,
- or trusting headphones without watching meters.

1.8.1 Shutter = motion

Shutter controls motion blur. It should normally be set according to frame rate and left alone.

Normal cinematic values:

Frame Rate Normal Shutter

23.98 / 24p 1/48 or 180°

29.97 / 30p 1/60 or 180°

59.94 / 60p 1/120 or 180°

Shutter should not be the first tool for exposure. If the image is too bright outdoors, use ND. If the image is too dark indoors, add light, open aperture, or use the correct base ISO strategy.

Change shutter only for a specific reason: flicker control, stylized motion, or action sharpness.

1.8.2 Aperture = depth and lens character

Aperture controls depth of field, subject isolation, focus difficulty, and lens feel.

Practical starting points:

Scene Type	Aperture Starting Point
Single actor close-up	f/2.8–f/4
Interview	around f/4
Two-person dialogue	f/4–f/5.6
Walk-and-talk	f/4–f/5.6
Wide scene	f/5.6–f/8

A very shallow aperture can look cinematic, but it can also ruin a take if eyes drift out of focus. For two people, f/4–f/5.6 is often safer than f/2.0.

1.8.3 ND = exposure control

ND is the primary brightness-control tool after shutter and aperture are chosen.

Correct order:

1. Choose frame rate.
2. Set shutter.
3. Choose aperture.
4. Set white balance.
5. Use ND to land exposure.
6. Verify with waveform/zebras.

Indoor baseline:

ND Clear unless the scene is too bright.

Outdoor baseline:

Variable ND On.

ND lets the operator preserve cinematic shutter and selected aperture in changing or bright light.

1.8.4 White balance = color consistency

White balance is for stability and consistency. It should not wander during controlled scenes.

Preferred workflow:

WB Position	Use
A	Main custom setup
B	Alternate lighting condition
Preset	Fixed Kelvin fallback

ATW should usually be avoided for actor reels and features because it can shift during a take. Manual white balance protects continuity.

1.8.5 EI = exposure-rating/monitoring decision

In Cine EI, EI is not used like ordinary gain. It affects how the operator rates and monitors the image.

Lower EI encourages brighter exposure and can help shadows. Higher EI encourages darker exposure and can protect highlights, but can increase shadow noise if exposure is starved.

EI should be changed only deliberately.

1.8.6 LUT/MLUT = viewing reference

The LUT or MLUT is a viewing transform. It helps the operator see a normalized or preferred preview instead of flat S-Log3.

Preferred logic:

Destination	Preferred Setting
FX6 viewfinder / LCD	MLUT On if desired
SDI/HDMI monitor	MLUT On if monitor needs normal image
Internal recording	MLUT Off for clean S-Log3

A LUT is not a lighting substitute. It should not be used to hide bad exposure.

1.8.7 Lighting and production design = actual look

The actual muted cinematic look comes from:

- soft directional light,
- negative fill,
- controlled windows,
- dimmed practicals,
- subdued wardrobe,

- non-distracting backgrounds,
- lens choice,
- and final grading.

Camera settings support the look, but they do not create the look by themselves.

1.8.8 Audio = production credibility

Audio quality determines whether the footage feels professional. Bad audio can ruin good picture.

The FX6 audio system must be verified with:

- correct physical input switches,
- correct menu routing,
- proper RØDE gain,
- safe meter levels,
- headphones,
- room-noise checks,
- and test recording.

The project's core audio lesson is that meters and headphones answer different questions:

Tool	Reveals
Meter	Level and clipping risk
Headphones	Noise, rub, room, distortion, bleed
Playback	Actual recorded result

1.8.9 Media/logging = post-production survival

The recording is not safe merely because it exists on a card. The project workflow requires:

- unique reel IDs,
- physical card IDs,
- full-card offload,
- two verified backups,
- clip logs,
- slates,
- short filenames,
- and preserved metadata/folder structure.

The file-management master rule is:

Do not rely on camera filenames alone.

Use reel identity and unique clip IDs such as:

A001_C0001

Chapter 2. Project-Specific Proven Settings and Non-Negotiable Warnings

2.1 Proven one-transmitter audio baseline

The proven one-transmitter baseline is the final working configuration for one RØDE transmitter and one RØDE receiver feeding FX6 INPUT1, with CH1 as the main dialogue channel and CH2 as a lower safety copy.

Item	Final Proven Setting
RØDE receiver physical mounting	FX6 shoe acceptable for mounting only
Actual audio path	RØDE 3.5 mm output to FX6 INPUT1
FX6 INPUT1 physical switch	MIC, center position
Phantom power	Off / do not use MIC+48V
FX6 Reference	-30 dB
RØDE receiver output	0 dB
CH1 Source	INPUT1 MIC
CH2 Source	INPUT1 MIC
CH1 dial	7
CH2 dial	5
CH1 purpose	Main dialogue
CH2 purpose	Lower safety copy
Normal voice target	-12 to -18 dB
Loud/shout target	around -10 dB
Clipping limit	avoid 0/red

This baseline was reached after troubleshooting the FX6 input switch, RØDE receiver gain, meter interpretation, headphone monitoring, and room-noise behavior.

The core one-transmitter concept is:

One mic signal, two camera channels, two levels.

That means CH2 is not a second person. It is not a different microphone. It is the same microphone recorded lower.

2.2 Proven two-transmitter split-track baseline

The proven two-transmitter baseline uses two RØDE transmitters and one RØDE receiver in Split mode. The receiver's left/right output is split into FX6 INPUT1 and INPUT2 using the Cable Techniques breakout cable.

Item	Final Proven / Required Setting
RØDE receiver mode	Split mode
Cable type	3.5 mm TRS stereo male to dual XLR-3M male
Cable model discussed	Cable Techniques RØDE Wireless GO II-style Y cable
Red XLR	FX6 INPUT1
Blue XLR	FX6 INPUT2
FX6 INPUT1 physical switch	MIC
FX6 INPUT2 physical switch	MIC
Phantom power	Off for RØDE
CH1 Input Select	INPUT1
CH2 Input Select	INPUT2
INPUT1 MIC Reference	-30 dB
INPUT2 MIC Reference	-30 dB
CH1 dial	start around 7, adjust per person
CH2 dial	start around 7, adjust per person

In this workflow:

Channel	Source
CH1	TX1 / Person 1
CH2	TX2 / Person 2

The important operational difference from the one-transmitter workflow is that CH2 is no longer a lower safety copy. In split mode, CH2 is the second person's main track.

2.3 Proven boom-addition concept (Ignore this 2.3 section—Refer to FX6 AUDIO FIELD SETUP GUIDE instead).

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When two RØDE transmitters are split to INPUT1 and INPUT2, both FX6 handle XLR inputs are already occupied. To add a boom as a third separate source while preserving the two lavs separately, the professional solution is a Sony XLR-K3M or XLR-K2M Multi Interface Shoe adapter.

The professional three-track layout is:

Channel	Source	Physical Path
CH1	RØDE TX1	Red XLR to FX6 INPUT1
CH2	RØDE TX2	Blue XLR to FX6 INPUT2
CH3	Boom mic	Sony XLR-K3M/K2M via Shoe CH1
CH4	Off or optional second shoe input Shoe CH2 if used	

The boom mic plugs into the adapter's INPUT1. The adapter plugs into the FX6 Multi Interface Shoe. The FX6 channel concept is:

FX6 Channel	Source
CH1	INPUT1
CH2	INPUT2
CH3	Shoe CH1
CH4	Off or Shoe CH2

The lower-cost alternate is:

Channel	Source
CH1	RØDE receiver in Merged mode, both lavs baked together
CH2	Boom mic

That lower-cost method is usable, but sacrifices separate lav control.

2.4 Proven Cine EI monitoring logic

The project established an important distinction:

S-Gamut3.Cine/S-Log3 does not automatically mean the external monitor sees a LUT.

The camera capture setting, monitor LUT output setting, and internal recording LUT setting are separate.

Preferred monitoring/recording logic:

Destination / Function	Preferred Setting
Camera color/gamma	S-Gamut3.Cine / S-Log3
VF/Proxy/Stream MLUT	On if operator wants normalized preview
SDI/HDMI MLUT	On if external monitor should see LUT-applied image
Internal Rec MLUT	Off for clean S-Log3 recording
External monitor LUT	Off/not needed if FX6 sends MLUT
Elvid RigVision	Can display FX6 LUT-applied output, even if it cannot import LUTs

This prevents two major mistakes:

1. Thinking S-Log3 automatically produces a normal-looking monitor image.
2. Applying two LUTs: one from the FX6 and another in the monitor.

2.5 Proven file-management logic

The project's file-management logic is built around the fact that camera filenames can repeat.

A camera may create filenames such as:

C0001.MXF

That same filename can appear on another card or another shoot. Therefore, camera filenames are not enough.

The safe system is:

Identity Type	Example	Purpose
Physical card ID	CFE-01	Identifies reusable media card
Reel ID	A001	Identifies this card/offload instance
Project code	NCAR	Identifies project
Reel folder	20260515_NCAR_FX6_A001	Identifies full card copy
Unique Clip ID	A001_C0001	Identifies clip safely across cards
Clip log description	Indoor action scene	Describes content without long filename

The file-management rules are:

- Keep camera originals unchanged.
- Do not dump multiple cards into one flat folder.
- Do not rely on C0001.MXF alone.
- Do not put long descriptions into filenames.
- Use the log for descriptions.
- Copy full card structure.
- Verify before formatting.

- Make a second backup.

2.6 Non-negotiable warnings

The following warnings are project-level rules.

2.6.1 Do not use LINE for RØDE receiver

Do not set FX6 INPUT1 or INPUT2 to LINE when receiving the RØDE receiver signal in this setup.

LINE is too insensitive for the RØDE receiver output as used here. It can produce weak or missing meter response.

Correct:

RØDE receiver → FX6 input set to MIC

Incorrect:

RØDE receiver → FX6 input set to LINE

2.6.2 Do not use MIC+48V for RØDE receiver

Do not use phantom power with the RØDE receiver.

Correct:

Source	FX6 Input Setting
RØDE receiver	MIC
Phantom-powered boom	MIC+48V only on boom input
Battery boom	MIC
Dynamic mic	MIC
Mixer feed	LINE

Phantom power may be appropriate for a boom mic that requires it, but only on that boom input. It must not be sent to the RØDE receiver.

2.6.3 Do not assume S-Gamut3.Cine/S-Log3 automatically sends a LUT to the monitor

S-Gamut3.Cine/S-Log3 is the recording color/gamma. It does not by itself guarantee that the external monitor receives a LUT-applied image.

To send a LUT-applied image to the external monitor, the FX6 SDI/HDMI MLUT output must be enabled.

2.6.4 Do not double-LUT

If the FX6 sends a LUT-applied image to the monitor, the monitor should not also apply its own LUT.

Double-LUT can make the image too contrasty, too saturated, or technically misleading.

For the Elvid RigVision monitor discussed in the project, direct LUT import does not appear available, so the preferred solution is to let the FX6 apply the MLUT to the SDI/HDMI output.

2.6.5 Do not rename camera originals casually

Camera originals should remain untouched unless there is a controlled duplicate/working-copy workflow.

Safe practice:

- preserve the full card copy,
- use reel folder names,
- use unique clip IDs in the log,
- rename only working copies if absolutely necessary.

2.6.6 Do not split camera-original folders arbitrarily

Do not split a 400GB FX6 card copy into arbitrary 100GB editing folders by dragging pieces around.

That can separate media from related metadata and create relinking or integrity problems.

Safer methods:

Need	Safer Method
Smaller storage chunks	Split archive volumes of full card folder
Easier future workflow	Offload smaller reels, 80–160GB target
Faster editing	Use proxies/transcodes
Emergency splitting	Preserve untouched full-card master first

2.6.7 Do not rely on camera filenames alone

Camera filenames such as C0001.MXF can repeat.

Use unique clip IDs:

Reel Camera File Unique Clip ID

A001 C0001.MXF A001_C0001

A002 C0001.MXF A002_C0001

The reel ID prevents duplicate-name confusion.

PART II — FX6 + RØDE AUDIO SYSTEM

Chapter 3. One-Transmitter RØDE Wireless GO + FX6 Baseline(For all FX6 Audio, Refer to FX6 AUDIO FIELD SETUP GUIDE Ver 1.0) instead.

3.1 Original one-transmitter use case

The original working audio configuration was for one RØDE transmitter, one RØDE receiver, and one person speaking. The purpose was to get clean dialogue into the Sony FX6 while also preserving a lower-level safety copy in the camera.

The final one-transmitter workflow is:

RØDE transmitter worn by subject

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↓ wireless transmission
RØDE receiver
↓ 3.5 mm audio output
3.5 mm-to-XLR cable/adaptor
↓
FX6 INPUT1
↓
CH1 and CH2 both sourced from INPUT1 MIC

This setup is appropriate for:

- one-person actor reel dialogue,
- solo documentary interview,
- one-person narration,
- single-subject field recording,
- a controlled monologue,
- one lav mic recorded with a lower safety copy.

The key design is that the same RØDE signal is recorded to two FX6 channels at two different levels.

Channel	Source	Dial Setting	Purpose
CH1	INPUT1 MIC	7	Main dialogue
CH2	INPUT1 MIC	5	Lower safety copy

CH2 is not a second person. CH2 is not a second microphone. CH2 is a lower recording of the same mic in case the main track gets too hot.

This one-transmitter setup is the safest simple setup for one person because it provides a built-in in-camera safety track without additional hardware.

3.2 RØDE receiver mounted on shoe: mounting only, no audio pass-through

The RØDE receiver may be mounted on the FX6 shoe for convenience, but in this project workflow the shoe is only a physical mounting point for the RØDE receiver.

The key rule is:

The shoe does not carry the RØDE receiver's audio into the FX6 in this setup.

The audio must travel through the receiver's 3.5 mm output cable.

Component	Job
FX6 shoe	Holds the RØDE receiver physically

Component	Job
RØDE receiver 3.5 mm output	Sends the audio signal
3.5 mm-to-XLR cable/adapter	Carries audio to camera
FX6 INPUT1	Receives the audio
CH1 / CH2	Records the routed audio

If the RØDE receiver is mounted on the camera but no audio cable is connected to the FX6 input, the camera will not record the RØDE audio.

This distinction matters because a receiver can appear “installed” on the camera while the camera is actually receiving no audio from it.

3.3 Required audio path: RØDE 3.5 mm output to FX6 INPUT1

The one-transmitter audio path is:

```
RØDE transmitter
  ↓
RØDE receiver
  ↓ 3.5 mm output
3.5 mm-to-XLR cable/adapter
  ↓
FX6 INPUT1
  ↓
CH1 / CH2 recording
```

The field rule is:

Mounting is not audio. Cable is audio.

The RØDE receiver’s 3.5 mm output must be connected to the FX6 audio input. For the one-transmitter baseline, the target input is FX6 INPUT1.

3.4 FX6 INPUT1 physical switch discovery

The decisive troubleshooting discovery was the FX6 INPUT1 physical switch position.

The user originally saw the physical input options as LINE and MIC+48V, but the correct working position was the center MIC position. Once the input was set to MIC, the FX6 meters responded properly.

The final working rule is:

FX6 INPUT1 physical switch = MIC

3.4.1 LINE position and why it is wrong

Do not use LINE for the RØDE receiver in this setup.

LINE expects a hotter line-level signal. The RØDE receiver signal, as used in this project, belongs on a mic-level input.

Using LINE can cause:

- little or no meter movement,
- apparently missing audio,
- weak recorded level,
- excessive need to raise the FX6 dial,
- confusion that the RØDE system is not working.

Correction:

Move the FX6 INPUT1 physical switch to MIC.

3.4.2 Center MIC position and why it fixed the meter problem

The center MIC position on the FX6 INPUT1 physical switch was the correct setting. This was the practical discovery that fixed the “no audio meter movement” problem.

The physical switch logic for the RØDE receiver is:

FX6 INPUT1 Switch Position	Use With RØDE Receiver?	Reason
LINE	No	Wrong input level
MIC	Yes	Correct mic-level input
MIC+48V	No	Phantom power unnecessary and inappropriate

The final working position is:

MIC

3.4.3 MIC+48V position and phantom-power warning

Do not use MIC+48V with the RØDE receiver.

MIC+48V supplies phantom power. The RØDE receiver is battery-powered and does not require phantom power. Phantom power is for microphones that require it, such as certain condenser or shotgun boom microphones, and only when connected to the appropriate input.

The warning is absolute in this setup:

Never send phantom power to the RØDE receiver.

Correct:

RØDE receiver → FX6 INPUT1 set to MIC

Incorrect:

RØDE receiver → FX6 INPUT1 set to MIC+48V

If a boom mic is later added and requires phantom power, phantom power may be applied only to the boom input, not the RØDE receiver inputs.

3.5 Final one-transmitter FX6 routing

The final one-transmitter routing is:

FX6 Item	Setting
INPUT1 physical switch	MIC
CH1 Source	INPUT1 MIC
CH2 Source	INPUT1 MIC
Reference	-30 dB
CH1 dial	7
CH2 dial	5

This is the saved baseline for one RØDE transmitter and one receiver.

3.5.1 CH1 Source = INPUT1 MIC

CH1 is assigned to INPUT1 MIC.

CH1 is the main dialogue channel. It should carry the best normal recording level.

The CH1 target is:

- strong enough for clean dialogue,
- not so hot that loud words clip,
- normal speech around -12 to -18 dB,
- shout/loud speech around -10 dB,
- never hitting 0/red.

3.5.2 CH2 Source = INPUT1 MIC

CH2 is also assigned to INPUT1 MIC.

This sends the same RØDE receiver signal to CH2. CH2 is then recorded lower by using the CH2 physical dial at a lower setting.

The purpose of CH2 is:

lower safety copy of the same mic

CH2 should not be interpreted as a second mic or second person in this one-transmitter baseline.

3.6 Reference level: -30 dB

The final saved FX6 audio reference setting is:

Reference = -30 dB

This was tested with:

- RØDE receiver output at 0 dB,
- FX6 INPUT1 switch at MIC,
- CH1 dial at 7,
- CH2 dial at 5.

The -30 dB reference is part of the proven baseline. It should not be changed casually.

Important distinction:

Control	What It Does
RØDE receiver output	Controls signal leaving receiver
FX6 MIC Reference	Controls camera input sensitivity behavior
CH1/CH2 dials	Set recorded channel levels
FX6 headphone volume	Changes monitoring loudness only

If the RØDE output is wrong, changing the FX6 dial alone may not solve the gain-stage problem. The system must be checked from transmitter to receiver to FX6 input to channel dials.

3.7 Final RØDE gain: 0 dB / -0

The final saved RØDE receiver output is:

0 dB

The user initially referred to this as “-0,” but the correct technical term is **0 dB**.

RØDE gain interpretation in this project:

RØDE Gain Display	Practical Meaning
0 dB	Strongest / loudest output
-3 dB	Slightly reduced output
-12 dB	Much quieter
-30 dB	Very low output

The final 0 dB setting allowed the FX6 channel dials to sit at practical positions rather than being pushed too high.

3.8 Final FX6 dials: CH1=7, CH2=5

The final dial positions are:

Channel Dial	Role
CH1	7 Main dialogue
CH2	5 Lower safety copy

These settings were confirmed by test behavior:

Voice Test	Expected Meter Result
Normal speech	approximately -12 to -18 dB
Loud speech / shout	approximately -10 dB
Clipping	avoided

The system is designed to leave headroom.

3.9 Main track and safety-track logic

The one-transmitter baseline records one mic to two camera channels.

Channel	Signal	Level	Use
CH1	RØDE via INPUT1	Higher	Main dialogue
CH2	Same RØDE via INPUT1	Lower	Safety backup

If CH1 is too hot during a sudden shout or laugh, CH2 may remain usable.

The safety track is useful only if CH2 is actually set lower. If CH1 and CH2 are both routed to INPUT1 but both dials are set similarly, the safety benefit is reduced or lost.

3.10 Target meter levels

3.10.1 Normal speech: -12 to -18 dB

Normal dialogue should land around:

-12 to -18 dB

This is strong enough for editing while leaving headroom.

3.10.2 Loud speech/shout: around -10 dB

A shout around:

-10 dB

is safe. It leaves room before clipping.

3.10.3 0/red as clipping ceiling

The 0/red area on the FX6 meter is the clipping ceiling. It is not the desired operating point.

Field rule:

Normal voice around -12 to -18. Loud voice around -10. Never 0/red.

3.11 Alternate tested setting: RØDE -3 dB / CH1 around 8

An earlier workable setting was:

Item	Earlier Workable Setting
RØDE receiver output	-3 dB
FX6 CH1 dial	about 8

Item	Earlier Workable Setting
Normal speech	about -12 to -18 dB
Shout	about -10 dB

This proved the system could work at -3 dB, but the final preference became:

Item	Final Preference
RØDE receiver output	0 dB
FX6 CH1 dial	7
FX6 CH2 dial	5
Reference	-30 dB

The final setup kept the RØDE output strong and the FX6 dials in a practical range.

3.12 When to consider -40 dB camera reference

If the FX6 dial must be turned all the way to 10 and the level is still weak, first check the RØDE output. The correct first move is to raise the RØDE output toward 0 dB.

Only after the RØDE receiver is correctly set should the FX6 MIC Reference be reconsidered.

Possible branch:

Situation	Action
RØDE output is low	Raise RØDE toward 0 dB
RØDE already 0 dB, FX6 still too low	Consider changing Reference from -30 dB to -40 dB and retest
Audio too hot	Lower CH1/CH2 dial or reduce RØDE output
Headphones too loud but meters good	Lower headphone volume only

The saved baseline remains:

Reference = -30 dB

3.13 One-transmitter quick setup table

Step	Setting / Action
Mount receiver	On FX6 shoe if desired
Connect audio	RØDE 3.5 mm output to FX6 INPUT1
INPUT1 physical switch	MIC

Step	Setting / Action
Phantom power	Off / do not use MIC+48V
RØDE receiver output	0 dB
FX6 Reference	-30 dB
CH1 Source	INPUT1 MIC
CH2 Source	INPUT1 MIC
CH1 dial	7
CH2 dial	5
Headphones	MDR-7506 in FX6 headphone jack
Normal speech target	-12 to -18 dB
Loud/shout target	around -10 dB
Clipping	never 0/red

3.14 One-transmitter troubleshooting table

Problem	Likely Cause	Correction
No meter movement	INPUT1 not set to MIC	Move INPUT1 switch to center MIC
Audio very weak	RØDE gain too low	Raise RØDE output toward 0 dB
FX6 dial at 10 but still low	Gain staging too weak	Raise RØDE first; consider -40 dB Reference only after retest
Audio clips	Too much gain	Lower CH1 dial or reduce RØDE output
CH2 is not safer than CH1	CH2 dial not lower	Set CH2 lower, around 5
Headphones painfully loud	Monitor volume high	Lower FX6 headphone volume
Recording still noisy after lowering headphones	Noise is in room/mic	Fix room noise or mic placement
Breathing loud	Mic too high	Move mic 6–8 inches below chin
TV audible	Room bleed	Turn off TV, close doors, move subject
Clothing noise	Lav/transmitter rubbing	Reposition mic, secure clothing

Chapter 4. RØDE Gain Testing and Button Operation

4.1 Why RØDE receiver output matters

The RØDE receiver output determines how strong the signal is before it reaches the FX6. It is the first major gain point after the transmitter/receiver system.

If the RØDE output is too low, the FX6 dials may have to be raised too high. If the RØDE output is too high, the camera may record too hot. The project found a stable balance:

RØDE 0 dB → FX6 INPUT1 MIC → Reference -30 dB → CH1 dial 7 / CH2 dial 5

This produced usable dialogue levels without clipping.

4.2 RØDE gain values tested: -30, -12, -3, 0 dB

The project tested or encountered several RØDE receiver output values.

RØDE Gain	What Happened / Meaning
-30 dB	Very quiet; caused confusion because level was too low
-12 dB	Lower than desired for final workflow
-3 dB	Workable with CH1 dial around 8
0 dB	Final preferred output

The user discovered the receiver had been cycled down to -30 dB, then worked back toward the correct output.

The final target is:

0 dB

4.3 Meaning of more negative RØDE gain numbers

The RØDE output scale is easy to misread.

More negative equals quieter.

Display	Output Strength
0 dB	Maximum / strongest
-3 dB	Slight reduction
-12 dB	Significant reduction
-30 dB	Very quiet

Field rule:

If the FX6 level is too low, move the RØDE output toward 0 dB, not toward -30 dB.

4.4 Correct term: 0 dB, not “-0”

The correct term for the final RØDE output setting is:

0 dB

The user’s “-0” reference means the same intended final setting, but the handbook uses the correct label: 0 dB.

4.5 Final gain choice and reason

The final gain choice is:

RØDE receiver output = 0 dB

Reason:

- It allowed FX6 CH1 dial around 7.
- It allowed FX6 CH2 dial around 5 for safety.
- Normal speech landed around -12 to -18 dB.
- Shouting landed around -10 dB.
- The signal had enough strength without clipping.

The test result that locked the baseline was:

Test	Result
RØDE 0 dB + CH1 dial 7	Normal speech -12 to -18 dB
Loud/shout	around -10 dB
CH2 dial 5	Lower safety copy

4.6 RØDE button operation

The RØDE gain adjustment procedure must be preserved because it solved a practical field problem.

4.6.1 Press left button to show gain

Press the left button on the RØDE receiver to bring up the gain number.

Do this first. If the gain number is not visible, the next button press may not do what the operator expects.

4.6.2 Briefly press right button to change/cycle gain

After the gain number is visible, briefly press the right button to change or cycle the gain value.

Repeat until the desired gain appears.

Target:

0 dB

4.6.3 Avoid holding right button

Avoid holding the right button. Holding may trigger other receiver behavior depending on the exact RØDE model.

Use short, deliberate presses.

4.7 If RØDE becomes stuck at low output

If the RØDE receiver appears stuck at a low value such as -30 dB:

1. Stop before recording.
2. Power on the RØDE receiver.
3. Press the left button to bring up the gain number.
4. Briefly press the right button to cycle/change the value.
5. Repeat until 0 dB is reached.
6. Confirm FX6 INPUT1 is set to MIC.
7. Confirm FX6 Reference is -30 dB.
8. Confirm CH1 dial is around 7.
9. Speak normally and watch meter.
10. Shout or speak loudly and confirm it does not hit 0/red.

Do not compensate for a stuck -30 dB receiver by blindly turning the FX6 dial all the way up. Fix the receiver output first.

4.8 Gain staging checklist

Check	Correct State
RØDE receiver output	0 dB
FX6 INPUT1 switch	MIC
Phantom power	Off
FX6 Reference	-30 dB
CH1 Source	INPUT1 MIC
CH2 Source	INPUT1 MIC for safety-copy mode
CH1 dial	7

Check	Correct State
CH2 dial	5
Normal speech	-12 to -18 dB
Loud speech	around -10 dB
Clipping	never 0/red
Headphone volume	comfortable; does not affect recording

Chapter 5. FX6 Headphone Monitoring and Room-Noise Control

5.1 MDR-7506 suitability for FX6 monitoring

The Sony MDR-7506 headphones are suitable for FX6 monitoring. They are professional-style monitoring headphones and are revealing enough to expose audio problems that may not be obvious from meters alone.

They are useful for detecting:

- breathing noise,
- TV bleed,
- room tone,
- HVAC rumble,
- clothing rub,
- distortion,
- wireless hits,
- cable movement,
- hum,
- handling noise,
- and excessive room echo.

The project specifically used the MDR-7506 to identify that the mic was sensitive enough to hear breathing and a TV in another room.

That was not a failure of the headphones. It was the headphones doing their job.

5.2 MDR-7506 volume-control expectation

The MDR-7506 normally does not have its own built-in volume control. Monitoring volume is controlled by the FX6 headphone volume setting.

The headphone volume affects only how loud the operator hears the audio.

It does not change:

- the RØDE receiver output,
- the FX6 channel recording level,
- the recorded file,
- the amount of TV picked up by the microphone,
- or the amount of breathing picked up by the microphone.

5.3 FX6 headphone volume versus recorded level

The project included a test where headphone volume was reduced from 50 to 35. The monitoring level became more comfortable, but the TV remained audible.

That result is expected.

Change	What It Affects
Lower FX6 headphone volume	Headphone loudness only
Lower CH1/CH2 dial	Recorded level
Lower RØDE output	Signal into camera
Move mic / fix room	Actual recorded noise balance

If background noise is in the microphone, lowering headphone volume does not remove it from the recording.

5.4 Meter levels versus headphone perception

Meters and headphones serve different jobs.

Tool	Primary Job	Limitation
FX6 meter	Shows recording level and clipping risk	Does not reveal sound quality
MDR-7506 headphones	Reveal noise, rub, bleed, distortion	Do not show exact meter level
Playback test	Confirms actual recorded result	Takes time, but prevents mistakes

Use all three when practical:

1. Watch meter for safe level.
2. Listen with headphones for quality.
3. Record and review test clip before serious work.

5.5 Breathing noise diagnosis

If breathing is prominent in the headphones, the mic is probably too close to the breath path or too high on the chest.

Corrective actions:

1. Move the RØDE mic/lav lower.
2. Aim for roughly 6–8 inches below the chin.
3. Avoid placing it directly under the mouth or nose.
4. Angle or position it to avoid breath blasts.
5. Use foam windscreen if available.
6. Listen again with MDR-7506 headphones.
7. Record a short test and play it back.

Do not solve breathing noise by lowering recording level unless the voice is also too loud. Lowering recording level reduces voice and noise together.

5.6 TV bleed diagnosis

If a TV in another room is audible in the headphones, it may be audible in the recording.

Steps:

1. Stop before serious recording.
2. Listen during room silence.
3. Watch whether the FX6 meters move when no one is speaking.
4. Turn off the TV if possible.
5. If not possible, lower the TV volume substantially.
6. Close doors between the set and TV.
7. Move the subject farther from the noise.
8. Recheck headphones.
9. Record a test and play it back.

Do not assume that because the speaker is louder than the TV, the TV will disappear. Lavs and small transmitters can pick up surprising background detail in quiet rooms.

5.7 HVAC and room tone diagnosis

HVAC noise can appear as low rumble, hiss, or steady air wash. It may not seem bothersome in person, but headphones and microphones reveal it.

If possible:

- turn off HVAC briefly during takes,
- avoid placing subject near vents,
- avoid pointing mic toward vents,

- close doors,
- record room tone.

If HVAC cannot be turned off, keep dialogue strong and consistent and record room tone for post.

5.8 Clothing rub diagnosis

Clothing rub is one of the most common lav problems. It may occur when the mic, transmitter, cable, shirt, jacket, collar, necklace, or hair touches or moves.

Symptoms:

- scratchy sound,
- thumps,
- intermittent muffled noise,
- rustling during body movement,
- noise only when the person turns or gestures.

Corrections:

1. Reposition the mic away from fabric movement.
2. Secure loose clothing.
3. Avoid collars and jacket edges.
4. Keep mic away from necklaces.
5. Test the actor's actual movement.
6. Listen again in headphones.

5.9 Mic placement correction: 6–8 inches below chin

The practical placement target is:

6–8 inches below the chin

This gives a balance of voice clarity and reduced breath noise.

Placement guide:

Problem	Adjustment
Breathing too loud	Move mic lower
Voice too weak	Move mic slightly higher
Clothing rub	Move away from fabric contact
Harsh plosives	Move off direct mouth path
Room too loud	Move mic closer if possible and quiet the room

Placement must be tested with the person speaking normally and moving as they will during the take.

5.10 Foam windscreen use

Use a foam windscreen when available.

It helps with:

- breath noise,
- light air movement,
- minor plosives,
- exterior light breeze.

For exterior wind, a simple foam windscreen may not be enough. More serious wind protection may be needed, but the project baseline specifically preserves the foam windscreen as the simple first corrective step.

5.11 Why not to lower recording level to hide room noise

Lowering recording level does not improve the signal-to-noise relationship. It lowers the voice and background noise together.

Bad fix:

Lower CH1 until the room sounds quieter.

Correct fix:

Make the room quieter, place the mic better, then keep the voice at a proper recording level.

If the room is noisy and the voice is recorded too low, post-production becomes harder because the editor must raise both the voice and the noise.

5.12 Room-noise cleanup checklist

Use this checklist before important dialogue:

Check	Action
TV	Turn off, lower, or isolate
Doors	Close between set and noise
HVAC	Reduce or turn off if practical
Appliances	Check refrigerator, fans, hum

Check	Action
Phones	Silence notifications
Computers	Check fan noise
Clothing	Check rub
Breathing	Move mic lower if needed
Headphones	Listen before rolling
Meters	Watch during silence
Test clip	Record and play back

The goal is not a perfectly silent world. The goal is clean, controllable dialogue.

5.13 Room tone recording procedure

Record 20–30 seconds of room tone for each setup.

Room tone should be recorded with:

- same room,
- same microphone position,
- same camera audio settings,
- same background condition,
- same HVAC condition if it remains on,
- everyone silent.

Room tone helps post-production because it gives the editor a clean sample of the actual room sound to smooth cuts or assist noise reduction.

Chapter 6. Dual RØDE Transmitter / One Receiver Split-Track System

6.1 Why the one-XLR setup is insufficient for separate tracks

The original one-transmitter setup feeds the RØDE receiver into **one FX6 XLR input**, usually INPUT1. That is correct for one person. It is also usable if two transmitters are already mixed together inside the RØDE receiver and the operator only wants one combined two-person track.

But it is **not sufficient** when the goal is to record two people separately.

A single FX6 XLR input is effectively one camera audio input. If two RØDE transmitters are combined before entering that one input, the FX6 cannot later separate interviewer and interviewee cleanly. Both voices are baked together.

That means this setup:

```
TX1 + TX2
  ↓
RØDE receiver in Merged mode
  ↓
one 3.5 mm-to-XLR cable
  ↓
FX6 INPUT1
```

may record both people, but it does **not** give independent control of each person in post.

The correct two-person objective is:

Person	RØDE Transmitter	FX6 Channel	Post-Production Benefit
Person 1 / interviewer	TX1	CH1	Can raise/lower Person 1 separately
Person 2 / interviewee	TX2	CH2	Can raise/lower Person 2 separately

Separate channels matter because one person may speak louder, turn their head, laugh, interrupt, rustle clothing, or be recorded in a different acoustic position. If both people are merged before the camera, those differences are harder to repair.

The governing rule is:

One XLR input can capture a mixed two-person signal, but two isolated people require two camera input channels.

6.2 Two-person interview objective

The two-transmitter setup is for interviews, two-person dialogue, two-actor scenes, documentary conversations, and any situation where two people each wear one RØDE transmitter.

The objective is:

```
TX1 → FX6 CH1
TX2 → FX6 CH2
```

This produces separate tracks inside the FX6 recording.

A proper two-person split-track setup gives the editor:

- independent level control,
- independent noise repair,

- cleaner dialogue balancing,
- better ability to mute one person's clothing rub,
- better ability to favor interviewer or interviewee,
- better control when people overlap,
- more professional dialogue handling.

The desired camera result is:

FX6 Audio Channel Desired Source

CH1	TX1 / Person 1
CH2	TX2 / Person 2

The exact person assignment is flexible. TX1 can be interviewer or interviewee, but it must be documented and tested.

A practical field assignment is:

Role	Transmitter	Camera Channel
Interviewer	TX1	CH1
Interviewee	TX2	CH2

For narrative work:

Role	Transmitter	Camera Channel
Actor 1	TX1	CH1
Actor 2	TX2	CH2

The project rule is:

Do not assume both transmitters are separate just because both people are wearing RØDE transmitters. Separation depends on receiver mode, cable type, FX6 input routing, and post inspection.

6.3 RØDE Merged mode versus Split mode

The RØDE receiver can operate conceptually in two relevant modes for this workflow: **Merged** and **Split**.

RØDE Receiver Mode	What It Does	FX6 Result	When to Use
Merged	Combines TX1 and TX2	Both people mixed together	Simple recording, no separate control

RØDE Receiver Mode	What It Does	FX6 Result	When to Use
Split	Sends TX1 and TX2 separately left/right	One person to CH1, one person to CH2 if correctly cabled	Professional two-person split workflow

For two separate FX6 channels, the receiver must be in:

Split mode

If the receiver is in Merged mode, both transmitters may appear together. The FX6 may still show audio on both meters depending on routing, but that does not prove true separation.

Merged mode is not “wrong” in every situation. It is useful when the operator deliberately wants a combined lav mix, such as the lower-cost boom setup where merged lavs go to INPUT1 and a boom goes to INPUT2. But Merged mode is wrong when the goal is to isolate interviewer and interviewee on separate channels.

The field test is simple:

Test	Correct Split Result
Speak into TX1 only	CH1 moves; CH2 mostly quiet
Speak into TX2 only	CH2 moves; CH1 mostly quiet
Speak into both	CH1 and CH2 move independently

If TX1 makes both CH1 and CH2 move equally, the system is probably not split correctly.

6.4 Correct signal path overview

The correct two-transmitter signal path is:

```

RØDE TX1 + RØDE TX2
      ↓
RØDE receiver set to Split mode
      ↓
Receiver 3.5 mm TRS stereo output
      ↓
Cable Techniques 3.5 mm TRS stereo male to dual XLR-3M male breakout cable
      ↓
Red XLR → FX6 INPUT1 → CH1
Blue XLR → FX6 INPUT2 → CH2
  
```

This path must remain intact from transmitter to receiver to cable to FX6 menu routing.

The complete split-track chain has five required elements:

Required Element	Correct State
Two transmitters	TX1 and TX2 active and assigned
RØDE receiver	Split mode
Cable	True 3.5 mm TRS stereo-to-dual-XLR breakout
FX6 physical inputs	INPUT1 MIC, INPUT2 MIC
FX6 channel routing	CH1=INPUT1, CH2=INPUT2

If any one of these is wrong, the result may be merged, silent, weak, duplicated, or unusable.

6.5 Cable Techniques 3.5 mm TRS stereo male to dual XLR-3M male cable

The required cable is a true stereo breakout cable:

3.5 mm TRS stereo male to dual XLR-3M male

The specific cable type discussed and purchased in the project was the Cable Techniques RØDE Wireless GO II-style “Y” cable, identified in the project as:

Cable Techniques CT-GO2-YX3M-15 / RØDE Wireless GO II “Y” to 2 XLR-3M low-profile cable

The important specifications are:

Cable Feature	Required
Receiver end	3.5 mm TRS stereo male
Camera ends	Two XLR-3M male plugs
Function	Breaks receiver left/right into two FX6 XLR inputs
Use	Two RØDE transmitters into one receiver, separated to FX6 INPUT1/INPUT2

The cable is not merely “a cable that fits.” It must be wired to preserve the left and right channels separately.

6.5.1 Cable purpose

The cable’s purpose is to take the RØDE receiver’s stereo output and split it into two physical XLR feeds.

In the split workflow:

RØDE Receiver Output Cable Side FX6 Input Camera Channel

Left / Tip	Red XLR	INPUT1	CH1
------------	---------	--------	-----

RØDE Receiver Output Cable Side FX6 Input Camera Channel

Right / Ring Blue XLR INPUT2 CH2

The 3.5 mm TRS output carries separate left and right audio when the receiver is in Split mode. The breakout cable sends those two sides to separate XLR plugs.

Without this cable, the FX6 cannot receive two separate RØDE transmitter channels through its two XLR inputs.

6.5.2 Why this is not a generic splitter

Do not use an ordinary headphone splitter.

A headphone splitter is usually designed to duplicate a stereo headphone feed to two listeners. That is not the same as properly breaking out left and right into separate camera inputs.

Avoid these for the two-transmitter FX6 split-track workflow:

Item	Why to Avoid
Ordinary headphone splitter	May duplicate/collapse signal instead of separating L/R
Random 3.5 mm Y-cable	Wiring may be wrong
Single 3.5 mm-to-XLR cable	Feeds only one FX6 input
Dual XLR female cable	Wrong connector sex for FX6 inputs
RØDE SC11	Not the correct FX6 XLR breakout job
Passive adapter chain	More failure points and possible wrong wiring

The required cable is:

3.5 mm TRS stereo male to dual XLR-3M male

The key words are:

- TRS,
- stereo,
- dual XLR-3M male,
- left/right breakout,
- not a headphone splitter.

6.5.3 Cable durability / “flimsy” concern

The Cable Techniques cable may look lighter than a heavy stage cable. That does not automatically mean it is wrong. It is a camera breakout cable intended for lightweight rigging.

But it should be treated carefully because it is a critical signal path.

Field handling rules:

- Do not yank it from the receiver.
- Do not let it hang with tension from the RØDE receiver jack.
- Do not bend it sharply at the 3.5 mm plug.
- Do not step on it.
- Do not pull the FX6 XLR ends under tension.
- Coil it gently.
- Test it before an important shoot.
- Keep it in the camera/audio kit as a dedicated cable.
- Consider carrying a backup cable if the workflow becomes production-critical.

The cable is small, but its job is major. If it fails, the two-transmitter split workflow fails.

6.5.4 Shorter-cable consideration

A shorter cable can reduce clutter on the FX6 rig. However, the first requirement is correct wiring, not just shorter length.

A short replacement cable must still be:

Requirement	Must Match
Receiver connector	3.5 mm TRS stereo male
Camera connectors	Two XLR-3M male
Channel function	Left and right separated
Intended use	Wireless receiver stereo out to two camera XLR inputs

Do not choose a shorter cable if it changes the wiring function. A wrong short cable is worse than a slightly long correct cable.

6.6 Red XLR to INPUT1

For the Cable Techniques cable preserved in this workflow:

Red XLR → FX6 INPUT1

This becomes the CH1 side when CH1 is set to INPUT1.

The intended routing is:

Cable Plug FX6 Input FX6 Channel

Red XLR INPUT1 CH1

If TX1 is assigned to the left side of the RØDE receiver, the blue XLR should carry TX1 to CH1.

6.7 Blue XLR to INPUT2

For the same cable:

Blue XLR → FX6 INPUT2

This becomes the CH2 side when CH2 is set to INPUT2.

The intended routing is:

Cable Plug FX6 Input FX6 Channel

Blue XLR INPUT2 CH2

If the two people appear reversed, this is not necessarily a failure. It may simply mean the transmitter assignment or receiver side is reversed.

Correction options:

1. Swap the Red/Blue XLR plugs.
2. Relabel TX1/TX2 assignments.
3. Keep the routing but document which person is on which channel.

The safest method is to test and slate:

“TX1 is interviewer on CH1. TX2 is interviewee on CH2.”

6.8 FX6 physical input settings

The FX6 physical input switches must match the RØDE receiver signal.

6.8.1 INPUT1 = MIC

Set FX6 INPUT1 physical switch to:

MIC

Do not use LINE.

Do not use MIC+48V.

6.8.2 INPUT2 = MIC

Set FX6 INPUT2 physical switch to:

MIC

Do not use LINE.

Do not use MIC+48V.

6.8.3 Phantom power off

Phantom power must be off for both RØDE receiver feeds.

Correct:

FX6 Input	Source	Physical Switch
INPUT1	RØDE left / TX1	MIC
INPUT2	RØDE right / TX2	MIC

Incorrect:

FX6 Input	Wrong Setting	Problem
INPUT1	LINE	wrong sensitivity
INPUT2	LINE	wrong sensitivity
INPUT1	MIC+48V	sends phantom power to RØDE
INPUT2	MIC+48V	sends phantom power to RØDE

The later boom setup may use phantom power on the boom adapter input if the boom mic requires it. That does not change the RØDE rule: no phantom power to RØDE receiver outputs.

6.9 FX6 menu settings

Once the cable is physically routed, the FX6 channels must be assigned correctly in the audio menu.

6.9.1 CH1 Input Select = INPUT1

Set:

CH1 Input Select = INPUT1

This makes CH1 record the blue XLR / INPUT1 side.

6.9.2 CH2 Input Select = INPUT2

Set:

CH2 Input Select = INPUT2

This makes CH2 record the red XLR / INPUT2 side.

This is the critical menu change from the one-transmitter safety-track workflow. In the one-transmitter setup, CH2 was also INPUT1. In the two-transmitter split setup, CH2 must be INPUT2.

Workflow	CH1	CH2
One-transmitter safety	INPUT1	INPUT1
Two-transmitter split	INPUT1	INPUT2

6.9.3 INPUT1 MIC Reference = -30 dB

Set INPUT1 MIC Reference to:

-30 dB

This matches the saved RØDE gain-staging logic.

6.9.4 INPUT2 MIC Reference = -30 dB

Set INPUT2 MIC Reference to:

-30 dB

Both RØDE sides should start from the same reference baseline.

6.10 Starting dial values

For two-transmitter split mode, start with:

Channel Starting Dial	
CH1	7
CH2	7

Then adjust per speaker.

This is different from the one-transmitter safety-copy workflow.

In one-transmitter safety mode:

Channel Dial Purpose

CH1	7 Main
CH2	5 Lower safety

In two-transmitter split mode:

Channel Dial Purpose

CH1	around 7 Person 1 main
CH2	around 7 Person 2 main

If Person 2 is louder, lower CH2. If Person 1 is quieter, adjust CH1. In split mode, each channel is a main source for a different person.

Target levels remain:

Speech Type	Target
Normal speech	-12 to -18 dB
Loud words	roughly -12 to -8 dB
Shout/laugh	below 0/red; around -10 is safe

6.11 TX1/TX2 channel test procedure

This test must be done after installing the Cable Techniques cable and setting the RØDE receiver to Split mode.

Step 1 — Test TX1 alone

1. Turn on TX1.
2. Turn off TX2 or keep TX2 silent.
3. Speak into TX1.
4. Watch FX6 meters.
5. Confirm CH1 moves strongly.
6. Confirm CH2 stays mostly quiet.

Expected result:

Speaker	CH1	CH2
TX1 only	Moves	Mostly quiet

Step 2 — Test TX2 alone

1. Turn on TX2.

2. Keep TX1 silent.
3. Speak into TX2.
4. Watch FX6 meters.
5. Confirm CH2 moves strongly.
6. Confirm CH1 stays mostly quiet.

Expected result:

Speaker	CH1	CH2
TX2 only	Mostly quiet	Moves

Step 3 — Test both transmitters

1. Have Person 1 speak.
2. Have Person 2 speak.
3. Have both speak briefly.
4. Confirm each channel responds independently.
5. Listen through MDR-7506 headphones.
6. Record a short test.
7. Play back the test before serious recording.

Final expected split result:

Test	Correct Result
TX1 only	CH1 moves
TX2 only	CH2 moves
Both	both move independently
Headphones	each person clean
Playback	separation confirmed

6.12 What to do if both channels move equally

If both channels move equally when only one transmitter is active, the system is probably not truly split.

Check in this order:

1. Is the RØDE receiver in Split mode?
2. Is the Cable Techniques stereo breakout cable installed?
3. Is Red XLR in INPUT1?
4. Is Blue XLR in INPUT2?
5. Is CH1 set to INPUT1?
6. Is CH2 set to INPUT2?
7. Are both physical input switches set to MIC?

8. Is any headphone splitter or wrong adapter being used?
9. Is the receiver output being collapsed or duplicated before the FX6?

Common causes:

Symptom	Likely Cause
TX1 moves both meters equally	Receiver in Merged mode or wrong cable
TX2 moves both meters equally	Receiver in Merged mode or wrong cable
CH1 and CH2 identical waveforms	Merged, duplicated, or dual-mono recording
CH2 duplicates CH1	CH2 still set to INPUT1
Only one side records	cable/input/routing problem

Do not proceed with a two-person interview until the TX1/TX2 solo test proves separation.

6.13 What to do if one channel is missing or thin

If one channel is missing, weak, thin, phasey, or strange:

1. Confirm the transmitter is turned on.
2. Confirm the receiver sees the transmitter.
3. Confirm RØDE receiver is in Split mode.
4. Confirm Red XLR is fully seated in INPUT1.
5. Confirm Blue XLR is fully seated in INPUT2.
6. Confirm INPUT1 and INPUT2 switches are MIC.
7. Confirm CH1=INPUT1 and CH2=INPUT2.
8. Swap Red and Blue XLR plugs temporarily.
9. See whether the problem follows the cable side or stays with the camera input.
10. Remove extra adapters.
11. Retest with each transmitter alone.
12. Record and play back a test.

Diagnostic table:

Problem	Likely Area
CH1 missing	TX1, Red cable side, INPUT1, CH1 routing
CH2 missing	TX2, Blue cable side, INPUT2, CH2 routing
One side thin	cable wiring, adapter problem, bad connection
Both mixed	receiver mode or wrong cable
No audio at all	physical input switch, receiver output, cable connection

A thin or phasey sound is a warning sign. Do not ignore it.

6.14 Split-track verification checklist

Before using the dual-transmitter setup for real production, complete this checklist.

Verification Item	Correct State
RØDE receiver	Split mode
Cable	Cable Techniques 3.5 mm TRS stereo to dual XLR-3M
Red XLR	INPUT1
Blue XLR	INPUT2
INPUT1 switch	MIC
INPUT2 switch	MIC
Phantom power	Off for RØDE
CH1 Input Select	INPUT1
CH2 Input Select	INPUT2
INPUT1 Reference	-30 dB
INPUT2 Reference	-30 dB
CH1 dial	start around 7
CH2 dial	start around 7
TX1 only test	CH1 moves
TX2 only test	CH2 moves
Headphone check	clean audio
Short test recording reviewed before shoot	

Field rule:

Do not trust the screen alone. Test TX1 alone, TX2 alone, both together, then play back.

Chapter 7. Permanent Split Setup for One or Two Transmitters

7.1 Why a permanent split setup is easier

The project reached a practical conclusion: the easiest long-term workflow is to leave the FX6 in the two-transmitter split configuration most of the time.

That means leaving the camera set as:

Channel Source

CH1 INPUT1
CH2 INPUT2

with the Cable Techniques cable installed as:

Cable Plug FX6 Input

Red XLR INPUT1
Blue XLR INPUT2

This simplifies field operation because the camera is always ready for two transmitters. The operator does not have to repeatedly switch CH2 between INPUT1 and INPUT2 depending on whether one or two people are being recorded.

The main benefit is avoiding this common failure:

- You shoot one person with CH2 as safety.
- Later you add a second transmitter.
- You forget to change CH2 from INPUT1 to INPUT2.
- Both camera channels record the same person, and the second person is missing or only mixed elsewhere.

Permanent split mode prevents that.

The tradeoff is that a one-person shoot no longer automatically records a lower CH2 safety copy.

7.2 Permanent split settings table

The permanent split baseline is:

Item	Setting
RØDE receiver	Split mode
Cable	Cable Techniques 3.5 mm TRS stereo to dual XLR-3M
Red XLR	FX6 INPUT1
Blue XLR	FX6 INPUT2
INPUT1 physical switch	MIC
INPUT2 physical switch	MIC
Phantom power	Off for RØDE receiver
CH1 Input Select	INPUT1
CH2 Input Select	INPUT2
INPUT1 MIC Reference	-30 dB
INPUT2 MIC Reference	-30 dB

Item	Setting
CH1 dial	start around 7
CH2 dial	start around 7
Headphones	MDR-7506
Test	TX1 only / TX2 only

This setup works for both:

- two-transmitter recording,
- one-transmitter recording using TX1 only.

The difference is what happens to CH2 when TX2 is not active.

7.3 Two-transmitter operation

For two transmitters, permanent split mode is exactly what is needed.

7.3.1 CH1 = TX1 / Person 1

With Red XLR into INPUT1 and CH1 assigned to INPUT1:

CH1 records TX1 / Person 1

This channel should be adjusted for the person wearing TX1.

7.3.2 CH2 = TX2 / Person 2

With Blue XLR into INPUT2 and CH2 assigned to INPUT2:

CH2 records TX2 / Person 2

This channel should be adjusted for the person wearing TX2.

Two-person dial rule:

Channel	Set For
CH1	Person 1's actual voice
CH2	Person 2's actual voice

Do not automatically set CH2 lower in split mode. CH2 is not safety in this mode. It is Person 2's main audio.

7.4 One-transmitter operation while staying in split mode

Permanent split mode can still be used when only one person is recorded.

7.4.1 Use TX1 only

For one-person use, keep the system in split mode and use TX1.

This means:

Item	State
TX1	On / worn by subject
TX2	Off or unused
CH1	Active
CH2	likely silent

7.4.2 CH1 records solo mic

CH1 records the solo microphone.

In post, CH1 becomes the usable dialogue track.

7.4.3 CH2 likely silent

CH2 will likely be silent or mostly unused because TX2 is not active.

This is expected. It does not mean the system is broken.

The one-person split-mode result is:

Channel	Result
CH1	Solo mic
CH2	Silent/unused

The operator should not panic if CH2 is silent during one-person split-mode recording. The question is whether CH1 is clean, properly leveled, and centered in post.

7.5 What is lost: old CH2 safety-track copy

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The tradeoff of permanent split mode is the loss of the old in-camera safety track when only one transmitter is used.

Old one-transmitter safety mode:

Channel	Source	Purpose
CH1	INPUT1	Main dialogue
CH2	INPUT1	Lower safety copy

Permanent split mode with one transmitter:

Channel	Source	Purpose
CH1	INPUT1 / TX1	Solo mic
CH2	INPUT2 / TX2 inactive	Silent/unused

Therefore, all you lose in the simplified one-transmitter workflow is the FX6's lower CH2 safety copy.

That is an acceptable tradeoff if simplicity and two-person readiness matter more.

It is not acceptable if the solo speaker is likely to shout, laugh loudly, or produce unpredictable peaks and no onboard transmitter recording is available.

7.6 When to switch back to one-transmitter safety mode

Switch back to the one-transmitter safety workflow when:

- only one person is recording,
- there is no need to be ready for two transmitters,
- the speaker may shout or laugh,
- the take is important,
- and a lower safety copy is worth the menu change.

To switch back:

FX6 Setting One-Transmitter Safety Mode

CH1 Input Select	INPUT1
CH2 Input Select	INPUT1
CH1 dial	7
CH2 dial	5
INPUT1 switch	MIC
Reference	-30 dB

This restores:

Channel	Purpose
---------	---------

CH1	Main
-----	------

CH2	Lower safety
-----	--------------

After the one-person safety shoot, if returning to normal two-transmitter readiness, reset:

FX6 Setting	Permanent Split Mode
-------------	----------------------

CH1 Input Select	INPUT1
------------------	--------

CH2 Input Select	INPUT2
------------------	--------

CH1 dial	per Person 1
----------	--------------

CH2 dial	per Person 2
----------	--------------

Cable	Red INPUT1 / Blue INPUT2
-------	--------------------------

The danger is forgetting to switch back before a two-person shoot. That is why permanent split mode is preferred as the everyday baseline.

7.7 Editing solo CH1 as centered mono audio

When one person is recorded in permanent split mode, the useful audio is on CH1.

In editing:

1. Treat CH1 as the mono dialogue source.
2. Center it.
3. Do not leave it panned only to the left speaker.
4. Duplicate or fill to both sides only for playback balance if needed.
5. Do not confuse duplication with safety.

Important distinction:

Post Action	What It Does
Center CH1 mono	Corrects playback position
Duplicate CH1 to both sides	Makes it play from both speakers
Use CH2 safety track	Only possible if CH2 was actually recorded lower
Onboard transmitter recording	Separate backup file if available

Duplicating CH1 in post does not create a safety track. If CH1 clipped, the duplicated copy is also clipped.

7.8 Field decision table: split mode versus safety-copy mode

Use this decision table before a shoot.

Shooting Situation	Recommended Setup	Reason
Two-person interview	Permanent split mode	CH1=TX1, CH2=TX2
Two-person actor scene	Permanent split mode	Separate tracks
One-person quick recording	Permanent split mode using TX1	Simplest
One-person critical performance with shouting	Safety-copy mode	CH2 lower backup
One-person quiet interview	Permanent split mode acceptable	CH1 alone likely fine
One person with onboard RØDE recording enabled	Permanent split mode acceptable	Onboard file can serve as backup
Two lavs plus boom, professional	Split mode + XLR-K3M/K2M	CH1/CH2 lavs, CH3 boom
Two lavs plus boom, no adapter	Merged lavs + boom	Sacrifices isolated lavs

Permanent field rule:

Leave the camera in split mode most of the time. Use TX1 for one person, TX1/TX2 for two people. Switch to safety-copy mode only when deliberately needed.

Chapter 8. RØDE Onboard Transmitter Recording

8.1 What onboard transmitter recording means

Onboard transmitter recording means the RØDE transmitter itself records an internal audio file while it is also sending audio wirelessly to the receiver.

This creates two possible audio paths:

Path 1:

Transmitter → Receiver → FX6 recording

Path 2:

Transmitter → Internal transmitter recording

The internal transmitter recording is independent of the FX6 recording. It can function as backup audio if the wireless link, camera input, cable, channel routing, or camera gain fails.

This is especially valuable in the permanent split workflow because a one-transmitter shoot may not have the old CH2 safety copy.

8.2 Camera audio versus transmitter internal audio

Audio Type	Recorded Where	Purpose
Camera audio	Inside FX6 video file	Main production audio
Transmitter internal audio	Inside RØDE transmitter	Backup / insurance audio

Camera audio is convenient because it is already attached to the video clip. Onboard transmitter audio must be retrieved separately, named, backed up, and synced if used.

The tradeoff is:

Camera Audio	Onboard Transmitter Audio
Already in clip	Separate retrieval required
Depends on wireless/cable/camera routing	Protected from camera routing mistakes
Can clip if camera gain wrong	May preserve cleaner backup depending on model/settings
Easier to edit immediately	Extra post step

8.3 Which RØDE models support onboard recording

Onboard recording depends on the exact RØDE model.

The preserved project conclusion is:

RØDE Model	Onboard Recording Status
Wireless GO II	Supports onboard recording
Wireless PRO	Supports onboard recording
Wireless GO Gen 3	Supports onboard recording
Original Wireless GO likely does not support the same onboard-recording workflow	

The operator must confirm the exact RØDE model before depending on onboard recording.

Do not assume onboard recording exists just because the unit is a RØDE Wireless GO-style device.

8.4 Backup mode versus Always mode

Common onboard recording concepts include Backup mode and Always mode.

Mode	Practical Meaning	Advantage	Risk
Backup	Records as a safety/backup according to device configuration	Good field insurance	Must confirm it is enabled
Always	Records whenever transmitter is on	Maximum protection	More battery/storage use
Manual/button start	Operator starts recording manually	Controlled	Easy to forget

For the user's workflow, Backup mode is the practical default if available. Always mode is safest if the operator can manage battery life, storage, and file retrieval.

The key principle is:

An onboard recording that was not enabled, not running, or not retrieved is not a backup.

8.5 Why onboard recording replaces the lost FX6 safety track

In one-transmitter safety mode, the FX6 records:

Channel	Source
CH1	main mic
CH2	same mic lower

In permanent split mode with one transmitter, the FX6 records:

Channel	Source
CH1	TX1 solo mic
CH2	silent/unused

The lost item is the lower CH2 safety copy.

Onboard transmitter recording can replace that missing safety layer:

Main Recording	Backup
FX6 CH1	TX1 internal recording

For two-person recording, the logic becomes:

Person	FX6 Main	Onboard Backup
Person 1	CH1	TX1 internal file
Person 2	CH2	TX2 internal file

This is why onboard recording matters in the simplified permanent split workflow.

8.6 RØDE safety channel versus onboard recording

The RØDE safety channel and onboard recording are different concepts.

Feature	Meaning
RØDE safety channel	A lower-level duplicate in certain output workflows
Onboard transmitter recording	A separate internal file recorded in the transmitter

For the FX6 split-track workflow, onboard transmitter recording is the more relevant backup concept because it can protect against camera-side routing or level mistakes.

A safety channel may be useful in certain merged workflows, but it is not the same as a separate transmitter file.

8.7 Shoot-day onboard recording checklist

Use this checklist before relying on onboard transmitter recording.

Check	Action
Confirm model	Make sure exact RØDE model supports onboard recording
Enable recording	Use correct RØDE configuration method
Select mode	Backup or Always
Check battery	Transmitter battery charged
Check storage	Enough onboard memory
Confirm receiver link	Receiver sees transmitter
Confirm FX6 meters	Camera still receiving audio

Check	Action
Listen in headphones	No rub/noise/distortion
Test recording	Record short camera test
Verify file if possible	Confirm onboard file exists before serious work

A practical field statement before rolling:

“Camera audio good. TX onboard backup enabled.”

8.8 Post-shoot file retrieval

After the shoot, onboard files must be retrieved before transmitters are cleared or reused.

Procedure:

1. Stop recording.
2. Power down only after confirming no recording is still needed.
3. Connect transmitter to computer using the appropriate RØDE workflow.
4. Export or copy internal recordings.
5. Place them in the project audio originals folder.
6. Rename or label them according to project/reel/transmitter.
7. Back them up.
8. Do not erase transmitter files until backup is confirmed.

Do not wait until weeks later to retrieve transmitter recordings. They can be forgotten, overwritten, or separated from the project context.

8.9 Folder and naming approach for transmitter recordings

Use a clear audio-originals structure.

Example:

```
PROJECT/  
  02_AUDIO_ORIGINALS/  
    20260515_RODE_TX1/  
    20260515_RODE_TX2/  
    ROOM_TONE/
```

Suggested naming patterns:

File Type	Example
TX1 backup	A001_TX1_BACKUP_001.wav
TX2 backup	A001_TX2_BACKUP_001.wav
Interviewer backup	A001_INTERVIEWER_TX1_001.wav
Interviewee backup	A001_INTERVIEWEE_TX2_001.wav
Room tone	A001_ROOMTONE_INT_INTERVIEW_001.wav

The exact extension depends on the RØDE export format. The important rule is that transmitter files should not remain as anonymous downloads with no project/reel/person identity.

8.10 Backup procedure for onboard recordings

Treat onboard recordings as production audio originals.

After retrieval:

1. Copy to the project audio originals folder.
2. Make a second backup.
3. Note the existence of the backup audio in the clip log.
4. Preserve the files until the final edit is complete.
5. Do not clear transmitter storage until files are backed up.

Clip log note example:

Unique Clip ID	Audio Note
A001_C0001	CH1 TX1 camera audio; TX1 onboard backup available
A001_C0002	CH1 TX1 / CH2 TX2; both onboard backups copied

The onboard recording is only useful if the editor knows it exists.

Chapter 9. Adding a Boom Mic to the Dual-RØDE Setup

9.1 Why both FX6 handle XLR inputs are already occupied

In the two-transmitter split-track workflow, both FX6 handle XLR inputs are already being used.

FX6 Input	Source
INPUT1	RØDE TX1 via Red XLR

FX6 Input	Source
INPUT2	RØDE TX2 via Blue XLR

That means there is no remaining handle XLR input for a boom mic if the goal is to keep TX1 and TX2 separate.

A boom mic can still be added, but not by simply plugging it into an already-used input.

The operator must choose between:

1. adding more input capability, or
2. sacrificing separate lav isolation.

9.2 Professional three-track solution overview

The professional solution is to add a Sony XLR-K3M or XLR-K2M through the FX6 Multi Interface Shoe.

This creates a three-track layout:

Camera Channel	Source
CH1	RØDE TX1
CH2	RØDE TX2
CH3	Boom mic
CH4	Off or optional second shoe input

This gives maximum post-production flexibility:

- TX1 isolated,
- TX2 isolated,
- boom isolated.

The boom may provide:

- more natural dialogue tone,
- backup if a lav rubs,
- backup if a lav transmitter fails,
- better room/scene perspective,
- cleaner sound if properly boomed,
- more editorial choices.

This is the best method when audio quality and post flexibility matter.

9.3 Sony XLR-K3M / XLR-K2M adapter concept

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The Sony XLR-K3M or XLR-K2M adapter adds additional XLR input capability through the camera's Multi Interface Shoe.

In this workflow, it does not replace the Cable Techniques cable. It works alongside it.

Physical concept:

Device	Connection
RØDE receiver split output	Cable Techniques cable to FX6 INPUT1/INPUT2
Sony XLR-K3M/K2M	FX6 Multi Interface Shoe
Boom mic	Adapter INPUT1
FX6 channels	CH1/CH2 lavs, CH3 boom

This allows the FX6 to record more than the two handle XLR inputs alone.

9.4 Where the adapter plugs in: Multi Interface Shoe

The Sony XLR adapter plugs into the FX6 Multi Interface Shoe on the top/handle area.

It does **not** plug into:

- FX6 INPUT1,
- FX6 INPUT2,
- the RØDE receiver,
- the Cable Techniques split cable.

The adapter's job is to provide an additional input path through the camera shoe.

Physical layout:

```
RØDE receiver
  ↓ Cable Techniques cable
Red XLR → FX6 INPUT1
Blue XLR → FX6 INPUT2

Boom mic
  ↓ XLR cable
Sony XLR-K3M/K2M INPUT1
  ↓ Multi Interface Shoe
FX6 CH3 / Shoe CH1
```

9.5 Boom mic into adapter INPUT1

Plug the boom mic into:

Sony XLR adapter INPUT1

The adapter input then feeds the FX6 through Shoe CH1, which should be assigned to CH3 in the camera's audio routing concept.

The boom does not go into the Cable Techniques cable. The boom does not share the RØDE receiver. The boom has its own adapter input.

9.6 Professional channel layout

9.6.1 CH1 = RØDE TX1

CH1 records the first RØDE transmitter.

Typical use:

CH1 Person 1 / interviewer / actor 1

9.6.2 CH2 = RØDE TX2

CH2 records the second RØDE transmitter.

Typical use:

CH2 Person 2 / interviewee / actor 2

9.6.3 CH3 = boom mic via Shoe CH1

CH3 records the boom mic through the Sony XLR adapter.

Typical use:

CH3 Boom mic

This gives the editor both close lav isolation and a more natural boom perspective.

9.6.4 CH4 = Off or Shoe CH2

CH4 can remain off unless a second source is connected to the adapter.

Possible CH4 uses later:

- second boom,
- plant mic,
- room mic,

- mixer feed,
- additional source.

For the current project baseline, CH4 can remain Off unless deliberately needed.

9.7 FX6 CH3/CH4 menu concept

The menu concept is:

FX6 Channel	Input Select
CH1	INPUT1
CH2	INPUT2
CH3	Shoe CH1
CH4	Off or Shoe CH2

The exact displayed labels may depend on the FX6 menu state and the connected adapter, but the operating logic is:

Boom mic into adapter INPUT1 → Shoe CH1 → FX6 CH3

The operator should verify by:

1. speaking into TX1 and watching CH1,
2. speaking into TX2 and watching CH2,
3. speaking into boom and watching CH3,
4. confirming CH4 is off or unused unless needed,
5. recording a test and reviewing playback.

9.8 Phantom-power decision tree

The boom input setting depends on the type of microphone or source.

9.8.1 Phantom-powered shotgun/condenser

If the boom mic is a condenser or shotgun microphone that requires phantom power:

Adapter INPUT1 = MIC+48V

This applies phantom power only to the boom input on the adapter.

Do not confuse this with the RØDE inputs.

9.8.2 Battery-powered boom mic

If the boom mic powers itself with an internal battery:

Adapter INPUT1 = MIC

Do not use phantom power unless the mic specifically requires it.

9.8.3 Dynamic mic

If the boom/source is a dynamic microphone:

Adapter INPUT1 = MIC

Dynamic microphones do not require phantom power.

9.8.4 External mixer feed

If the source is a true line-level feed from an external mixer:

Adapter INPUT1 = LINE

Use LINE only for a true line-level source. Do not use LINE for the RØDE receiver baseline.

Phantom-power decision table:

Source	Input Setting
Phantom-powered shotgun/condenser	MIC+48V on adapter input only
Battery-powered boom	MIC
Dynamic mic	MIC
External mixer line feed	LINE
RØDE receiver	MIC, never MIC+48V

9.9 Warning: never send phantom power to RØDE receiver

The boom workflow does not change the RØDE rule.

The RØDE receiver inputs must remain:

RØDE Path	FX6 Setting
Red XLR to INPUT1	MIC
Blue XLR to INPUT2	MIC

Do not use MIC+48V on INPUT1 or INPUT2 when those inputs are receiving the RØDE receiver outputs.

A boom mic may receive phantom power only through the adapter input if that boom mic requires phantom power.

The safe separation is:

Device	Phantom Power?
RØDE receiver	No
Phantom-powered boom	Yes, on boom adapter input only
Battery boom	No
Dynamic mic	No
Mixer feed	No phantom; use LINE if appropriate

9.10 Lower-cost alternate: merged lavs plus boom

If the operator does not have a Sony XLR-K3M/K2M adapter, a lower-cost compromise is possible.

The compromise is:

- set the RØDE receiver to Merged mode,
- feed the merged lavs into FX6 INPUT1,
- plug boom into FX6 INPUT2.

This gives two camera tracks:

Channel	Source
CH1	both RØDE lavs mixed together
CH2	boom mic

This can be useful, but it sacrifices separate control of the two lav transmitters.

9.10.1 RØDE receiver Merged mode into INPUT1

In this alternate workflow, the RØDE receiver combines TX1 and TX2 before sending audio to the FX6.

The result is:

TX1 + TX2 → one combined lav mix → INPUT1 → CH1

This is not a split lav workflow.

9.10.2 Boom into INPUT2

The boom mic goes into FX6 INPUT2.

The result is:

FX6 Channel	Source
CH1	Merged RØDE lavs
CH2	Boom

This gives the editor one lav mix and one boom track.

9.10.3 Tradeoff: two lavs baked together

The tradeoff is major:

Professional Three-Track	Lower-Cost Alternate
CH1 TX1 isolated	CH1 both lavs merged
CH2 TX2 isolated	No separate TX1/TX2 control
CH3 boom isolated	CH2 boom
Maximum flexibility	Simpler but less flexible

If one lav has clothing rub in the lower-cost merged setup, that rub may contaminate the combined lav track. If one person is too loud, adjusting the combined track affects both people.

Use the merged-lavs-plus-boom setup only when the adapter is unavailable and a boom track is still desired.

9.11 Why not to use a passive Y-cable

Do not combine the boom and RØDE receiver with a passive Y-cable.

A passive Y-cable is not a mixer. It can cause:

- level loss,
- impedance mismatch,
- noise,
- weak signal,
- unpredictable routing,
- phase problems,
- gear interaction,

- difficult troubleshooting.

Correct ways to combine multiple audio sources:

Need	Correct Solution
Two separate RØDE lavs	RØDE Split + Cable Techniques dual XLR
Two separate lavs + boom	Add XLR-K3M/K2M adapter
Merged lavs + boom	RØDE Merged to INPUT1, boom to INPUT2
More complex multi-mic setup	Proper mixer/recorder

Do not build a professional audio system out of passive splitters.

9.12 Professional three-track versus simpler alternate decision table

Production Need	Recommended Setup	Result
One person with safety	CH1/CH2 both INPUT1	main + lower safety
One person, simplest permanent setup	TX1 only in split mode	CH1 solo, CH2 silent
Two people, separate lavs	RØDE Split + Cable Techniques	CH1 TX1, CH2 TX2
Two people + boom, best method	Add XLR-K3M/K2M	CH1 TX1, CH2 TX2, CH3 boom
Two people + boom, no adapter	RØDE Merged + boom INPUT2	CH1 merged lavs, CH2 boom
Maximum post flexibility	Professional three-track	isolated lavs + boom
Lowest gear complexity	Merged lavs + boom	less control

Simple overview:

- The lavs give close, reliable dialogue.
- The boom gives more natural tone and backup.
- The professional adapter setup gives the editor the most choices.
- The lower-cost alternate works but bakes the two lavs together.

Final rule:

Use the Sony XLR-K3M/K2M adapter when you want two separate RØDE lavs plus a separate boom track.

PART III — CINE EI CAMERA OPERATION AND EXTERNAL CONTROLS

Chapter 10. White Balance External Controls

10.1 Manual white balance philosophy

White balance is a consistency tool. It tells the camera what color should be treated as neutral under the current light.

For this Cine EI muted-color workflow, white balance should be deliberate, stable, and repeatable. It should not drift during a take.

The preferred approach is:

Manual white balance using A, B, or Preset — not uncontrolled ATW for serious controlled scenes.

White balance should serve the scene by keeping skin and neutral objects consistent. It should not be abused as the main creative “muted look” tool. The muted look should come from lighting, production design, controlled color palette, LUT monitoring, and final grade.

White balance should protect:

- skin tone,
- shot-to-shot continuity,
- grading consistency,
- matching between angles,
- matching between actor close-ups,
- documentary credibility.

A scene can be warm or cool intentionally, but that choice should be locked, not drifting.

10.2 Why ATW should usually be avoided

ATW means Auto Tracing White / automatic white balance behavior. It can shift as the camera sees different colors, light sources, backgrounds, or subject movement.

ATW may be useful in emergency run-and-gun conditions, but it is usually wrong for controlled actor reels and feature scenes.

Risks of ATW:

Risk	Result
Color shifts during take	Unprofessional change mid-shot
Different close-ups	Skin does not match
Background influence	Camera changes WB based on wall/wardrobe
Mixed light confusion	Skin becomes inconsistent
Grading difficulty	Shots require extra correction
Actor reel problem	Performer's face changes color between takes

For controlled scenes:

Do not let the camera chase color. Set color deliberately.

ATW can be considered only when:

- documentary conditions are changing quickly,
- the operator cannot pause to set WB,
- the shot is informational more than cinematic,
- and the risk of color drift is acceptable.

Even then, fixed white balance is usually preferable if time allows.

10.3 External WB switch positions

The FX6 provides external white balance selection positions such as A, B, and Preset. The project workflow uses them as practical memory positions.

WB Position	Practical Use
A	Main custom white balance for current controlled scene
B	Alternate custom white balance for second lighting condition
Preset	Fixed Kelvin fallback

The best approach is to assign these deliberately before shooting.

Example assignment:

Position	Use Example
A	Interior key-light setup
B	Exterior shade/daylight setup
Preset	5600K daylight or 3200K tungsten-style fallback

10.3.1 A memory

Use A as the primary custom white balance memory for the current main setup.

Examples:

- actor reel interior,
- controlled interview,
- feature dialogue scene,
- staged close-up.

Procedure:

1. Set WB switch to A.
2. Place gray/white card at subject position.
3. Light the subject as intended.
4. Press WB SET.
5. Use A for all matching shots in that lighting setup.

A should not be changed randomly between takes. If A changes, note it for continuity.

10.3.2 B memory

Use B as a second custom white balance memory for an alternate lighting condition.

Examples:

- exterior daylight,
- open shade,
- window-light setup,
- second room,
- alternate interview location.

A practical workflow is:

Position	Use
A	Interior main scene
B	Exterior or alternate lighting

This allows faster switching without recalculating WB each time.

10.3.3 Preset

Use Preset as a fixed Kelvin fallback.

Preset can be useful when:

- the lighting source is known,
- there is not time for custom WB,
- the operator wants a fixed value,
- exterior daylight is stable,
- or a repeatable controlled value is preferred.

Examples:

Lighting Condition	Possible Preset Concept
Daylight	5600K-type value
Tungsten/warm interior	3200K-type value
Mixed/creative	fixed deliberate value after testing

The exact Kelvin choice depends on the scene and light sources. Do not assume one Preset works for every location.

10.4 Gray card / white card procedure

A gray card or white card gives the FX6 a neutral reference.

Preferred:

Neutral gray card

Acceptable:

Clean white card if not overexposed or colored

Procedure:

1. Finish rough lighting first.
2. Place the card where the subject's face will be.
3. Make sure the card is lit by the same key light as the face.
4. Avoid colored spill from walls, wardrobe, practicals, or LEDs.
5. Fill enough of the frame for the camera to read it.
6. Avoid glare or overexposure.
7. Press WB SET for A or B.
8. Confirm the camera accepts the balance.
9. Remove the card and check skin through the monitoring LUT.

Important rule:

White balance at subject position under the actual light that matters.

Do not white balance on a random wall, table, ceiling, shirt, or object unless it is truly neutral and lit like the subject.

10.5 WB SET button procedure

The general procedure is:

1. Set the WB switch to A or B.
2. Place gray/white card at subject position.
3. Frame the card.
4. Press WB SET.
5. Wait for the camera to complete the balance.
6. Confirm the result.
7. Check face/skin through the monitoring LUT.
8. Do not change WB during the scene unless the lighting changes.

If the camera fails to set WB, check:

Problem	Correction
Card too dark	Add light or expose card better
Card too bright	Reduce exposure / avoid glare
Card not filling enough frame	Move closer or zoom in
Colored light spill	Reposition card
Wrong WB memory selected	Confirm A or B
ATW still active	Disable ATW for controlled work

10.6 Indoor custom WB setup

For controlled indoor shooting, use a custom white balance.

Recommended indoor approach:

Step	Action
1	Turn off bad overhead/mixed lights if possible
2	Establish key light / practical motivation
3	Set camera to Cine EI / S-Log3 workflow
4	Select WB A
5	Place gray card at subject face position
6	Press WB SET
7	Check skin through LUT
8	Keep WB locked for matching coverage

Indoor actor reel:

- WB A = main scene balance.
- Do not use ATW.
- Keep the same WB for close-up and reverse if the lighting is intended to match.
- If practical lamps are part of the scene, decide whether they are color accents or main source before setting WB.

Indoor documentary interview:

- WB A = interview key-light setup.
- If window light dominates, white balance for the actual face light.
- If mixed light is ugly, fix the light before white balancing.

10.7 Outdoor custom WB setup

Outdoor white balance depends on sun, shade, clouds, time of day, and reflected color.

Recommended outdoor approach:

Condition	WB Approach
Controlled exterior interview	Custom WB on B
Open shade	Custom WB preferred
Direct sun	Custom or fixed daylight after checking face
Fast documentary	Fixed daylight/preset if custom WB is too slow
Moving between sun/shade	Choose based on dominant face light or use controlled documentary compromise

Outdoor actor/feature work should avoid ATW if continuity matters.

A practical A/B assignment:

WB Position	Outdoor Use
A	Interior scene
B	Exterior daylight/open shade
Preset	fixed daylight fallback

If the exterior scene moves between shade and sun, the operator must decide whether continuity or responsiveness matters more. For controlled scenes, choose one lighting condition and keep the subject in it.

10.8 Warm/cool intentional offsets

White balance can be intentionally warmed or cooled, but this should be subtle and deliberate.

Desired Feeling	Possible White Balance Bias
Slight warmth	Set Kelvin slightly higher than neutral
Slight coolness	Set Kelvin slightly lower than neutral
Neutral interview	Custom balance accurately
Night practical mood	Let practicals remain warm while skin stays controlled

Do not overdo WB offsets. Extreme shifts can make skin look unnatural and complicate grading.

The muted Netflix-type look should not be created mainly by making WB “wrong.” Use lighting and art direction first.

10.9 Why white balance should not be the muted-look tool

White balance is for color consistency. The muted look is built elsewhere.

Use these tools for muted color:

Tool	Role
Wardrobe	Removes bright color distractions
Background	Controls palette
Lighting	Shapes contrast and mood
Negative fill	Adds depth
LUT/grade	Final restrained color
White balance	Keeps color stable

If white balance is pushed too far for style, skin can become:

- too blue,
- too orange,
- too green,
- unhealthy,
- hard to match,
- hard to grade.

The correct rule is:

Mute the environment and grade carefully; do not destroy skin with white balance.

10.10 Filter White Memory considerations

Filter White Memory can relate white balance behavior to filter/ND conditions. For the project's current field workflow, simplicity is preferred unless there is a deliberate reason to use advanced behavior.

Practical recommendation:

Keep white balance simple: A, B, Preset.

Use Filter White Memory only if:

- a controlled test confirms why it is needed,
- the operator understands exactly what changes,
- the shoot requires different WB memory behavior by filter/ND state,
- and it is documented.

For ordinary actor reels, feature-style scenes, and documentary interviews, simple locked manual WB is safer.

10.11 White balance checklist before recording

Before rolling on a serious take:

Check	Required State
ATW	Off for controlled work
WB switch	A, B, or Preset deliberately chosen
Gray/white card	Used if practical
Card position	Subject face position
Key light	Final or close to final
Practical lights	Set before WB if they affect face
LUT monitor	Check skin through LUT
Continuity	Same WB for matching shots
Notes	Record if WB changes

Field statement before rolling:

“White balance locked. ATW off. Skin checked.”

Chapter 11. ND External Controls

11.1 ND as exposure stabilizer

On the FX6, ND is one of the most important external exposure controls because it allows the operator to keep the **chosen shutter** and **chosen aperture** while controlling brightness.

For this Cine EI muted-color workflow, ND should be treated as an exposure stabilizer, not as the first creative decision.

The correct logic is:

```

Frame rate chosen
    ↓
Shutter set for motion
    ↓
Aperture chosen for depth/emotion/focus reliability
    ↓
White balance locked
    ↓
ND adjusted to land exposure
    ↓
Waveform/zebras checked
    
```

ND is especially important outdoors. Without ND, the operator may be tempted to:

- raise shutter too high,
- stop the lens down too far,
- change aperture shot-to-shot,
- or underexpose S-Log3.

All of those can damage the look.

The FX6 internal variable ND is a major advantage because it lets the operator hold a desired aperture while moving through changing light.

For a muted cinematic look, ND helps preserve:

Creative Choice	ND Protects It By
180° shutter motion	Avoiding high shutter as brightness fix
f/2.8–f/4 close-up look	Reducing light without stopping down
f/4–f/5.6 two-person safety	Keeping exposure consistent
S-Log3 exposure quality	Preventing accidental over/underexposure
Shot continuity	Reducing exposure jumps between angles

The main rule is:

Choose shutter and aperture for the image. Use ND to control exposure.

11.2 Correct exposure-control order

The most reliable exposure order is:

1. Set frame rate.
2. Set shutter.
3. Choose aperture.
4. Set white balance.
5. Use ND to control brightness.
6. Verify exposure with waveform and zebras.
7. Record a test if the take matters.

This order prevents common mistakes.

Wrong order:

```
Image too bright
  ↓
Raise shutter
  ↓
Motion looks harsh
```

Wrong order:

```
Image too bright
  ↓
Stop lens way down
  ↓
Depth of field changes and background becomes distracting
```

Correct order:

```
Image too bright
  ↓
Keep shutter and aperture
  ↓
Increase ND
```

For Cine EI, this order is especially important because S-Log3 can look deceptively flat or forgiving on the LCD. The operator should not chase the monitor image by randomly changing controls.

Use the controls according to their jobs:

Control	Primary Job
Shutter	Motion rendering
Aperture	Depth of field and lens character
ND	Brightness/exposure

Control	Primary Job
White balance	Color consistency
EI	Exposure-rating / monitoring decision
LUT	Viewing reference
Waveform/zebras	Exposure truth

11.3 ND PRESET / VARIABLE switch

The FX6 ND system can operate in preset steps or variable mode. For this muted Cine EI workflow, **Variable ND** is usually the most useful because it allows fine control without changing aperture.

Use **Preset ND** when:

- you want quick fixed steps,
- light conditions are stable,
- you prefer simple repeatable ND positions,
- or you are working fast and do not need fine tuning.

Use **Variable ND** when:

- you want to hold a specific aperture,
- you are outdoors,
- light changes gradually,
- you are balancing exposure precisely,
- you are shooting actor reels or feature scenes where exposure continuity matters.

For most serious Cine EI actor reel, feature, and documentary setups:

Variable ND is preferred.

Preset ND is not wrong, but Variable ND gives more control.

11.4 ND FILTER POSITION buttons

The ND filter position controls whether the camera is in Clear or ND. The operator must know whether ND is actually engaged.

A common mistake is thinking ND is helping when the camera is still effectively clear, or thinking the image is dark because of exposure when ND is accidentally engaged.

Field check:

Situation	ND Starting Point
Interior normal lighting	Clear
Interior dark/moody scene	Clear
Bright interior with large windows/lights	ND only if needed
Exterior daylight	Variable ND On
Exterior open shade	Variable ND likely still needed
Exterior walk-and-talk	Variable ND or Auto ND depending on movement

Before recording, confirm:

- Is ND Clear or On?
- Is ND in Preset or Variable?
- Is Auto ND on or off?
- Is exposure being controlled intentionally?

11.5 ND VARIABLE dial

The ND VARIABLE dial is used to fine-adjust exposure when variable ND is active.

The best use is:

1. Choose aperture for the shot.
2. Keep shutter correct.
3. Turn Variable ND until waveform/zebras show proper exposure.
4. Do not change aperture just to chase brightness if the aperture is part of the shot design.

Example exterior actor close-up:

Control	Choice
Frame rate	24p
Shutter	1/48 or 180°
Aperture	f/4
ND	Variable ND adjusted until face/exposure is correct

The ND dial lets the operator keep f/4 instead of stopping down to f/11 and losing the intended background separation.

11.6 ND VARIABLE AUTO button

Auto ND allows the camera to adjust ND automatically as light changes.

Auto ND can be useful, but it should not be the default for controlled cinematic scenes.

Use Auto ND for:

- documentary walk-and-talks,
- moving from shade to sun,
- uncontrolled exterior coverage,
- event-style shooting,
- situations where manual ND adjustment would cause missed action.

Avoid Auto ND for:

- actor reel scenes,
- feature dialogue scenes,
- locked interviews,
- dramatic close-ups,
- scenes where exposure shifts during the take would be distracting.

Auto ND is a practical tool, not a cinematic default. It may save a documentary shot, but it can also create visible exposure breathing in controlled work.

The operating rule is:

Shooting Type	Auto ND Recommendation
Actor reel	Usually Off
Feature scene	Usually Off
Controlled interview	Usually Off
Documentary walk-and-talk	Can be useful
Fast outdoor coverage	Can be useful
Lighting changes mid-shot	Use only if manual adjustment is impractical

11.7 Indoor ND workflow

Indoor ND should be handled carefully because interiors often need more light, not less.

11.7.1 Start with ND Clear

For indoor scenes, start with:

ND Clear

This is especially true for:

- dramatic interiors,
- actor reel close-ups,
- interviews,

- moody practical-light scenes,
- night interiors,
- low-light documentary rooms.

If the scene is already dim, ND will make the problem worse.

Indoor starting point:

Control	Typical Starting Point
Base ISO	800 if lit, 12800 if genuinely low light
Shutter	180° / 1/48 at 24p
Aperture	f/2.8–f/4 solo, f/4–f/5.6 two-person
ND	Clear
WB	Custom A
LUT	Monitor On, Internal Rec Off
Exposure tool	Waveform/zebras

The indoor rule:

Do not add ND unless the scene is too bright.

11.7.2 Use ND indoors only if too bright

There are indoor cases where ND is useful:

- strong daylight through windows,
- bright studio lights,
- large LED panels,
- high-output practicals,
- shallow-depth actor close-up where f/2.8 must be preserved,
- bright white set or reflective surfaces.

Example indoor bright-window interview:

Problem	Correct Fix
Face properly lit but window too bright	Reframe/control window if possible
Whole scene too bright at chosen aperture	Add Variable ND
Need f/2.8 but lights too bright	Use ND rather than stopping down

Problem	Correct Fix
Scene too dark	Do not use ND; add light/open aperture/use base ISO strategy
Indoor ND should be intentional, not accidental.	

11.8 Outdoor ND workflow

Outdoors, ND is usually essential.

11.8.1 Variable ND On

For exterior daylight shooting, start with:

Variable ND On

This allows the operator to hold:

- 180° shutter,
- desired aperture,
- consistent exposure,
- clean S-Log3 capture.

Exterior daylight without ND can force bad compromises:

Without ND	Problem
High shutter	harsh motion
f/11–f/16	deep background, less cinematic separation
underexposure	noisy shadows
inconsistent aperture	coverage mismatch

11.8.2 Hold aperture with ND

The outdoor sequence is:

1. Set frame rate.
2. Set shutter.
3. Choose aperture for look and focus.
4. Turn Variable ND On.
5. Adjust ND until exposure is correct.
6. Check waveform/zebras.
7. Record a test if needed.

Example exterior interview:

Control	Setting
Frame rate	24p
Shutter	1/48 or 180°
Aperture	f/4–f/5.6
Base ISO	800
ND	Variable On
WB	Custom B or fixed daylight
Exposure	Adjust ND, verify waveform

Example exterior emotional close-up:

Control	Setting
Lens	Longer focal length if available
Aperture	f/2.8–f/4 if focus allows
ND	Variable On
Light	Open shade or backlight preferred
Focus	Near eye, magnified
Audio	Wind protection

11.9 Auto ND use cases

Auto ND is useful when exposure changes faster than the operator can manually correct without ruining the shot.

Use Auto ND when:

- the subject walks from shade to sun,
- documentary action cannot be stopped,
- the operator is solo and managing audio/focus/framing,
- a missed moment is worse than slight exposure adjustment,
- or movement through changing light is unavoidable.

Avoid Auto ND when:

- the shot is locked off,
- exposure must stay emotionally stable,
- lighting is controlled,
- a visible auto-adjustment would distract,

- or the scene will be cut with matching coverage.

Decision table:

Situation	Manual ND	Auto ND
Actor close-up	Yes	No
Feature dialogue	Yes	No
Sit-down interview	Yes	No
Exterior documentary walk	Maybe	Yes if light changes
Outdoor event coverage	Maybe	Often useful
Moving from interior to exterior	Hard	Possibly useful

If Auto ND is used, record a test and watch for visible exposure changes.

11.10 Why not to switch Clear/On while rolling

Avoid switching ND Clear/On during a serious take unless the shot is documentary and unavoidable.

Switching ND during a take may cause:

- visible exposure jump,
- operator distraction,
- continuity problem,
- take ruined by exposure change.

For controlled scenes, set ND before rolling.

For documentary work, if ND must change during recording, use the smoothest possible method and accept that the moment may matter more than perfect exposure continuity.

11.11 ND and white balance interaction

ND should not replace white balance. White balance should be set and locked based on the lighting. ND then controls exposure.

Correct order:

Set WB for light

↓

Use ND for exposure

Do not let changing ND cause random white balance changes. For controlled work, ATW should usually be off, so ND changes do not trigger color drift.

If using Filter White Memory or more advanced behavior, test it before relying on it. For the project's normal workflow, keep WB simple:

- A for primary setup,
- B for alternate setup,
- Preset for fallback.

11.12 Indoor/outdoor ND examples

Interior actor reel close-up

Control	Setting
Base ISO	800 if lit
Shutter	1/48 or 180° at 24p
Aperture	f/2.8–f/4
ND	Clear
WB	Custom A
Exposure correction Adjust light, aperture, or ISO strategy before ND	

Interior bright window interview

Control	Setting
Base ISO	800
Shutter	180°
Aperture	f/4
ND	Variable if needed
WB	Custom at subject face
Extra action Control window if practical	

Exterior actor close-up

Control	Setting
Base ISO	800
Shutter	180°
Aperture	f/2.8–f/4 if focus allows
ND	Variable On
WB	Custom B / daylight
Exposure ND dial + waveform	

Exterior two-person dialogue

Control	Setting
Base ISO	800
Shutter	180°
Aperture	f/4–f/5.6
ND	Variable On
WB	Custom or fixed daylight
Focus	both people on plane

Documentary walk-and-talk

Control	Setting
Base ISO	800
Shutter	180°
Aperture	f/4–f/5.6
ND	Variable On
Auto ND	Consider if moving through changing light
Audio	wind/handling protection

Final ND rule:

Inside: start Clear. Outside: expect Variable ND. In all cases, use ND to protect shutter and aperture.

Chapter 12. Shutter and Aperture External Controls

12.1 Shutter controls motion

Shutter controls how motion looks. It affects motion blur, movement smoothness, and the emotional feel of action.

For normal cinematic work, shutter should usually be set to a 180-degree shutter angle or equivalent shutter speed.

The common mistake is using shutter as a brightness control. That is not the correct normal workflow for this project.

Wrong:

Exterior is too bright

↓

Raise shutter to darken image

↓

Motion becomes harsh/staccato

Correct:

Exterior is too bright

↓

Keep shutter at 180°

↓

Use ND to reduce brightness

Shutter should be boring and correct unless there is a specific creative or technical reason to change it.

12.2 Aperture controls depth of field

Aperture controls how much of the image is in focus and how the lens renders depth.

Aperture affects:

- background blur,
- focus difficulty,
- subject separation,
- lens sharpness behavior,
- emotional intimacy,
- two-person focus safety,
- exposure.

For this project, aperture should be chosen based on the scene and then protected with ND.

The basic principle:

Aperture is for depth and emotion. ND is for brightness.

12.3 Normal cinematic shutter values

12.3.1 24p = 1/48 or 180°

For 23.98p or 24p shooting, use:

1/48 or 180°

This is the standard cinematic motion baseline for actor reels and feature-style scenes.

Use this for:

- actor monologues,
- dialogue scenes,
- interviews with cinematic feel,
- feature-style coverage,
- dramatic close-ups.

12.3.2 30p = 1/60 or 180°

For 29.97p or 30p shooting, use:

1/60 or 180°

This is appropriate when shooting 30p documentary or other 30p workflows.

12.3.3 60p = 1/120 or 180°

For 59.94p or 60p shooting, use:

1/120 or 180°

This is appropriate for 60p motion or material intended for slow motion, depending on the project plan.

12.4 When to change shutter

Change shutter only when there is a deliberate reason.

Legitimate reasons include:

Reason	Example
Flicker control	Lights flicker at normal shutter
Stylized action	Sharper, more aggressive motion
Dream/blur effect	More motion blur intentionally
Sports/action clarity	Need crisper movement
Technical matching	Matching other footage/frame rate constraints

If flicker is present, adjust shutter carefully and test. Do not randomly change shutter without checking motion and exposure.

12.5 When not to change shutter

Do not change shutter merely because:

- the image is too bright,
- the monitor looks washed out,
- the background is bright,
- the operator is avoiding ND,
- or aperture was not planned.

For this workflow, shutter is not the normal exposure correction tool.

If the image is too bright:

1. Confirm ISO/Base ISO/EI.
2. Confirm aperture.
3. Use ND.
4. Control light if possible.
5. Protect highlights.

If the image is too dark:

1. Confirm ND is not accidentally on.
2. Open aperture if appropriate.
3. Add light.
4. Use proper base ISO strategy.
5. Do not simply slow shutter unless intentional.

12.6 Aperture selection by scene type

Aperture should serve the shot.

Scene Type	Practical Aperture Range	Reason
Single actor close-up	f/2.8–f/4	subject isolation while keeping eyes manageable
Dramatic close-up	f/2.8–f/4	emotional intimacy
Sit-down interview	around f/4	face sharp, background softened
Two-person dialogue	f/4–f/5.6	both people more likely sharp
Walk-and-talk	f/4–f/5.6	focus safety during movement
Wide establishing shot	f/5.6–f/8	more environment in focus
Action/chase	f/4–f/8 depending movement	focus reliability

The operator should not blindly choose the widest aperture. Very shallow focus can look attractive but can ruin performances if focus drifts.

12.7 Indoor aperture recommendations

Indoor actor reel single-person:

Shot	Aperture
Close-up	f/2.8–f/4
Medium shot	f/4
Moving actor	f/4–f/5.6 if needed

Indoor two-person dialogue:

Shot	Aperture
Two-shot	f/4–f/5.6
Over-the-shoulder	f/4
Close-up	f/2.8–f/4 if focus can be held

Indoor documentary interview:

Shot	Aperture
Standard interview	f/4
More background separation	f/2.8–f/4
Unpredictable movement	f/4–f/5.6

The indoor rule:

Do not choose shallow aperture at the expense of sharp eyes and usable performance.

12.8 Outdoor aperture recommendations

Outdoors, the operator often has enough light, so aperture can be chosen for focus and look.

Useful exterior starting points:

Exterior Situation	Aperture
Interview	f/4–f/5.6
Emotional close-up	f/2.8–f/4 if focus allows
Two-person dialogue	f/4–f/5.6
Walk-and-talk	f/4–f/5.6
Action/chase	f/5.6–f/8 if focus is difficult
Wide landscape/context	f/5.6–f/8

Use Variable ND to hold the chosen aperture.

Outdoor mistake to avoid:

Do not let bright sun force the lens to f/11 or f/16 if the desired look is subject separation. Use ND.

12.9 Two-person aperture recommendations

Two-person scenes are where aperture discipline matters most.

If two people are not on the same focus plane, a very wide aperture may make one person soft. For dialogue, especially if both people need to be readable, use a safer aperture.

Recommended:

Two-Person Situation	Aperture
Both seated, same plane	f/4 may work
Both moving slightly	f/4–f/5.6
One foreground / one background	choose who is sharp or stop down
Documentary two-person interview	f/4–f/5.6
Actor reel two-shot	f/4–f/5.6 unless focus is controlled

If the artistic intention is for only one person to be sharp, a wider aperture can be used. But that must be intentional.

12.10 Manual iris versus auto iris

For controlled actor reels and feature scenes:

Manual iris is preferred.

Auto iris can shift exposure during a take. That may look amateur or cause continuity problems.

Manual iris is best for:

- actor reels,
- feature dialogue,
- dramatic close-ups,
- sit-down interviews,
- controlled lighting,
- repeatable coverage.

Auto iris may be considered for:

- fast documentary coverage,
- uncontrolled run-and-gun conditions,
- events where missed exposure is worse than exposure shifting.

But for the project's muted cinematic workflow:

Manual iris first. Auto iris only by deliberate exception.

12.11 Why ND should handle brightness after aperture is chosen

Once the aperture is chosen for the shot, ND should be used to correct brightness.

Example:

You choose f/4 because:

- one person is sharp,
- background has some softness,
- lens looks good,
- focus is manageable.

If the image is too bright outdoors, do not change to f/11 just to darken the image unless deeper focus is desired. Use ND.

Correct:

Aperture chosen for look

↓

ND adjusted for exposure

Wrong:

Image too bright

↓

Aperture closed without considering look

↓

Background becomes too sharp / scene changes

For shot matching, this is critical. If one angle is f/2.8 and another is f/8 only because exposure was handled inconsistently, the scene may not cut smoothly.

12.12 Indoor setup examples

Interior actor close-up

Control	Setting
Frame rate	24p
Shutter	1/48 or 180°
Aperture	f/2.8–f/4
ND	Clear
Base ISO	800 if lit
WB	Custom A
Focus	near eye
Exposure check	waveform/zebras

Operating note:

Do not underexpose the face to make the scene moody. Shape mood with negative fill and background control.

Interior two-person dialogue

Control	Setting
Frame rate	24p
Shutter	1/48 or 180°
Aperture	f/4–f/5.6
ND	Clear unless too bright
WB	Custom A
Focus	both subjects / primary speaker
Audio	two-transmitter split if both wearing lavs

Operating note:

Keep the people on a similar focus plane when possible.

Interior documentary interview

Control	Setting
Frame rate	24p or documentary project frame rate
Shutter	180° equivalent
Aperture	around f/4
ND	Clear
WB	Custom A
Audio	lav plus boom if available
Test	record and review

Operating note:

Interview sharpness and audio reliability matter more than extreme background blur.

12.13 Outdoor setup examples

Exterior actor close-up

Control	Setting
Frame rate	24p
Shutter	1/48 or 180°
Aperture	f/2.8–f/4 if focus allows
ND	Variable On
WB	Custom B or fixed daylight
Focus	near eye with magnifier
Lighting	open shade/backlight preferred

Exterior two-person dialogue

Control	Setting
Frame rate	24p
Shutter	180°
Aperture	f/4–f/5.6
ND	Variable On
WB	fixed/custom daylight
Focus	both on plane if possible
Audio	wind protection

Exterior chase/action

Control	Setting
Frame rate	project-dependent
Shutter	180° unless action sharpness is deliberate
Aperture	f/5.6–f/8 if focus is difficult
ND	Variable On
Focus	pretest movement
Logging	slate/clip note essential

Operating note:

For action, focus reliability may be more important than shallow depth of field.

Chapter 13. Focus External Controls

13.1 Focus as subject-attention control

Focus is not just technical sharpness. Focus directs attention. In actor reels and dramatic scenes, focus carries emotional meaning because the viewer looks where the image is sharp.

For close-ups, the face can tolerate some softness in hair or ears, but soft eyes weaken the shot. The near eye is the primary focus target.

For documentaries, focus also affects credibility. A slightly imperfect documentary image may be tolerated, but a soft interview face feels careless.

The focus rule for this project is:

Focus must serve the subject, not the monitor image alone.

Use magnification, peaking, AF tools, and rehearsal as needed, but confirm critical focus deliberately.

13.2 Manual focus

Manual focus is preferred for controlled work when the subject position is predictable.

Use manual focus for:

- actor reel close-ups,
- feature dialogue scenes,
- controlled interviews,
- rack focus,
- tripod shots,
- repeated marks,
- scenes where AF might chase the wrong object.

Manual focus workflow:

1. Set aperture first.
2. Put subject in final position.
3. Use Focus Magnifier.
4. Focus on near eye.

5. Exit magnifier.
6. Reframe if needed.
7. Record a short test if the shot is critical.

Manual focus requires discipline. The operator must recheck focus after:

- zooming,
- changing aperture,
- moving camera,
- moving subject,
- changing focal length,
- changing camera distance.

13.3 Face/Eye AF

Face/Eye AF can be very useful with compatible lenses, especially for a solo operator.

Use Face/Eye AF for:

- sit-down interviews,
- solo operator documentary work,
- slight subject movement,
- walk-and-talks,
- actor reel setups where movement is modest and AF is tested,
- exterior work where manual screen visibility is difficult.

But Face/Eye AF is not magic. It must be tested in the actual scene.

Potential AF problems:

Situation	Risk
Foreground object crosses frame	AF may jump
Subject turns away	AF may lose face/eye
Low light	AF may hunt
Backlight/silhouette	AF may struggle
Multiple faces	AF may choose wrong person
Actor moves behind objects	AF may shift
Reflections/glass	AF may be confused

Use AF when it helps reliability. Avoid it when it creates uncertainty.

13.4 Push Auto Focus

Push Auto Focus is a useful hybrid tool. It allows the operator to work mostly manually but temporarily ask the camera to grab focus.

Use Push Auto Focus when:

- manual focus is close but needs quick correction,
- subject shifts slightly,
- operator wants help before rolling,
- documentary subject moves into position,
- solo operator needs speed.

Push Auto Focus should be treated as a focus assist, not a substitute for checking focus.

Practical use:

1. Frame subject.
2. Press Push AF to acquire focus.
3. Confirm with magnifier if time allows.
4. Return to manual/hold if desired.
5. Roll.

13.5 Focus Magnifier

Focus Magnifier is one of the most important focus tools on the FX6.

Use it before:

- close-ups,
- interviews,
- shallow depth of field,
- rack focus,
- long-lens shots,
- important actor reel takes,
- shots where the monitor is hard to judge.

Focus Magnifier workflow:

```
Subject in place
↓
Magnifier on
↓
Check near eye
↓
Adjust focus
↓
```

Magnifier off
↓
Frame and roll

Do not rely only on the full-screen image for critical focus, especially outdoors or at wide aperture.

13.6 Peaking

Peaking can help, but it is not proof.

Peaking may highlight:

- eyelashes,
- hair,
- glasses frames,
- high-contrast background edges,
- clothing texture,
- foreground objects.

It can make an image look “focused” while the eye itself is not truly sharp.

Use peaking as a guide. Confirm with magnifier.

Peaking is most useful when:

- pulling focus manually,
- working fast,
- using monitor assistance,
- shooting documentary movement.

Peaking is least reliable when:

- the shot is low contrast,
- the background has high-contrast detail,
- the subject has glasses,
- the lens is wide open,
- the focus target is small.

13.7 Lens focus ring

Use the lens focus ring for manual focus. The behavior depends on the lens.

Some electronic lenses are focus-by-wire, meaning the focus ring does not behave like a mechanical cine lens. The response may depend on turn speed or camera/lens settings.

Operational rule:

Rehearse focus pulls with the actual lens.

Do not assume a focus ring will behave like a mechanical cinema lens unless it is one.

For repeatable focus pulls, mechanical cine-style lenses are easier. For still-camera electronic lenses, practice is essential.

13.8 Focus Hold button

If the lens or camera setup supports Focus Hold, it can be useful to prevent autofocus changes during a critical moment.

Use Focus Hold when:

- AF is useful but you do not want it to jump,
- the subject briefly turns away,
- an object crosses in front,
- focus has locked correctly and should not change,
- the scene includes predictable interruptions.

This depends on lens support and assignment, so confirm the actual behavior before relying on it.

13.9 Indoor focus procedure

For controlled indoor scenes:

1. Set the final or near-final lighting.
2. Set frame rate and shutter.
3. Choose aperture.
4. Place subject in final position.
5. Set manual focus or AF mode.
6. Use Focus Magnifier.
7. Focus on near eye.
8. Confirm both eyes if depth of field allows.
9. Exit magnifier.
10. Record a short test if the take is important.

For actor reels, repeat this process for each close-up. Do not assume focus remains correct after changing framing.

Indoor focus risks:

Risk	Prevention
Shallow depth of field	Stop down slightly or rehearse
Actor leans forward	Use mark or deeper aperture
Low light	Add light or use AF carefully
Reframing	Recheck focus
Zooming	Recheck focus

13.10 Two-person focus strategy

Two-person scenes require a focus plan.

Questions to answer:

1. Should both people be sharp?
2. Is one person primary?
3. Are they on the same plane?
4. Will either person move?
5. Is the shot a two-shot or over-the-shoulder?
6. Is shallow focus part of the emotional design?

If both should be sharp, use:

f/4–f/5.6

and place them as close to the same focus plane as possible.

If only one should be sharp, that must be intentional and should support the scene.

Two-person guide:

Shot	Focus Strategy
Two-shot, both important	Focus between / f/4–f/5.6
OTS with speaker primary	Focus speaker's near eye
Reaction close-up	Focus reacting actor's near eye
Documentary two-person	Use deeper aperture for safety
Moving two-person	Stop down and/or use tested AF

13.11 Outdoor focus procedure

Outdoors, focus is harder because the monitor may be difficult to see and subjects may move more.

Outdoor procedure:

1. Shade the monitor if possible.
2. Use Focus Magnifier.
3. Confirm near eye or focus target.
4. Use f/4–f/5.6 for safety when movement is expected.
5. Recheck after changing zoom/focal length.
6. Record a test if the scene is important.

For exterior actor close-ups, longer lenses and shallow depth of field look good but increase focus difficulty. Do not sacrifice the actor's eyes for background blur.

13.12 Focus in bright sun

Bright sun can make the LCD or external monitor misleading. An image may appear sharp because it is high contrast, but the true focus may be off.

In bright sun:

- use magnification,
- use a hood/shade if possible,
- use peaking only as secondary aid,
- stop down slightly if focus is risky,
- review test clips when possible,
- avoid ultra-shallow focus unless controlled.

13.13 When to use autofocus

Use autofocus when it improves reliability.

Good uses:

Situation	AF Usefulness
Solo operator interview	High
Documentary walk-and-talk	High
Subject moves slightly	High
Operator managing audio and framing	High
Bright exterior with compatible lens	Useful
Gimbal/handheld movement	Useful

Autofocus is a tool. It should be tested, not assumed.

13.14 When to avoid autofocus

Avoid or be cautious with autofocus when:

- doing a planned rack focus,
- shooting through foreground objects,
- shooting through glass,
- subject turns away repeatedly,
- there are multiple faces and only one matters,
- lighting is very low,
- the scene is emotionally precise,
- the lens is manual,
- or AF hunting would ruin the take.

Feature-style scenes often benefit from manual focus because the focus intention is part of the storytelling.

13.15 Rack focus procedure

A rack focus is an intentional shift from one focus point to another.

Procedure:

1. Decide the storytelling purpose.
2. Mark Focus Point A.
3. Mark Focus Point B.
4. Set aperture deep enough to make the move controllable, or shallow enough if the effect is intended.
5. Rehearse the pull.
6. Check both endpoints with Focus Magnifier.
7. Practice at performance speed.
8. Record only when repeatable.

Rack focus should not be accidental. It should reveal, shift attention, or create emotional emphasis.

13.16 Near-eye rule

For close-ups, focus on the near eye.

This is especially important for:

- actor reels,
- emotional close-ups,
- interviews,
- long lens shots,
- shallow depth of field.

If the far eye is sharp but the near eye is soft, the shot often feels wrong. If the near eye is sharp, minor softness elsewhere is usually more acceptable.

Field rule:

Close-up = near eye.

13.17 Focus checklist

Before recording:

Check	Required State
Aperture	chosen for focus and look
Subject	in position
Focus mode	manual/AF selected deliberately
Magnifier	used for critical shots
Eye	near eye sharp
Two-person	focus plane considered
Movement	rehearsed
Zoom	focus rechecked after zoom
Bright sun	monitor visibility handled
Test	recorded if critical

Field statement:

“Focus checked. Near eye sharp.”

Chapter 14. Zoom Controls, Push-Ins, Pull-Outs, and Emotional Close-Ups

14.1 Zoom as framing control, not exposure control

Zoom changes framing and focal length. It should not be used as an exposure solution.

The operator should not zoom just because:

- the shot feels boring,
- the camera is too far away,
- framing was not planned,

- a close-up was forgotten,
- or the image needs “emotion.”

Zoom is a powerful tool, but in narrative and actor reel work, close-ups are usually better achieved through planned coverage, camera placement, or a physical push-in.

Use zoom for:

- reframing before a take,
- changing focal length between setups,
- documentary flexibility,
- controlled slow zoom when emotionally motivated,
- observational moments where a zoom is part of the style.

Do not use zoom as a casual correction during a take.

14.2 Lens zoom ring

If using a manual zoom lens, the zoom ring controls focal length.

Manual zooming while recording can introduce:

- camera shake,
- uneven speed,
- focus shift,
- exposure change on variable-aperture lenses,
- operator handling noise,
- amateur-looking movement.

If a manual zoom during recording is intentional:

1. Use tripod or stable support.
2. Rehearse the move.
3. Check focus before and after.
4. Check exposure before and after.
5. Move slowly and smoothly.
6. Record a test.

14.3 FX6 handle/grip zoom rocker

The FX6 handle or grip zoom rocker can control compatible Sony power zoom lenses.

A rocker can produce smoother zooms than hand-turning a lens ring if the lens supports it.

Use a zoom rocker for:

- slow documentary reframes,
- controlled push-like zooms,
- subtle pressure moves,
- exterior observation,
- situations where physical camera movement is not practical.

Do not jab or pump the rocker. Use gentle pressure and rehearse speed.

14.4 Sony power zoom lenses

Power zoom lenses are useful when a smooth zoom is required. They can make a controlled zoom possible without shaking the camera.

Power zoom uses:

Use	Appropriate?
Slow psychological zoom	Yes, if motivated
Fast reframing mid-take	Usually no
Documentary adjustment	Sometimes
Actor reel emotional close-up	Usually prefer planned coverage/push-in
Feature scene	Only if zoom is part of visual grammar

Power zoom does not automatically make a zoom cinematic. Motivation matters.

14.5 Manual zoom lenses

Manual zoom lenses are useful for changing framing between takes, but risky for zooming during a take.

Manual zoom during recording should be avoided unless:

- the camera is locked down,
- the move is intentional,
- the operator has practiced it,
- focus and exposure are checked,
- and the scene benefits from the zoom.

If a manual zoom is done casually, it can look like a home-video correction.

14.6 Prime lenses and Clear Image Zoom

Prime lenses do not optically zoom. If using a prime lens, emotional close-ups come from:

- camera placement,
- lens change,
- moving closer,
- shooting separate coverage,
- or limited digital reframing if quality permits.

Clear Image Zoom can provide limited digital reframing, but it should be used carefully. It is not the same as an optical zoom lens and should not replace proper shot planning.

14.7 Clear Image Zoom limits

Clear Image Zoom may be useful for modest reframing, but the operator should not treat it as a substitute for coverage.

Use it for:

- small framing adjustments,
- emergency reframing,
- controlled minor push effect if tested.

Avoid relying on it for:

- major close-ups,
- final emotional coverage,
- quality-critical feature shots,
- untested production use.

If Clear Image Zoom is used, test image quality before relying on it.

14.8 Zoom versus push-in

A zoom and a push-in are emotionally different.

Move	What Changes	Emotional Effect
Zoom-in	Focal length changes; camera stays still	Can feel observational, psychological, or artificial
Push-in	Camera physically moves closer	Feels like viewer is entering the subject's space
Pull-out	Camera moves away	Can reveal isolation, context, abandonment
Zoom-out	Focal length widens from fixed position	Can reveal context in a more optical/observational way

For emotional actor close-ups, a physical push-in usually feels more cinematic than a zoom-in.

14.9 Why “never zoom while recording” is not absolute

The statement “never zoom while recording” is too absolute. The better rule is:

Do not zoom while recording unless the zoom is intentional, smooth, motivated, and part of the storytelling.

Zooming while recording is bad when it is used to fix poor framing. It may be valid when it expresses a scene idea.

Bad zoom:

- operator suddenly realizes the actor should be closer,
- zoom speed is uneven,
- focus shifts,
- exposure changes,
- movement looks accidental.

Good zoom:

- slow psychological pressure,
- controlled reveal,
- observational documentary style,
- deliberate isolation,
- stylized period/genre choice.

14.10 When zooming while recording is acceptable

Zooming while recording can be acceptable in these cases:

Scenario	Why It May Work
Psychological pressure	Slow zoom creates tension
Realization	Viewer is drawn into thought
Threat	Frame tightens as danger rises
Isolation	Zoom narrows world around subject
Reveal	Zoom-out exposes context
Documentary observation	Operator follows reality
Performance moment	Subtle move supports emotion

The zoom must be smooth enough that the audience feels the intention rather than noticing the operation.

14.11 Emotional push-in

A push-in is often the preferred way to get an emotional close-up during a scene.

Use a push-in for:

- confession,
- realization,
- grief,
- fear,
- moral decision,
- emotional climax,
- internal shift.

Push-in procedure:

1. Decide emotional moment.
2. Choose start frame.
3. Choose end frame.
4. Rehearse movement.
5. Check focus at start and end.
6. Check exposure.
7. Record take with movement timed to performance.

A push-in should not be random. It should happen because the scene is pulling the viewer closer.

14.12 Emotional pull-out

A pull-out can suggest:

- loneliness,
- defeat,
- abandonment,
- loss of control,
- larger context,
- emotional distance.

Pull-out procedure:

1. Start close enough to read emotion.
2. End wider to reveal environment or isolation.
3. Keep movement smooth.
4. Maintain focus.
5. Avoid changing exposure unintentionally.
6. Let the performance drive timing.

A pull-out can be especially useful in feature scenes and actor reels where the emotional beat ends in separation or uncertainty.

14.13 Slow zoom-in for psychological pressure

A slow zoom-in can work when it is nearly invisible. It can create pressure, suspicion, dread, or psychological compression.

Use sparingly.

Settings/operation:

- stable camera support,
- power zoom if available,
- very slow speed,
- focus checked,
- exposure checked,
- motivated by scene,
- not overused.

If the audience notices “the camera is zooming,” the move may be too obvious unless that is the intended style.

14.14 Slow zoom-out for isolation/reveal

A slow zoom-out can reveal:

- empty room,
- larger environment,
- other characters,
- danger,
- loneliness,
- context.

It can be useful in documentaries as well when revealing where a subject is or what surrounds them.

The move must be planned so the end frame matters. A zoom-out that ends on a messy background weakens the shot.

14.15 Indoor zoom guidance

Indoors, space is limited, so zooms may be tempting. The better approach is usually planned coverage.

Indoor hierarchy for emotional close-ups:

1. Shoot a separate close-up.

2. Move the camera closer.
3. Use a longer focal length if space allows.
4. Use a slow push-in if supported.
5. Use a subtle zoom only if motivated.

Indoor risks:

Risk	Cause
Camera shake	manual zoom ring
Focus error	focal length change
Exposure shift	variable-aperture zoom
Amateur feel	unmotivated zoom
Background clutter tighter framing reveals bad set choices	

14.16 Outdoor zoom guidance

Outdoors, zoom lenses are useful because space and background control vary.

Outdoor zoom uses:

- choose a longer focal length to simplify background,
- reframe quickly between takes,
- compress distance,
- isolate subject,
- avoid moving physically into unsafe or impractical positions.

Outdoor zoom while recording should still be motivated.

Use ND to maintain aperture. Do not use zoom to solve brightness.

14.17 Zoom-focus recheck rule

After every zoom change:

Recheck focus.

This is especially important when:

- using long focal lengths,
- shooting close-ups,
- using wide aperture,
- using manual focus,
- using variable zoom lenses,
- shooting in bright sun.

Do not assume focus remains perfect after zooming.

Field procedure:

1. Zoom/reframe.
2. Use Focus Magnifier.
3. Check near eye.
4. Adjust focus.
5. Confirm exposure.
6. Roll.

14.18 Variable-aperture zoom warning

Some zoom lenses change maximum aperture as they zoom.

Example concept:

- wide end may allow f/3.5,
- telephoto end may only allow f/5.6.

If zooming during a take, this can cause the image to darken as the lens zooms in.

Before using a zoom during recording:

Check	Required
Does aperture change while zooming?	Test
Does exposure shift?	Watch waveform
Does focus shift?	Test
Is the zoom smooth?	Rehearse
Is the move motivated?	Confirm

If exposure changes visibly, do not use that zoom move unless the change is acceptable or intentional.

14.19 Coverage versus zooming mid-take

For actor reels and feature scenes, the best emotional close-ups usually come from planned coverage rather than mid-take zooms.

Coverage plan:

Shot	Purpose
Master / wide geography	

Shot	Purpose
Medium	body language
Close-up	emotion
Insert	detail
Reaction	listening/thinking
Push-in	emotional escalation

If emotional close-ups matter, plan them. Do not rely on zooming during the take to discover them.

Final zoom rule:

Zoom before recording for framing. Push or cut for emotion. Zoom during recording only when the zoom itself is the storytelling choice.

Chapter 15. Cine EI Exposure Monitoring

15.1 Why LCD appearance is not enough

The FX6 LCD or external monitor image is not enough to judge exposure, especially in Cine EI and S-Log3.

Reasons:

- S-Log3 is flat by design.
- A monitoring LUT can make exposure look more normal than it really is.
- Screen brightness can mislead.
- Outdoor glare can hide exposure problems.
- The image may look “moody” while actually being underexposed.
- Highlights may be clipped even if the face looks acceptable.
- The operator’s eyes adapt to the monitor.

For this project, exposure should be judged with technical tools, not only by the picture on the screen.

Use:

- waveform,
- zebras,
- histogram as secondary support,
- gray card/white reference when practical,

- skin-tone judgment through LUT,
- test recording and playback.

The rule is:

The monitor shows the look. The waveform tells the truth.

15.2 Monitoring LUT versus exposure truth

A LUT is a viewing transform. It helps the operator see something closer to a normal image instead of flat log. But a LUT can also hide problems if the operator trusts it too much.

The LUT answers:

- What might the image feel like?
- Is the framing and contrast roughly right?
- Is the monitor usable for composition?
- Does skin look plausible?

The waveform answers:

- Where are levels actually sitting?
- Is the face too low?
- Are highlights clipping?
- Is the gray card near target?
- Are windows/practicals out of range?

A scene can look good through a LUT but still be underexposed in log. Conversely, a flat log image can look washed out but be technically well exposed.

Use both.

15.3 Waveform as primary exposure truth

The waveform is the primary exposure tool in this workflow.

Use waveform to check:

- gray card,
- white card,
- skin,
- windows,
- practical lamps,
- white clothing,
- sky,

- reflective surfaces,
- shadow floor,
- overall scene distribution.

Waveform is especially important for muted color because the operator may be tempted to make the image dark. A dark-looking image must still be a clean exposure.

Practical waveform workflow:

1. Turn on monitoring LUT for viewing.
2. Turn on waveform/video signal monitor.
3. Place subject.
4. Check face level.
5. Check brightest important highlight.
6. Adjust ND/light/aperture as needed.
7. Record a short test if critical.

For controlled work, waveform should be used before recording, not only after a problem is discovered.

15.4 Zebras as fast warnings

Zebras are useful for quick exposure checks. They are not as complete as waveform, but they help the operator react quickly.

Use zebras for:

- warning when highlights approach clipping,
- checking white reference,
- checking skin if configured for that purpose,
- fast exterior exposure control,
- monitoring changes during documentary work.

Zebras should be treated as a reference tool. The exact zebra setup depends on camera configuration and operator preference. The project's key rule is not a specific zebra number; it is that zebras should be used as an exposure warning system rather than ignored.

Use zebras to avoid:

- clipped faces,
- clipped white shirts,
- blown practical lamps,
- blown windows when they matter,
- overexposed skies when they are important.

15.5 Histogram as secondary tool

Histogram shows the overall distribution of brightness values. It is useful, but it does not tell exactly where the face sits. It also does not show which part of the image is causing a spike.

Histogram can help identify:

- extreme underexposure,
- extreme overexposure,
- clipped highlight-heavy scene,
- crushed shadow-heavy scene.

But for serious Cine EI exposure decisions, waveform is more useful.

Use histogram as a secondary tool, not the primary exposure truth.

15.6 S-Log3 exposure references

S-Log3 has technical reference points that help the operator judge exposure.

15.6.1 18% gray around 41 IRE

A standard 18% gray reference in S-Log3 is around:

41 IRE

Use this with a gray card when setting or checking exposure.

Practical use:

1. Place gray card at subject position.
2. Light it with the same light as the face.
3. View waveform.
4. Adjust exposure so gray sits near the expected reference.
5. Then check actual skin and highlights.

Do not expose only by theory. Use the gray card as a reference, then judge the actual subject.

15.6.2 90% white around 61 IRE

A 90% white reference in S-Log3 is around:

61 IRE

This can be useful when using a white card or reference chart.

Caution:

- a white card can clip or reflect glare,
- white clothing may not be a proper reference,
- practical scene highlights may exceed this,
- not every white object needs to sit at the same level.

Use 90% white as a technical reference, not a blind rule.

15.7 Skin-tone exposure guidance

Skin tone is not one fixed number. Different complexions, lighting styles, contrast ratios, and scene moods require judgment.

The project rule is:

Expose skin cleanly enough to grade, then create mood with lighting and grade.

Do not make skin muddy in-camera to get a muted look.

Practical skin guidance:

Situation	Exposure Priority
Actor reel close-up	Face and eyes must be readable
Dramatic feature close-up	Skin can be shaped but not starved
Documentary interview	Skin should look natural and credible
Darker skin tones	Preserve highlight shape and avoid underexposure
Pale skin / bright forehead	Protect highlights without lowering whole face too far
Backlit exterior	Expose for face or add fill/adjust angle

For actor reels, the performer's face is the product. Do not hide it.

15.8 Highlight protection

Highlights to watch:

- windows,
- lamps,
- practical bulbs,
- white shirts,
- white paper,
- shiny skin,

- cars,
- sidewalks,
- sky,
- reflective surfaces.

Not all highlights must be saved. Some practical bulbs or specular reflections may clip acceptably. But important highlights should be controlled.

Highlight-control options:

Problem	Correction
Face good, window too bright	Reframe, curtain, flag, reduce window, accept if not important
White shirt clipping	Change wardrobe or reduce exposure/lighting
Practical lamp ugly	Dim lamp, change bulb, reposition
Sky too hot	Reframe, use shade/backlight, expose subject intentionally
Forehead highlight too hot	Soften key, powder, adjust angle, reduce light

The key question is:

Is the clipped highlight important to the shot?

If yes, control it. If no, it may be acceptable.

15.9 Indoor exposure procedure

Controlled indoor Cine EI procedure:

1. Set camera to Cine EI.
2. Confirm S-Gamut3.Cine/S-Log3.
3. Confirm Base ISO/EI.
4. Set frame rate and shutter.
5. Choose aperture for the scene.
6. Set ND Clear unless too bright.
7. Set manual white balance.
8. Turn on monitoring LUT.
9. Turn on waveform/zebras.
10. Place subject in final position.
11. Set key light and negative fill.
12. Check face on waveform.
13. Check highlights/practicals/windows.
14. Adjust light/ND/aperture as needed.
15. Focus near eye.
16. Check audio.
17. Record a 10-second test.

18. Play back if the take matters.

Indoor exposure rule:

Do not make the image dark by starving the camera. Make the scene dark by controlling light.

15.10 Outdoor exposure procedure

Outdoor Cine EI procedure:

1. Set Base ISO 800 for daylight.
2. Set frame rate.
3. Set shutter to 180° equivalent.
4. Choose aperture for focus/look.
5. Turn Variable ND On.
6. Set white balance/custom daylight.
7. Turn on monitoring LUT.
8. Use waveform/zebras.
9. Expose for the face/subject.
10. Watch sky, white shirts, and reflective surfaces.
11. Recheck focus in bright sun.
12. Record and review test when possible.

Outdoor exposure priorities:

Scene	Priority
Actor close-up	face/eyes
Two-person dialogue	both faces
Documentary interview	face and audio
Chase/action	focus and motion
Landscape/context	protect important highlights

If the sun is harsh, the best exposure tool may be location choice: open shade, backlight, or a better angle.

15.11 Why not to underexpose for mood

Underexposure is one of the most dangerous mistakes in S-Log3 muted-color shooting.

Underexposure can cause:

- noisy shadows,
- muddy image,

- weak skin,
- color breaking in grade,
- loss of texture,
- fake-looking darkness,
- actor eyes disappearing.

Mood should come from:

- lighting ratio,
- negative fill,
- background control,
- wardrobe,
- lens choice,
- camera position,
- and final grade.

A cleanly exposed face can still appear moody if the shadow side is shaped and the background is controlled.

The correct principle:

Capture clean information. Create mood intentionally.

15.12 Test-clip exposure review

Before serious shooting, record a short technical test.

The test clip should include:

- subject's face,
- normal speech,
- loud speech if relevant,
- movement if relevant,
- brightest important background element,
- silence for room noise,
- focus target.

Review for:

Review Item	Question
Face exposure	Is skin clean and readable?
Highlights	Are important highlights controlled?
Shadows	Are they rich but not muddy?
Focus	Is near eye sharp?

Review Item	Question
Audio	Is dialogue clean?
Room noise	Is TV/HVAC/rub audible?
LUT	Is monitor look misleading?
Continuity	Does this match intended coverage?

A 10-second test can prevent an entire scene from being recorded wrong.

Final exposure-monitoring rule:

Use the LUT to see. Use waveform and zebras to know. Use playback to confirm.

Chapter 16. Cine EI, Base ISO, and EI Workflow

16.1 Cine EI versus normal ISO operation

Cine EI should be treated differently from normal ISO operation. In a normal ISO workflow, the operator may think of ISO as a gain control that directly brightens or darkens the recorded image. In Cine EI, the operating concept is closer to a digital cinema negative workflow.

The camera is operated around its base sensitivity, while Exposure Index affects how the image is rated, monitored, and exposed. The goal is not to ride ISO constantly. The goal is to choose the correct base sensitivity, expose the image cleanly, and preserve a strong S-Log3 file for grading.

The simplified distinction is:

Workflow	Practical Meaning
Normal ISO thinking	ISO is treated like a brightness/gain knob
Cine EI thinking	Base ISO is the sensor operating foundation; EI guides exposure rating/monitoring

For this project, Cine EI is used because it supports a disciplined, gradeable S-Log3 workflow. The camera is not being used merely to get a pretty Rec.709 picture straight out of the monitor. The internal recording should preserve a clean log image that can later be graded into the muted cinematic look.

The important Cine EI mindset is:

Shoot a clean negative. Do not bake panic decisions into the file.

That means:

- choose the proper base ISO,
- expose intentionally,
- use waveform/zebras,
- use LUT for monitoring,
- keep Internal Rec MLUT Off unless intentionally baking a LUT,
- avoid underexposing for mood,
- create mood through lighting and final grade.

In the project's "Netflix-type muted color" workflow, Cine EI is not a magic look button. It is the controlled capture mode that gives the later muted grade room to work.

16.2 Base ISO 800

Base ISO 800 is the normal starting point for controlled lighting and daylight shooting.

Use Base ISO 800 for:

- actor reels with controlled lighting,
- feature-style interior scenes where lights can be used,
- daylight exteriors,
- exterior interviews,
- outdoor dialogue,
- controlled documentary interviews,
- scenes where the operator can add light or shape light,
- situations where clean highlight handling and standard base operation are preferred.

Base ISO 800 should be the first thought when the scene has adequate light.

Examples:

Scene	Base ISO Choice
Interior actor close-up with soft key	800
Interior two-person dialogue with lights	800
Day exterior dialogue	800
Open-shade interview	800
Controlled documentary interview	800
Bright practical-light interior with supplemental light	800

When using Base ISO 800 indoors, the operator should not try to make a dark scene by starving the camera. If the room is too dark, add or redirect light, open aperture if appropriate, or consider whether Base ISO 12800 is genuinely needed.

Base ISO 800 gives the operator a stable controlled foundation. The muted look should come from light shape, negative fill, and grade, not from accidental underexposure.

16.3 Base ISO 12800

Base ISO 12800 is for low-light situations where Base ISO 800 is not practical. It is not automatically “better” for every night or moody scene. It is a high-base option for scenes where the available light level requires it.

Use Base ISO 12800 for:

- genuinely low-light interiors,
- night interiors with weak practicals,
- documentary available-light work,
- low-light exterior night situations,
- situations where adding light is impossible or undesirable,
- emergency low-light capture where missing the shot is worse.

Examples:

Scene	Base ISO Choice
Available-light night room	12800 may be needed
Documentary in dim location	12800 may be needed
Candle/practical-light mood scene	12800 may be needed if not adding light
Dark interior where lighting can be added	800 may still be better
Controlled feature night scene with lights	800 or 12800 depending lighting design

Base ISO 12800 should not be used as a license to stop lighting or stop exposing carefully. It increases the camera’s low-light capability, but the operator still needs clean exposure, proper white balance, and good monitoring.

If the image is underexposed at Base ISO 12800, it can still be noisy, muddy, and hard to grade. High base ISO does not eliminate the need for exposure discipline.

16.4 EI as exposure-rating / monitoring decision

Exposure Index in Cine EI should be understood as an exposure-rating decision rather than a casual gain knob.

EI affects how the operator interprets the image and where exposure is encouraged to land. The EI setting can make the monitoring image appear brighter or darker relative to the base sensitivity strategy, guiding the operator to expose differently.

The operator should use EI deliberately. It should not be changed constantly just to make the monitor look pleasant.

The working concept:

EI Choice	Practical Effect
Lower EI than base	Encourages brighter exposure; can give cleaner shadows
Higher EI than base	Encourages darker exposure; may protect highlights but can risk shadows
EI equal to base	Neutral starting point

The operator must remember:

EI affects the exposure strategy. It is not a substitute for lighting, ND, aperture, or waveform.

For a muted cinematic look, the temptation may be to raise EI or darken exposure because the monitor looks moodier. That is dangerous if it starves the log file. It is usually better to expose cleanly and create the mood through lighting and grading.

16.5 Lower EI effect

A lower EI setting encourages the operator to expose the scene brighter relative to the base. This can result in cleaner shadows because more light is placed into the recorded image.

Practical effect:

Lower EI Use	Benefit	Risk
Cleaner shadows	More exposure in darker parts	Less highlight headroom if pushed too far
Actor close-ups	Cleaner skin and eyes	Must protect forehead/highlights
Moody interiors	Prevents mud/noise	Must shape with lighting, not over-brighten scene

Lower EI can be useful when the operator wants to protect shadow quality and avoid the common mistake of underexposing S-Log3. It can help preserve cleaner skin and shadow detail.

However, lower EI must still be paired with highlight monitoring. If the operator exposes too brightly, highlights may become difficult to protect. Use waveform and zebras.

The practical rule:

Lower EI can help clean shadows, but do not ignore highlights.

16.6 Higher EI effect

A higher EI setting encourages the operator to expose darker relative to the base. This can help protect highlights, but it can also make shadows thinner or noisier if the scene is not lit or exposed carefully.

Practical effect:

Higher EI Use	Benefit	Risk
Highlight-heavy scene	Encourages highlight protection	Shadows may suffer
Bright exterior contrast	May protect sky/window areas	Subject face may become too dark
Practical lamp scenes	Can preserve bright sources	Actor skin may become underexposed

Higher EI should not be used just to make the monitor look moodier. If the image is dark because the operator raised EI and did not compensate properly, the S-Log3 file may become noisy and weak.

The practical rule:

Higher EI can protect highlights, but do not sacrifice the subject's face and shadows accidentally.

16.7 Indoor Base ISO choices

Indoor Cine EI operation should begin with a realistic evaluation of the light.

Use Base ISO 800 indoors when:

- lighting is controlled,
- soft key can be added,
- practicals are supported with hidden light,
- actor reel or feature scene can be staged,
- the scene is not genuinely too dark.

Use Base ISO 12800 indoors when:

- the location is genuinely dim,
- documentary conditions prevent adding light,
- the scene relies on available practicals,
- low-light capture is necessary,
- the operator cannot get clean exposure at Base ISO 800 without unacceptable aperture/shutter compromise.

Indoor decision table:

Indoor Condition	Recommended Base ISO
Lit actor reel	800
Lit feature dialogue	800
Controlled interview with key light	800
Window daylight interior	800
Dim documentary room	12800 may be needed
Night practical-only scene	12800 may be needed
Scene too dark but light can be added	Add light and consider 800
Scene too dark and light cannot be added	12800

The operator should also check ND. If an interior scene is too dark and ND is accidentally engaged, remove ND before changing base ISO.

Indoor checklist:

1. Confirm ND Clear.
2. Confirm shutter 180°.
3. Choose aperture.
4. Add or shape light.
5. Select Base ISO 800 or 12800 based on actual need.
6. Set EI deliberately.
7. Verify exposure with waveform.

16.8 Outdoor Base ISO choices

For most daylight exterior work, use:

Base ISO 800

Outdoor scenes normally have enough light, so the exposure problem is often too much brightness, not too little. The correct tool is Variable ND, not Base ISO 12800.

Use Base ISO 800 for:

- daylight interviews,
- open shade,
- exterior actor scenes,
- exterior dialogue,
- outdoor chase/action,
- establishing shots,
- bright documentary coverage.

Outdoor Base ISO 12800 may be considered only for genuinely low-light exterior conditions, such as night or very dark available-light scenes.

Outdoor decision table:

Outdoor Condition	Recommended Base ISO
Bright daylight	800
Open shade	800
Overcast day	800
Golden hour	800 unless too dim
Night exterior	12800 may be needed
Dark available-light documentary	12800 may be needed

The exterior operating principle:

Use Base ISO 800 and Variable ND for daylight. Do not use high base ISO as an exterior brightness control.

16.9 Low-light Cine EI choices

Low-light Cine EI operation requires careful judgment. The operator must decide whether to:

- add light,
- open aperture,
- use Base ISO 12800,
- change composition,
- use practicals,
- accept a darker mood,
- or modify the scene.

Low-light should not mean uncontrolled underexposure.

Low-light decision path:

```
Scene looks too dark
↓
Is ND accidentally on?
↓
Is shutter correct?
↓
Can aperture open safely?
↓
Can light be added or redirected?
↓
Is Base ISO 12800 appropriate?
↓
Use waveform to confirm clean exposure
```

For actor reels, low-light should be used carefully. If the actor's face and eyes disappear, the reel fails even if the shot feels "moody."

For feature scenes, low-light can work if designed. Practical lamps, motivated sources, negative fill, and controlled highlights can make a scene dark but still clean.

For documentaries, low-light may be unavoidable. In that case, Base ISO 12800 is a practical tool, but headphones, focus, and exposure should still be checked.

16.10 Cine EI Quick versus Cine EI concept

The project's controlling workflow is Cine EI-based. Cine EI Quick may provide a faster operating variant depending on camera setup, but the important concept is not the label alone. The important concept is preserving a disciplined Cine EI / S-Log3 workflow:

- base sensitivity chosen deliberately,
- EI used intentionally,
- monitor LUT used for viewing,
- internal recording protected as clean log,
- exposure verified with waveform/zebras,
- lighting used to create mood,
- final look completed in grade.

Do not switch Cine EI operating modes casually before a serious shoot. If the camera is configured and tested in one Cine EI workflow, preserve that workflow unless there is a deliberate reason to change and retest.

Field rule:

Do not change the camera's Cine EI operating logic on shoot day unless you know exactly why.

16.11 Practical EI field rules

Use these practical rules:

Rule	Reason
Start from Base ISO 800 in controlled/daylight work	Stable default
Use Base ISO 12800 only when low light requires it	Avoid unnecessary high-base use
Treat EI as exposure rating	Do not ride it like normal ISO
Do not underexpose for mood	S-Log3 becomes muddy/noisy
Use waveform/zebras	Monitor image can mislead
Use ND for brightness	Protect shutter/aperture
Use lighting for mood	Not accidental underexposure

Rule	Reason
Record test clip	Confirms exposure and monitoring

Cine EI operator statement before rolling:

“Base ISO chosen. EI deliberate. Exposure checked on waveform. LUT is only monitoring.”

Chapter 17. Recording Format, Codec, Frame Rate, and Audio Channel Planning

17.1 Recommended cinematic defaults

The recommended baseline for serious muted-color Cine EI shooting is:

Setting Area	Recommended Default
Resolution	4K UHD / QFHD
Codec	XAVC-I when storage allows
Frame rate	23.98p / 24p for actor reel and feature-style scenes
Color/gamma	S-Gamut3.Cine / S-Log3
Recording bit depth/color	Use high-quality 10-bit 4:2:2 workflow where configured
Monitoring	LUT/MLUT On for viewing
Internal Rec MLUT	Off for clean log recording
Audio	Verify CH1/CH2/CH3 routing before takes

This baseline is designed for a strong original file, flexible grading, and professional post workflow.

The defaults should be adjusted only for a real reason:

Change	Valid Reason
XAVC-L instead of XAVC-I long recording/storage limit	
30p instead of 24p	documentary/broadcast/project requirement
60p	slow motion or motion-specific need
Internal LUT baked	deliberate quick-turnaround workflow, not default
Lower resolution	storage or delivery constraint

The project's preference is to record a strong original and use proxies if the edit system struggles.

17.2 4K UHD / QFHD

4K UHD / QFHD is the preferred capture format for this FX6 workflow because it provides:

- higher image quality,
- more room for reframing,
- better future-proofing,
- stronger actor reel and feature presentation,
- better source for grading,
- more flexible documentary post-production.

Even if final delivery is 1080p, shooting 4K gives the editor options.

Useful 4K benefits:

Use	Benefit
Actor reel close-up	slight reframing without obvious loss
Documentary interview	crop/punch-in for edit variation
Feature scene	better source for grade and delivery
Stabilization	some room for correction
Archive	stronger master footage

The caution is storage and processing. XAVC-I 4K creates larger files. If the computer struggles, the solution should usually be proxies, not reducing capture quality unless necessary.

17.3 XAVC-I versus XAVC-L

The project distinguishes XAVC-I and XAVC-L based on quality, edit performance, and storage.

Codec	Description	Best Use
XAVC-I	Intra-frame, larger files, robust editing/quality	actor reels, features, important interviews
XAVC-L	Long-GOP, smaller files, more storage-efficient	long documentary/event coverage

XAVC-I is preferred when:

- the take matters,
- storage is manageable,
- grading quality matters,

- the footage will be featured,
- edit performance can be supported by proxies if needed.

XAVC-L is acceptable when:

- long recording time matters,
- storage is limited,
- documentary coverage is extended,
- the shot is less grading-critical,
- the operator needs more efficient media use.

Decision table:

Production Type	Recommended Codec
Actor reel performance scene	XAVC-I
Feature dialogue scene	XAVC-I
Dramatic close-up	XAVC-I
Important documentary interview	XAVC-I if storage allows
Long documentary sit-down	XAVC-I or XAVC-L depending duration/storage
Long event coverage	XAVC-L may be practical
B-roll	XAVC-I for important, XAVC-L for volume if needed

17.4 23.98p / 24p actor reel and feature workflow

For actor reels and feature-style scenes, 23.98p or 24p is the preferred cinematic baseline.

Use 23.98p / 24p for:

- dramatic actor reels,
- narrative scenes,
- feature-style dialogue,
- emotional close-ups,
- cinematic interviews if project style supports it.

Pair with:

Frame Rate Shutter
23.98p / 24p 1/48 or 180°

This gives normal cinematic motion. Do not raise shutter to darken the image. Use ND.

Actor reel reminder:

The actor's performance matters more than extreme camera style. Use cinematic motion, clean focus, clear eyes, and clean dialogue.

17.5 Documentary interview options

Documentary interviews may be shot at 23.98p / 24p or another project frame rate depending on final use. The key is consistency.

Documentary choices:

Situation	Practical Choice
Cinematic sit-down interview	23.98p / 24p
Project uses 30p	29.97p / 30p
Broadcast/event style	match delivery requirement
Mixed-source documentary	choose project standard and stay consistent

For documentary interviews, audio quality and consistency matter as much as frame rate. Before recording a long interview:

- verify audio routing,
- confirm RØDE Split/Merged state,
- check headphones,
- record room tone,
- confirm card space,
- confirm codec/storage plan.

Use XAVC-I if the interview is important and storage allows. Use XAVC-L if duration/storage requires it.

17.6 Slow motion / S&Q considerations

Slow motion and S&Q should be planned before the shoot. Do not casually enter S&Q without understanding audio and post implications.

Before using S&Q:

Check	Why
Frame rate	Determines slow-motion effect
Shutter	Must match motion intent
Audio behavior	Some S&Q modes may not record normal audio
Lighting	Higher frame rates may need more light
Flicker	Artificial lights may flicker
Post timeline	Must conform correctly

Check	Why
Clip log	Mark as S&Q

Use slow motion for:

- action emphasis,
- emotional movement,
- visual detail,
- documentary B-roll,
- chase/action inserts.

Avoid slow motion when:

- dialogue sync is required,
- lighting is too weak,
- post plan is unclear,
- the footage must match normal-speed dialogue coverage.

If a clip is S&Q, log it clearly.

17.7 10-bit 4:2:2 logic

For S-Log3 muted-color grading, a robust 10-bit 4:2:2 recording workflow is preferred where configured. The reason is grading flexibility.

S-Log3 footage will be transformed and graded. A stronger recording format helps preserve:

- skin tone,
- subtle color transitions,
- shadow detail,
- highlight rolloff,
- restrained saturation,
- clean grade adjustments.

The muted look can involve careful color shaping. Weak source files are less tolerant of grading.

The rule is:

If the scene matters, capture the strongest practical original and use proxies for editing performance.

17.8 Audio channel verification

Recording format is not only picture. Audio channel layout must be verified before recording.

Possible audio layouts:

Setup	CH1	CH2	CH3	CH4
One RØDE with safety	TX1 main	TX1 lower safety	—	—
Two RØDE split	TX1	TX2	—	—
One RØDE in permanent split	TX1	silent/unused	—	—
Two RØDE + boom	TX1	TX2	Boom Off/Shoe	CH2
Merged lavs + boom	TX1+TX2 merged Boom		—	—

Before recording, state the routing out loud if necessary:

“CH1 TX1, CH2 TX2, CH3 boom.”

Then test each source.

Audio channel mistakes are easy to make because some settings are physical switches and some are menu routing. ALL File may not save physical switch positions or RØDE receiver mode. Check them manually.

17.9 Matching recording format to post workflow

The recording format must match the editing plan.

If using DaVinci Resolve or Adobe Premiere Pro:

- import full reel folders,
- preserve camera-original structure,
- generate proxies if needed,
- grade/export from originals,
- keep audio channel identity.

Do not choose lower capture quality merely because playback is choppy. Choppy playback can often be solved with proxies.

Format/post decision table:

Problem	Better Solution
Computer struggles with XAVC-I	Generate proxies
Storage filling too fast	Use smaller reel offloads or XAVC-L where appropriate
Long interview	Consider XAVC-L or more cards
Editing lag	DNxHR proxies
Duplicate clip names	Reel folder + unique clip IDs
Huge card copy	smaller future reel targets

17.10 Avoiding mixed frame rates without plan

Do not mix frame rates casually. Mixed frame rates create post-production complications.

Avoid unplanned mixing of:

- 23.98p,
- 24p,
- 29.97p,
- 30p,
- 59.94p,
- 60p,
- S&Q clips.

If mixing is intentional, log it.

Clip log should record:

- frame rate,
- S&Q status,
- codec,
- reel ID,
- clip ID,
- scene description.

Frame-rate decision table:

Use	Frame Rate
Actor reel cinematic scene	23.98p / 24p
Feature-style scene	23.98p / 24p
Documentary project standard	project-dependent
Slow-motion B-roll	planned higher frame rate/S&Q
Event/documentary long coverage match project delivery	

Final rule:

Pick the project frame-rate standard before shooting and deviate only by plan.

Chapter 18. Assignable Buttons and User Menu Field Map

18.1 Why field controls should be fast

The FX6 has deep menus, but field operation should not require hunting through menus during a take. Critical controls should be assigned or placed where the operator can reach them quickly.

The controls that matter most during a shoot are:

- focus magnification,
- waveform/video signal monitor,
- zebras,
- LUT On/Off,
- Face/Eye AF,
- Push AF,
- Audio Status,
- Rec Review.

These controls are not cosmetic. They prevent failed takes.

Fast access is important because on a real shoot the operator may need to respond to:

- focus uncertainty,
- exposure change,
- monitor image confusion,
- audio problem,
- room noise,
- unexpected actor movement,
- changing light,
- need to review a take.

A good button/menu map reduces stress.

18.2 Assignable button priorities

The assignable button priorities should support the user's actual workflow: Cine EI, muted-color monitoring, RØDE audio, focus-critical actor/documentary work, and test review.

18.2.1 Focus Magnifier

Focus Magnifier is one of the most important assignable functions.

Why it matters:

- close-ups require eye focus,
- actor reels fail if eyes are soft,
- S-Log3/LUT monitor image may not show fine focus clearly,

- bright sun makes screen judgment harder,
- shallow aperture reduces tolerance.

Use before rolling on:

- actor close-ups,
- interview close-ups,
- long-lens exterior shots,
- rack focus starts/ends,
- shallow depth of field shots.

18.2.2 Waveform / Video Signal Monitor

Waveform or Video Signal Monitor should be quickly accessible because exposure cannot be judged reliably by the monitor image alone.

Use waveform to check:

- face,
- gray card,
- white reference,
- windows,
- practical lights,
- sky,
- bright shirts,
- shadow placement.

For muted color, this is critical because the image may look moody while being underexposed.

18.2.3 Zebras

Zebras provide fast exposure warnings. They are useful when the operator needs a quick check without staring at waveform.

Use zebras to watch:

- highlight clipping,
- bright skin areas,
- white clothing,
- windows,
- sky,
- practicals.

Zebras are especially useful outdoors and during documentary movement.

18.2.4 LUT On/Off

LUT On/Off is useful because the operator may need to compare:

- flat S-Log3 view,
- LUT-applied preview,
- exposure confidence,
- color/contrast direction.

The LUT should help viewing, but it can also mislead if treated as exposure truth. A fast LUT toggle helps the operator understand what is monitor transform and what is underlying log.

Preferred recording remains:

Internal Rec MLUT Off

while monitoring LUT can be On.

18.2.5 Face/Eye AF

Face/Eye AF should be quickly reachable if using compatible lenses and autofocus workflow.

Use cases:

- solo operator interviews,
- documentary subject movement,
- walk-and-talks,
- actor movement when manual focus is difficult.

But Face/Eye AF must be tested. Quick access lets the operator enable or disable it depending on the shot.

18.2.6 Push AF

Push AF is useful when the operator wants temporary autofocus assistance without fully relying on continuous autofocus.

Use cases:

- grab focus before rolling,
- correct focus after subject shifts,
- documentary quick setup,
- manual focus workflow with occasional assist.

Push AF is especially useful when the operator wants control but also needs speed.

18.2.7 Audio Status

Audio Status should be accessible because audio routing is a major part of this project.

The operator must often verify:

- CH1 source,
- CH2 source,
- CH3 source if boom adapter used,
- INPUT1/INPUT2 reference,
- headphone monitor channel,
- levels,
- limiter/AGC status depending setup,
- routing after switching one-transmitter/two-transmitter/boom workflows.

Audio Status is not optional. The project's audio system has multiple valid configurations, so the current configuration must be visible.

18.2.8 Rec Review

Rec Review allows the operator to check whether the last take recorded properly.

Use Rec Review after:

- new audio routing,
- new lens/focus setup,
- new LUT/output setup,
- first take of scene,
- critical performance,
- new card/reel start,
- exterior exposure setup.

A short review can catch:

- no audio,
- wrong channel,
- soft focus,
- bad exposure,
- unwanted room noise,
- framing mistake,
- blown highlight,
- wrong LUT monitoring assumption.

18.3 User Menu Page 1: Exposure

User Menu Page 1 should contain exposure controls and checks.

Suggested contents:

Item	Reason
ISO/Gain/EI	Cine EI exposure strategy
Base ISO	800 / 12800 decision
Exposure Index	rating/monitoring decision
ND Filter	exposure control
Shutter	motion control
Zebra	highlight/skin warning
Video Signal Monitor / Waveform	exposure truth

The exposure page should answer:

- What base ISO am I in?
- What EI am I rating at?
- Is shutter correct?
- Is ND doing exposure work?
- Are zebras/waveform available?

18.4 User Menu Page 2: Look / LUT

User Menu Page 2 should contain look and LUT-related controls.

Suggested contents:

Item	Reason
Cine EI/Flex.ISO Set	confirm operating mode
Color Gamut	confirm S-Gamut3.Cine/S-Log3
LUT On/Off VF/Proxy/Stream	viewfinder preview
LUT On/Off SDI/HDMI	external monitor preview
Internal Rec LUT	protect clean recording
Base Look	choose s709/other look
Scene File	look backup/load

This page should answer:

- Am I recording S-Gamut3.Cine/S-Log3?
- Is the monitor receiving MLUT?
- Is Internal Rec MLUT Off?
- What Base Look is selected?

The most dangerous mistake here is accidentally baking a LUT into internal recording when the intent is clean log.

18.5 User Menu Page 3: Focus

User Menu Page 3 should contain focus controls.

Suggested contents:

Item	Reason
Focus Mode	manual/AF state
Focus Area	AF behavior
Face/Eye Detection AF	interview/actor tracking
Push AF Mode	temporary assist behavior
Peaking	manual focus aid
Focus Magnifier	critical focus check

This page should support the focus decision:

- manual or AF,
- eye tracking or not,
- peaking on/off,
- magnifier available,
- focus behavior appropriate to scene.

For actor reels, this page protects the near-eye rule.

18.6 User Menu Page 4: Audio

User Menu Page 4 should contain audio controls.

Suggested contents:

Item	Reason
Audio Input	master audio routing area
CH1 Input Select	TX1/main/safety routing
CH2 Input Select	safety vs TX2 routing
CH3 Input Select	boom via Shoe CH1 if used
INPUT1 MIC Reference	RØDE input sensitivity
INPUT2 MIC Reference	second RØDE input sensitivity
Monitor CH / Headphone	what operator hears
Audio Level Meter	visible confirmation

This page is critical because the project has multiple audio modes:

Mode	CH1	CH2	CH3
One-transmitter safety	INPUT1	INPUT1	—
Two-transmitter split	INPUT1	INPUT2	—
One-transmitter in split mode	INPUT1	INPUT2 silent	—
Two lavs + boom	INPUT1	INPUT2	Shoe CH1
Merged lavs + boom	INPUT1 merged INPUT2 boom		—

The operator must know which mode is active.

18.7 User Menu Page 5: Recording / Media

User Menu Page 5 should contain recording and media controls.

Suggested contents:

Item	Reason
Rec Format	resolution/codec/frame rate
S&Q Motion	slow motion state
Proxy Rec	post workflow
Simul Rec	if used
All File	save/load full setup
User File	user setup backup
Format Media	card management, use carefully

This page should support:

- confirming recording format,
- avoiding accidental S&Q state,
- saving settings,
- managing cards carefully.

Format Media must be used only after verified backup. Do not format production cards casually.

18.8 Button-map operating rule

The button and user-menu map should support the real field workflow.

Priority controls are:

1. Focus Magnifier,

2. Waveform/Video Signal Monitor,
3. Zebras,
4. LUT On/Off,
5. Face/Eye AF,
6. Push AF,
7. Audio Status,
8. Rec Review.

The operating rule is:

Assign buttons to prevent failed takes, not to decorate the camera.

The best button map is the one that lets the operator quickly answer:

- Is focus sharp?
- Is exposure safe?
- Is LUT monitoring correct?
- Is audio routed correctly?
- Did the take record properly?

PART IV — LUT, MONITORING, SETTINGS FILES, AND FX6 SETTINGS CARD

Chapter 19. LUT / MLUT Monitoring Setup

19.1 S-Gamut3.Cine/S-Log3 does not automatically mean monitor LUT

A key project finding was that setting the camera to S-Gamut3.Cine/S-Log3 does **not** automatically mean the external monitor will display a LUT-applied image.

There are separate concepts:

1. camera color/gamma,
2. monitor/output LUT,
3. internal recording LUT.

The camera can record S-Gamut3.Cine/S-Log3 while the external monitor receives:

- flat log,
- LUT-applied image,
- or a signal altered by output settings.

The operator must deliberately set SDI/HDMI MLUT behavior.

The practical rule:

S-Gamut3.Cine/S-Log3 defines the capture. SDI/HDMI MLUT defines what the external monitor sees.

Do not assume the monitor image is normalized unless the FX6 output LUT setting is on.

19.2 Three separate items

The project separates three items that are often confused.

19.2.1 Camera color/gamma

The camera color/gamma is the recording foundation.

Project baseline:

S-Gamut3.Cine / S-Log3

This defines the log capture intended for grading. It does not by itself guarantee that the LCD or external monitor is showing the final look.

19.2.2 SDI/HDMI MLUT

SDI/HDMI MLUT controls whether the FX6 sends a LUT-applied image through the external video output.

If SDI/HDMI MLUT is On:

- the external monitor can see a normalized/look preview,
- the monitor does not need to import its own LUT,
- the operator can judge composition and broad contrast more easily.

If SDI/HDMI MLUT is Off:

- the external monitor may see flat S-Log3,
- the image may look washed out,
- exposure may be harder to judge visually,
- waveform/zebras still matter.

19.2.3 Internal Rec MLUT

Internal Rec MLUT controls whether the LUT is baked into the camera's internal recording.

For this project, the preferred setting is:

Internal Rec MLUT Off

That preserves clean S-Gamut3.Cine/S-Log3 for grading.

If Internal Rec MLUT is On, the LUT may be recorded into the file. That is not the preferred workflow unless deliberately chosen for a fast turnaround or specific baked-look project.

19.3 Recommended settings

The project's preferred monitoring setup is:

Destination	Recommended Setting
VF/Proxy/Stream	MLUT On if desired
SDI/HDMI	MLUT On for external monitor preview
Internal Rec	MLUT Off for clean S-Log3

This lets the operator see a normalized image while the camera records gradeable log footage.

19.3.1 VF/Proxy/Stream MLUT On

Turning VF/Proxy/Stream MLUT On gives the operator a usable preview on the camera's viewing path.

Use this when:

- S-Log3 appears too flat for composition,
- judging broad contrast,
- showing talent/client a normal-looking image,
- working in the muted preview style.

The operator should remember that this is only a viewing transform.

19.3.2 SDI/HDMI MLUT On

Turn SDI/HDMI MLUT On when the external monitor should see the LUT-applied image.

This is especially important for the Elvid RigVision monitor discussed in the project, because it does not appear to import LUTs directly. If the FX6 sends the MLUT-applied output, the monitor can still display the normalized image.

External monitor workflow:

```
FX6 records clean S-Log3 internally
↓
FX6 applies MLUT to SDI/HDMI output
↓
External monitor displays LUT-applied image
```

19.3.3 Internal Rec MLUT Off

Keep Internal Rec MLUT Off for the project's main workflow.

Reason:

- preserves clean log,
- gives grading flexibility,
- prevents accidental baked LUT,
- supports muted look in post,
- avoids committing to monitor preview as final image.

The field statement should be:

“Monitor LUT On. Internal Rec LUT Off.”

19.4 External monitor LUT behavior

The external monitor displays the signal it receives. If the FX6 sends a LUT-applied image through SDI/HDMI, the monitor shows that image.

Therefore, a monitor does not need to import LUTs if the FX6 is already applying the MLUT to the output.

Signal behavior:

FX6 SDI/HDMI MLUT	Monitor Display
Off	Flat S-Log3/log-like image
On	LUT-applied/normalized preview

This is the answer to the project question about whether S-Gamut3.Cine/S-Log3 plus LUT On settings can allow the monitor to see the LUT without loading the LUT into the monitor.

Yes, if the FX6 is set to send MLUT through SDI/HDMI, the monitor can display the FX6-applied LUT image.

19.5 Why monitor does not need its own LUT if FX6 sends MLUT

If the FX6 applies the LUT before the signal reaches the monitor, the monitor is simply displaying the already transformed image.

This matters because the Elvid RigVision monitor may not import LUTs. That limitation is not fatal if the FX6 output is configured correctly.

Workflow:

Device	Role
FX6	Applies MLUT to SDI/HDMI output
Elvid monitor	Displays received image
Internal FX6 recording	Remains clean S-Log3 if Internal Rec MLUT Off

This is the simplest monitoring workflow for the user’s setup.

19.6 Double-LUT warning

Do not apply two LUTs.

Double-LUT happens when:

1. the FX6 sends a LUT-applied image,
2. and the monitor also applies a LUT.

Result can be:

- too much contrast,
- crushed shadows,
- clipped-looking highlights,
- oversaturated color,
- wrong skin tone,
- misleading exposure judgment.

For this project:

FX6 SDI/HDMI MLUT	Monitor LUT
On	Off / not used

FX6 SDI/HDMI MLUT

Monitor LUT

Off

Monitor LUT could be used only if monitor supports correct LUT

Since the Elvid RigVision likely does not import LUTs, the practical setup is:

FX6 SDI/HDMI MLUT On; monitor LUT not used.

19.7 Internal recording safety

The safest recording workflow is:

Function	Setting
Camera capture	S-Gamut3.Cine/S-Log3
Monitoring	MLUT On
Internal Rec MLUT	Off

This prevents the operator from accidentally baking the preview look into the recording.

The internal file should remain flexible for:

- DaVinci Resolve grading,
- Premiere workflow,
- muted final color,
- exposure correction,
- skin-tone protection,
- matching shots.

Do not turn Internal Rec MLUT On unless the operator deliberately wants to record the LUT-applied look.

19.8 s709 monitoring look

s709 is preserved as a recommended safe monitoring look because it is restrained and useful for viewing S-Log3 material without pushing the image into an overly harsh Rec.709 preview.

Use s709 when:

- judging a more natural contrast preview,
- protecting skin,
- avoiding aggressive LUTs,
- shooting actor reels,
- working toward muted color.

s709 is not the final grade. It is a monitoring reference.

19.9 709(800%) reference look

709(800%) is preserved as another reference look. It can be useful as a more standard normalized viewing option.

Use it as:

- a comparison,
- a technical reference,
- a different preview option.

Do not confuse it with the final grade. Like s709, it is a monitoring tool.

19.10 Custom Nelson Muted Preview LUT concept

The project allows for a future custom “Nelson Muted Preview LUT” concept. This would be a preview LUT designed to approximate the desired restrained Netflix-type muted look.

However, it should not be loaded or used casually without testing.

Before adopting a custom muted LUT:

1. Confirm it is designed for S-Gamut3.Cine/S-Log3 input.
2. Test it on skin.
3. Test it indoors and outdoors.
4. Test it on actor close-ups.
5. Test it on documentary interviews.
6. Confirm it does not crush shadows.
7. Confirm it does not make skin gray.
8. Confirm Internal Rec MLUT remains Off unless intentionally baking.

The custom LUT should be a preview aid, not a substitute for lighting and grading.

Final LUT rule:

Use LUTs to see the image. Use S-Log3 to preserve the image. Use grading to finish the image.

Chapter 20. Elvid RigVision Monitor and External Monitoring

20.1 Elvid RigVision LUT-import limitation

The project question was whether the Elvid RigVision monitor can import a LUT.

The preserved conclusion is:

The Elvid RigVision monitor discussed does not appear to support direct LUT import.

That means the monitor should not be treated like a LUT-capable production monitor where the operator loads .cube files directly into the monitor.

But that limitation does not prevent proper LUT monitoring because the FX6 can send a LUT-applied image through SDI/HDMI when configured.

The practical result:

Need	Solution
See normal/muted preview on Elvid Use FX6 SDI/HDMI MLUT On	
Load LUT into Elvid	Not available/likely unsupported
Avoid flat S-Log3 monitor image	Let FX6 apply MLUT to output
Avoid double-LUT	Do not apply monitor LUT

20.2 Why FX6-applied MLUT solves the issue

If the FX6 applies the MLUT to the SDI/HDMI output, the external monitor does not need to know anything about LUTs. It simply displays the signal it receives.

Signal path:

```

FX6 internal image: S-Gamut3.Cine/S-Log3
    ↓
FX6 applies selected MLUT to SDI/HDMI output
    ↓
Elvid RigVision receives normalized/LUT-applied image
    ↓
FX6 internal recording remains clean log if Internal Rec MLUT is Off
    
```

This solves the user's monitor problem without needing a LUT-capable monitor.

The operator should verify:

- SDI/HDMI MLUT is On,
- Internal Rec MLUT is Off,
- selected Base Look is appropriate,
- monitor image changes when MLUT is toggled,

- camera recording remains log.

20.3 Monitor LUT off when FX6 SDI/HDMI MLUT is on

If using a monitor that can import LUTs, the rule would be:

Do not apply monitor LUT when FX6 is already outputting MLUT.

For the Elvid RigVision monitor, direct LUT import appears unavailable, so this double-LUT risk is less about accidentally loading a LUT into Elvid and more about understanding the correct signal path.

The safe external monitoring state is:

FX6 Setting	Monitor State
SDI/HDMI MLUT On	Monitor displays FX6-applied LUT
Internal Rec MLUT Off	Camera records clean S-Log3
Monitor LUT	Not used

If a different external monitor is used later and it does support LUTs, choose one LUT location:

LUT Location	Use
FX6 output LUT	preferred for simple setup
Monitor LUT	possible if FX6 SDI/HDMI MLUT Off
Both	avoid

20.4 External monitor as view-only device versus recorder warning

The Elvid RigVision should be treated as a viewing monitor in this workflow, not as a recorder or color-management authority.

Its job is:

- composition,
- focus assistance if clear enough,
- viewing LUT-applied image,
- director/talent preview,
- framing.

It should not override:

- waveform exposure judgment,

- FX6 internal recording settings,
- S-Log3 capture logic,
- Resolve/Premiere color management,
- post-production grading.

A monitor image can be affected by:

- brightness setting,
- contrast setting,
- viewing angle,
- ambient light,
- HDMI/SDI signal settings,
- LUT output setting from camera.

Therefore:

Use the monitor to see. Use camera tools to verify. Use post to finish.

20.5 Practical monitoring setup table

Use this practical table for the Elvid RigVision workflow.

Item	Recommended Setting / Role
FX6 color/gamma	S-Gamut3.Cine/S-Log3
Selected viewing LUT/Base Look	s709 or chosen test look
VF/Proxy/Stream MLUT	On if desired
SDI/HDMI MLUT	On
Internal Rec MLUT	Off
Elvid monitor LUT import	Not relied upon
Elvid monitor role	Display FX6-applied output
Exposure verification	FX6 waveform/zebras
Recording	Clean S-Log3 internally
Warning	Do not assume monitor image equals final grade

External monitor pre-roll checklist:

1. Confirm FX6 is in S-Gamut3.Cine/S-Log3.
2. Confirm the desired Base Look/LUT is selected.
3. Confirm SDI/HDMI MLUT is On.
4. Confirm Internal Rec MLUT is Off.
5. Look at Elvid monitor and verify image is not flat log if LUT preview is intended.
6. Toggle LUT if needed to confirm behavior.
7. Use waveform/zebras for exposure.

8. Record test if monitor/output settings were changed.

Final monitor rule:

The Elvid does not need to import a LUT if the FX6 is sending the LUT-applied image. The camera records clean log; the monitor displays the preview.

Chapter 21. LUT Acquisition and FX6 Settings Card

21.1 Why to preload only a small LUT set

The FX6 should not be loaded with a large, random collection of LUTs. A large LUT collection creates confusion in the field and increases the chance that the wrong LUT will be selected, monitored, or accidentally baked into a recording path.

For this project, LUTs are used primarily as **monitoring references**. They are not the final grade, and they are not a substitute for exposure, white balance, lighting, art direction, or careful post-production color work.

The correct philosophy is:

Carry only the LUTs you understand, trust, and have tested.

A small controlled LUT set is better than a large LUT library because it helps the operator know exactly what the monitor is showing.

A recommended small LUT set would include:

LUT Type	Purpose
s709	Primary safe monitoring look
709(800%)	Reference/alternate normalized look
Sony official S-Gamut3.Cine/S-Log3 LUTs	Trusted technical baseline
Optional Sony creative look	Test only, not default
Future custom Nelson Muted Preview LUT	Project-specific preview after testing

Avoid loading LUTs simply because they are described as “cinematic,” “Netflix,” “moody,” “teal orange,” or “film.” A LUT made for the wrong camera, wrong gamma curve, or wrong color space can mislead exposure and color judgment.

In this project, the monitoring LUT should help answer:

- Is the face readable?
- Is the contrast direction close to the intended muted look?
- Is the background too distracting?
- Are skin tones plausible?
- Is the scene becoming too dark or too crushed?

The LUT should not be used to decide final color on set. The final look should be built in DaVinci Resolve or Premiere/color workflow from the clean S-Log3 recording.

21.2 Recommended LUTs

The recommended LUT set should remain small and controlled. Each LUT should have a clear purpose.

21.2.1 s709

s709 is the preferred safe monitoring LUT for this project.

It is useful because it gives a normalized image that is generally restrained and suitable for judging a natural-looking S-Log3 image without pushing the contrast and saturation into an aggressive look.

Use s709 for:

- actor reel close-ups,
- controlled interviews,
- feature-style dialogue,
- muted cinematic monitoring,
- skin-tone judgment,
- safe external monitor preview.

s709 is not the final grade. It is a monitoring reference.

The practical use is:

Setting	Recommended Use
Camera capture	S-Gamut3.Cine/S-Log3
Monitor	s709 MLUT
Internal Rec MLUT	Off
Final grade	done later in post

The advantage of s709 is that it lets the operator see a reasonable image without committing that look to the recorded file.

21.2.2 709(800%)

709(800%) is useful as another reference monitoring look. It can serve as a more standard normalized preview option.

Use 709(800%) when:

- comparing against s709,
- checking a more standard Rec.709-style preview,
- verifying whether a scene is too flat, too contrasty, or too bright,
- testing monitor behavior.

It should not be treated as the final “Netflix muted” look. It is a reference.

A practical LUT test procedure is:

1. Set camera to S-Gamut3.Cine/S-Log3.
2. Set Internal Rec MLUT Off.
3. Turn SDI/HDMI MLUT On.
4. View s709.
5. View 709(800%).
6. Compare skin, contrast, and shadow detail.
7. Choose the safer monitoring look for that shoot.
8. Keep the final grade for post.

21.2.3 Sony official S-Gamut3.Cine/S-Log3 LUTs

Sony official LUTs are preferred over random internet LUTs because they are more likely to be technically correct for the FX6 color/gamma path.

Use official Sony LUTs as:

- trusted technical monitoring references,
- controlled starting points,
- comparison tools,
- baseline transforms for testing.

The key requirement is that the LUT must be built for the correct input:

S-Gamut3.Cine / S-Log3

Do not use a LUT intended for:

- Canon Log,
- V-Log,
- ARRI LogC,
- RED IPP2,
- generic Rec.709 footage,
- unknown log footage,
- a different Sony gamma/color space unless intentionally tested.

Wrong-input LUTs can create bad contrast, wrong saturation, distorted skin, and false exposure confidence.

21.2.4 Optional creative Sony looks

Optional creative Sony looks can be loaded for testing, but they should not become the field default unless they have been tested across the user's actual shooting scenarios.

Test creative looks on:

- indoor actor close-up,
- two-person dialogue,
- documentary interview,
- exterior open shade,
- exterior sun/backlight,
- darker practical-light scene,
- different skin tones,
- muted wardrobe,
- bright background.

A creative LUT that looks good on one shot may fail on another. For actor reels, this is especially dangerous because the actor's face must remain the priority.

Use creative looks only if:

1. they are correct for the FX6 log/color path,
2. they preserve skin,
3. they do not crush shadows,
4. they do not clip highlights misleadingly,
5. they do not make the monitor look better than the recorded exposure actually is,
6. they are documented in the field notes.

21.2.5 Custom Nelson Muted Preview LUT

A future custom **Nelson Muted Preview** LUT could be useful if it is designed specifically for this project's style. Its purpose would be to approximate the preferred muted cinematic direction while still preserving safe viewing judgment.

It should be treated as a preview LUT only until fully tested.

The custom LUT should be designed to:

- keep skin natural,
- restrain saturation,
- avoid crushed blacks,
- preserve shadow texture,
- avoid harsh contrast,
- protect actor faces,
- work indoors and outdoors,
- avoid misleading exposure.

Before using a custom Nelson Muted Preview LUT on a real shoot:

Test	Required Check
Actor close-up	Does skin remain alive?
Dark interior	Are shadows readable, not crushed?
Exterior shade	Does face look clean?
Direct daylight	Are highlights misleading?
Documentary interview	Does it look credible?
Wardrobe colors	Are muted colors controlled?
Bright background	Does it over-darken subject?
Internal recording	Confirm LUT is not baked unless deliberate

The custom LUT should never replace waveform, zebras, manual white balance, or exposure testing.

21.3 Avoiding random LUT packs

Random LUT packs are risky because many LUTs are not built for the FX6 S-Gamut3.Cine/S-Log3 input. A LUT may look attractive in advertising but be wrong for the camera's actual signal.

Risks of random LUTs:

Risk	Result
Wrong input gamma	bad contrast and exposure preview
Wrong color space	distorted color and skin
Overly strong contrast	crushed shadows
Oversaturation	non-muted look
Excessive desaturation	dead skin

Risk	Result
Unclear purpose	field confusion
Too many options	decision paralysis

For this project, LUTs must support the operator's job. They should not create additional uncertainty.

Field rule:

If you do not know what input the LUT expects, do not use it on the FX6 for production monitoring.

A safe LUT must answer:

- Is it for S-Log3?
- Is it for S-Gamut3.Cine?
- Is it intended for monitoring or final conversion?
- Has it been tested on skin?
- Is Internal Rec MLUT Off?
- Is the monitor double-LUT-free?

21.4 Correct card folder paths

LUTs must be placed in the correct folder structure for the FX6 to recognize them for import.

21.4.1 SD card LUT path

For an SD card, use:

```
/PRIVATE/SONY/PRO/LUT/
```

This means the LUT files should be inside the LUT folder at that path.

A practical SD card structure would be:

```
SD CARD/  
  PRIVATE/  
    SONY/  
      PRO/  
        LUT/  
          s709.cube  
          709_800.cube  
          Nelson_Muted_Test.cube
```

Folder names matter. Do not scatter LUT files randomly on the card.

21.4.2 CFexpress Type A LUT path

For a CFexpress Type A card, use:

/SONY/PRO/LUT/

A practical CFexpress structure would be:

```
CFexpress CARD/  
  SONY/  
    PRO/  
      LUT/  
        s709.cube  
        709_800.cube  
        Nelson_Muted_Test.cube
```

The project preference is to use a dedicated settings card rather than mixing settings/LUT files casually with production footage cards.

21.5 Importing LUTs into FX6

The FX6 must import the LUT from the card before it can be selected as a Base Look or monitoring look.

General workflow:

1. Prepare the LUT files on the computer.
2. Confirm they are .cube files intended for the FX6/S-Log3/S-Gamut3.Cine workflow.
3. Place them in the correct card folder.
4. Insert the settings/LUT card into slot B if following the project's Media(B) workflow.
5. Go to the FX6 Look/Base Look import area.
6. Choose import from Media(B).
7. Select the LUT file.
8. Import it into the camera.
9. Confirm it appears in the available Base Look list.
10. Select it only after confirming it is the intended LUT.

Do not assume that placing a LUT on a card automatically activates it. The LUT must be imported and selected.

21.6 Selecting the imported Base Look

After import, the LUT or look must be selected as the active Base Look / monitoring look, depending on the FX6 menu structure and current mode.

The operator must confirm:

Check	Required Answer
Is the LUT imported?	Yes
Is it selected as Base Look?	Yes, if intended
Is SDI/HDMI MLUT On?	Yes, for external monitor preview
Is Internal Rec MLUT Off?	Yes, for clean log recording
Is the image on monitor changed?	Yes, if LUT output active
Is waveform still used?	Yes

Changing the Base Look affects monitoring behavior and possibly output behavior depending on LUT On/Off destinations. The operator must know which outputs are affected.

21.7 Input/output LUT setting warning

The LUT must match the input signal.

For this project, the baseline input is:

S-Gamut3.Cine / S-Log3

Do not load or select a LUT if it expects a different input unless it is being tested intentionally.

Correct LUT input:

S-Gamut3.Cine / S-Log3 → selected LUT → monitoring preview

Wrong LUT input examples:

Canon Log LUT used on S-Log3
V-Log LUT used on S-Log3
ARRI LogC LUT used on S-Log3
Rec.709 LUT used directly on S-Log3
Unknown "cinematic" LUT used without input specification

Potential consequences:

- skin becomes orange/green/gray,
- contrast becomes misleading,
- shadows crush,
- highlights appear worse than they are,
- exposure judgment becomes unreliable,
- monitor no longer represents a useful preview.

Input/output must be treated as technical, not decorative.

21.8 Why to keep LUT files backed up separately

Do not rely on the camera alone as the only place where LUTs exist.

Keep backup copies of LUT files in:

```
PROJECT/  
  00_ADMIN/  
    FX6_SETTINGS/  
      LUTS/
```

and on the dedicated settings card.

A practical backup structure:

```
FX6_SETTINGS_BACKUP/  
  ALL_FILES/  
  USER_FILES/  
  SCENE_FILES/  
  LUTS/  
    s709/  
    709_800/  
    SONY_OFFICIAL/  
    NELSON_MUTED_TEST/  
  NOTES/
```

Reason:

- ALL File may preserve menu configuration but not necessarily all external LUT source files in a usable standalone way.
- A card can be formatted.
- LUTs may need to be reloaded later.
- Post-production needs to know what monitoring LUT was used.
- Future shoots must recreate the same monitoring environment.

LUT backup rule:

Save the LUT file, the camera setting, and the note explaining when it was used.

Chapter 22. ALL Files, User Files, Scene Files, and Dedicated Settings Card

22.1 What ALL File saves

An FX6 ALL File is used to save a broad set of camera configuration settings. It is the closest practical way to preserve the current camera setup across the menus.

FX6 CINE EI Muted-Color Shooting System Handbook V7.0

For this project, the ALL File is valuable because the FX6 setup includes many linked settings:

- Cine EI mode,
- S-Gamut3.Cine/S-Log3 setup,
- recording format,
- LUT/MLUT routing,
- monitoring configuration,
- audio menu routing,
- user menu configuration,
- assignable button setup,
- file-related camera settings,
- and many other savable menu values.

The practical project expectation is:

ALL File should capture most savable camera menu values across Menu 0–10, including many Level 1 through Level 4 menu settings where they are actual savable settings.

That does not mean it replaces written documentation. It saves camera configuration; it does not create a readable operator manual.

Use ALL File when:

- the camera is finally configured for the Cine EI muted-color workflow,
- a shoot setup has been tested and confirmed,
- the user wants to preserve current menu state,
- the user wants to reload the setup later,
- or the user wants to send/share the camera settings for review.

The project's saved ALL File procedure is:

Project → All File → Save to Media(B) → Execute

Then choose a “No File” slot for a new save, or choose an existing File ID if deliberately overwriting.

22.2 What ALL File does not save

An ALL File does not save everything in the physical production system.

It does not reliably save or represent:

Item	Reason
Physical switch positions	Switches must be visually checked
Lens zoom/focus/iris ring position	Physical lens state

Item	Reason
RØDE receiver mode	External device
RØDE receiver gain	External device
RØDE onboard recording status	External device
Cable Techniques cable routing	Physical cable state
Blue XLR / red XLR placement	Physical connection
Headphone volume perception	Monitoring preference/physical
Boom mic model	External device
Boom adapter physical switches	External device/physical
Elvid monitor settings	External monitor
Loaded LUT source files on computer	External files
Lighting layout	Physical set
White/gray card shot	Production reference
File log entries	Production paperwork
Production card backup status	Post workflow

Therefore, ALL File is powerful but not sufficient by itself.

The correct rule is:

ALL File saves camera menu state. It does not save the entire physical rig or production workflow.

22.3 Menu 0–10 settings and ALL File capture

The user specifically asked whether ALL File will capture and save Level 1 through Level 4 settings for Menu 0–10.

The practical answer is:

It should save most savable camera menu settings across the camera’s menu system, but it should not be treated as a substitute for written camera-verified documentation or physical switch checks.

In the project context, Menu 0–10 refers to the broader FX6 canonical menu mapping structure. ALL File is a camera configuration file, not a printed menu map.

Therefore:

Need	Use
Restore camera setup	ALL File
Know exact menu hierarchy/wording	Written canonical menu document

Need	Use
Verify physical switches	Manual inspection
Preserve RØDE gain/mode	RØDE notes/device setup
Preserve external monitor behavior	Monitor notes/settings
Preserve lighting setup	Lighting diagram/notes
Preserve file workflow	Handbook/log/checklists

An ALL File can be excellent for restoring the camera, but the operator still needs a checklist.

22.4 Level 1–Level 4 camera values versus written documentation

The FX6 canonical menu work recorded menu levels and values. That written structure is documentation. An ALL File is camera data.

They serve different purposes.

Item	Purpose
Canonical menu document	Human-readable reference
ALL File	Reloadable camera setup
User File	User setup backup
Scene File	Look/Paint-related backup
Checklist	Confirms physical/external items
Clip log	Production record

The ALL File may preserve the camera value, but it does not tell the operator why that setting matters. It also does not warn the operator that the RØDE receiver must be in Split mode or that blue XLR must go to INPUT1.

The handbook and checklist remain necessary.

22.5 Slot B / Media(B) workflow

The preserved project workflow uses card slot B / Media(B) for settings-file operations.

Procedure:

1. Insert a formatted card in slot B.
2. Go to the FX6 Project menu.
3. Choose All File.
4. Choose Save to Media(B).
5. Choose Execute.

6. Select a “No File” slot to create a new save, or select an existing File ID if overwriting intentionally.
7. Confirm Execute.

This slot B procedure is important because settings files and LUT import workflows are tied to the camera’s media-file handling.

The project also preserves the distinction:

All File is different from User File.

Do not assume saving one automatically gives the same protection as saving all possible file types.

22.6 ALL File save/load procedure

Save procedure

Use this when the camera is configured and tested.

```
Project
  → All File
    → Save to Media (B)
      → Execute
```

Then:

- choose a “No File” slot for new save,
- or choose an existing File ID only if intentionally overwriting.

Before saving, confirm:

Check	Why
Cine EI mode correct	saves correct operating mode
S-Gamut3.Cine/S-Log3 correct	saves color/gamma setup
Recording format correct	preserves format defaults
Audio routing correct	saves menu routing
LUT routing correct	saves monitoring path
User menu/buttons correct	preserves field controls
Internal Rec MLUT Off	protects clean recording
SDI/HDMI MLUT On if desired	monitor workflow
Date/version note made	avoids mystery files later

Load procedure

Use this when restoring the setup.

1. Insert settings card in slot B.
2. Go to Project → All File.
3. Choose Load from Media(B).
4. Select the intended ALL File.
5. Execute load.
6. Restart or confirm as required by camera behavior.
7. Perform manual checks after loading.

After loading, manually verify:

- INPUT1 switch = MIC if using RØDE,
- INPUT2 switch = MIC if using split RØDE,
- no phantom power to RØDE,
- CH1/CH2 routing,
- RØDE receiver mode,
- RØDE gain,
- Cable Techniques cable routing,
- monitor output behavior,
- Internal Rec MLUT Off,
- SDI/HDMI MLUT On if using external monitor LUT preview,
- white balance state,
- ND physical state,
- audio meters,
- test recording.

Loading ALL File does not eliminate the need for pre-roll verification.

22.7 User File backup

A User File can preserve user-related camera setup items, depending on camera behavior and file type. It should be saved as an additional backup, not as a replacement for ALL File.

Use User File to preserve:

- user menu configuration,
- assignable button setup,
- operator preferences,
- custom field layout.

Project rule:

Save ALL File first for broad setup. Save User File as companion protection.

Recommended settings-card folder note:

```
FX6_SETTINGS_CARD/  
  ALL_FILE/  
  USER_FILE/  
  SCENE_FILE/  
  LUT/  
  README_SETTINGS_NOTES.txt
```

The exact folder structure on the card is camera-managed, but the backup on the computer can be organized this way.

22.8 Scene File backup

Scene File is useful for look-related settings. In the FX6 context, Scene File / Paint/Look-related information may help preserve the selected look configuration.

Use Scene File as an additional look backup when:

- Base Look has been selected,
- LUT/Look configuration has been tested,
- Paint/Look settings are part of the workflow,
- the camera's look behavior should be preserved.

Scene File should not replace ALL File because ALL File covers broader camera configuration.

The correct hierarchy is:

File Type	Use
ALL File	Broad camera setup
User File	User/operator setup
Scene File	Look/Paint-related setup
LUT files	Actual LUT source files
Written notes	Human-readable context

22.9 LUT file backup

The actual LUT files should be backed up separately from the camera settings files.

Why:

- the camera may import LUTs internally,
- the card may later be formatted,
- post-production may need the LUT reference,
- future reload may require the original `.cube`,
- the ALL File may not be enough to reconstruct the entire LUT library.

Recommended backup location:

```
PROJECT_ADMIN/  
  FX6_SETTINGS/  
    LUTS/  
      s709/  
      709_800/  
      SONY_OFFICIAL/  
      NELSON_MUTED_TEST/
```

For each LUT, keep a note:

LUT	Input	Purpose	Use
s709	S-Gamut3.Cine/S-Log3 monitor		primary safe preview
709(800%)	S-Gamut3.Cine/S-Log3 monitor/reference		alternate
Nelson Muted Preview	S-Gamut3.Cine/S-Log3	future project look test only until approved	

22.10 Physical switch limitations

The FX6 has physical controls that must be manually checked. A settings file cannot be trusted to confirm physical switch positions.

Physical items to check:

Physical Item	Check
INPUT1 switch	MIC for RØDE
INPUT2 switch	MIC for RØDE split
MIC+48V	Off for RØDE
ND physical state	Clear/On/Variable as intended
WB switch	A/B/Preset as intended
Channel dials	CH1/CH2 levels correct
Cable routing	blue INPUT1, red INPUT2
Headphones	connected and audible
Boom adapter switches	match boom mic type
Lens switches	AF/MF, stabilization, iris behavior

Project rule:

After loading settings, physically inspect the camera.

22.11 RØDE settings not saved by FX6

The FX6 cannot save RØDE receiver/transmitter settings.

RØDE items to check separately:

RØDE Item	Required Check
Receiver output gain	0 dB for saved baseline
Receiver mode	Split for two transmitters
Transmitter assignment	TX1/CH1, TX2/CH2
Onboard recording	enabled if used
Battery	charged
Storage	available for onboard recording
Receiver connection	3.5 mm cable seated
Transmitter placement	6–8 inches below chin / no rub

The RØDE system is external to the FX6 settings file. It requires its own checklist.

22.12 External monitor settings not saved by FX6

The FX6 can control whether its output carries MLUT, but it does not save the external monitor's own settings.

For the Elvid RigVision monitor:

Item	Check
Power	on
Input	correct HDMI/SDI path
Brightness	usable but not trusted for exposure
LUT import	not relied upon
FX6 output	SDI/HDMI MLUT On if preview desired
Double LUT	avoid if using another LUT-capable monitor

The monitor should be treated as a display, not the final authority.

22.13 Boom adapter switch settings not saved by FX6

If using Sony XLR-K3M/K2M or similar shoe-mounted adapter, some physical adapter settings may need manual confirmation.

Check:

Adapter Item	Required State
Adapter mounted	secure in Multi Interface Shoe
Boom cable	plugged into adapter INPUT1

Adapter Item	Required State
Input type	MIC / MIC+48V / LINE based on source
Phantom power	only if boom requires it
CH3 routing	Shoe CH1
CH4	Off or Shoe CH2 if needed
Levels	tested with boom speech
Headphones	boom monitored

Do not assume loading ALL File confirms the adapter's physical switches.

22.14 Dedicated FX6 Settings Card

The project recommends a dedicated settings card.

Label:

FX6 SETTINGS — DO NOT FORMAT

The settings card should be separate from production recording cards whenever practical.

Purpose:

- store ALL Files,
- store User Files,
- store Scene Files,
- store LUT import files,
- preserve tested configurations,
- prevent accidental formatting during production.

Do not use the settings card as a routine production recording card.

A settings card is not valuable if it gets formatted on set.

22.15 Why not to rely on production recording cards

Production cards are used, copied, verified, formatted, and reused. They are not safe as the sole storage location for critical FX6 settings and LUTs.

Risks of using production cards for settings:

Risk	Result
Card formatted after offload settings lost	
Card filled with footage	settings buried/confusing

Risk	Result
Card handed to editor	setup files separated
Card reused	LUTs/settings overwritten
Emergency format	settings destroyed

Use production cards for footage. Use a dedicated settings card for settings.

22.16 Recommended card label: FX6 SETTINGS — DO NOT FORMAT

The card should be physically labeled.

Recommended label:

FX6 SETTINGS — DO NOT FORMAT

If small label space is limited:

FX6 SETTINGS
DO NOT FORMAT

Also consider a card case label:

Sony FX6 Settings / LUT / ALL File Card
Do Not Use For Footage
Do Not Format

The label matters because on a shoot, cards can be confused quickly.

22.17 Computer/NAS/USB duplicate backup

Do not rely only on the physical settings card.

Back up settings to:

- PC folder,
- NAS if available,
- USB drive,
- project archive,
- external backup drive.

Suggested computer folder:

FX6_SETTINGS_BACKUP/
2026-05-15_CINE_EI_MUTED/

ALL_FILE/
USER_FILE/
SCENE_FILE/
LUTS/
NOTES/

Include a simple notes file:

README_FX6_SETTINGS.txt

The notes should describe:

- date saved,
- camera mode,
- audio workflow,
- LUT monitoring behavior,
- Internal Rec MLUT state,
- RØDE baseline,
- any known physical switch requirements.

22.18 Settings-card checklist

Before considering the settings-card system complete, confirm:

Item	Complete?
Dedicated settings card labeled	Yes
ALL File saved to Media(B)	Yes
User File saved if desired	Yes
Scene File saved if desired	Yes
LUT files copied to correct folder	Yes
LUTs imported/tested	Yes
Computer backup made	Yes
USB/NAS backup made	Yes
README/notes created	Yes
Production cards kept separate	Yes
Physical-switch checklist printed or saved	Yes

Final settings-file rule:

Save camera setup with ALL File, preserve operator setup with User File, preserve look support with Scene File/LUTs, and still verify every physical/external item by checklist.

PART V — MUTED-COLOR SHOOTING METHOD, LIGHTING, LENSES, MOVEMENT, AND DESIGN

Chapter 23. Pro Tips for Netflix-Type Muted Color

23.1 Do not underexpose for mood

The most important muted-color rule is:

Do not underexpose S-Log3 to create mood.

Underexposure may look “dark” on the monitor, but it often produces:

- muddy shadows,
- noisy blacks,
- weak skin,
- color that breaks during grading,
- actor eyes disappearing,
- a cheap-looking image rather than cinematic mood.

Mood should come from:

- lighting ratio,
- negative fill,
- controlled background,
- practical-light motivation,
- color palette,
- lens choice,
- composition,
- and final grade.

A cleanly exposed image can still feel dark if the scene is shaped correctly.

Correct method:

Expose face cleanly

↓

Let shadow side fall with control

↓

Use negative fill

↓
Control background brightness
↓
Grade restrained

Wrong method:

Lower exposure until screen looks dark
↓
Record noisy/muddy S-Log3
↓
Try to rescue in post

23.2 Use Cine EI like a negative workflow

Cine EI should be treated like a digital negative workflow. The goal is to record strong image information that can later be shaped in post.

This means:

- record clean S-Gamut3.Cine/S-Log3,
- monitor with a LUT,
- do not bake the LUT unless deliberately intended,
- expose with waveform/zebras,
- preserve skin,
- protect important highlights,
- give the grade room to work.

Think of the camera file as the negative and the LUT as a viewing print. The viewing print helps on set, but the negative must remain strong.

23.3 Record clean log, monitor with LUT

The recommended workflow is:

Function	Setting
Internal recording	S-Gamut3.Cine/S-Log3
Internal Rec MLUT	Off
VF/Proxy/Stream MLUT	On if useful
SDI/HDMI MLUT	On for external monitor
External monitor LUT	Off if FX6 sends MLUT

This gives the operator a normal-looking preview while preserving clean log.

The field statement is:

“Recording log. Monitoring LUT.”

If the operator is unsure whether the LUT is being baked into the file, stop and verify before recording important work.

23.4 Use s709 as safe monitor look

s709 is a safe primary monitoring choice for this project because it is restrained and useful for judging S-Log3 footage without an overly aggressive look.

Use s709 for:

- actor reels,
- interviews,
- feature-style dialogue,
- skin judgment,
- muted-color preview.

Do not assume the s709 monitor image is the finished grade. It is a controlled viewing aid.

23.5 Lock white balance

White balance must be locked for controlled work.

Use:

- A for main setup,
- B for alternate setup,
- Preset for fixed fallback.

Avoid ATW for actor reels and feature scenes because it may drift during a take. Drifting white balance makes shots harder to match and can damage skin consistency.

Before rolling:

“ATW off. WB locked.”

23.6 Let ND protect aperture

Aperture is chosen for depth, focus, and emotional feel. ND controls brightness.

Do not stop down from f/4 to f/11 merely because the exterior is bright if f/4 is the desired look. Use Variable ND.

Exterior rule:

Choose aperture first. Dial ND second.

Interior rule:

Start ND Clear. Add ND only if the scene is too bright.

23.7 Keep shutter boring and correct

For normal cinematic motion, keep shutter at 180° or equivalent.

Frame Rate	Shutter
24p	1/48 or 180°
30p	1/60 or 180°
60p	1/120 or 180°

Do not use shutter as a casual exposure control.

Change shutter only for:

- flicker,
- stylized motion,
- action sharpness,
- deliberate creative effect.

23.8 Pick aperture for emotion and focus reliability

Aperture affects emotional feel and focus safety.

Use:

Shot	Aperture
Solo close-up	f/2.8–f/4
Interview	around f/4
Two-person dialogue	f/4–f/5.6
Walk-and-talk	f/4–f/5.6
Action/wide	f/5.6–f/8 if needed

Very shallow focus can look cinematic but can ruin a performance if eyes go soft. Actor reels require sharp eyes more than extreme blur.

23.9 Use waveform and zebras

Use waveform and zebras because the monitor image can mislead.

The LUT may make the image look acceptable while the log exposure is weak. The waveform reveals actual levels.

Use waveform for:

- face,
- gray card,
- white reference,
- windows,
- practicals,
- skies,
- shadow level.

Use zebras for fast warning.

23.10 Protect skin tones

Skin is the priority in actor reels, interviews, and dialogue.

Muted color does not mean dead skin.

Protect skin by:

- exposing cleanly,
- using soft key light,
- controlling mixed color temperatures,
- avoiding extreme WB shifts,
- using restrained LUTs,
- grading carefully,
- not crushing shadows into the face.

The subject's face should remain alive even if the scene is restrained.

23.11 Control wardrobe and set color

The muted look begins in front of the lens.

Wardrobe and set design should use restrained colors:

- charcoal,
- navy,
- gray,
- olive,

- brown,
- cream,
- muted burgundy,
- faded denim,
- earth tones,
- aged wood,
- dark metal.

Avoid unless intentional:

- neon colors,
- bright red,
- saturated royal blue,
- busy patterns,
- shiny plastic,
- loud logos,
- pure white shirts in high contrast,
- strong green walls near skin.

A loud red shirt cannot be fully fixed by a LUT. Control color before shooting.

23.12 Use negative fill

Negative fill means using darkness or black material to remove unwanted fill light from one side of the subject.

It helps create:

- facial shape,
- contrast,
- mood,
- depth,
- cinematic restraint.

Examples:

- black cloth,
- black foamcore,
- flag,
- unlit wall,
- dark curtain,
- subject positioned away from white walls.

Negative fill is often more effective than adding another light.

23.13 Do not overlight the room

The muted cinematic look is not flat brightness. Avoid lighting everything equally.

Bad approach:

Bright room
Flat face
Bright background
No contrast

Better approach:

Soft key on face
Controlled shadow side
Background darker or shaped
Practical motivated

The scene should have controlled contrast. The face should be readable, but the room does not need to be evenly lit.

23.14 Use practical lights carefully

Practical lights can make a scene feel cinematic, but they can also cause problems.

Risks:

- blown lamps,
- ugly color temperature,
- mixed lighting,
- distracting background brightness,
- skin contamination,
- flicker,
- cheap-looking over-bright bulbs.

Use practicals as motivation, not necessarily as the only light.

Practical-light method:

1. Place practical where it motivates light.
2. Dim or change bulb if too bright.
3. Add hidden soft light for face.
4. Control spill.
5. Check waveform for lamp clipping.
6. Check skin color.

23.15 Control windows

Windows can dominate exposure.

Window problems:

- blown highlights,
- backlit faces,
- inconsistent cloud/sun changes,
- mixed color temperature,
- reflections,
- distracting bright rectangles.

Options:

Problem	Correction
Window too bright	curtain, flag, reframe, reduce exposure if face allows
Subject backlit	add fill/key or rotate setup
Changing sunlight	move to shade or control with diffusion
Window color too cool	white balance for face, not window
Background too bright	darken room side or reframe

For interviews, avoid placing a bright window directly behind the subject unless intentionally controlled.

23.16 Focus on the near eye

For close-ups, focus on the near eye.

This applies to:

- actor reels,
- dramatic close-ups,
- interviews,
- long-lens portraits,
- shallow depth-of-field shots.

If the near eye is soft, the shot often feels wrong, even if another part of the face is sharp.

Use Focus Magnifier.

23.17 Use deeper focus for two-person scenes

Two-person scenes need enough depth of field for both people if both are meant to be readable.

Use:

f/4–f/5.6

when both subjects need to be acceptably sharp.

If using f/2.8 or wider, decide intentionally who is the focus priority. Do not accidentally make one actor soft.

23.18 Shoot coverage

Do not rely on zooming mid-take to create close-ups later.

Shoot coverage:

- wide/master,
- medium,
- over-the-shoulder,
- close-up,
- reaction,
- insert/detail,
- movement or push-in if needed.

Actor reels especially benefit from clean close-ups and reaction shots because performance is the product.

23.19 Do not casually zoom while recording

Zooming while recording is not forbidden, but casual zooming usually looks amateur.

Do not zoom because:

- the framing was not planned,
- the actor's emotion was missed,
- the camera is too far away,
- or the operator suddenly wants a close-up.

Zoom while recording only when:

- the zoom is slow,
- motivated,
- smooth,
- rehearsed,

- emotionally justified,
- and technically checked for focus/exposure.

23.20 Push-ins beat zoom-ins

A physical push-in usually feels more cinematic than a zoom-in because the camera changes spatial relationship to the subject.

Use push-ins for:

- realization,
- confession,
- emotional pressure,
- discovery,
- fear,
- internal shift.

Use a zoom-in for psychological or observational effect only when that is the intended grammar.

23.21 Actor reel priority: performance clarity

For actor reels, the image should make the actor look professional without hiding performance.

Actor reel priorities:

1. sharp eyes,
2. readable face,
3. clean dialogue,
4. controlled background,
5. flattering but honest light,
6. no distracting color,
7. no over-stylized darkness,
8. performance-first framing.

A reel fails if the viewer cannot clearly see and hear the actor.

23.22 Feature priority: visual grammar

Feature scenes require consistent visual grammar.

This means:

- light direction matches,
- color palette holds,
- coverage cuts together,

- exposure remains consistent,
- lens choices feel intentional,
- movement has meaning,
- close-ups match scene mood,
- sound perspective is controlled.

Feature-style work is less about one beautiful shot and more about shots that cut together.

23.23 Documentary priority: reality first

Documentary work should look credible. It can be cinematic, but not fake.

Documentary priorities:

- clean audio,
- true subject presence,
- readable face,
- controlled but believable lighting,
- fast setup,
- accurate file management,
- room tone,
- backup audio,
- reliable focus.

A documentary interview can be restrained and attractive without looking staged beyond credibility.

23.24 Audio is half the image

Bad audio makes good images feel amateur.

For this project, audio discipline includes:

- RØDE receiver gain at correct setting,
- FX6 inputs set to MIC,
- no phantom power to RØDE,
- CH1/CH2 routing verified,
- headphones used,
- room noise checked,
- test recording reviewed,
- split tracks confirmed,
- boom used when appropriate.

The viewer may forgive a slightly imperfect image. They often will not forgive bad dialogue.

23.25 Use the boom as safety and tone tool

A boom mic can improve production sound because it captures a more natural voice perspective than lavs alone.

Boom benefits:

- natural dialogue tone,
- backup if lav rubs,
- backup if transmitter fails,
- better scene perspective,
- useful blend with lavs,
- more professional post choices.

The professional setup is:

Channel	Source
CH1	RØDE TX1
CH2	RØDE TX2
CH3	Boom through XLR-K3M/K2M

If the adapter is unavailable, the lower-cost compromise is merged lavs plus boom.

23.26 Record room tone

Room tone should be recorded for each setup.

Record 20–30 seconds with:

- same room,
- same mic positions,
- same background condition,
- same HVAC state,
- everyone quiet.

Room tone helps smooth edits and repair dialogue transitions.

23.27 Build a pre-roll ritual

A pre-roll ritual prevents mistakes.

Before rolling:

1. check frame rate,

2. check shutter,
3. check aperture,
4. check ND,
5. check white balance,
6. check LUT monitoring,
7. check Internal Rec MLUT Off,
8. check focus,
9. check audio routing,
10. check RØDE mode,
11. check headphones,
12. slate,
13. record test if needed.

A repeatable ritual matters more than memory.

23.28 Protect continuity

Continuity includes more than wardrobe and props. Technical continuity also matters.

Track:

- white balance,
- Base ISO,
- EI,
- ND,
- aperture,
- lens/focal length,
- LUT,
- audio routing,
- mic placement,
- lighting layout,
- subject position.

If a setting changes, log it.

23.29 Keep a dedicated FX6 Settings Card

Use a dedicated settings card labeled:

FX6 SETTINGS — DO NOT FORMAT

It should store:

- ALL Files,
- User Files,

- Scene Files,
- LUT files,
- notes.

Do not rely on production recording cards for settings preservation.

23.30 Keep only a few LUTs on the camera

Too many LUTs create field confusion.

Keep:

- s709,
- 709(800%),
- Sony official technical LUTs,
- one tested project preview LUT if approved.

Remove random LUTs that are not part of the workflow.

23.31 Shoot a 10-second technical test

Before important work, shoot a short test that includes:

- normal speech,
- loud speech if relevant,
- subject face,
- movement,
- silence for room noise,
- bright background,
- focus target.

Review for:

- exposure,
- focus,
- audio,
- room noise,
- LUT/monitor behavior,
- file recording.

A short test can save a full scene.

23.32 Do not over-grade

Muted does not mean crushed, gray, or lifeless.

Avoid:

- crushing blacks too far,
- removing all color,
- making skin gray,
- forcing teal/orange,
- making every shot look the same regardless of scene,
- overusing contrast,
- destroying eye detail.

The grade should finish what was captured, not rescue what was neglected.

23.33 Actor reel grading versus feature grading

Actor reel grading should usually be cleaner and less stylized than feature grading.

Actor reel:

- face readable,
- skin natural,
- performance visible,
- subtle mood.

Feature:

- can carry stronger style,
- may use deeper contrast,
- can support narrative world,
- still must preserve skin and continuity.

Do not grade an actor reel so dark that casting cannot see the actor's face.

23.34 Background must support the face

The background should support the subject, not compete.

Control:

- brightness,
- color,
- clutter,
- logos,
- white objects,
- saturated objects,
- distracting lines,

- moving elements,
- practical lights.

A muted background helps the face carry the scene.

23.35 Use longer lenses to simplify chaos

Longer lenses can simplify backgrounds by narrowing the field of view and compressing space.

Use longer lenses for:

- exterior actor close-ups,
- interviews with busy backgrounds,
- emotional isolation,
- separating subject from environment.

But longer lenses increase focus sensitivity. Recheck focus.

23.36 Outside, choose shade before fighting sun

Open shade often produces better faces than direct sun.

Exterior priority:

1. find good light,
2. place subject well,
3. use ND,
4. control background,
5. protect audio from wind.

Do not fight terrible overhead sun if a better shaded angle exists.

23.37 Inside, control mixed color temperatures

Mixed lighting can ruin skin.

Common problems:

- daylight window plus warm lamp,
- overhead LED plus tungsten practical,
- greenish room light,
- computer screen spill,
- TV color spill.

Fix by:

- turning off bad sources,
- choosing one dominant key,
- gelling or matching lights,
- controlling practicals,
- white balancing for the face.

23.38 Shoot gray card and color reference

When practical, shoot a gray card or color reference at the start of a setup.

Use:

- same light as subject,
- same exposure setup,
- same white balance,
- same LUT monitoring path.

This helps post-production match shots and confirm color.

23.39 File discipline

Every good shoot can be damaged by bad media discipline.

File discipline includes:

- reel naming,
- card labeling,
- full-card copy,
- second backup,
- unique clip IDs,
- logs,
- slates,
- no random renaming,
- no flat dumping of clips,
- no arbitrary splitting of originals.

The file-management rule is:

A clip is not truly safe until it is copied, verified, backed up, and identifiable.

23.40 Final master rule

The final master rule for this entire muted Cine EI system is:

Build the image and sound in layers.

The layers are:

1. camera mode,
2. recording format,
3. shutter,
4. aperture,
5. ND,
6. white balance,
7. exposure tools,
8. LUT monitoring,
9. focus,
10. lighting,
11. production design,
12. audio routing,
13. headphones,
14. slate,
15. log,
16. full-card backup,
17. post workflow,
18. final grade.

No single setting creates the final result. The system creates the result.

Chapter 24. Lighting Layouts for Actor Reels

24.1 Universal muted-color lighting rules

Actor reel lighting has one primary job:

Make the actor look professional and emotionally readable.

The muted cinematic look should support the actor, not hide the actor.

Universal actor reel lighting rules:

Rule	Meaning
Face must be readable	Do not bury performance in darkness
Eyes must be sharp and alive	Catchlight/eye detail matters
Background must be controlled	No loud distractions
Skin must remain natural	Muted does not mean gray
Light must be shaped	Avoid flat overhead lighting

Rule	Meaning
Audio must be clean	Performance includes voice
Style must serve casting	Do not over-stylize

The operator should avoid trying to make an actor reel look like a dark prestige-drama frame at the expense of clarity. Casting and viewers need to see the actor.

The best actor reel look is:

- cinematic,
- restrained,
- clean,
- performance-centered,
- technically reliable.

24.2 One-person dramatic close-up interior

24.2.1 Goal

The goal is to create a dramatic but readable close-up for one actor.

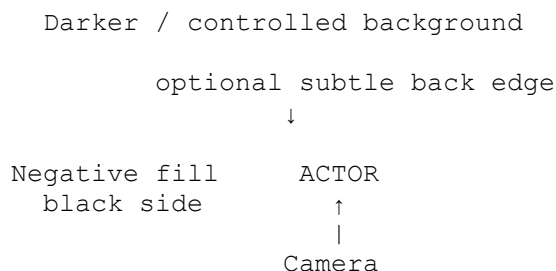
The shot should show:

- eyes,
- emotional expression,
- skin texture,
- controlled shadow,
- clean background,
- no distracting color,
- clean dialogue.

The scene can be moody, but the actor must not disappear.

24.2.2 Layout

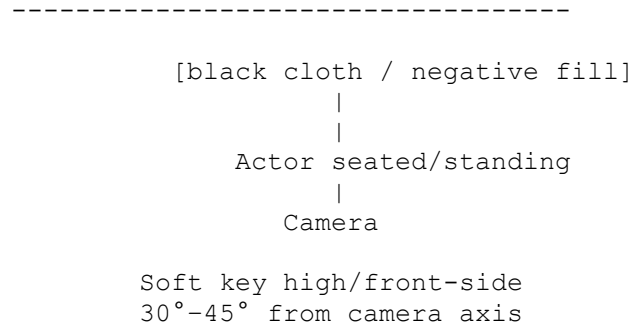
Basic one-person muted close-up layout:



Soft key 30°–45°

Alternate room diagram:

Wall / background kept darker



The key should be soft but directional. Negative fill should create shape. The background should not be brighter than the face unless deliberately motivated.

24.2.3 Setup

Step-by-step setup:

1. Place actor away from the wall.
2. Choose a clean background.
3. Remove bright objects, logos, white clutter, and saturated colors.
4. Place soft key 30–45 degrees to one side of camera.
5. Raise key slightly above eye level.
6. Aim key toward the face, not the entire room.
7. Add negative fill on the opposite side if the room is too bright.
8. Add subtle background separation only if needed.
9. Set white balance manually.
10. Set exposure with waveform.
11. Focus on near eye.
12. Check audio with headphones.
13. Record a 10-second test.

Lighting notes:

Issue	Correction
Face too flat	Add negative fill or move key off-axis
Shadow side too dark	Add gentle fill or move negative fill away
Background too bright	Turn off lights, flag, reframe
Eyes dead	adjust key height/angle for catchlight
Skin too gray	check WB/LUT/exposure

Issue	Correction
Too theatrical	soften key or reduce contrast

24.2.4 FX6 starting point

Recommended starting point:

Control	Starting Setting
Mode	Cine EI
Color/gamma	S-Gamut3.Cine/S-Log3
Base ISO	800 if lit
Frame rate	23.98p / 24p
Shutter	1/48 or 180°
Aperture	f/2.8–f/4
ND	Clear
WB	Custom A
LUT monitoring	s709 / selected monitoring LUT
Internal Rec MLUT	Off
Focus	near eye
Audio	RØDE baseline or split if needed

If the room is genuinely low light and cannot be lit, Base ISO 12800 may be considered, but the actor’s face must still be exposed cleanly.

24.2.5 Pro tip

For an actor reel, do not make the actor fight the look. The audience should see the performance immediately.

Pro tip:

Let the shadow create mood, but let the eyes carry the scene.

If the face looks “cinematic” but the performance is unreadable, the lighting has failed.

24.3 Two-person dialogue scene interior

24.3.1 Goal

The goal is to light two actors so the scene cuts cleanly between angles and both performances remain readable.

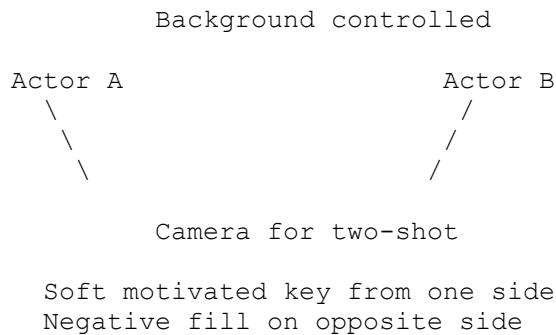
A two-person actor reel scene usually needs:

- a usable two-shot,
- over-the-shoulder angles,
- close-ups,
- reaction shots,
- clean dialogue,
- consistent light direction,
- manageable focus.

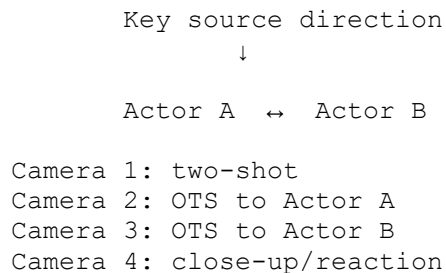
The muted look should remain consistent across coverage.

24.3.2 Layout

Basic two-person dialogue layout:



Coverage layout:



The light should appear motivated and consistent. Do not completely relight every angle in a way that breaks continuity.

24.3.3 Setup

Step-by-step setup:

1. Block actor positions first.
2. Keep both actors near the same focus plane if both must be sharp.

3. Choose a motivated light direction.
4. Place soft key to create shape on both faces.
5. Use negative fill to prevent flatness.
6. Control background brightness.
7. Avoid bright clutter between the actors.
8. Set aperture around $f/4$ – $f/5.6$ for two-person safety.
9. Set RØDE split audio if both actors wear transmitters.
10. Test TX1/CH1 and TX2/CH2 separately.
11. Shoot two-shot.
12. Shoot each actor's close-up with matching light direction.
13. Record room tone.

Focus note:

For two-person scenes, $f/2.8$ may be too shallow unless the blocking is controlled. $f/4$ – $f/5.6$ is often safer.

24.3.4 Coverage pattern

Recommended coverage:

Shot	Purpose
Master/two-shot	geography and relationship
Medium Actor A	performance
Medium Actor B	performance
OTS Actor A	dialogue connection
OTS Actor B	dialogue connection
Close-up Actor A	emotional beat
Close-up Actor B	emotional beat
Reaction	listening/thought
Insert/detail	object, hand, phone, evidence, etc.

Actor reels often need strong close-ups and reactions. Do not shoot only wide or medium shots.

24.3.5 Pro tip

Pro tip:

Match the light direction more than the exact light position.

When moving for reverse coverage, the lighting may need adjustment, but the scene should still feel like the same motivated environment.

If Actor A is lit softly from camera left in one angle, Actor B's reverse should not suddenly look like a different room unless intended.

24.4 Moody practical-light interior

24.4.1 Goal

The goal is to create an interior scene that appears motivated by lamps, windows, TV, or other practical sources while still keeping the actor readable and clean.

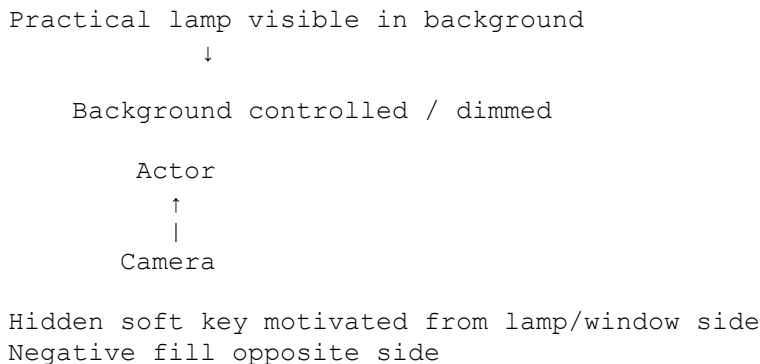
This is common for muted cinematic scenes:

- living room drama,
- late-night confession,
- desk scene,
- bedroom scene,
- emotional phone call,
- documentary-like interior portrait.

The danger is relying entirely on practicals and ending up with dark, noisy, ugly footage.

24.4.2 Layout

Basic practical-light motivated layout:



The practical should motivate the light. It does not have to provide all the light.

24.4.3 Setup

Procedure:

1. Choose practical source: lamp, window, TV, hallway, desk light.
2. Place practical where it motivates the scene.

3. Dim practical or use lower-output bulb if it clips.
4. Add hidden soft key from the same general direction.
5. Use negative fill on the opposite side.
6. Keep face exposure clean.
7. Control background brightness.
8. Set manual white balance for the face.
9. Check practical on waveform.
10. Avoid mixed ugly color unless intentional.

Common practical problems:

Problem	Fix
Lamp clips badly	dim, change bulb, angle shade
Face too dark	add hidden soft key
Skin too orange	correct WB or change bulb
Mixed green overhead	turn off overhead
Background too busy	remove clutter/reframe
Room too flat	add negative fill

24.4.4 Pro tip

Pro tip:

A practical can be the reason for the light without being the only light.

The audience accepts the practical as motivation. The hidden soft key makes the actor look professional.

24.5 Exterior emotional close-up

24.5.1 Best exterior layout

The best exterior emotional close-up usually uses open shade, backlight, or soft directional natural light.

Avoid direct overhead sun on the actor's face.

Preferred exterior conditions:

Condition	Why It Helps
Open shade	soft face, controlled contrast
Backlight	separates subject, protects face from harsh sun

Condition	Why It Helps
Overcast	soft but may need contrast/negative fill
Golden hour	flattering, controlled if not too low/bright
Tree shade	useful if not dappled
Building shade	stable and controllable

Basic exterior layout:

Sun behind or to side of subject
↓
Actor in open shade/backlight
Camera with longer lens
Negative fill or dark side if needed

24.5.2 Setup

Procedure:

1. Find open shade or backlight.
2. Avoid dappled light on face.
3. Choose clean background.
4. Use longer focal length if possible.
5. Set Base ISO 800.
6. Set shutter 180°.
7. Choose aperture f/2.8–f/4 if focus allows.
8. Turn Variable ND On.
9. Set white balance/custom daylight.
10. Focus on near eye.
11. Use wind protection for audio.
12. Record test.

Exterior issues:

Problem	Correction
Harsh sun on face	move to shade/backlight
Background too bright	change angle/longer lens
Wind noise	add wind protection
Eye sockets dark	adjust angle or add bounce
Dappled light	move subject
Focus hard in sun	use magnifier/monitor shade

24.5.3 Pro tip

Pro tip:

Outside, move the actor before fighting the sun.

A better position can solve more problems than adding gear.

24.6 Actor reel lighting priorities

24.6.1 Face readability

The actor's face must be readable. The reel exists to show performance.

If the face is too dark, too contrasty, or too stylized, the reel becomes less useful.

Face readability includes:

- eyes visible,
- mouth visible,
- emotion visible,
- skin not gray,
- expression clear.

24.6.2 Eye detail

Eyes carry performance. Use focus and light to preserve them.

Check:

- near eye sharp,
- catchlight present if appropriate,
- no heavy shadow hiding both eyes,
- glasses glare controlled,
- no focus hunting.

24.6.3 Controlled background

A strong actor reel background is supportive, not distracting.

Control:

- bright objects,
- saturated colors,

- clutter,
- logos,
- windows,
- white walls,
- busy shelves,
- TV screens,
- reflective surfaces.

24.6.4 Performance over style

The final actor reel rule is:

Performance over style.

A beautiful frame that hides the actor is not a successful reel shot. The muted look should help the actor look professional, not compete with the actor.

Chapter 25. Lighting Layouts for Feature Scenes

25.1 Interior naturalistic dialogue scene

25.1.1 Goal

The goal of a feature-style interior dialogue scene is to create believable motivated light that supports coverage and continuity.

Unlike a single actor reel close-up, a feature scene must cut between multiple angles. The lighting must therefore be repeatable and consistent.

The scene should have:

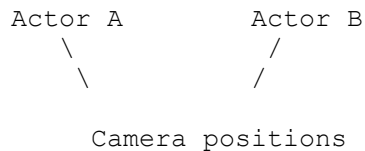
- motivated key direction,
- readable faces,
- controlled contrast,
- matched coverage,
- stable white balance,
- clean dialogue,
- background depth,
- restrained color palette.

The goal is not one isolated pretty frame. The goal is a scene that cuts.

25.1.2 Layout

Basic naturalistic interior layout:

Window / lamp / motivated source side
↓



Negative fill on shadow side
Background controlled/dimmed

Another version:

Soft key motivated by window/lamp

Actor A Actor B

Camera 1: two-shot
Camera 2: OTS A
Camera 3: OTS B
Camera 4: close-ups

Negative fill opposite key
Background practical dimmed

The key should feel as if it comes from a real source: window, lamp, doorway, hallway, practical, or motivated offscreen source.

25.1.3 Setup

Procedure:

1. Decide the motivated light source.
2. Block actors before final lighting.
3. Set camera side and coverage plan.
4. Place soft key from motivated direction.
5. Add negative fill to create shape.
6. Control background lights and practicals.
7. Remove bright clutter.
8. Set manual white balance.
9. Set exposure with waveform.
10. Choose aperture for coverage: often f/4–f/5.6 for two-person scenes.

11. Record room tone.
12. Maintain lighting direction across reverses.

Coverage setup:

Shot	Lighting Concern
Two-shot	both readable
OTS Actor A	Actor A face matches direction
OTS Actor B	Actor B face matches direction
CU Actor A	preserve same motivation
CU Actor B	preserve same motivation
Reaction	do not relight into different scene

25.1.4 Pro tip

Pro tip:

Continuity is more important than making every angle independently dramatic.

If every angle looks like a different lighting setup, the scene will not feel professional.

25.2 Dark dramatic close-up

25.2.1 Goal

A dark dramatic close-up should feel controlled, not underexposed.

The goal is:

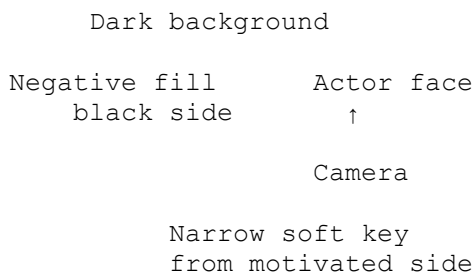
- clean face exposure,
- shaped shadow,
- eye detail,
- controlled highlight,
- dark background,
- emotional intensity,
- no muddy S-Log3.

The actor can be in a dark environment, but the recorded image should still contain usable information.

25.2.2 Layout

Basic dark close-up layout:

FX6 CINE EI Muted-Color Shooting System Handbook V7.0



The key can be narrow, soft, and controlled. The shadow side can fall off, but not into unusable mud if the face must be read.

25.2.3 Setup

Procedure:

1. Darken or control the background first.
2. Place actor away from wall.
3. Add soft key from one side.
4. Add negative fill to deepen shadow side.
5. Use small edge/back light only if separation is needed.
6. Set WB manually.
7. Expose face cleanly with waveform.
8. Protect highlights.
9. Check eyes.
10. Record test.

Dark-scene mistakes:

Mistake	Result
Underexpose face	noisy/muddy skin
No eye light	dead performance
Too much fill	flat/no mood
Practical too bright	attention pulled away
Background too black	subject may disappear
Over-grade	crushed unusable image

25.2.4 Pro tip

Pro tip:

Make the room dark, not the file weak.

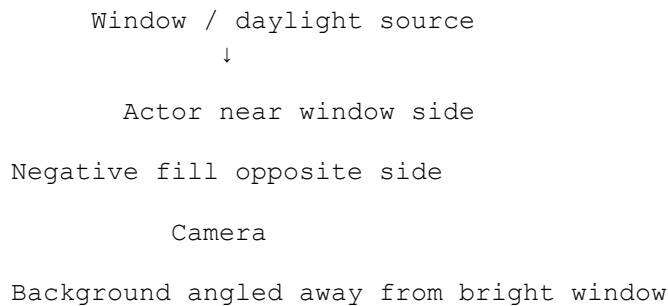
A cleanly exposed face against a controlled dark environment grades better than an underexposed face in a bright uncontrolled room.

25.3 Window-motivated daylight interior

25.3.1 Layout

Window-motivated daylight interiors can look high-end if controlled.

Basic layout:



Avoid placing the actor directly in front of a bright window unless that is the intended look and exposure is controlled.

25.3.2 Setup

Procedure:

1. Choose whether window is key, background, or motivation.
2. Avoid direct harsh sunlight on the face unless diffused.
3. Place actor at an angle to the window.
4. Use negative fill on opposite side if face is too flat.
5. Control bright window if it dominates.
6. Set white balance for the face.
7. Use waveform to check face and window.
8. Use ND if the scene is too bright at chosen aperture.
9. Shoot coverage before daylight changes too much.

Window-control tools:

- curtains,
- blinds,
- diffusion,
- flags,
- angle change,
- subject movement,

- exposure compromise,
- background choice.

25.3.3 Pro tip

Pro tip:

Window light is cinematic only when the window is controlled.

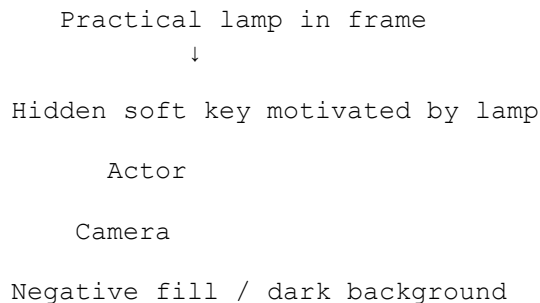
An uncontrolled window can become a blown white rectangle that steals attention from the actors.

25.4 Night interior with practicals

25.4.1 Layout

Night interiors often use practical lamps as visible motivation.

Basic layout:



The practical should motivate the light but does not have to be the only source.

25.4.2 Setup

Procedure:

1. Choose the practical source.
2. Dim or replace bulb if too bright.
3. Add hidden soft key from same direction.
4. Keep face readable.
5. Control spill on walls.
6. Avoid mixed ugly overheads.
7. Set WB intentionally.
8. Check practical clipping.
9. Use Base ISO 800 if lit enough; 12800 only if genuinely needed.

10. Record test.

Night interior audio note:

Rooms at night may seem quiet but can reveal refrigerators, HVAC, distant TV, and traffic. Use headphones and record room tone.

25.4.3 Pro tip

Pro tip:

A lamp in the frame can motivate the scene, but a hidden soft key often makes the actor look professional.

Do not rely on a bare lamp to do all the work unless the harshness is intentional.

25.5 Exterior day dialogue

25.5.1 Sun strategy

Exterior day dialogue should usually avoid direct harsh sun on faces.

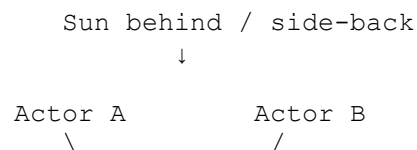
Preferred sun strategies:

Sun Position	Use
Backlight	often best for faces
Side-backlight	creates shape
Open shade	safest/softest
Overcast	soft but may need contrast
Direct front sun	usually harsh
Overhead sun	often worst

The first lighting decision outdoors is often where to place the actors, not what camera setting to change.

25.5.2 Layout

Exterior dialogue layout:



Camera

Background chosen for tone
Variable ND controls exposure
Wind protection on audio

Use background distance and longer focal length if possible to simplify the image.

25.5.3 Procedure

1. Find open shade or backlight.
2. Choose clean background.
3. Keep both actors in similar light.
4. Set Base ISO 800.
5. Set shutter 180°.
6. Choose f/4–f/5.6 for two-person focus.
7. Turn Variable ND On.
8. Set WB for daylight/shade condition.
9. Use waveform/zebras.
10. Test audio for wind.
11. Shoot master and coverage before light changes too much.

Exterior continuity warning:

Sun movement can change the scene quickly. Work efficiently and log changes.

25.5.4 Pro tip

Pro tip:

The best exterior lighting tool is often a better location angle.

Move the actors, camera, or background before fighting bad sun.

25.6 Repeatable visual grammar

Feature scenes need repeatable visual grammar. This means the project should have consistent rules for how scenes look.

Examples:

Scene Type	Visual Rule
Interior dialogue	motivated soft side light
Emotional close-up	controlled shadow, clean eyes

Scene Type	Visual Rule
Exterior dialogue	open shade/backlight
Documentary interview	clean face, credible background
Night practical	practical motivates hidden soft key

Repeatable grammar helps the viewer feel the film is intentional.

Without grammar, shots may feel random:

- one shot flat,
- one shot overly dark,
- one shot over-saturated,
- one shot underexposed,
- one shot too sharp/deep,
- one shot noisy.

25.7 Motivated light direction

Motivated light appears to come from a believable source.

Sources:

- window,
- lamp,
- TV,
- doorway,
- hallway,
- streetlight,
- car headlights,
- computer screen,
- kitchen practical,
- exterior sun.

The light does not have to literally come only from that source. It must feel like it could.

Example:

A lamp appears in the background. A hidden soft LED from the same side lights the actor. The audience accepts the lamp as motivation.

Motivated light keeps scenes believable.

25.8 Matching coverage between angles

When shooting coverage, match:

- light direction,
- contrast,
- exposure,
- white balance,
- aperture/depth,
- background level,
- audio perspective,
- eyeline,
- focal length logic.

Coverage matching checklist:

Item	Check
WB	same memory/preset unless changed deliberately
Key direction	consistent motivation
Aperture	consistent depth unless planned
Exposure	face levels match
Background	not suddenly brighter/darker
Audio	lav/boom channels consistent
Lens	not wildly different without reason
Focus	eyes sharp

Matching does not mean every shot is identical. It means the shots belong to the same scene.

25.9 Consistent contrast and palette

Feature scenes depend on consistent contrast and palette.

Control:

- wardrobe colors,
- wall colors,
- props,
- practical lamps,
- background saturation,
- light color temperature,
- LUT monitoring,
- final grade direction.

A muted feature scene should not have one angle with a bright red object dominating the frame unless that object is intentional.

Contrast consistency also matters. If Actor A's close-up is soft and low contrast while Actor B's close-up is harsh and dark, the scene may feel mismatched.

Final feature lighting rule:

Design the scene, not just the shot.

Chapter 26. Lighting Layouts for Documentaries

26.1 Sit-down interview interior

26.1.1 Goal

The goal of a documentary sit-down interview is to make the subject look credible, natural, readable, and professionally recorded without making the setup feel fake or over-staged.

A documentary interview is not the same as a dramatic actor reel close-up. It can still be cinematic, but the viewer must believe the person and the setting. The lighting should support truthfulness, not call attention to itself.

The interview image should have:

- clean face,
- readable eyes,
- natural skin,
- controlled background,
- believable light direction,
- no ugly mixed-color contamination,
- no distracting clutter,
- clean audio,
- enough depth to show environment without letting the background take over.

The primary documentary rule is:

Make the subject look real, trustworthy, and clear.

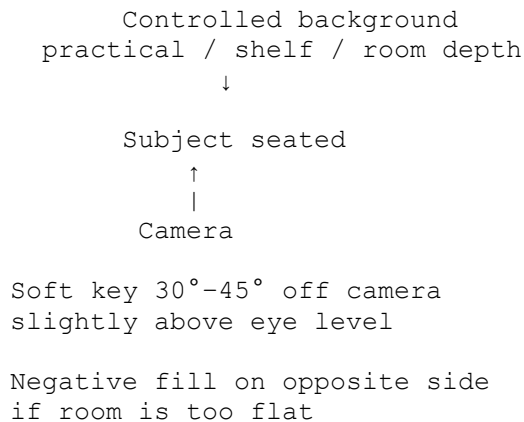
The muted-color approach for documentary should be restrained. It should not make the subject look artificially dark, gray, overly stylized, or theatrical. A documentary subject should not look like they are trapped in a music video unless that is the project's deliberate style.

The best documentary interview look is:

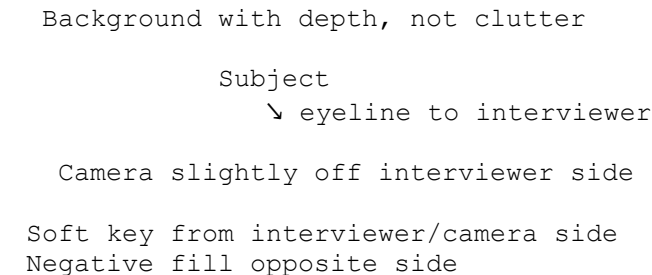
Element	Target
Face	clean, dimensional, readable
Eyes	sharp, natural, alive
Background	relevant but controlled
Color	restrained but believable
Contrast	shaped but not theatrical
Audio	clean, monitored, backed up if possible
Framing	stable, intentional, not distracting
Lighting	motivated, soft, simple

26.1.2 Layout

Basic documentary sit-down interview layout:



Alternate layout with interviewer eyeline:



The subject usually should not stare directly into the lens unless the documentary style calls for direct address. A common interview setup places the interviewer slightly beside the camera so the subject's eyeline is just off lens.

Suggested setup:

Element	Position
Subject	4–8 feet from background if possible
Camera	eye-level or slightly below/above depending tone
Key light	30–45 degrees off camera
Negative fill	opposite key side if room is flat
Background practical	dimmed/controlled if used
Boom/lav	placed and tested before recording
Interviewer	near camera for natural eyeline

The subject should not be pressed against a blank wall if avoidable. Separation from the background gives depth and improves the image immediately.

26.1.3 Setup

Step-by-step documentary interview setup:

1. Choose the quietest practical location available.
2. Listen for HVAC, refrigerator hum, traffic, TV, appliances, and room echo before setting the camera.
3. Choose the background before placing the subject.
4. Remove distracting objects, labels, logos, bright clutter, and anything that pulls attention from the subject.
5. Seat or stand the subject far enough from the background to create depth.
6. Decide eyeline: direct-to-camera or interviewer-off-camera.
7. Place camera at a respectful height, usually near eye level.
8. Set lens/focal length to avoid distortion while preserving environment.
9. Place soft key light 30–45 degrees off camera.
10. Raise key slightly above subject eye level.
11. Use negative fill if the face looks too flat.
12. Add or control background practical only if it supports the scene.
13. Turn off bad overhead lighting if possible.
14. Set manual white balance.
15. Set Cine EI / Base ISO / EI deliberately.
16. Set shutter to 180° equivalent.
17. Choose aperture, usually around f/4 for a sit-down interview.
18. Use ND only if needed.
19. Confirm LUT monitoring.
20. Confirm Internal Rec MLUT Off.
21. Set audio routing.
22. Place lav properly.
23. Add boom if available.
24. Listen through MDR-7506 headphones.
25. Record room tone.
26. Record a 10-second technical test.

27. Play back before the actual interview if time permits.

Interview exposure targets:

Item	Goal
Face	clean and readable
Shadow side	shaped, not lost
Background	darker or controlled enough not to compete
Practical lamp	not clipping distractingly
Window	controlled or intentionally allowed
Skin	natural through monitoring LUT
Eyes	sharp and alive

Interview audio targets:

Item	Goal
Lav	clean, no rub
Boom	natural backup if used
Room	quiet enough
Levels	normal speech around -12 to -18 dB
Loud moments	below clipping
Headphones	no TV/HVAC/clothing problem

26.1.4 Pro tip

Pro tip:

In documentary interviews, move the subject and clean the room before adding more camera settings.

A better background, quieter room, and softer face light will do more for the interview than an exotic LUT.

A simple high-quality interview is:

- quiet room,
- clean background,
- soft side key,
- manual white balance,
- proper exposure,
- sharp eyes,
- clean lav/boom,

- full-card offload.

Do not make the subject look overproduced. The subject should look credible, not staged beyond belief.

26.2 Sit-down interview with window light

26.2.1 Layout

Window light can be excellent for documentary interviews if it is controlled. It can also destroy the image if the subject is placed poorly.

Best window interview layout:

Window / soft daylight

↓

Subject turned partly toward window

Camera across from subject, not shooting
straight into bright window if avoidable

Negative fill or dark side opposite window
Background angled away from direct window brightness

Avoid this:

Bright window directly behind subject

↓

Subject becomes dark

↓

Camera sees blown window

Better:

Window to side/front-side

↓

Subject face lit softly

Camera angled so window is not a blown
rectangle behind subject

Window light should usually be side/front-side, not directly behind the subject, unless the backlight is deliberately controlled and the face is filled.

26.2.2 Setup

Step-by-step window-light documentary setup:

1. Find the window with the softest usable light.
2. Avoid direct harsh sun on the subject's face unless diffused.
3. Place subject at an angle to the window.
4. Keep the window out of the background if it is too bright.
5. If the window must be in background, expose for the subject and decide whether the window can be allowed to blow.
6. Use curtains, blinds, diffusion, or angle changes to control brightness.
7. Use negative fill on the opposite side if the face looks too flat.
8. Turn off overhead lights that contaminate skin color.
9. Set manual white balance for the light falling on the face.
10. Use waveform to check face and window.
11. Use ND if the scene is too bright at the desired aperture.
12. Record a test.
13. Watch for changing daylight during a long interview.

Window interview concerns:

Problem	Correction
Window behind subject blows out	Move camera/subject or reframe
Subject face too dark	Turn subject toward window or add fill
Face too flat	Add negative fill
Direct sun creates harsh shadows	Use diffusion or move to indirect light
Clouds changing exposure	monitor waveform and adjust if needed
Mixed lamp/window color	turn off lamp or control color
Background too bright	change angle or reduce window visibility

Suggested camera baseline:

Control	Starting Point
Base ISO	800
Shutter	180°
Aperture	f/4
ND	Clear indoors unless window makes scene too bright
WB	Custom at subject face
LUT	monitor on, internal record off
Focus	near eye
Audio	lav and boom if available

26.2.3 Pro tip

Pro tip:

Do not white balance for the window; white balance for the face.

The subject is the interview. The window is only the light source or background element. If the face looks wrong, the interview looks wrong.

Window light can look expensive with minimal gear, but only if controlled. The best fix is often to rotate the subject or camera rather than add more equipment.

26.3 Run-and-gun interior / available light

26.3.1 Goal

Run-and-gun interior documentary work is about speed, reliability, and capturing the moment. The goal is not perfection. The goal is to make fast decisions that protect image, focus, and audio.

Available-light interiors are often messy:

- mixed color temperatures,
- dim corners,
- overhead lights,
- windows,
- TVs,
- reflective surfaces,
- cluttered backgrounds,
- room noise,
- unpredictable subjects.

The operator must make fast improvements.

The priority order is:

1. audio,
2. face light,
3. focus,
4. exposure,
5. background,
6. color consistency,
7. file/log discipline.

In documentary run-and-gun work, a technically perfect shot that misses the moment is a failure. But a captured moment with unusable audio is also a failure.

26.3.2 Procedure

Fast interior available-light procedure:

1. Listen first. Identify TV, HVAC, echo, refrigerator, traffic, and appliance noise.
2. Put headphones on early.
3. Place subject near the best existing light.
4. Turn off ugly overheads if possible.
5. Use window light or practical motivation.
6. Remove bright background distractions quickly.
7. Set Base ISO based on available light: 800 if enough, 12800 if genuinely needed.
8. Set shutter correctly.
9. Choose aperture for focus safety, often f/4 if possible.
10. Set white balance manually if time allows; use Preset only if faster and acceptable.
11. Check waveform quickly.
12. Confirm audio meter/headphones.
13. Record.
14. Log enough to identify the clip later.

Fast improvement checklist:

Problem	Fast Fix
Bad overhead light	turn it off if possible
Face too dark	move subject toward window/lamp
Background clutter	change angle
Room too echoey	move closer, use lav, choose softer room
Mixed light	choose one dominant source
Low light	open aperture/add light/consider 12800
Noise	stop TV/HVAC if possible
Focus risk	stop down or use Face/Eye AF

26.3.3 Quick layout

Available-light quick layout:

Window / lamp / best available source

↓

Subject turned toward light

Camera positioned to avoid clutter
and avoid bright window behind subject

Lav monitored with headphones

If the room is ugly, frame tighter. If the background is busy, use longer focal length. If light is bad, move the person before adjusting the camera.

Quick one-person documentary shot:

Step	Action
1	Move subject to best light
2	Put background behind them with depth
3	Set WB
4	Check audio
5	Focus
6	Roll

26.3.4 Pro tip

Pro tip:

In run-and-gun interiors, moving the subject three feet can solve more problems than changing five camera settings.

Move toward better light, quieter room, cleaner background, and less mixed color.

26.4 Exterior interview

26.4.1 Layout

Exterior interviews should prioritize face, sound, wind control, and background.

Best exterior interview layout:

Sun behind or side-back
↓
Subject in open shade
or backlit position

Camera with clean background

Lav with wind protection
Boom only if wind/crew support allows

Avoid:

- direct overhead sun,
- subject squinting,
- wind into mic,
- loud traffic behind subject,
- bright white walls,

- moving distractions,
- uncontrolled public background.

Exterior face strategy:

Light Condition	Action
Direct harsh sun	move to shade/backlight
Open shade	use as primary
Overcast	add contrast with negative fill if needed
Backlight	expose face, watch highlights
Golden hour	use carefully; changes fast

26.4.2 Setup

Exterior interview procedure:

1. Listen for traffic, wind, people, machinery, aircraft, water, birds, and background noise.
2. Choose the quietest workable location.
3. Choose background with depth and relevance.
4. Place subject in open shade or backlight.
5. Avoid direct sun in eyes.
6. Use wind protection on lav.
7. Use boom only if wind protection and operator support are adequate.
8. Set Base ISO 800.
9. Set shutter 180°.
10. Choose aperture f/4–f/5.6 for focus safety.
11. Turn Variable ND On.
12. Set WB for daylight/shade condition.
13. Use waveform/zebras.
14. Check face exposure.
15. Check background highlights.
16. Record test.
17. Monitor wind through headphones.
18. Record room tone/ambient tone if useful.

Exterior interview audio warning:

A lav without wind protection can be destroyed by breeze. Always listen before recording. Wind rumble may not be obvious without headphones.

26.4.3 Pro tip

Pro tip:

For exterior interviews, choose shade and quiet before choosing the lens.

A beautiful background is not worth unusable wind noise or a squinting subject in harsh sun.

26.5 Walk-and-talk exterior

26.5.1 Goal

The goal of a walk-and-talk exterior is to capture movement, conversation, and location energy while keeping exposure, focus, and audio usable.

Walk-and-talks are harder than locked interviews because:

- light changes as people move,
- focus distance changes,
- background changes,
- wind changes,
- footsteps and handling noise appear,
- framing must be maintained,
- audio must remain consistent.

The priority is reliability:

Priority	Requirement
Audio	lavs secured, wind managed
Focus	Face/Eye AF or safe aperture
Exposure	ND ready, possibly Auto ND
Route	stable light path
Framing	rehearsed camera movement
File/log	slate and note route/take

26.5.2 Layout

Walk-and-talk route layout:

```
Route chosen for consistent light

Start point → walking path → end point

Avoid sun/shade/sun/shade flicker
Avoid loud traffic if possible
Avoid background chaos

Camera moves backward/side/parallel
Lavs on subjects
```

Optional boom only with crew support

Better route:

Open shade path
consistent background
low wind
quiet enough for dialogue

Worse route:

direct sun → shade → direct sun
traffic noise
wind tunnel
busy background

26.5.3 Procedure

Walk-and-talk procedure:

1. Scout the route before recording.
2. Listen for traffic/wind at start, middle, end.
3. Decide whether the camera moves backward, sideways, or follows.
4. Check safety for operator movement.
5. Set Base ISO 800.
6. Set shutter 180°.
7. Choose aperture f/4–f/5.6 for focus safety.
8. Turn Variable ND On.
9. Consider Auto ND only if light changes are unavoidable.
10. Set WB for dominant light condition.
11. Use Face/Eye AF if tested and helpful.
12. Secure lavs against clothing rub.
13. Add wind protection.
14. Test TX1/TX2 if two people.
15. Rehearse walking speed.
16. Record a test segment.
17. Play back audio if time allows.
18. Roll actual take.
19. Log route and take notes.

26.5.4 Pro tip

Pro tip:

A walk-and-talk is won in the route choice.

A route with stable shade, low wind, and low traffic is more valuable than a dramatic but technically chaotic route.

26.6 Quick one-light field interview

26.6.1 Layout

A quick one-light field interview is useful when available light is weak, flat, ugly, or uncontrolled.

Basic layout:

Background with depth
Subject
Camera
Soft LED 30°–45° off camera
slightly above eye level
Negative fill if room is too flat

If the background is too bright, angle the subject/camera. If the room is too flat, add negative fill.

26.6.2 Gear

Minimal useful gear:

Gear	Purpose
Soft LED light	key light
Light stand	stable placement
Diffusion/softbox	soft face
Black cloth/foamcore	negative fill
RØDE lav	close dialogue
MDR-7506 headphones	audio monitoring
Gray/white card	white balance
FX6	Cine EI capture
Extra battery/card	reliability

Optional:

- boom mic,
- Sony XLR-K3M/K2M,

- small practical lamp,
- reflector,
- sandbag,
- extension cord.

26.6.3 Procedure

Quick one-light interview setup:

1. Choose quiet location.
2. Place subject away from wall.
3. Pick simple background.
4. Put soft LED 30–45 degrees off camera.
5. Raise light slightly above eye line.
6. Dim light until face is clean but not overlit.
7. Add negative fill if face is flat.
8. Set manual WB using gray/white card.
9. Set Base ISO 800 if light is sufficient.
10. Choose aperture around f/4.
11. Focus on near eye.
12. Set lav.
13. Listen with headphones.
14. Record test.
15. Roll.

One-light corrections:

Problem	Correction
Face too flat	move light farther side or add negative fill
Shadow too dark	move light closer to camera or reduce negative fill
Background too bright	reframe, turn off light, move subject
Light too harsh	diffuse or move light closer/larger
Glasses glare	raise/angle key
Skin shiny	adjust light angle/intensity

26.6.4 Pro tip

Pro tip:

One soft light, good placement, and clean audio can look more professional than a complicated setup done badly.

Do not add unnecessary lights until the face, background, and audio are already working.

26.7 Documentary lighting priorities

26.7.1 Truthfulness

Documentary lighting should feel believable. The viewer should not be pulled out of the subject's story by lighting that feels artificial or self-important.

Truthful does not mean ugly. It means the lighting supports the subject and setting.

26.7.2 Clean faces

The subject's face must be readable. This is especially important in interviews.

Clean face means:

- eyes visible,
- skin natural,
- no ugly mixed color,
- not hidden in shadow,
- not blown out,
- not flattened by overhead light.

26.7.3 Fast setup

Documentary work often requires speed. A simple repeatable setup is better than an elaborate setup that takes too long and causes the subject to lose energy.

Fast setup priorities:

1. quiet room,
2. good background,
3. soft key,
4. manual WB,
5. clean audio,
6. focus,
7. exposure test.

26.7.4 Audio protection

Audio is central to documentary work. Protect audio with:

- proper lav placement,
- wind protection,
- headphone monitoring,

- room tone,
- boom if available,
- onboard RØDE backup if supported,
- test recording.

A beautifully lit interview with bad sound is not usable.

26.7.5 Background control

Documentary background should be meaningful but not distracting.

Control:

- clutter,
- logos,
- bright windows,
- strong color objects,
- moving people,
- reflective surfaces,
- irrelevant items,
- harsh practicals.

The background should help tell the subject's story, not steal attention.

Final documentary lighting rule:

Make the person credible, the face readable, the audio clean, and the background controlled.

Chapter 27. Lens, Movement, and Emotional Coverage

27.1 Lens-choice guide

Lens choice affects emotional tone, background control, focus difficulty, and how close the viewer feels to the subject.

A useful lens/focal-length guide:

Shot Type	Typical Focal Length Concept	Use
Wide establishing	24–35mm	environment, geography

Shot Type	Typical Focal Length Concept	Use
Interior medium	35–50mm	natural dialogue framing
Interview medium	35–70mm	subject + background
Close-up	50–85mm	emotional face
Exterior portrait	85–135mm	background compression
Documentary walk-and-talk	24–50mm	movement and flexibility
Detail/insert	depends on object	emphasis

These are practical ranges, not rigid rules. Sensor format, lens availability, room size, and desired look matter.

The project principle is:

Choose the lens for emotional distance and background control, not merely because it fits.

Lens choice affects:

Lens Choice	Effect
Wider lens close to face	intimacy, distortion risk
Longer lens farther away	compression, cleaner background
Moderate focal length	natural perspective
Very long lens	isolation, focus difficulty
Very wide lens	environment, possible distortion

27.2 Prime versus zoom

Prime lenses and zoom lenses have different workflow advantages.

Lens Type	Strength	Weakness
Prime	discipline, often strong image character, simple focal decision	must move camera/change lens
Zoom	flexible framing, fast documentary use, fewer lens changes	can encourage lazy framing, may be variable aperture
Power zoom	smooth controlled zoom possible	depends on lens, can look artificial if unmotivated
Manual zoom	flexible but risky to zoom while rolling	shake/focus/exposure shift risk

For actor reels and feature scenes, primes or deliberate focal-length choices encourage better shot design. For documentary work, zooms can be extremely useful because reality moves faster than a controlled film set.

The rule is:

Use primes for discipline when time allows; use zooms for flexibility when reality demands it.

27.3 Interior focal-length choices

Interior spaces often limit camera distance. The lens must fit the room while avoiding distortion.

Useful interior guide:

Interior Shot	Focal-Length Concept
Small room wide	24–35mm
Medium dialogue	35–50mm
Interview	35–70mm
Close-up	50–85mm if room allows
Detail insert	close focus / appropriate lens

Interior caution:

If a wide lens is placed too close to a face, it can distort features. That may be acceptable for a stylized shot, but usually not for actor reels or interviews.

Interior actor reel rule:

Do not distort the actor's face unless deliberately intended.

For small rooms, it may be better to:

- move furniture,
- simplify background,
- shoot tighter,
- use a moderate lens,
- avoid extreme wide close-ups.

27.4 Exterior focal-length choices

Exteriors often have more space, so longer lenses can be used to simplify the background and create emotional isolation.

Exterior guide:

Exterior Shot	Focal-Length Concept
Emotional close-up	70–135mm
Interview	50–100mm depending background
Two-person dialogue	35–85mm
Walk-and-talk	24–50mm
Action/chase	depends on movement and safety
Establishing	24–35mm or wider as needed

Longer lenses help:

- compress distance,
- reduce background clutter,
- make the image feel more cinematic,
- isolate subject,
- soften busy exterior environments.

But longer lenses increase:

- focus sensitivity,
- camera shake,
- need for stable support,
- difficulty following movement.

Use longer lenses when the shot can be controlled. Use wider/moderate lenses when movement or space requires it.

27.5 Emotional close-up hierarchy

When the goal is an emotional close-up, do not automatically zoom while recording. Use a hierarchy.

Preferred hierarchy:

1. Plan a close-up as coverage.
2. Move the camera physically closer.
3. Use a longer focal length.
4. Use a controlled push-in.
5. Use a slow motivated zoom only if the zoom itself is the storytelling choice.
6. Use Clear Image Zoom only as a tested limited tool, not as primary coverage.

Emotional close-ups should be built around performance.

Ask:

- What is the emotional beat?
- When does the subject change internally?
- Does the viewer need to move closer?
- Should the camera push, cut, or hold?
- Is a reaction more powerful than a line?
- Is the close-up for actor reel clarity or feature story grammar?

Actor reel close-up rule:

Capture the performance cleanly first. Add movement only if it helps.

27.6 Push-in for emotional intensity

A push-in physically moves the camera closer to the subject. It changes the viewer's relationship to the subject.

Use a push-in for:

- realization,
- confession,
- fear,
- suspicion,
- grief,
- decision,
- emotional pressure,
- internal change.

Push-in procedure:

1. Identify the emotional line or moment.
2. Choose start frame.
3. Choose end frame.
4. Choose support: tripod slider, dolly, handheld, gimbal, or controlled move.
5. Rehearse movement speed.
6. Check focus at start.
7. Check focus at end.
8. Check exposure at start/end if light changes.
9. Coordinate movement with performance.
10. Record test if possible.

Push-in risks:

Risk	Correction
Focus lost	stop down/rehearse/focus pull
movement shaky	use support or slower move

Risk	Correction
move too obvious	slow down
actor misses mark	rehearse
exposure changes	control light/ND
audio noise from movement	monitor headphones

A push-in should feel motivated by the scene, not like the operator suddenly wanted a tighter shot.

27.7 Pull-back for isolation

A pull-back moves the camera away from the subject. It can reveal loneliness, defeat, danger, space, or context.

Use a pull-back for:

- abandonment,
- emotional isolation,
- reveal of environment,
- aftermath,
- character smallness,
- documentary context,
- feature scene ending.

Pull-back procedure:

1. Start on meaningful close or medium frame.
2. Decide what the wider frame reveals.
3. Make sure the revealed background is controlled.
4. Rehearse movement.
5. Maintain focus or plan focus transition.
6. Confirm audio remains usable.
7. Roll when movement has purpose.

A pull-back fails if the end frame reveals clutter, ugly background, or irrelevant objects. The revealed environment must matter.

27.8 Longer lens for compression

Longer lenses compress space and simplify backgrounds. They are especially useful outdoors.

Use longer lenses to:

- isolate actor,

- reduce visual clutter,
- compress background,
- make exterior close-ups feel cinematic,
- make interviews look cleaner,
- reduce distracting wide-angle distortion.

Longer lens cautions:

Issue	Risk
Focus	shallower apparent depth
Camera shake	more visible
Framing	harder to follow movement
Distance	operator farther from subject
Audio	camera may be far, but lav/boom handles sound

For emotional close-ups, longer lenses can help the subject feel separated from the world. For documentaries, they can make a cluttered real environment more controlled.

27.9 Walk-and-talk support

Walk-and-talk support must match the type of movement.

Possible support options:

Support	Use	Caution
Handheld	documentary energy	shake/fatigue
Gimbal	smooth movement	focus/audio management
Monopod	semi-mobile stability	limited motion
Tripod pan	subject passes through frame	less mobile
Shoulder rig	stable doc style	weight/setup
Dolly/slider	controlled feature move	setup time
Static camera	subject moves through frame	limited coverage

For solo operator work, the safest approach may be:

- lavs on subjects,
- focus-safe aperture,
- Face/Eye AF if tested,
- route in stable light,
- moderate focal length,
- simple movement.

Do not choose a movement system that makes audio or focus impossible.

27.10 Tripod, slider, dolly, gimbal, handheld considerations

Each support choice affects the scene.

Tripod

Best for:

- interviews,
- controlled actor reels,
- dialogue coverage,
- locked emotional close-ups,
- repeatable composition.

Advantages:

- stable,
- focus easier,
- framing controlled,
- professional.

Caution:

- can feel static if scene needs movement.

Slider

Best for:

- subtle push-ins,
- reveal shots,
- controlled movement,
- product/detail shots.

Caution:

- short move length,
- requires setup,
- focus may need adjustment.

Dolly

Best for:

- feature-style push-ins/pull-outs,

- controlled scene movement,
- professional camera motion.

Caution:

- needs space and smooth surface.

Gimbal

Best for:

- walk-and-talk,
- following movement,
- dynamic documentary or feature motion.

Caution:

- focus and audio become harder,
- setup balance needed,
- can look floaty if overused.

Handheld

Best for:

- documentary immediacy,
- tension,
- realism,
- mobile coverage.

Caution:

- too much shake can feel amateur,
- long lenses magnify instability.

The support should match the emotion. Do not use movement just because equipment allows it.

27.11 Focus during movement

Movement and focus must be planned together.

Questions:

- Is subject moving toward/away from camera?
- Is camera moving toward/away from subject?

- Is aperture shallow?
- Is autofocus reliable?
- Is manual focus pull possible?
- Is focus mark needed?
- Is the movement repeatable?

Movement focus strategies:

Situation	Strategy
Actor walks toward camera	stop down / AF / pull focus
Camera pushes in	rehearse focus endpoints
Walk-and-talk	f/4–f/5.6 and Face/Eye AF if tested
Gimbal move	AF or focus pull system
Feature push-in	marks and rehearsal
Documentary unpredictable	focus-safe aperture

Focus during movement should be tested before important takes.

27.12 Rehearsing movement

Rehearsal prevents failed takes.

Rehearse:

- actor movement,
- camera movement,
- focus,
- framing,
- audio cable/wireless behavior,
- boom position if used,
- exposure changes,
- start/end marks,
- eyeline.

Movement rehearsal checklist:

Check	Question
Start frame	correct?
End frame	meaningful?
Focus start/end	sharp?
Exposure start/end	safe?
Audio	clean during movement?
Background	controlled throughout?

Check	Question
Operator path	safe?
Actor path	repeatable?

For actor reels, movement should never distract from performance. For feature scenes, movement should be motivated. For documentaries, movement should preserve the moment without destroying focus/audio.

27.13 Coverage map for actor reels and features

A coverage map prevents relying on one shot to do everything.

Basic actor reel coverage map:

Shot	Purpose
Medium	body language and context
Close-up	performance/emotion
Reaction	listening/thought
Insert/detail	story object or action
Optional push-in	emotional escalation

Basic feature dialogue coverage map:

Shot	Purpose
Master	geography
Two-shot	relationship
OTS Actor A	dialogue connection
OTS Actor B	dialogue connection
Close-up A	emotional detail
Close-up B	emotional detail
Reaction	subtext
Inserts	story/action detail

Coverage should be logged. Clip descriptions should identify which scene/shot/take is on each file. That prevents confusion in post.

Final lens/movement rule:

Get the performance safely first. Add movement only when it improves the moment.

Chapter 28. Production Design and Muted Color Control

28.1 Why wardrobe and set color matter

The muted cinematic look begins before the camera records. Wardrobe, walls, props, practical lights, furniture, and background objects all affect color.

A LUT cannot fully fix a set full of loud, saturated, distracting colors. A grade cannot easily make a bright red shirt stop dominating the frame without damaging skin and other colors.

Production design controls what the camera sees.

Muted color is not only a post-production decision. It is a pre-production and on-set decision.

Key principle:

If a color is in front of the lens, the grade must deal with it.

For actor reels, production design should support the actor's face and performance. For feature scenes, it should support story world and continuity. For documentaries, it should preserve credibility while reducing distractions.

28.2 Preferred muted palette

Preferred muted palette:

Color Family	Examples
Dark neutrals	charcoal, black, deep gray
Blues	navy, faded denim, slate blue
Earth tones	brown, tan, taupe, clay
Greens	olive, moss, muted sage
Warm neutrals	cream, beige, oatmeal
Deep accents	burgundy, rust, dark mustard
Materials	wood, aged metal, canvas, leather
Background tones	gray wall, warm wood, off-white, muted curtains

These colors work well because they support skin rather than fighting it. They also grade better into a restrained cinematic look.

Actor wardrobe should usually avoid colors that overpower the face. The viewer should look at the actor, not the shirt.

28.3 Colors to avoid unless intentional

Avoid or control:

Color / Object	Problem
Bright red	dominates frame
Neon green	hard to grade, unnatural
Saturated royal blue	pulls attention
Bright white shirt	clips / distracts
Busy patterns	moiré/distraction
Loud logos	unprofessional / legal distraction
Shiny plastic	cheap highlights
Bright orange	dominates skin palette
Strong green walls	contaminates skin
TV screens	moving color distraction

These are not banned forever. They can be used intentionally. But if the goal is a muted cinematic look, they must be controlled.

If a bright object must remain in frame, decide whether it is story-important. If not, remove it.

28.4 Controlling props and clutter

Props and clutter affect image quality.

Before recording, scan the frame for:

- water bottles,
- tissue boxes,
- labels,
- cables,
- trash cans,
- random papers,
- bright objects,
- reflective objects,
- distracting photos,
- clocks,
- screens,
- logos,
- messy shelves,

- strong color patches.

Documentary work may preserve truthful setting, but even documentary settings can be cleaned of irrelevant distractions.

Set-control process:

1. Frame the shot.
2. Look at background edges.
3. Remove bright clutter.
4. Remove labels/logos unless needed.
5. Reduce color distractions.
6. Create depth.
7. Add one meaningful background element if useful.
8. Recheck through monitor.

The background should answer:

Does this help the subject or distract from the subject?

28.5 Practical lights as color sources

Practical lights are visible lights in the scene: lamps, bulbs, screens, candles, hallway lights, signs, or other real sources.

They can create:

- mood,
- depth,
- motivation,
- warmth,
- background interest.

They can also create:

- blown highlights,
- ugly color,
- mixed temperature,
- flicker,
- bright distractions,
- color spill on skin.

Practical control checklist:

Check	Action
Too bright	dim/change bulb/reposition
Too warm	adjust WB or bulb
Too green	replace/turn off
Distracting	move or dim
Clipping	check waveform/zebras
Not motivating face	add hidden key
Flicker	test recording

Practical rule:

A practical can motivate the light without being the only light.

28.6 Background separation

Background separation helps the subject stand out.

Ways to create separation:

Method	Effect
Distance from background	depth
Longer lens	background compression/blur
Aperture	subject isolation
Back/rim light	edge separation
Background darker than face	attention to subject
Color contrast	subject stands out
Negative fill	facial shape
Controlled practical	depth point

Do not solve every separation problem by opening the lens too wide. Sometimes moving the subject six feet from the wall is better than shooting at f/1.8.

28.7 Skin tone must remain natural

Skin is the most important color in actor reels, interviews, and dialogue scenes.

Muted color should never make skin:

- gray,
- green,
- dead,

- waxy,
- overly orange,
- crushed,
- noisy,
- lifeless.

Protect skin by:

- setting manual white balance,
- using correct LUT input,
- exposing cleanly,
- avoiding mixed color spill,
- controlling wardrobe/background,
- grading subtly.

The muted color principle is:

Mute the world around the person; keep the person alive.

28.8 Muting the environment, not the person

A successful muted image often makes the environment more restrained while the subject remains emotionally present.

This can be done by:

- choosing muted wardrobe,
- darkening or simplifying the background,
- using soft key on face,
- using negative fill,
- reducing saturated props,
- using controlled practicals,
- preserving skin tone.

Wrong approach:

Desaturate entire image heavily

↓

Skin becomes gray

↓

Actor looks lifeless

Correct approach:

Restrained wardrobe/background

↓

Clean skin exposure

↓
Subtle grade
↓
Muted but alive image

28.9 Actor reel visual restraint

Actor reels should not look visually boring, but they should be restrained enough that the performance remains the center.

Avoid:

- extreme darkness,
- excessive color stylization,
- distracting camera movement,
- overly busy background,
- wild practical colors,
- shallow focus that misses eyes,
- costume colors that dominate.

Actor reel production design should ask:

- Does this help casting see the actor?
- Is the face readable?
- Is wardrobe flattering but not distracting?
- Is the background professional?
- Is the scene too stylized for the reel's purpose?

28.10 Feature color consistency

Feature scenes require color continuity across the story world.

Color consistency includes:

- recurring palette,
- motivated color sources,
- wardrobe planning,
- background control,
- consistent white balance logic,
- consistent LUT monitoring,
- final grade direction.

For a feature, one scene can be warmer or cooler than another, but the choices should feel designed.

Track:

Item	Why
WB setting	shot matching
LUT used for monitoring	visual consistency
wardrobe colors	palette continuity
practical bulb colors	scene consistency
camera angle background colors	avoid mismatches
grade notes	post continuity

28.11 Documentary credibility

Documentary production design must not feel fake. The setting should remain believable, but distractions can still be reduced.

Acceptable documentary cleanup:

- remove trash,
- silence TV,
- move bright clutter,
- reduce logos,
- choose better angle,
- turn off ugly light,
- position subject near meaningful background.

Avoid making the scene look artificially staged if that undermines truthfulness.

Documentary background should support:

- who the person is,
- where they are,
- why the setting matters,
- without distracting from what they say.

Final production design rule:

Control what matters, remove what distracts, preserve what is truthful.

PART VI — PRE-SHOOT, ON-SET, AND SHOOT-DAY WORKFLOW

Chapter 29. Pre-Shoot Checklist and On-Set Test Procedure

29.1 Night-before setup checklist

The night-before checklist prevents shoot-day failures. It should be completed before any important actor reel, feature, or documentary shoot.

Camera and media:

Item	Check
FX6 batteries	charged
Battery charger	packed
CFexpress/SD production cards	formatted only after backup confirmed
Settings card	labeled FX6 SETTINGS — DO NOT FORMAT
ALL File	saved on settings card
User File	saved if used
Scene File	saved if used
LUTs	copied/imported/tested
Card reader	packed
Backup drive	available
Second backup drive	available if possible

Audio:

Item	Check
RØDE transmitter(s)	charged
RØDE receiver	charged
RØDE receiver gain	0 dB baseline
RØDE receiver mode	Split or Merged as needed
Cable Techniques cable	packed
3.5 mm-to-XLR one-transmitter cable	packed if needed
MDR-7506 headphones	packed
Windscreens	packed
Boom mic	packed if used
XLR-K3M/K2M	packed if used
Boom XLR cable	packed
Onboard transmitter recording	enabled/tested if used

FX6 CINE EI Muted-Color Shooting System Handbook V7.0

Camera support and exposure:

Item	Check
Tripod/plate	packed
Lens/lenses	cleaned
Lens caps	packed
ND workflow	internal ND tested
Gray/white card	packed
Monitor	packed/charged
HDMI/SDI cable	packed
Light meter/reference tools	optional

Lighting:

Item	Check
Key light	packed
Light stand	packed
Diffusion/softbox	packed
Negative fill	packed
Extension cords	packed
Practical bulbs/dimmers	packed if needed
Sandbags/weights	packed if needed

Paperwork / logging:

Item	Check
Clip log	printed or digital
Paper field log	printed
Pen/marker	packed
Slate/paper slate	packed
Project code	chosen
Physical card IDs	assigned
Reel naming plan	ready

Night-before rule:

Do not wait until the subject is ready to discover a missing cable, dead transmitter, wrong card, or untested LUT.

29.2 Camera mode checklist

Before shooting, confirm the camera mode.

Item	Required State
Shooting mode	Cine EI
Color/gamma	S-Gamut3.Cine/S-Log3
Base ISO	800 or 12800 deliberately chosen
EI	deliberate, not accidental
Internal Rec MLUT	Off unless intentionally baking
Monitoring LUT	On if desired
Frame rate	project standard
Codec	XAVC-I or XAVC-L by plan
Audio channels	routed correctly

Camera mode must be checked after loading an ALL File and again after any major change.

29.3 Recording format checklist

Before recording:

Setting	Check
Resolution	4K UHD/QFHD if project baseline
Codec	XAVC-I for quality, XAVC-L for duration if needed
Frame rate	23.98/24p or project standard
S&Q	Off unless deliberately shooting slow motion
Audio	normal recording confirmed
Proxy	on/off by plan
Card space	enough for scene
Card/reel ID	assigned/logged

If S&Q is active accidentally, dialogue/audio and timing may be wrong. Always check S&Q before serious dialogue.

29.4 LUT checklist

Before recording:

LUT Item	Required Check
Camera color/gamma	S-Gamut3.Cine/S-Log3
Base Look	intended LUT selected
VF/Proxy/Stream MLUT	On if desired

LUT Item	Required Check
SDI/HDMI MLUT	On if external monitor should see LUT
Internal Rec MLUT	Off for clean log
External monitor LUT	Off/not used if FX6 sends MLUT
Double-LUT risk	eliminated
LUT file	backed up separately

Field statement:

“Monitor LUT On. Internal Rec LUT Off.”

29.5 White balance checklist

Before recording:

WB Item	Check
ATW	Off for controlled scenes
WB switch	A/B/Preset selected deliberately
Gray/white card	used if practical
Card position	subject face position
Mixed lights	controlled if possible
Skin	checked through LUT
Continuity	same WB for matching shots
Change	logged if WB changes

White balance is especially important for actor close-ups and interviews because skin must remain consistent.

29.6 ND checklist

Before recording:

ND Item	Check
Interior	ND Clear unless too bright
Exterior	Variable ND On in daylight
Auto ND	Off for controlled scenes
Auto ND	considered only for documentary changing light
ND dial	adjusted for waveform exposure
Clear/On switch	confirmed before rolling
Aperture	chosen before ND

ND Item	Check
Shutter	protected at 180°

ND check statement:

“Shutter locked. Aperture chosen. ND controlling exposure.”

29.7 Focus checklist

Before recording:

Focus Item	Check
Focus mode	manual or AF deliberately selected
Focus Magnifier	used for critical shots
Eye	near eye sharp
Two-person	depth of field sufficient
Movement	rehearsed
Zoom change	focus rechecked
Bright sun	monitor visibility addressed
Face/Eye AF	tested if used
Rack focus	marks rehearsed

Focus statement:

“Near eye sharp. Movement checked.”

29.8 Audio checklist

Before recording, confirm which audio workflow is active.

One-transmitter safety:

Item	Setting
RØDE output	0 dB
INPUT1	MIC
CH1	INPUT1
CH2	INPUT1
CH1 dial	7
CH2 dial	5

Two-transmitter split:

Item	Setting
RØDE receiver	Split
Red XLR	INPUT1
Blue XLR	INPUT2
CH1	INPUT1
CH2	INPUT2
INPUT1/2	MIC
Phantom	Off
TX1 test	CH1
TX2 test	CH2

Boom three-track:

Channel	Source
CH1	TX1
CH2	TX2
CH3	Boom via Shoe CH1
CH4	Off/Shoe CH2

Always check headphones.

29.9 Physical switch checklist

Physical switches must be checked manually.

Physical Switch / Control	Check
INPUT1	MIC for RØDE
INPUT2	MIC for RØDE split
MIC+48V	Off for RØDE
WB switch	A/B/Preset
ND	Clear/On/Variable
Channel dials	correct levels
Lens AF/MF	correct
Stabilization	correct for support
Monitor connection	secure
Cable Techniques	connected correctly
Headphones	plugged into FX6 headphone jack

ALL File does not remove the need for this.

29.10 RØDE split cable checklist

For two transmitters:

Item	Required
Receiver mode	Split
Cable	Cable Techniques TRS to dual XLR-3M
Red	INPUT1
Blue	INPUT2
INPUT1	MIC
INPUT2	MIC
CH1	INPUT1
CH2	INPUT2
Reference	-30 dB both
TX1 test	CH1 moves
TX2 test	CH2 moves
Headphones	clean
Test clip	reviewed

Do not assume split mode is working until TX1 and TX2 are tested separately.

29.11 Boom adapter checklist

For boom addition:

Item	Check
Adapter	Sony XLR-K3M/K2M mounted
Connection	Multi Interface Shoe secure
Boom	plugged into adapter INPUT1
CH3	Shoe CH1
CH4	Off or Shoe CH2
Boom input	MIC / MIC+48V / LINE as appropriate
Phantom	only if boom requires it
RØDE inputs	no phantom
Headphones	boom checked
Test	lavs and boom separately tested

Boom statement:

“CH1 TX1. CH2 TX2. CH3 boom.”

29.12 10-second technical test

Before serious recording, shoot a 10-second technical test.

Include:

- subject face,
- normal speech,
- loud speech if relevant,
- silence for room noise,
- movement if relevant,
- focus target,
- brightest background element,
- slate/ID if useful.

Review:

Item	Question
Exposure	face clean?
Focus	near eye sharp?
Audio	correct channels?
Noise	TV/HVAC/clothing/wind?
LUT	monitoring as expected?
File	recording properly?
Background distracting?	

The 10-second test is one of the strongest protections against failed shoots.

29.13 Playback review checklist

When reviewing the test clip:

Review Area	Confirm
Picture	no obvious exposure problem
Focus	subject sharp
Skin	natural through LUT
Highlights	acceptable
Shadows	not muddy
Audio	correct channel/source
Room noise	acceptable
Wind	controlled

Review Area	Confirm
File	clip recorded
Monitor	not misleading

Do not review only the picture. Listen to audio.

29.14 During-shoot continuity check

Track continuity during the shoot.

Continuity Item	Track
WB	A/B/Preset/Kelvin
Base ISO	800/12800
EI	value
Aperture	f-stop
ND	state/value
Lens/focal length	shot notes
LUT	monitoring look
Audio	CH routing
Mic placement	unchanged?
Lighting	key/negative fill/practicals
Background	objects moved?
Card/reel	A001/A002 etc.

If a setting changes, log it.

29.15 After-shoot backup checklist

After shooting:

1. Stop recording.
2. Label card/reel.
3. Do not format.
4. Copy full card structure.
5. Verify copy.
6. Make second backup.
7. Copy RØDE onboard recordings if used.
8. Copy room tone and audio files.
9. Update clip log.
10. Confirm project files organized.
11. Only format production card after backup confirmation.

Backup statement:

“Full card copied, verified, second backup made.”

Chapter 30. Master Shoot-Day Workflow

30.1 Load or confirm ALL File

At the start of the shoot, load or confirm the correct ALL File if the shoot depends on a saved camera configuration.

Procedure:

1. Insert FX6 Settings Card in slot B.
2. Load intended ALL File from Media(B) if needed.
3. Confirm camera has correct Cine EI setup.
4. Confirm S-Gamut3.Cine/S-Log3.
5. Confirm recording format.
6. Confirm LUT routing.
7. Confirm audio menu routing.
8. Confirm User Menu/assignable buttons if needed.

After loading:

Do not assume everything physical is correct.

The ALL File does not confirm:

- RØDE mode,
- RØDE gain,
- cable placement,
- physical input switches,
- channel dial positions,
- ND physical state,
- external monitor settings,
- boom adapter physical switches.

30.2 Confirm physical switches

Before rolling, physically inspect:

Control	Check
INPUT1	MIC if RØDE
INPUT2	MIC if RØDE split
MIC+48V	Off for RØDE
WB switch	A/B/Preset intended
ND	Clear/Variable intended
Channel dials	correct
Lens AF/MF	intended
Stabilization	intended
Monitor cable	secure
Headphones	connected

Physical switches can ruin a take even when menu settings are correct.

30.3 Confirm RØDE receiver mode

Confirm RØDE receiver mode for the current audio workflow.

Workflow	RØDE Mode
One transmitter safety copy mode appropriate for one transmitter	
Two transmitters separate	Split
Merged lavs plus boom	Merged
Permanent split one-person	Split, TX1 only

If two people are wearing transmitters and separate tracks are needed:

RØDE receiver must be in Split mode.

Test TX1 and TX2 separately.

30.4 Confirm Cable Techniques routing

For the split workflow:

Cable Plug	FX6 Input
Red XLR	INPUT1
Blue XLR	INPUT2

Then confirm:

FX6 Channel Input

CH1	INPUT1
CH2	INPUT2

Say it out loud if needed:

“Red to one. Blue to two. CH1 input one. CH2 input two.”

Then test.

30.5 Confirm boom adapter if used

If using boom:

1. Confirm XLR-K3M/K2M is mounted securely.
2. Confirm boom cable is in adapter INPUT1.
3. Confirm adapter input type: MIC, MIC+48V, or LINE.
4. Confirm phantom power only if boom requires it.
5. Confirm CH3 receives Shoe CH1.
6. Confirm CH4 is Off unless used.
7. Speak into boom and watch CH3.
8. Listen in headphones.

Audio routing statement:

“CH1 TX1. CH2 TX2. CH3 boom.”

30.6 Set frame rate and recording format

Before recording:

Item	Check
Resolution	4K UHD/QFHD if baseline
Codec	XAVC-I or XAVC-L by plan
Frame rate	project standard
Shutter	matches frame rate
S&Q	off unless planned
Audio	normal recording if dialogue
Card space	enough
Reel ID	assigned

Do not discover after a take that S&Q was on or frame rate was wrong.

30.7 Set Cine EI / Base ISO / EI

Confirm:

Item	Decision
Mode	Cine EI
Base ISO	800 or 12800
EI	deliberate
Exposure tools	waveform/zebras

Use Base ISO 800 for controlled/daylight work. Use 12800 only when low light genuinely requires it.

Statement:

“Base ISO selected. EI deliberate. Exposure checked.”

30.8 Set white balance

Set and lock white balance.

Procedure:

1. Choose A, B, or Preset.
2. Use gray/white card if possible.
3. Press WB SET if custom balancing.
4. Check skin through LUT.
5. Keep WB stable for matching shots.

Avoid ATW for controlled actor reels/features.

Statement:

“White balance locked.”

30.9 Set shutter

Set shutter for motion.

Frame Rate	Shutter
24p	1/48 or 180°
30p	1/60 or 180°
60p	1/120 or 180°

Do not change shutter for ordinary brightness correction. Use ND.

Statement:

“Shutter set for motion.”

30.10 Set aperture

Choose aperture for the shot.

Scene	Aperture
Solo close-up	f/2.8–f/4
Interview	around f/4
Two-person	f/4–f/5.6
Walk-and-talk	f/4–f/5.6
Wide/action	f/5.6–f/8 if needed

Do not choose extreme shallow focus if it risks ruining performance.

Statement:

“Aperture chosen for focus and look.”

30.11 Set ND

Set ND after shutter and aperture.

Interior:

Situation	ND
normal interior	Clear
bright window/studio	Variable if needed

Exterior:

Situation	ND
daylight	Variable On
changing documentary light	consider Auto ND only if necessary

Statement:

“ND controls exposure.”

30.12 Set LUT monitoring

Confirm monitoring path.

Destination	Setting
VF/Proxy/Stream	MLUT On if desired
SDI/HDMI	MLUT On for external monitor
Internal Rec	MLUT Off
Monitor LUT	Off/not used if FX6 applies LUT

Statement:

“Monitor LUT On. Internal Rec LUT Off.”

30.13 Set waveform/zebras

Turn on exposure tools.

Use waveform to check:

- face,
- highlights,
- gray/white card,
- windows,
- practicals.

Use zebras for fast warnings.

Statement:

“Exposure checked with waveform/zebras.”

30.14 Confirm focus

Before rolling:

1. Put subject in position.
2. Use Focus Magnifier.
3. Focus near eye.
4. Check two-person depth if needed.
5. Recheck after zoom.
6. Test movement if needed.

Statement:

“Focus checked. Near eye sharp.”

30.15 Confirm audio

Confirm audio workflow.

One-transmitter:

Channel	Source
CH1	INPUT1 main
CH2	INPUT1 lower safety

Two-transmitter:

Channel	Source
CH1	TX1
CH2	TX2

Two-transmitter plus boom:

Channel	Source
CH1	TX1
CH2	TX2
CH3	boom

Check:

- meters,
- headphones,
- room noise,
- transmitter placement,
- wind,
- clothing rub,
- test recording.

Statement:

“Audio routed. Meters good. Headphones clean.”

30.16 Slate clip

Slate before recording or at the start of clip.

Verbal slate example:

A001, C0001, indoor action scene, take one.

For two-person audio, include:

TX1 interviewer CH1. TX2 interviewee CH2.

For boom:

CH3 boom.

Slate should help post identify the clip.

30.17 Record test

Record a short test when:

- setup changed,
- audio routing changed,
- lighting changed,
- lens changed,
- location changed,
- first take of day,
- important scene.

Test should include:

- face,
- normal speech,
- loud speech,
- silence,
- focus movement if needed,
- background highlight.

30.18 Review

Review test for:

Area	Check
Exposure	clean face
Focus	sharp eye
Audio	correct channels
Noise	no TV/HVAC/rub/wind

Area	Check
LUT	correct monitoring
Recording	file saved
Background	no major distraction

Do not review only picture. Listen.

30.19 Record take

When all checks pass, record the take.

During recording:

- watch meters,
- watch focus,
- monitor framing,
- listen for audio problems,
- avoid touching cables,
- avoid unnecessary zoom,
- hold handles before/after action if needed.

If a problem occurs, note it immediately.

30.20 Log clip

After recording, make a quick log note.

Minimal field log:

Field	Example
Reel	A001
Clip	C0001
Scene	INT_ACT
Note	indoor action scene
Status	review/select

Do not try to fill the entire spreadsheet during the shoot. Capture enough to identify the clip, then complete the full log after offload.

30.21 Backup media

After shooting:

1. Stop recording.
2. Label card/reel.
3. Copy full card structure.
4. Verify copy.
5. Make second backup.
6. Copy RØDE onboard recordings if used.
7. Update clip log.
8. Do not format until verified.

Backup statement:

“Full card copied. Verified. Second backup made. Log updated.”

PART VII — FILE MANAGEMENT, SLATES, LOGGING, OFFLOAD, RESOLVE/PREMIERE, PROXIES, AND STORAGE

Chapter 31. FX6 File-Management Doctrine

31.1 Why camera filenames alone are unsafe

The FX6 may create camera filenames that are simple and sequential, such as:

C0001.MXF
C0002.MXF
C0003.MXF

Those filenames are useful inside one camera card folder, but they are not safe as the only identifying system for a project.

The core danger is that the same camera filename can appear again on another card, another shoot day, another formatted card, or another reel. For example:

Card / Reel A001:
C0001.MXF

Card / Reel A002:

C0001.MXF

Card / Reel A003:
C0001.MXF

If those clips are later copied into one folder, imported carelessly, renamed casually, or disconnected from their reel folder, the editor may not know which C0001.MXF is which.

That can create serious problems:

- wrong clip imported,
- duplicate names in editing software,
- media relink confusion,
- clip descriptions attached to wrong footage,
- accidental overwrite,
- missing scene identification,
- inability to tell which card a clip came from,
- loss of subject matter tracking,
- trouble finding best takes,
- trouble matching audio backups,
- trouble syncing RØDE onboard files,
- confusion between actor reel, feature, and documentary footage.

The doctrine is:

The camera filename is only one part of the clip identity. It is not the whole identity.

A safe clip identity must include the reel/card context.

Correct unique clip identity:

A001_C0001
A001_C0002
A001_C0003
A002_C0001
A002_C0002

The reel prefix protects the clip from being confused with a same-numbered clip from another card.

31.2 Why same-name clips happen across cards

Same-name clips happen because cameras often restart or continue clip numbering based on internal rules, card state, formatting, or reel behavior. Even if numbering continues for a while, the operator should not depend on it as the only protection.

A physical card can be reused many times. Each time it is formatted and used again, clip numbering may eventually produce familiar names such as C0001.MXF.

Example:

Physical Card	Shoot / Offload	Reel ID	Camera File
CFE-01	morning actor reel	A001	C0001.MXF
CFE-02	afternoon exterior	A002	C0001.MXF
CFE-01 reused later	chase scene	A003	C0001.MXF

The same physical card is not the same as the same reel. A physical card is reusable media. A reel is a specific recorded card/offload instance.

That distinction is central:

Term	Meaning
Physical card ID	The reusable card itself, such as CFE-01
Reel ID	One recorded batch/offload, such as A001
Camera filename	The file created by camera, such as C0001.MXF
Unique Clip ID	Reel + camera filename stem, such as A001_C0001

The unique clip ID solves the duplicate filename problem.

31.3 Why camera originals should not be casually renamed

Camera-original files should not be casually renamed because the camera folder structure, metadata, sidecar files, and editing software relinking behavior may depend on the original relationships.

Renaming C0001.MXF to something like:

Outdoor chase scene best shot actor running with dialogue version 2.MXF

may seem helpful at first, but it creates risks:

- long filename/path-length problems,
- broken relinking,
- broken metadata assumptions,
- inconsistency with camera sidecar files,
- confusion with original media backups,
- mismatch between log and camera media,
- editor uncertainty over whether file is original or modified,
- risk of accidental duplicate names after manual renaming.

The safe method is:

Keep camera-original filenames unchanged and put descriptions in the log.

Example:

Camera File	Unique Clip ID	Description in Log
C0001.MXF	A001_C0001	Indoor action scene
C0002.MXF	A001_C0002	Outdoor dialogue scene
C0003.MXF	A001_C0003	Outdoor chase scene

The description belongs in the log, not in the original filename.

If a renamed working copy is ever needed, it should be made from a duplicate, not from the preserved camera original.

Safe hierarchy:

```
01_CAMERA_ORIGINALS/  
  20260515_NCAR_FX6_A001/  
    [full original camera card structure unchanged]  
  
03_PROXIES/  
  A001_C0001_proxy.mov  
  
04_PROJECT_FILES/  
  Resolve or Premiere project files  
  
00_ADMIN/  
  Clip_Log.xlsx
```

The original remains intact. The log carries the meaning.

31.4 Folder identity versus clip identity

Folder identity and clip identity serve different purposes.

Folder identity tells where a group of files came from.

Clip identity tells which exact clip is being discussed.

A safe reel folder name might be:

20260515_NCAR_FX6_A001

This tells the user:

Folder Element	Meaning
----------------	---------

20260515	shoot date
NCAR	project code
FX6	camera
A001	reel ID

A safe clip ID might be:

A001_C0001

This tells the user:

Clip ID Element	Meaning
-----------------	---------

A001	reel
C0001	camera clip filename stem

The folder identifies the reel. The unique clip ID identifies the clip inside that reel.

Example structure:

```
PROJECT/  
  01_CAMERA_ORIGINALS/  
    20260515_NCAR_FX6_A001/  
      [camera card folder structure]  
    20260515_NCAR_FX6_A002/  
      [camera card folder structure]
```

Clip log:

Reel Folder	Camera File	Unique Clip ID	Description
20260515_NCAR_FX6_A001	C0001.MXF	A001_C0001	Indoor action scene
20260515_NCAR_FX6_A001	C0002.MXF	A001_C0002	Outdoor dialogue scene
20260515_NCAR_FX6_A002	C0001.MXF	A002_C0001	Outdoor chase pickup

The camera filename may repeat, but the unique clip ID does not.

31.5 Project codes, reel IDs, physical card IDs, and unique clip IDs

The project uses four identity layers.

31.5.1 Project code

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The project code is a short identifier for the production.

Examples:

Project Type	Example Project Code
Nelson Cyr actor reel	NCAR
Feature test film	FFT
Documentary project	DOC1
Interview project	INT1
FX6 test	FX6T

The project code should be short. Do not use a long title in every folder or filename.

Good:

NCAR

Bad:

Nelson_Cyr_Actor_Reel_Netflix_Muted_Color_Test_Full_Project_Version_Final

Long names create path-length problems and clutter.

31.5.2 Reel ID

The reel ID identifies each card/offload instance.

Examples:

A001
A002
A003
A004

A reel is not the physical card itself. It is one recorded batch.

If CFE-01 is used in the morning, offloaded, formatted, and used again in the afternoon, it receives a new reel ID.

Example:

Time	Physical Card	Reel ID
Morning	CFE-01	A001
Afternoon	CFE-02	A002

Time Physical Card Reel ID
Evening CFE-01 reused A003

31.5.3 Physical card ID

The physical card ID identifies the reusable card.

Examples:

CFE-01
CFE-02
SD-SETTINGS

The physical card should be labeled with a sticker or other visible identifier.

Physical card ID helps answer:

- Which card was used?
- Which card is still full?
- Which card was offloaded?
- Which card is safe to format?
- Which card is the settings card and must not be formatted?

Physical card ID should not be used as a substitute for reel ID because the same physical card can produce multiple reels over time.

31.5.4 Unique Clip ID

The unique clip ID combines the reel ID and the camera filename stem.

Formula:

Unique Clip ID = Reel ID + "_" + Camera File Stem

Example:

Reel ID	Camera File	Unique Clip ID
----------------	--------------------	-----------------------

A001	C0001.MXF	A001_C0001
------	-----------	------------

A001	C0002.MXF	A001_C0002
------	-----------	------------

A002	C0001.MXF	A002_C0001
------	-----------	------------

A003	C0001.MXF	A003_C0001
------	-----------	------------

This is the safest short identifier for logs, notes, bins, and verbal references.

31.6 Short-name discipline to avoid Windows/path-length problems

Long filenames and deep folders can create Windows path-length problems. Even when modern Windows can sometimes support long paths, many applications, plugins, backup tools, and older workflows may still behave poorly with very long names.

The safe approach is:

Keep folder names short and put descriptions in the log.

Bad long folder example:

```
20260515_Nelson_Cyr_Actor_Reel_Netflix_Muted_Color_Cine_EI_Outdoor_Dialogue_C
hase_Scenes_Final_Version_A001
```

Better:

```
20260515_NCAR_FX6_A001
```

Bad long file description approach:

```
A001_C0001_Indoor_action_scene_actor_enters_room_finds_letter_turns_to_camera
_shouts_take_1_best_focus_good_audio.MXF
```

Better:

```
A001_C0001
```

with log entry:

Unique Clip ID	Scene	Description	Notes
A001_C0001	INT_ACT	Actor enters room, finds letter, turns, shouts	focus good; audio clean

The log carries the detail. The file/folder names carry the identity.

31.7 Never dump different cards into one flat folder

Never copy clips from multiple cards into one flat folder such as:

```
ALL_FX6_CLIPS/
  C0001.MXF
  C0002.MXF
  C0001.MXF
  C0002.MXF
```

That creates immediate risk of overwrite, duplicate names, confusion, and broken metadata relationships.

Unsafe flat-dump behavior:

Action	Risk
Drag only MXF files into one folder	loses structure and metadata
Copy multiple cards into same folder	duplicate names
Rename after dumping	manual error
Import mixed clips without reel folders	relink confusion
Delete non-footage files	possible metadata loss

Safe method:

```
01_CAMERA_ORIGINALS/  
  20260515_NCAR_FX6_A001/  
    [entire card copy]  
  20260515_NCAR_FX6_A002/  
    [entire card copy]  
  20260515_NCAR_FX6_A003/  
    [entire card copy]
```

Each reel stays intact.

31.8 File-management master rule

The master rule is:

Do not rely on camera filenames alone. Preserve full card folders, identify every reel, create unique clip IDs, and put descriptions in the log.

The complete doctrine:

1. Label physical cards.
2. Assign a new reel ID to each card/offload.
3. Copy the full card structure.
4. Keep camera originals unchanged.
5. Use short reel folder names.
6. Use unique clip IDs such as A001_C0001.
7. Put subject/scene descriptions in the log.
8. Do not dump multiple cards into one flat folder.
9. Do not split camera-original folders arbitrarily.
10. Verify and back up before formatting cards.

Chapter 32. Production Card and Reel Naming System

32.1 Physical card labels: CFE-01, CFE-02

Every reusable production card should have a physical label.

Suggested labels:

CFE-01
CFE-02
CFE-03

If using SD cards:

SD-01
SD-02

The settings card should be labeled differently:

FX6 SETTINGS — DO NOT FORMAT

Do not label a production card and the settings card in a way that can be confused.

Physical card labels help manage:

- which card is in the camera,
- which card has been offloaded,
- which card is safe to format,
- which card contains settings,
- which card should never be used for production footage.

A physical card label does not replace reel ID.

32.2 Reel IDs: A001, A002, A003

A reel ID identifies a recorded card/offload instance.

Use:

A001
A002
A003
A004

The first recorded card/offload of the project is A001. The next is A002. Continue in order.

Example shoot day:

Order Physical Card Reel ID			Folder
1	CFE-01	A001	20260515_NCAR_FX6_A001
2	CFE-02	A002	20260515_NCAR_FX6_A002
3	CFE-01 reused	A003	20260515_NCAR_FX6_A003

The reel ID must advance every time a new card/offload set is created.

Do not reuse A001 for a second card just because it is a new day or the same physical card.

32.3 Reused physical card gets a new reel ID

A physical card can be reused. A reel ID should not be reused within a project.

Example:

Morning:

CFE-01 → A001

Afternoon:

CFE-01 reused → A003

This is correct because CFE-01 is the physical card, while A003 is the new recorded media batch.

The safe rule:

Every time a card is recorded and offloaded as a new batch, assign the next reel ID.

Reusing physical card ID in the reel identity would be dangerous because it would not distinguish the morning footage from the afternoon footage.

32.4 Folder format: YYYYMMDD_PROJECT_FX6_A001

Use a short reel folder format:

YYYYMMDD_PROJECT_FX6_A001

Example:

FX6 CINE EI Muted-Color Shooting System Handbook V7.0

20260515_NCAR_FX6_A001

Breakdown:

Element	Meaning
20260515	date
NCAR	project code
FX6	camera
A001	reel ID

This format is short enough to avoid long-path problems but informative enough to identify the footage.

Additional examples:

```
20260515_NCAR_FX6_A001
20260515_NCAR_FX6_A002
20260516_NCAR_FX6_A003
```

Do not add long scene descriptions into the reel folder name. Put scene descriptions in the log.

32.5 Examples for actor reel projects

Actor reel project code example:

NCAR

Possible folder structure:

```
NELSON_ACTOR_REEL_PROJECT/
  01_CAMERA_ORIGINALS/
    20260515_NCAR_FX6_A001/
    20260515_NCAR_FX6_A002/
  02_AUDIO_ORIGINALS/
    20260515_RODE_TX1/
    20260515_RODE_TX2/
  03_PROXIES/
  04_PROJECT_FILES/
  05_EXPORTS/
  00_ADMIN/
  Clip_Log.xlsx
```

Example clip IDs:

Reel	Camera File	Unique Clip ID	Description
A001	C0001.MXF	A001_C0001	indoor action scene
A001	C0002.MXF	A001_C0002	outdoor dialogue scene

Reel	Camera File	Unique Clip ID	Description
A001	C0003.MXF	A001_C0003	outdoor chase scene

Actor reel logging should emphasize:

- scene type,
- performance quality,
- focus,
- audio quality,
- best takes,
- emotional beats.

32.6 Examples for feature projects

Feature project code example:

FFT

Possible folder structure:

```
FEATURE_TEST_PROJECT/
  01_CAMERA_ORIGINALS/
    20260515_FFT_FX6_A001/
    20260515_FFT_FX6_A002/
  02_AUDIO_ORIGINALS/
  03_PROXIES/
  04_PROJECT_FILES/
  05_EXPORTS/
  00_ADMIN/
```

Feature logging should include:

- scene number,
- shot,
- take,
- angle,
- lens/focal length if important,
- audio routing,
- best/take notes,
- continuity notes.

Example log row:

Unique Clip ID	Scene	Shot	Take	Description	Status
A001_C0001	SC01	MS	T01	actor enters room	review
A001_C0002	SC01	CU	T01	close-up emotional reaction	select

Unique Clip ID	Scene	Shot	Take	Description	Status
A002_C0001	SC02	WS	T01	exterior chase start	review

Feature work requires more detailed scene/shot/take tracking than a simple actor reel.

32.7 Examples for documentary projects

Documentary project code example:

DOC1

Possible folder structure:

```
DOCUMENTARY_PROJECT/
  01_CAMERA_ORIGINALS/
    20260515_DOC1_FX6_A001/
    20260515_DOC1_FX6_A002/
  02_AUDIO_ORIGINALS/
    INTERVIEW_SUBJECT_01/
    RODE_TX_BACKUPS/
    ROOM_TONE/
  03_PROXIES/
  04_PROJECT_FILES/
  05_EXPORTS/
  00_ADMIN/
    Interview_Log.xlsx
    Clip_Log.xlsx
```

Documentary logging should emphasize:

- subject,
- topic,
- location,
- interview segment,
- usable quotes,
- b-roll content,
- audio conditions,
- releases/permissions if relevant.

Example:

Unique Clip ID	Subject	Topic	Description	Audio
A001_C0001	John	background	interview intro	CH1 lav
A001_C0002	John	event story	emotional answer	CH1 lav / CH3 boom
A002_C0001	B-roll	exterior	house exterior and street	natural sound

Documentary footage becomes difficult to manage without description because clips may look similar in thumbnails. Log subject matter immediately.

32.8 Production card versus settings card distinction

Production cards and settings cards have different jobs.

Card Type	Purpose	Label
Production card	records footage/audio/video	CFE-01, CFE-02
Settings card	stores FX6 settings/LUTs	FX6 SETTINGS — DO NOT FORMAT

The settings card should not be used casually for production footage because it may be formatted and lose settings files.

Production cards are expected to be:

- recorded,
- offloaded,
- verified,
- backed up,
- formatted,
- reused.

Settings card is expected to be:

- protected,
- rarely formatted,
- used for ALL/User/Scene/LUT files,
- backed up to computer/NAS/USB,
- kept separate.

Final card rule:

Production cards are expendable after verified backup. The settings card is configuration protection and should not be treated as ordinary media.

Chapter 33. Clip Name Footage Description Log System

33.1 Purpose of the log

The log solves the problem that camera filenames do not describe what is inside each clip.

A clip name such as:

C0001.MXF

does not tell the editor:

- scene,
- subject,
- take,
- quality,
- audio setup,
- whether it is good,
- whether it contains an indoor action scene,
- whether it contains an outdoor dialogue scene,
- whether it contains an outdoor chase scene,
- whether there was wind noise,
- whether focus was good,
- whether the clip was imported,
- whether proxies were created.

The log creates the missing meaning.

The log is the bridge between:

Camera	Human Meaning
--------	---------------

C0001.MXF	indoor action scene
-----------	---------------------

C0002.MXF	outdoor dialogue scene
-----------	------------------------

C0003.MXF	outdoor chase scene
-----------	---------------------

The log also protects against same-name clips from later cards by using the unique clip ID.

33.2 Full Excel log columns

The full Excel/XLSX log should include enough fields for production and post-production. It does not need every field filled on set. Many fields can be completed after offload.

Recommended full log columns:

Column	Purpose
Date	shoot date
Project Code	short project ID
Physical Card ID	CFE-01, CFE-02

Column	Purpose
Reel ID	A001, A002
Reel Folder	full folder name
Camera	FX6
Camera File Name	C0001.MXF
Unique Clip ID	A001_C0001
Scene Code	INT_ACT, EXT_DLG, EXT_CHASE
Scene / Subject	plain description
Shot Type	WS, MS, CU, OTS, insert
Take	T01, T02, etc.
Location	room/exterior/site
Description	what happens in clip
Audio Routing	CH1 TX1, CH2 TX2, CH3 boom
RØDE Mode	Split, Merged, one TX
Boom Used	yes/no
WB	A, B, Preset, Kelvin if known
Base ISO	800 or 12800
EI	value if logged
LUT Monitor	s709, 709(800%), other
Internal Rec MLUT	Off/On
Codec	XAVC-I, XAVC-L
Frame Rate	23.98, 24, 29.97, etc.
S&Q	yes/no
Focus Note	good, soft, check
Exposure Note	good, hot window, dark, etc.
Audio Note	clean, wind, TV, rub
Status	Select, Review, Hold, Reject
Backup 1	yes/no
Backup 2	yes/no
Imported to NLE	yes/no
Proxy Created	yes/no
Notes	additional comments

The log is not meant to slow down production. The on-set version can be much shorter. The full version is completed after the card is copied and filenames are confirmed.

33.3 Unique Clip ID formula

The unique clip ID formula is:

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Unique Clip ID = Reel ID + "_" + Camera File Stem

Examples:

Reel ID Camera File Unique Clip ID

A001	C0001.MXF	A001_C0001
A001	C0002.MXF	A001_C0002
A001	C0003.MXF	A001_C0003
A002	C0001.MXF	A002_C0001
A002	C0002.MXF	A002_C0002

This formula is short, readable, and safe.

It should be used in:

- Excel log,
- Word log,
- paper notes,
- Resolve bins,
- Premiere bins,
- proxy names if applicable,
- audio backup notes,
- verbal references.

The unique clip ID does not require renaming the original camera file. It is a log/reference identity.

33.4 Scene code system

Scene codes keep the log short while preserving meaning.

Examples:

Scene Code	Meaning
INT_ACT	indoor action scene
EXT_DLG	exterior dialogue scene
EXT_CHASE	exterior chase scene
INT_INT	interior interview
EXT_INT	exterior interview
BROLL	b-roll
ROOM	room tone
TEST	technical test

Scene Code	Meaning
SLATE	slate/reference
PICKUP	pickup shot

For the user's example first three clips:

Clip	Scene Code
Clip 1 indoor action scene	INT_ACT
Clip 2 outdoor dialogue scene	EXT_DLG
Clip 3 outdoor chase scene	EXT_CHASE

Scene codes should be short enough to use quickly, but clear enough to understand later.

33.5 Shot-size and angle fields

Shot-size and angle fields help the editor locate coverage.

Common shot-size codes:

Code	Meaning
WS	wide shot
MS	medium shot
MCU	medium close-up
CU	close-up
ECU	extreme close-up
OTS	over-the-shoulder
INS	insert
RXN	reaction
BROLL	b-roll
WAT	walk-and-talk

Angle fields can include:

Angle	Meaning
A	primary angle
B	reverse or second angle
INT	interview angle
MOV	moving shot
LOCK	locked tripod
HH	handheld

Angle **Meaning**
 GMBL gimbal

Example:

Unique Clip ID	Scene	Shot Angle	Description
A001_C0001	INT_ACT	MS A	actor enters room
A001_C0002	EXT_DLG	OTS B	outdoor dialogue reverse
A001_C0003	EXT_CHASE	WS MOV	chase across yard

33.6 Audio-routing fields

Audio routing must be logged because the project has multiple valid audio configurations.

Possible audio-routing entries:

Audio Setup	Log Entry
One RØDE with safety	CH1 TX1 main / CH2 TX1 safety
Two RØDE split	CH1 TX1 / CH2 TX2
One RØDE in split mode	CH1 TX1 / CH2 silent
Two RØDE + boom	CH1 TX1 / CH2 TX2 / CH3 boom
Merged lavs + boom	CH1 merged lavs / CH2 boom
Room tone	CH1 room tone / CH2 safety or as configured
Test clip	specify tested routing

Audio log examples:

Unique Clip ID	Audio Routing	Audio Note
A001_C0001	CH1 TX1 / CH2 TX1 safety	clean
A001_C0002	CH1 TX1 / CH2 TX2	check wind
A001_C0003	CH1 TX1 / CH2 TX2 / CH3 boom	boom good, lav rustle on TX2

This prevents post-production confusion when a clip has silent CH2, merged lavs, or boom on CH3.

33.7 Look/LUT and format fields

The log should record important image format and monitoring details.

Recommended fields:

Field	Example
Color/Gamma	S-Gamut3.Cine/S-Log3
LUT Monitor	s709
Internal Rec MLUT	Off
Base ISO	800
EI	800 or chosen value
WB	A custom, B custom, Preset
Codec	XAVC-I
Frame Rate	23.98p
Resolution	4K UHD
S&Q	No

This helps the user know:

- what was recorded,
- what was only monitored,
- what should happen in post,
- why one scene may look different from another.

Example:

Unique Clip ID	Format / Look Note
A001_C0001	S-Log3 clean, s709 monitor, Internal Rec MLUT Off
A001_C0002	S-Log3 clean, s709 monitor, exterior WB B
A001_C0003	S-Log3 clean, possible exposure shift outdoors

33.8 Quality/select fields

The log should include a field for clip status.

Suggested values:

Status	Meaning
Select	best or likely usable
Review	needs review
Hold	keep but not first choice
Reject	technical or performance problem
Audio Issue	audio problem
Focus Issue	focus problem
Exposure Issue	exposure problem

Status	Meaning
Best	strongest take
Test	technical test only

Do not delete clips on set merely because they seem weak unless there is a very controlled reason. Mark them instead.

Example:

Unique Clip ID	Status	Note
A001_C0001	Review	focus check
A001_C0002	Select	good dialogue
A001_C0003	Hold	wind noise; good action

The status field speeds up editing.

33.9 Backup/import/proxy status fields

The log can also track post-production progress.

Suggested columns:

Column	Meaning
Backup 1	first copy made
Backup 2	second backup made
Verified	copy verified
Imported	imported into Resolve/Premiere
Proxy Created	proxy made
Audio Checked	channels verified
Synced	external/onboard audio synced if needed
Reviewed	content reviewed
Selects Marked	best portions marked

Example:

Unique Clip ID	Backup 1	Backup 2	Imported	Proxy	Audio Checked
A001_C0001	Yes	Yes	Yes	Yes	Yes
A001_C0002	Yes	Yes	Yes	No	Yes
A001_C0003	Yes	No	No	No	No

This prevents the user from losing track of what has been safely copied and what is still vulnerable.

33.10 Example row: indoor action scene

The user asked how the first three separate 10-minute clips would be logged. The first clip is an indoor action scene.

Example:

Field	Entry
Date	2026-05-15
Project Code	NCAR
Physical Card ID	CFE-01
Reel ID	A001
Reel Folder	20260515_NCAR_FX6_A001
Camera	FX6
Camera File Name	C0001.MXF
Unique Clip ID	A001_C0001
Scene Code	INT_ACT
Scene / Subject	Indoor action scene
Shot Type	MS / action coverage
Take	T01
Description	Indoor action scene; subject movement/action beat
Audio Routing	CH1 TX1 / CH2 TX1 safety or current routing
RØDE Mode	as used
WB	A custom
Base ISO	800 if lit
LUT Monitor	s709
Internal Rec MLUT	Off
Codec	XAVC-I or selected codec
Frame Rate	23.98p / 24p if baseline
Focus Note	check movement focus
Audio Note	check handling/clothing noise
Status	Review
Notes	first 10-minute clip

If using permanent split mode with one transmitter, audio routing would instead be:

CH1 TX1 / CH2 silent

If using two transmitters:

CH1 TX1 / CH2 TX2

The log must match actual routing.

33.11 Example row: outdoor dialogue scene

Second clip: outdoor dialogue scene.

Example:

Field	Entry
Date	2026-05-15
Project Code	NCAR
Physical Card ID	CFE-01
Reel ID	A001
Reel Folder	20260515_NCAR_FX6_A001
Camera	FX6
Camera File Name	C0002.MXF
Unique Clip ID	A001_C0002
Scene Code	EXT_DLG
Scene / Subject	Outdoor dialogue scene
Shot Type	dialogue coverage
Take	T01
Description	Outdoor dialogue scene; two-person or solo dialogue depending setup
Audio Routing	CH1 TX1 / CH2 TX2 if two people
RØDE Mode	Split if two transmitters
WB	B custom or daylight preset
Base ISO	800
LUT Monitor	s709
Internal Rec MLUT	Off
Codec	XAVC-I or selected codec
Frame Rate	23.98p / 24p if baseline
Focus Note	check eye focus / two-person depth
Audio Note	check wind and background noise
Status	Review or Select
Notes	second 10-minute clip

Outdoor dialogue needs wind/audio notes because a technically good image can be ruined by wind noise.

33.12 Example row: outdoor chase scene

Third clip: outdoor chase scene.

Example:

Field	Entry
Date	2026-05-15
Project Code	NCAR
Physical Card ID	CFE-01
Reel ID	A001
Reel Folder	20260515_NCAR_FX6_A001
Camera	FX6
Camera File Name	C0003.MXF
Unique Clip ID	A001_C0003
Scene Code	EXT_CHASE
Scene / Subject	Outdoor chase scene
Shot Type	action / movement
Take	T01
Description	Outdoor chase scene; movement/action coverage
Audio Routing	current routing, likely scratch/lavs if used
RØDE Mode	Split/one TX/none as used
WB	B custom or daylight
Base ISO	800
LUT Monitor	s709
Internal Rec MLUT	Off
Codec	XAVC-I or selected codec
Frame Rate	project frame rate or S&Q if planned
Focus Note	check motion focus
Audio Note	wind/handling/footsteps
Status	Review
Notes	third 10-minute clip; action may need multiple takes

If this chase was shot in slow motion, the S&Q field must be marked clearly. If it is normal speed, mark S&Q as No.

33.13 How to use the Word/DOCX log version

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The Word/DOCX log version is useful for printing, binder use, simple handwritten field notes, or production paperwork.

Use the Word version when:

- working from paper,
- handing a simple log sheet to someone else,
- recording notes without opening Excel,
- printing a field packet,
- creating a production binder.

The Word log should include a simplified table:

Reel Clip Scene Take Description Audio Status Notes

Example Word log entry:

Reel	Clip	Scene	Take	Description	Audio	Status	Notes
A001	C0001	INT_ACT	T01	Indoor action scene	CH1 TX1 / CH2 safety	Review	check focus
A001	C0002	EXT_DLG	T01	Outdoor dialogue	CH1 TX1 / CH2 TX2	Select	wind okay
A001	C0003	EXT_CHASE	T01	Outdoor chase	scratch/lav	Review	check motion

The Word version is easier to print and mark up. The Excel version is better for sorting, filtering, and post-production tracking.

33.14 How to use the paper log version

The paper log is the on-set fast version. It should not require the operator to fill 30 fields while shooting.

Minimal paper log fields:

Field Example

Reel A001

Clip C0001

Scene INT_ACT

Note indoor action

Status review

Paper log example:

A001 C0001 INT_ACT indoor action – review focus
A001 C0002 EXT_DLG outdoor dialogue – good audio
A001 C0003 EXT_CHASE chase scene – check motion/focus

The paper log rhythm is:

1. slate the clip,
2. shoot the clip,
3. write one short line,
4. move on,
5. complete full Excel log after offload.

Do not make the paper log so complex that it slows production.

Chapter 34. Minimal Field Logging Workflow

34.1 Why not to fill the full spreadsheet on set

The full spreadsheet is valuable, but it is too detailed for real-time shooting. On set, the operator is already managing:

- camera,
- focus,
- exposure,
- audio,
- RØDE routing,
- lighting,
- subject performance,
- slate,
- media,
- time,
- continuity.

Trying to fill every spreadsheet field during shooting can cause missed moments and mistakes.

The solution is a two-stage logging workflow:

Stage	Tool	Purpose
On set	minimal field log	quick identification
After offload	full Excel log	complete project record

On set, capture only what is necessary to identify the clip.

After offload, complete the detailed log using actual filenames and verified card structure.

34.2 Five-field field log method

The minimal field log uses five fields:

Field	Example
-------	---------

Reel	A001
------	------

Clip	C0001
------	-------

Scene	INT_ACT
-------	---------

Note	indoor action
------	---------------

Status	review
--------	--------

This is enough to find the clip later.

Example first three clips:

Reel	Clip	Scene	Note	Status
A001	C0001	INT_ACT	indoor action scene	review
A001	C0002	EXT_DLG	outdoor dialogue scene	review/select
A001	C0003	EXT_CHASE	outdoor chase scene	review

The five-field method is intentionally simple. It is designed for speed.

34.3 Before-recording notes

Before recording begins, write the fixed information at the top of the field log:

Header Item	Example
Date	2026-05-15
Project	NCAR
Camera	FX6
Physical Card	CFE-01
Reel	A001
Audio Setup	CH1 TX1 / CH2 TX2
Look	S-Log3 clean / s709 monitor
WB	A or B
Frame Rate	23.98p

This prevents rewriting the same information for every clip.

Example field log header:

```
Date: 2026-05-15
Project: NCAR
Camera: FX6
Card: CFE-01
Reel: A001
Mode: Cine EI / S-Gamut3.Cine-S-Log3
Monitor LUT: s709
Audio: CH1 TX1 / CH2 TX2
```

Then each clip line can be short.

34.4 During-recording slate

The slate should match the log.

Verbal slate example for first clip:

A001, C0001, indoor action scene, take one.

Second clip:

A001, C0002, outdoor dialogue scene, take one.

Third clip:

A001, C0003, outdoor chase scene, take one.

If two transmitters are used, add:

TX1 on CH1. TX2 on CH2.

If boom is used: CH3 boom (**Differs if Tascam DR-60D and NTG5 boom mic is used—
See FX6 Audio Setup Field Guide Ver. 1.0**)

The slate does not have to be elaborate. It just needs to create a reliable connection between the clip, the log, and the content.

34.5 After-recording quick note

Immediately after recording each clip, write one quick line.

Examples:

A001 C0001 INT_ACT indoor action — review focus

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A001 C0002 EXT_DLG outdoor dialogue – good audio
A001 C0003 EXT_CHASE outdoor chase – check motion/focus

Do not write paragraphs on set unless there is a major issue.

Use short status words:

Status	Meaning
good	likely usable
review	check later
select	strong take
hold	keep but not best
bad audio	audio problem
soft	focus issue
wind	wind issue
test	technical test
room	room tone

The quick note should help the editor know what to inspect first.

34.6 After-offload spreadsheet completion

After the card is copied and verified, complete the full spreadsheet using actual camera filenames.

Procedure:

1. Copy full card folder.
2. Verify copy.
3. Open the reel folder.
4. Confirm actual camera filenames.
5. Match field log notes to filenames.
6. Create unique clip IDs.
7. Enter descriptions.
8. Add audio routing.
9. Add format/look notes.
10. Mark backup status.
11. Mark import/proxy status later.

Example conversion:

Field note:

A001 C0001 INT_ACT indoor action – review focus

Full log row:

Field	Value
Reel ID	A001
Camera File	C0001.MXF
Unique Clip ID	A001_C0001
Scene Code	INT_ACT
Description	Indoor action scene
Status	Review
Focus Note	check focus

The field log is the rough record. The Excel log becomes the master record.

34.7 Practical paper log example

A practical paper log page might look like this:

PROJECT: NCAR
DATE: 2026-05-15
CAMERA: FX6
CARD: CFE-01
REEL: A001
AUDIO: CH1 TX1 / CH2 TX2
LOOK: S-Log3 clean / s709 monitor

CLIP LOG

A001	C0001	INT_ACT	indoor action scene	review focus
A001	C0002	EXT_DLG	outdoor dialogue scene	good audio / check wind
A001	C0003	EXT_CHASE	outdoor chase scene	check motion focus
A001	C0004	ROOM	room tone exterior	30 sec
A001	C0005	TEST	LUT/audio test	do not use final

This is fast, understandable, and easy to transfer into Excel later.

34.8 Field log rhythm: slate it, shoot it, write one short line, move on

The working rhythm is:

1. Assign reel and clip.
2. Slate it.
3. Shoot it.
4. Write one short line.
5. Move on.
6. Complete full log after offload.

Do not overcomplicate the field moment.

The operator should not be forced to choose between logging and directing/shooting. The field log supports the shoot. It does not become the shoot.

The simplest workable rhythm for the first three 10-minute clips is:

Before Clip 1:

Slate: A001, C0001, indoor action scene, take one.

After Clip 1:

Log: A001 C0001 INT_ACT indoor action – review focus/audio

Before Clip 2:

Slate: A001, C0002, outdoor dialogue scene, take one.

After Clip 2:

Log: A001 C0002 EXT_DLG outdoor dialogue – check wind/audio

Before Clip 3:

Slate: A001, C0003, outdoor chase scene, take one.

After Clip 3:

Log: A001 C0003 EXT_CHASE outdoor chase – check motion/focus

Final field logging rule:

Do the minimum on set that guarantees you can reconstruct the full record later.

Chapter 35. Verbal, Paper, Phone, Electronic, and Smart Slate Workflow

35.1 Why slating helps

Slating helps identify what is inside a clip. It creates a visible and/or audible reference that connects the footage to the log.

A slate can identify:

- reel,
- clip,
- scene,
- take,
- audio routing,
- subject,
- date,
- camera,

- sync reference,
- room tone,
- test clip.

Slating is especially useful because camera filenames do not explain content. When the editor opens C0001.MXF, the slate can immediately say what it is.

For this project, slating supports:

- actor reel organization,
- two-person RØDE split-track confirmation,
- boom channel confirmation,
- documentary interview subject tracking,
- duplicate filename prevention,
- post-production clarity.

The simplest useful slate is a verbal slate.

35.2 Verbal slate method

A verbal slate is the easiest method. The operator or subject says the clip identity at the start of recording.

Basic verbal slate format:

Reel, clip, scene, take.

Example:

A001, C0001, indoor action scene, take one.

For the first three example clips:

A001, C0001, indoor action scene, take one.

A001, C0002, outdoor dialogue scene, take one.

A001, C0003, outdoor chase scene, take one.

For two-transmitter audio, add channel identity:

A001, C0002, outdoor dialogue scene, take one.

TX1 on CH1. TX2 on CH2.

For boom:

A001, C0002, outdoor dialogue scene, take one.

TX1 CH1. TX2 CH2. Boom CH3.

For room tone:

A001, room tone, exterior dialogue location, thirty seconds.

A verbal slate is fast, free, and effective.

35.3 Paper slate method

A paper slate is a visible written slate placed briefly in front of the camera.

A simple paper slate can be:

```
PROJECT: NCAR
REEL: A001
CLIP: C0001
SCENE: INT_ACT
TAKE: 1
AUDIO: CH1 TX1 / CH2 TX2
```

Use a paper slate when:

- clip identification matters,
- audio may not be heard clearly,
- the editor needs visual reference,
- a documentary subject should not speak slate,
- multiple takes are being organized.

Paper slate advantages:

Advantage	Meaning
free	paper/marker only
visual	appears in footage
flexible	can include anything
easy	no electronics
useful in post	thumbnail/reference

Paper slate disadvantages:

Disadvantage	Mitigation
can slow down	keep fields minimal
must be updated	assign one person or routine
may be forgotten	include in pre-roll ritual
not timecode sync	acceptable for current simple workflow

For current FX6 use, a paper slate plus verbal slate is often enough.

35.4 Phone/tablet slate app method

A phone or tablet slate app can display a cleaner slate than paper. It may show:

- project,
- scene,
- take,
- time,
- date,
- timecode-style display,
- production notes.

Use a phone/tablet slate when:

- a cleaner visual slate is desired,
- paper slate feels too improvised,
- the operator wants reusable templates,
- the production is small but organized.

Cautions:

Issue	Warning
screen reflections can glare	
brightness	may be too bright/dim
battery	must be charged
notifications	disable
timecode claims	may not be true sync unless integrated
handling	do not slow shoot

A phone slate is helpful for visibility but does not automatically solve file naming, logging, or true timecode sync unless connected to a proper timecode system.

35.5 Basic electronic slate

A basic electronic slate is a dedicated slate device that may show scene/take/time visually. It may or may not have real timecode capability.

Basic electronic slates help by:

- looking professional,
- displaying clear scene/take,
- improving visual identification,

- reducing messy handwriting,
- speeding repeated takes if set up well.

But a basic electronic slate may not:

- sync separate audio automatically,
- rename camera files,
- fill out logs,
- prevent duplicate filenames,
- organize footage,
- replace reel IDs.

A basic electronic slate is useful if it improves discipline. It is not necessary for the current workflow if verbal/paper slate and logs are used correctly.

35.6 Professional timecode smart slate

A professional timecode smart slate displays timecode synchronized with the camera and/or audio recorder. It is common in more advanced productions, especially when using separate audio recorders, multiple cameras, or professional post workflows.

A true smart slate can help sync:

- camera footage,
- external audio recorder,
- multiple cameras,
- timecode-based editing workflows.

A professional smart slate becomes more useful when:

- using a separate audio recorder,
- shooting multi-camera,
- working with a crew,
- recording long documentary interviews with external audio,
- needing timecode sync across devices,
- handing footage to a professional editor.

For the current FX6 + RØDE workflow, a true timecode slate is not strictly required unless the production grows beyond camera-recorded audio and simple sync needs.

35.7 What smart slates help with

Smart slates help with synchronization and identification.

They can help:

Function	Helpfulness
Sync separate audio	high if timecode system is correct
Sync multiple cameras	high
Identify scene/take visually	high
Professional workflow	high
Long-form documentary	useful
Editor handoff	useful

Smart slates are valuable when the whole production uses timecode correctly.

A smart slate is not useful if only the slate has timecode but the camera and audio devices are not synced to the same timecode system.

35.8 What smart slates do not solve

Smart slates do not solve every file-management problem.

They do not automatically:

- rename FX6 files,
- prevent C0001.MXF duplication,
- create unique clip IDs,
- fill out the Excel log,
- copy the card,
- verify backups,
- organize Resolve/Premiere bins,
- fix bad audio,
- fix wrong channel routing,
- replace room tone,
- choose best takes.

Even with a smart slate, the project still needs:

- reel IDs,
- unique clip IDs,
- full-card offload,
- clip log,
- audio routing notes,
- backup verification.

Smart slate rule:

Timecode helps sync; it does not replace media discipline.

35.9 Timecode synchronization versus file naming

Timecode and file naming solve different problems.

System	Solves
Timecode	syncs clips/audio by time
File naming / reel IDs	identifies media uniquely
Clip log	explains content
Slate	connects visible/audio reference to log
Backup structure	protects files

A clip can have perfect timecode and still be confusing if it is named `C0001.MXF` with no reel ID or log.

Likewise, a clip can be well named/logged but require manual sync if timecode is not used.

For the current workflow, the safest combination is:

Reel ID + Unique Clip ID + verbal/paper slate + clip log + full-card backup

Timecode can be added later if the production requires it.

35.10 Why Reel ID + Clip ID remains required

Even if using a slate, the unique clip ID remains required because it is the simplest way to avoid same-name confusion.

Example:

Camera File	Without Reel	With Reel
C0001.MXF	ambiguous	A001_C0001
C0001.MXF	ambiguous	A002_C0001
C0001.MXF	ambiguous	A003_C0001

A slate may say “Scene 1 Take 1,” but that still does not uniquely identify the media across cards unless the reel/clip system exists.

Therefore, always preserve:

- reel ID,
- camera filename,
- unique clip ID,
- log description.

35.11 When a real timecode slate becomes justified

A real timecode slate becomes justified when the workflow grows beyond simple camera-recorded audio.

Consider a real timecode slate when:

Situation	Reason
Separate audio recorder	sync benefit
Multiple cameras	sync benefit
Long interviews	sync reliability
Professional editor handoff	standard workflow
Crew production	faster organization
Complex documentary	large media volume
Music/performance sync	timing accuracy

For the current FX6 + RØDE camera-audio workflow, the simpler slate/log system is sufficient if used consistently.

If the user later adds an external audio recorder, multi-camera production, or larger crew workflow, timecode becomes more valuable.

35.12 Recommended slate workflow for current FX6 use

The recommended current workflow is:

Verbal slate + optional paper/phone slate + minimal field log + full spreadsheet after offload.

Step-by-step:

1. Assign reel ID.
2. Confirm camera file number if practical.
3. Start recording.
4. Verbal slate: “A001, C0001, indoor action scene, take one.”
5. Include audio routing if important: “TX1 CH1, TX2 CH2, boom CH3.”
6. Shoot the scene.
7. Stop recording.
8. Write one-line field log note.
9. After offload, enter full details into Excel log.

For the first three sample clips:

Slate 1:

A001, C0001, indoor action scene, take one.

Field log:

A001 C0001 INT_ACT indoor action – review focus/audio

Slate 2:

A001, C0002, outdoor dialogue scene, take one. TX1 CH1, TX2 CH2.

Field log:

A001 C0002 EXT_DLG outdoor dialogue – check wind/audio

Slate 3:

A001, C0003, outdoor chase scene, take one.

Field log:

A001 C0003 EXT_CHASE outdoor chase – check motion/focus

Final slate rule:

The slate identifies the clip at the moment of recording. The log preserves the meaning after the shoot. The reel ID prevents duplicate filename confusion.

Chapter 36. FX6 Full-Card Offload Integrity

36.1 Why full card structure matters

The FX6 does not create footage as isolated human-described movie files meant to be dragged loosely into random folders. A camera card can contain a folder structure, video media files, metadata, sidecar information, indexes, thumbnails, and other non-obvious support files that help editing software understand what was recorded.

The safe professional rule is:

Copy the full card structure, not just the visible video files.

A full-card copy preserves the relationship between:

- the MXF video/audio files,
- card folder hierarchy,
- clip metadata,
- timecode information,
- camera-generated indexing,
- potential sidecar data,
- thumbnail/management files,

- and the editing application's ability to recognize the media as camera-original footage.

Even if DaVinci Resolve or Adobe Premiere Pro can import an individual MXF file, that does not mean it is best practice to separate that MXF from the rest of the camera card structure.

The production-safe method is to treat each card/offload as a complete reel.

Example:

```
PROJECT/  
  01_CAMERA_ORIGINALS/  
    20260515_NCAR_FX6_A001/  
      [entire copied card contents]
```

That reel folder becomes the untouched camera-original master for that card.

The reason this matters is simple: once camera-original structure is damaged, reorganized, partially copied, or mixed with other cards, later post-production problems become harder to diagnose.

A clip may still play, but the workflow becomes less reliable.

Possible problems from not preserving full structure:

Mistake	Possible Result
Drag only MXF files	metadata/context lost
Mix multiple cards together	duplicate filenames
Delete non-video folders	relinking/import issues
Rename camera originals	confusion with metadata/logs
Split card by file size	broken reel integrity
Copy without verification	hidden corruption risk
Format before backup	permanent loss risk

The full-card copy is the master source. Everything else—proxies, transcodes, edited timelines, exports—comes later.

36.2 Why non-footage files matter

Non-footage files may look unnecessary because they are not the visible video clips. That assumption is dangerous.

A camera card may include files that help with:

- clip indexing,
- timecode reference,

- camera metadata,
- file spanning,
- thumbnail display,
- NLE recognition,
- reel identification,
- audio/video relationship,
- file management.

Even if a particular editor can read the MXF file alone, the safest archival and professional workflow is to keep the camera's complete original structure intact.

The non-footage files are part of the camera-original package.

Treat the full card as one unit:

```
CARD CONTENTS = footage + metadata + structure + support files
```

Do not decide on set that something is unnecessary just because it does not look like video.

A production assistant, editor, or future version of you should be able to open the reel folder and see the card exactly as it was copied.

Correct:

```
20260515_NCAR_FX6_A001/  
[full original card structure]
```

Incorrect:

```
FX6 Clips/  
C0001.MXF  
C0002.MXF  
C0003.MXF
```

The incorrect version may play, but it has lost its card context.

36.3 Why not to drag only MXF files into one folder

Dragging only MXF files into one folder is one of the most dangerous shortcuts in this workflow.

It creates multiple problems at once:

1. It separates the media from the card structure.
2. It removes context from related camera files.
3. It increases duplicate-name risk.
4. It encourages casual renaming.

5. It makes reel identity unclear.
6. It complicates backup verification.
7. It may confuse future relinking.
8. It makes it harder to know which card a clip came from.

Bad workflow:

```
ALL_VIDEO_FILES/  
  C0001.MXF  
  C0002.MXF  
  C0003.MXF  
  C0001.MXF  
  C0002.MXF
```

The second C0001.MXF may overwrite the first, be auto-renamed by the computer, or create confusion. Even if the system prevents overwrite, the editor now has duplicate camera filenames without reel context.

Safe workflow:

```
01_CAMERA_ORIGINALS/  
  20260515_NCAR_FX6_A001/  
    [full card copy]  
  20260515_NCAR_FX6_A002/  
    [full card copy]
```

Then use the log to create unique clip IDs:

Reel Camera File Unique Clip ID

A001 C0001.MXF A001_C0001

A002 C0001.MXF A002_C0001

The original camera filename remains untouched, but the clip is now uniquely identified.

36.4 Full-card copy procedure

Use this procedure every time a production card is offloaded.

36.4.1 Prepare the destination folder

Create the project folder structure before copying.

Recommended structure:

```
PROJECT_NAME/  
  00_ADMIN/  
  01_CAMERA_ORIGINALS/  
  02_AUDIO_ORIGINALS/
```

```
03_PROXIES/  
04_PROJECT_FILES/  
05_EXPORTS/  
06_DELIVERY/
```

Inside 01_CAMERA_ORIGINALS, create a reel folder:

```
20260515_NCAR_FX6_A001
```

Do not copy footage into a loose desktop folder.

36.4.2 Confirm physical card and reel ID

Before copying, identify:

Item	Example
Physical Card ID	CFE-01
Reel ID	A001
Project Code	NCAR
Camera	FX6
Date	20260515

Write this in the log before copying.

Example:

```
Card: CFE-01  
Reel: A001  
Destination: 20260515_NCAR_FX6_A001
```

36.4.3 Copy the full card contents

Open the card at the top level and copy everything into the reel folder.

Correct:

```
Source card root  
↓ copy all contents  
Destination reel folder
```

Destination:

```
01_CAMERA_ORIGINALS/  
  20260515_NCAR_FX6_A001/  
    [entire copied card contents]
```

Do not open the card, hunt for MXF files, and drag only the video clips.

36.4.4 Do not change the original structure

After copying, do not reorganize the copied card contents.

Do not:

- rename camera files,
- move MXF files out of their original folders,
- delete support folders,
- delete small files,
- combine folders from multiple cards,
- split the reel folder into pieces,
- add unrelated files inside the camera-original folder.

The camera-original folder should remain a faithful copy.

If notes are needed, put them in:

00_ADMIN/

or in the clip log, not inside the preserved card structure unless using a separate clearly labeled notes folder outside the original copied contents.

36.4.5 Record the copy in the log

After copying, update the log:

Field	Entry
Physical Card ID	CFE-01
Reel ID	A001
Reel Folder	20260515_NCAR_FX6_A001
Copy Status	copied
Verify Status	pending or complete
Backup 1	yes
Backup 2	pending or yes

This prevents uncertainty later.

36.5 Verify before formatting

Never format a production card immediately after dragging files without verification.

Formatting should happen only after:

1. full card copied,
2. copy verified,
3. second backup made,
4. log updated,
5. footage opened/import-tested if practical,
6. RØDE onboard recordings copied if used,
7. user is certain the card is no longer the only copy.

Verification can be done by:

- comparing folder size,
- checking file count,
- spot-opening clips,
- importing into Resolve/Premiere,
- using copy software with verification,
- comparing source/destination properties,
- confirming log entries.

Minimum verification:

Check	Required
Destination folder exists	yes
Folder size plausible	yes
Clips visible	yes
First clip opens	yes
Last clip opens	yes
Log updated	yes
Second backup complete	yes before formatting

If anything is uncertain, do not format.

Card-format rule:

A card is not safe to format until the footage exists in at least two verified places.

36.6 Two-backup rule

The project should use at least two copies before formatting production cards.

Recommended minimum:

Copy	Location	Purpose
Copy 1	main working drive	edit/import

Copy	Location	Purpose
Copy 2	backup drive/NAS/external	protection

Better:

Copy	Location
Copy 1	editing drive
Copy 2	local backup drive
Copy 3	NAS or separate archive drive

The more important the footage, the more conservative the backup should be.

Do not count the camera card as a backup after it is needed for reuse. A card that will be formatted is temporary storage, not long-term protection.

Backup sequence:

```
Camera card
↓
Copy to working drive
↓
Verify
↓
Copy to backup drive
↓
Verify
↓
Only then consider formatting card
```

36.7 Folder structure for camera originals

Use this structure:

```
PROJECT/
  01_CAMERA_ORIGINALS/
    20260515_NCAR_FX6_A001/
      [full card copy]
    20260515_NCAR_FX6_A002/
      [full card copy]
    20260516_NCAR_FX6_A003/
      [full card copy]
```

Do not use:

```
PROJECT/
  FX6_FILES/
    C0001.MXF
    C0002.MXF
    C0003.MXF
```

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The reel folder name carries the key identity. The full card copy preserves integrity.

Recommended naming structure:

YYYYMMDD_PROJECT_CAMERA_REEL

Example:

20260515_NCAR_FX6_A001

Breakdown:

Element	Meaning
20260515	shoot date
NCAR	project code
FX6	camera
A001	reel ID

This is short enough to avoid long-path problems while still identifying the footage.

36.8 RØDE onboard recording backup location

If RØDE onboard transmitter recording is used, those files must be copied into the project separately.

Recommended folder:

```
PROJECT/  
  02_AUDIO_ORIGINALS/  
    20260515_RØDE_TX1/  
    20260515_RØDE_TX2/  
    ROOM_TONE/
```

If the onboard files correspond to specific reels, include reel ID in the naming:

```
02_AUDIO_ORIGINALS/  
  A001_RØDE_TX1/  
  A001_RØDE_TX2/
```

Possible file naming:

```
A001_TX1_BACKUP_001.wav  
A001_TX2_BACKUP_001.wav  
A001_ROOMTONE_INT_ACT_001.wav
```

The exact extension depends on the RØDE export format. The important rule is that RØDE backup files should be identifiable.

Log the onboard audio:

Unique Clip ID	Camera Audio	Onboard Backup
A001_C0001	CH1 TX1	TX1 backup copied
A001_C0002	CH1 TX1 / CH2 TX2	TX1/TX2 backups copied
A001_C0003	CH1 scratch	no onboard backup

Do not leave onboard recordings trapped in the transmitter after the card has been offloaded.

36.9 Offload checklist

Use this checklist every time.

36.9.1 Before copying

Check	Done
Card identified physically	CFE-01 / CFE-02
Reel ID assigned	A001 / A002
Destination folder created	yes
Enough drive space	yes
Backup drive available	yes
Card not formatted	yes

36.9.2 During copying

Check	Done
Full card structure copied	yes
Not just MXF files	yes
Copied into correct reel folder	yes
No mixing cards	yes
No renaming originals	yes

36.9.3 After copying

Check	Done
Folder size checked	yes
Clips visible	yes
First/last clip opens	yes
Log updated	yes
Second backup copied	yes

Check	Done
Second backup verified	yes
RØDE onboard files copied if used	yes
Room tone/audio copied	yes
Card marked safe/not safe to format	yes

36.9.4 Before formatting card

Check	Required
Full card copied	yes
Copy verified	yes
Second backup made	yes
Log updated	yes
No missing audio backups	yes
User confirms card can be erased	yes

Final offload rule:

No format until full card copied, verified, backed up, and logged.

Chapter 37. Large Card / 400GB Footage Management

37.1 Why not to split camera-original folders into arbitrary 100GB chunks

The user asked what to do when a CFexpress card contains about 400GB of footage and the desire is to split it into 100GB separate folders.

The project rule is:

Do not split the camera-original folder into arbitrary 100GB chunks for editing.

That means do not manually divide the copied card structure like this:

```
A001_PART_1_100GB/  
A001_PART_2_100GB/  
A001_PART_3_100GB/  
A001_PART_4_100GB/
```

if doing so separates camera files from related metadata and folder structure.

The risk is that arbitrary splitting breaks the integrity of the camera-original copy. It can separate media from support files, confuse editing software, and make relinking harder.

A camera card is not just a pile of equally independent files. It is a structured media set.

Wrong approach:

Take a 400GB card copy

↓

Manually divide files into 100GB groups

↓

Place metadata/support files in some folders but not others

↓

Create uncertain partial camera-original folders

Correct approach:

Copy the full 400GB card as one complete reel master

↓

Verify and back it up

↓

Use proxies, archive volumes, or future smaller reel discipline

The master copy must remain intact.

37.2 Safer method: split archive volumes

If the problem is transfer, storage, or archive size, use split archive volumes rather than manually breaking camera-original folders.

The concept is:

- keep the full card folder intact,
- compress/archive that complete folder,
- create split archive volumes for storage/transfer,
- later reassemble/extract to restore the complete folder.

Example concept:

20260515_NCAR_FX6_A001/
[full card copy]

becomes archive volumes such as:

20260515_NCAR_FX6_A001.zip.001
20260515_NCAR_FX6_A001.zip.002
20260515_NCAR_FX6_A001.zip.003

20260515_NCAR_FX6_A001.zip.004

or similar split-volume format depending on the archive tool.

The key point:

The archive split is a storage/transfer method. It is not a new editing folder structure.

Do not edit directly from arbitrary split archive pieces. Reassemble/extract the complete reel folder first.

Split archive volumes are useful when:

- a drive has file-size limitations,
- transfer target has size limits,
- uploading/downloading in parts,
- archiving to media that benefits from chunks,
- moving large reels across systems.

But the editor should receive the complete restored reel folder.

37.3 Safer method: future smaller reel offloads

The better long-term solution is to avoid enormous card dumps when practical.

Instead of filling a 400GB card before offload, use smaller reel/offload targets.

Preferred reel/offload size:

80–160GB per reel/offload target

This is not a hard technical limit. It is a practical operating range that makes footage easier to:

- copy,
- verify,
- back up,
- import,
- archive,
- track,
- recover,
- transfer,
- log.

A 400GB card is not automatically wrong, but it is more cumbersome and riskier if something goes wrong during copy, verification, or backup.

Smaller reel advantages:

Advantage	Benefit
Faster copy	less waiting
Easier verification	smaller batches
Easier backup	manageable size
Easier troubleshooting	problems isolated
Easier logging	fewer clips per reel
Lower loss exposure	one failure affects less footage
Easier transfer	smaller folders

Practical future approach:

1. Start card/reel A001.
2. Shoot until about 80–160GB or logical scene break.
3. Offload full card.
4. Verify and back up.
5. Format only after safe.
6. Continue with next reel ID.

This is especially useful for actor reels, features, and documentary shoot days where natural breaks exist.

37.4 Safer method: proxies/transcodes

If the reason for splitting is editing performance, do not split the camera-original folder. Use proxies or transcodes.

The original remains:

```
01_CAMERA_ORIGINALS/  
  20260515_NCAR_FX6_A001/  
    [full card copy]
```

The edit-friendly files go into:

```
03_PROXIES/  
  A001/  
    A001_C0001_proxy.mov  
    A001_C0002_proxy.mov
```

or the NLE's managed proxy location.

This preserves original integrity while making editing easier.

Use proxies when:

- XAVC-I 4K playback is choppy,
- computer struggles,
- timeline has multiple layers,
- storage bandwidth is limited,
- laptop editing is needed,
- documentary footage volume is large.

Proxy rule:

Edit with proxies if needed. Preserve camera originals untouched. Grade/export from originals when possible.

Do not reduce capture quality just because the edit system struggles. Capture quality and edit performance are separate problems.

37.5 If splitting is unavoidable

If splitting is absolutely unavoidable, preserve an untouched full-card master first.

Minimum safe sequence:

1. Copy the full 400GB card to one complete master folder.
2. Verify the master copy.
3. Make a second backup of the complete master.
4. Only then create working split folders if absolutely required.
5. Clearly label split folders as working copies, not camera originals.
6. Do not delete the complete master.

Working split folder example:

```
WORKING_SPLITS_NOT_CAMERA_ORIGINALS/  
A001_WORK_PART_01/  
A001_WORK_PART_02/  
A001_WORK_PART_03/  
A001_WORK_PART_04/
```

Each split should be documented.

But this is not preferred. It is a workaround.

If a working split is made, do not pretend each split is a complete reel. It is a derived working division.

The camera-original master remains:

```
01_CAMERA_ORIGINALS/  
  20260515_NCAR_FX6_A001/  
    [full 400GB original card copy]
```

37.6 Preserve the full-card master untouched

This is the controlling rule for large cards:

The full-card master must remain untouched.

The full-card master is the source of truth. Do not:

- rename its files,
- split it,
- delete support files,
- move clips out of it,
- mix other files into it,
- edit inside it,
- store proxies inside it,
- store exports inside it.

Keep it clean.

Example:

```
01_CAMERA_ORIGINALS/  
  20260515_NCAR_FX6_A001/  
    [untouched card copy]
```

Derived materials go elsewhere:

```
03_PROXIES/  
04_PROJECT_FILES/  
05_EXPORTS/  
00_ADMIN/
```

This prevents the editing process from contaminating the original media.

37.7 80–160GB reel/offload target

The project’s practical target for future offloads is:

80–160GB per reel/offload

This is not because the FX6 cannot record more. It is because post-production and backup discipline become easier with smaller, logical reels.

Possible reel-break points:

Break Point	Reason
end of scene	natural log boundary
end of location	easier organization
lunch break	backup opportunity
before major setup change	protects prior work
after interview	preserves important segment
before risky shoot	reduce loss exposure
around 80–160GB	manageable size

Example day:

Reel	Content	Approx Size
A001	indoor actor scene	90GB
A002	outdoor dialogue	120GB
A003	chase/action	110GB
A004	documentary interview	140GB

This creates cleaner post organization than one 400GB reel containing everything.

Final large-card rule:

Large cards are convenient in camera but cumbersome in post. Shoot to logical smaller reels when practical, and never break the full-card original after the fact.

Chapter 38. Resolve and Premiere Import and Audio-Channel Workflow

38.1 Import full reel folders

DaVinci Resolve and Adobe Premiere Pro should import or reference the footage from organized reel folders, not from a flat pile of individual MXF files.

Correct source structure:

```
PROJECT/  
  01_CAMERA_ORIGINALS/  
    20260515_NCAR_FX6_A001/
```

```
[full card copy]
20260515_NCAR_FX6_A002/
[full card copy]
```

In the editing application, create bins that mirror the reel structure.

Example Resolve/Premiere bins:

```
FX6_CAMERA_ORIGINALS/
  A001_20260515_NCAR/
  A002_20260515_NCAR/
  A003_20260516_NCAR/
```

This keeps the edit project aligned with the physical media organization.

The import rule is:

Import by reel, organize by reel, then describe by scene.

Do not import all clips into one undifferentiated bin called “Footage” unless the project is extremely small. Even then, reel identity should remain visible.

38.2 Do not flatten media from multiple cards

Flattening means mixing clips from multiple cards/reels into one folder or one bin without reel identity.

Bad structure:

```
All Clips/
  C0001.MXF
  C0002.MXF
  C0003.MXF
  C0001.MXF
```

Bad bin structure:

```
Footage/
  C0001
  C0002
  C0003
  C0001
```

This creates confusion because camera filenames repeat.

Good bin structure:

```
FX6/
  A001/
```

```
C0001
C0002
C0003
A002/
C0001
C0002
```

Then use clip names or metadata/log notes to identify:

```
A001_C0001 indoor action
A001_C0002 outdoor dialogue
A001_C0003 outdoor chase
```

If the NLE allows clip renaming inside the project without changing the original file, it may be useful to rename the clip display name to the unique clip ID plus short description. But the camera-original file on disk should remain unchanged.

38.3 Resolve bin structure

A clean DaVinci Resolve bin structure can be:

```
01_FX6_CAMERA_ORIGINALS
  A001_20260515_NCAR
  A002_20260515_NCAR
  A003_20260516_NCAR

02_AUDIO_ORIGINALS
  RODE_TX1
  RODE_TX2
  BOOM
  ROOM_TONE

03_SYNCED_ORGANIZED
  SC01_INT_ACT
  SC02_EXT_DLG
  SC03_EXT_CHASE

04_SELECTS
  Actor Reel Selects
  Dialogue Selects
  Chase Selects

05_TIMELINES
  Assembly
  Rough Cut
  Fine Cut
  Color Version
  Export Version

06_PROXIES_OR_OPTIMIZED
```

Resolve workflow:

1. Create project.
2. Set project frame rate before importing if possible.
3. Import full reel folders.
4. Keep reel bins.
5. Check audio channel interpretation.
6. Create scene bins or smart bins as needed.
7. Generate proxies if needed.
8. Edit with proxies.
9. Grade from original camera files.
10. Export final.

Resolve audio check is important for split RØDE channels. Do not assume both channels are centered and separated the way you expect. Inspect the audio channel layout.

38.4 Premiere bin structure

A clean Adobe Premiere Pro bin structure can be:

```
01_FX6_CAMERA_ORIGINALS
  A001_20260515_NCAR
  A002_20260515_NCAR
  A003_20260516_NCAR
```

```
02_AUDIO_ORIGINALS
  RODE_TX1
  RODE_TX2
  BOOM
  ROOM_TONE
```

```
03_SCENES
  INT_ACT
  EXT_DLG
  EXT_CHASE
```

```
04_SELECTS
  Best Takes
  Audio Review
  B-Roll
```

```
05_SEQUENCES
  Assembly
  Rough Cut
  Fine Cut
  Final
```

```
06_PROXIES
```

Premiere workflow:

1. Create project in organized project folder.
2. Import full reel folders or use Media Browser-style workflow where appropriate.

3. Preserve bin organization by reel.
4. Check audio channel mapping.
5. Rename clip labels inside Premiere if useful, without renaming original media files.
6. Generate/attach proxies if needed.
7. Edit.
8. Relink/use full-quality media for export.

Premiere users must be especially careful not to import duplicate C0001.MXF files into confusing bins without reel context.

38.5 Left/right audio inspection

For the RØDE split-track workflow, the receiver sends two transmitters as left/right or separate sides that are broken out to FX6 INPUT1 and INPUT2.

The editor must inspect audio channels, not just look at a single waveform.

In the desired two-transmitter workflow:

Camera Channel	Source
CH1	TX1 / Person 1
CH2	TX2 / Person 2

In the lower-cost merged-lavs-plus-boom workflow:

Camera Channel	Source
CH1	merged lavs
CH2	boom

In the boom adapter workflow:

Camera Channel	Source
CH1	TX1
CH2	TX2
CH3	boom

Post-production must verify channel identity.

Audio inspection procedure:

1. Open clip in NLE.
2. Show individual audio channels/lane view if possible.
3. Solo or inspect CH1.

4. Confirm TX1 / Person 1.
5. Solo or inspect CH2.
6. Confirm TX2 / Person 2.
7. If CH3 exists, confirm boom.
8. Label or note channels.
9. Correct pan/mono handling as needed.

38.6 Why muting a whole event does not prove channel separation

The user observed that when muting audio for one speaking clip/event, both waveforms darkened and both speakers went silent.

That does not prove whether two people were merged or separated. It may simply mean the whole event/clip was muted.

Muting the entire event silences all audio channels inside that event.

To test separation, do not mute the whole event. Instead, inspect or isolate individual channels.

Correct separation test in post:

Test	Meaning
Solo CH1	should hear TX1/person 1 only
Solo CH2	should hear TX2/person 2 only
Mute CH1 only	CH2 should remain if separated
Mute CH2 only	CH1 should remain if separated
Compare waveforms	should differ when different people speak
Both channels identical	may indicate merged/duplicated audio

If muting one clip item mutes all its channels, that is normal NLE behavior. It is not a valid split-track test.

38.7 Two-transmitter split audio in post

When the split-track workflow is correct, post should treat CH1 and CH2 as separate mono dialogue tracks.

Post workflow:

1. Identify CH1 as TX1 / Person 1.
2. Identify CH2 as TX2 / Person 2.
3. Center each as mono dialogue.

4. Adjust levels separately.
5. Cut or reduce unused mic when the other person speaks if needed.
6. Reduce clothing rub on one channel without affecting the other when possible.
7. Balance dialogue.
8. Apply noise reduction carefully if needed.
9. Use room tone for smoothing.

Example:

Situation	Post Action
Person 1 speaks	favor CH1
Person 2 speaks	favor CH2
Person 1 clothing rub while Person 2 speaks	lower/mute CH1 if safe
Person 2 laughs too loud	reduce CH2 only
Both speak over each other	balance CH1/CH2

This is the main advantage of split lav recording.

38.8 Boom/lav channel organization

If a boom is recorded, organize it clearly.

Professional three-track organization:

Channel	Source	Post Use
CH1	TX1 lav	close isolated dialogue
CH2	TX2 lav	close isolated dialogue
CH3	boom	natural tone / backup / blend
CH4	unused or second shoe input only if needed	

In post, the boom may be used:

- as primary if it sounds better,
- blended under lavs,
- as backup where lav rubs,
- for natural room perspective,
- for dialogue continuity.

Boom/lav decision table:

Situation	Use
Lav clean and natural	lav primary

Situation	Use
Boom cleaner than lav	boom primary
Lav has clothing rub	use boom if clean
Boom too roomy	use lav primary
Both good	blend subtly
Outdoor wind on boom	use lav if protected
Lav transmitter dropout	use boom backup

Label channels immediately. Do not leave the editor guessing which channel is boom.

38.9 Solo CH1 mono centering

When recording one transmitter while staying in permanent split mode, the likely result is:

Channel	Result
CH1	solo mic
CH2	silent/unused

In post, CH1 must be treated as mono dialogue and centered.

Do not leave CH1 panned hard left. Center it.

Possible post actions:

Action	Purpose
Interpret CH1 as mono	correct dialogue handling
Center pan	voice plays in center
Duplicate to both L/R if needed	playback balance
Disable silent CH2	avoid empty track
Label as TX1 solo	clarity

Important:

Duplicating CH1 does not create a safety track. It only makes playback come from both speakers or a centered mono path. If CH1 clipped, the duplicate clips too.

If onboard RØDE recording exists, that is the true backup.

38.10 Post-import checklist

After importing footage into Resolve or Premiere, complete this checklist.

38.10.1 Media organization

Check	Done
Reels imported separately	yes
A001/A002 bins created	yes
No flat mixed-card bin	yes
Unique clip IDs used in log	yes
Clip log available	yes

38.10.2 Audio

Check	Done
CH1 source verified	yes
CH2 source verified	yes
CH3 boom verified if used	yes
Solo/mute channel test done	yes
Silent CH2 noted if one-person split	yes
Room tone imported	yes
RØDE onboard backups imported if used	yes

38.10.3 Picture

Check	Done
S-Log3 recognized	yes
LUT/grade workflow set	yes
Frame rate correct	yes
S&Q clips identified	yes
Exposure checked	yes
Focus checked	yes

38.10.4 Proxies

Check	Done
Proxy need assessed	yes
Proxy format chosen	yes
Proxies generated/attached	yes
Proxy/full-res toggle tested	yes
Final export set to originals	yes

Final import rule:

Do not start editing seriously until reel identity, audio channels, and proxy/original workflow are verified.

Chapter 39. Proxy, Storage, and Archive Planning

39.1 Shoot high-quality originals, edit with proxies if needed

The project's preferred approach is:

Shoot high-quality originals. Use proxies if the computer struggles.

Do not lower capture quality simply because editing the original footage is heavy. Capture quality and edit performance are separate issues.

Capture should be chosen for:

- image quality,
- grading flexibility,
- actor reel polish,
- feature scene quality,
- documentary archival value.

Editing performance can be improved with:

- proxies,
- optimized media,
- lower-resolution playback,
- fast storage,
- simpler timelines,
- render cache,
- transcodes.

The correct workflow is:

```
FX6 high-quality original
↓
Full-card backup
↓
Proxy generation if needed
↓
Edit with proxy
↓
```

Grade/export from original

This protects both quality and practicality.

39.2 XAVC-I 4K file-size planning

The project preserved a practical planning estimate:

XAVC-I 4K at 23.98/24p is roughly about 108GB per hour.

This is an approximate planning number, not a substitute for checking actual camera settings.

Examples:

Recording Time Approx XAVC-I 4K Size

10 minutes	about 18GB
30 minutes	about 54GB
1 hour	about 108GB
2 hours	about 216GB
4 hours	about 432GB

This explains why a 400GB card can fill with several hours of high-quality footage.

XAVC-I is preferred for:

- actor reels,
- feature scenes,
- critical interviews,
- material needing grade flexibility.

But it requires more storage and a stronger edit workflow.

39.3 XAVC-L 4K file-size planning

The project preserved a practical planning estimate:

XAVC-L 4K may be roughly about 45GB per hour.

Again, this is approximate and depends on exact settings.

Examples:

Recording Time Approx XAVC-L 4K Size

10 minutes	about 7.5GB
30 minutes	about 22.5GB
1 hour	about 45GB
2 hours	about 90GB
4 hours	about 180GB

XAVC-L is useful for:

- long documentary interviews,
- events,
- high-volume b-roll,
- storage-constrained shoots,
- long recording sessions.

XAVC-L tradeoff:

Advantage	Tradeoff
smaller files	less edit-friendly than intra-frame
longer record time	may be harder on CPU
storage efficient	less robust for heavy grading than higher-bitrate intra options

Choose XAVC-L deliberately, not accidentally.

39.4 80–160GB reel/offload target

The project's practical offload target is:

80–160GB per reel/offload

This is not a camera limit. It is a workflow target.

Benefits:

Benefit	Explanation
faster copy	less waiting
easier verification	fewer files/less data
easier backup	manageable chunks
safer formatting decision	less footage at risk
easier logging	fewer clips per reel
cleaner import	smaller bins
simpler archive	easier to move/store

Example with XAVC-I 4K:

Target Approx Runtime

80GB about 44 minutes

108GB about 1 hour

160GB about 1.5 hours

Example with XAVC-L 4K:

Target Approx Runtime

80GB about 1.75 hours

160GB about 3.5 hours

For actor reels and features, reel breaks can occur at scene breaks. For documentaries, reel breaks can occur at interview/session breaks.

39.5 1080p DNxHR LB proxies

DNxHR LB is a lightweight proxy option.

Use 1080p DNxHR LB proxies when:

- the computer struggles with originals,
- the project has many clips,
- editing speed matters,
- final color/export will use originals,
- storage for proxies should remain modest.

Advantages:

Advantage	Meaning
lighter playback	easier editing
smaller proxy files	less storage
adequate for cutting	good for edit decisions
separates edit performance from capture quality	original remains strong

DNxHR LB is not intended as the final master quality. It is for editing performance.

39.6 1080p DNxHR SQ proxies

DNxHR SQ proxies are higher-quality than LB and may look better during editing.

Use 1080p DNxHR SQ when:

- the computer can handle slightly larger proxies,
- visual quality during editing matters,
- judging focus/framing during edit is important,
- storage is available.

Comparison:

Proxy Type	Use
DNxHR LB	fastest/lightest practical editing
DNxHR SQ	better-looking editing proxy
720p proxy	weak system or huge project

For actor reels, DNxHR SQ may be useful if the user wants a cleaner editing view. For long documentaries, LB or 720p may be more practical.

39.7 720p proxy use cases

720p proxies are useful when the editing computer is weak or the project is large.

Use 720p proxies when:

- playback is still choppy with 1080p proxies,
- laptop editing is required,
- documentary footage volume is large,
- edit decisions matter more than judging final detail,
- storage is tight.

Caution:

Do not judge final focus, grain, or fine image quality only from 720p proxies. Use originals for final review, grading, and export.

720p proxy rule:

Use 720p for speed, not final image judgment.

39.8 Resolve proxy workflow

DaVinci Resolve proxy workflow concept:

1. Import full reel folders.
2. Preserve bins by reel.

3. Confirm project frame rate.
4. Select clips.
5. Generate proxy media.
6. Choose proxy format/resolution.
7. Store proxies in organized proxy folder or Resolve-managed location.
8. Enable proxy usage for editing.
9. Edit smoothly.
10. Disable/bypass proxies or ensure originals are used for final grade/export.
11. Confirm final export references original high-quality media.

Suggested proxy folder:

```
PROJECT/  
  03_PROXIES/  
    RESOLVE/  
      A001/  
      A002/
```

Resolve proxy rules:

Rule	Reason
Keep originals untouched	source protection
Generate proxies from organized reels	avoid confusion
Use proxy toggle	edit speed
Grade originals	quality
Export originals	final quality

If proxies go offline, originals should still remain organized and intact.

39.9 Premiere proxy workflow

Adobe Premiere Pro proxy workflow concept:

1. Create organized Premiere project.
2. Import full reel folders or use a media-browser style import.
3. Preserve bins by reel.
4. Create proxies using ingest/proxy workflow or manually.
5. Attach proxies to original clips.
6. Use Toggle Proxies button while editing.
7. Edit with proxies.
8. Ensure full-resolution media is used for export.
9. Keep proxy files organized and backed up as needed.

Suggested structure:

```
PROJECT/  
  03_PROXIES/  
    PREMIERE/  
      A001/  
      A002/
```

Premiere proxy rules:

Rule	Reason
Do not rename originals	relink protection
Use reel bins	duplicate filename protection
Attach proxies properly	edit speed
Check audio channel mapping	split tracks
Export from originals	final quality

If Premiere shows offline media, reel-folder organization makes relinking easier.

39.10 Storage planning per 1TB originals

A project with 1TB of camera originals needs more than 1TB of total storage.

Plan for:

Storage Type	Approx Need
Camera originals	1TB
Backup copy	1TB
Proxies	variable, possibly 100–300GB+
Project files/cache	variable
Exports	variable
Safety overhead	20–30% free space preferred

A practical planning estimate:

```
1TB camera originals  
+ 1TB backup  
+ 0.2TB proxies/cache/exports  
= at least 2.2TB practical working need
```

Better to plan more.

Do not fill drives to the edge. Drives with very little free space can become slow, unstable, or difficult to manage.

Storage planning rule:

For every 1TB of originals, expect to need at least 2TB+ total storage when backups and working files are included.

39.11 Project folder structure

Use this structure:

```
PROJECT_NAME/  
  00_ADMIN/  
    Clip_Log.xlsx  
    Paper_Log.pdf  
    Notes/  
    Releases/  
    Settings_Notes/  
  01_CAMERA_ORIGINALS/  
    20260515_NCAR_FX6_A001/  
    20260515_NCAR_FX6_A002/  
  02_AUDIO_ORIGINALS/  
    RODE_TX1/  
    RODE_TX2/  
    BOOM/  
    ROOM_TONE/  
  03_PROXIES/  
    RESOLVE/  
    PREMIERE/  
  04_PROJECT_FILES/  
    Resolve/  
    Premiere/  
  05_EXPORTS/  
    Review/  
    Final/  
  06_DELIVERY/  
    Master/  
    Social/  
    Archive/
```

This separates:

- originals,
- audio,
- proxies,
- project files,
- exports,
- delivery.

Do not mix exports, proxies, and originals in the same folder.

39.12 Backup/archive rules

Use these backup/archive rules:

39.12.1 Originals

- Copy full card structure.
- Preserve untouched.
- Store by reel.
- Back up before formatting.
- Do not rename original media files.

39.12.2 Audio originals

- Copy RØDE onboard files.
- Copy boom/external audio.
- Copy room tone.
- Label by reel/subject/source.
- Back up with project.

39.12.3 Project files

- Save Resolve/Premiere project files in 04_PROJECT_FILES.
- Create versioned project saves.
- Back up project files separately.

Example:

```
NCAR_Edit_v01  
NCAR_Edit_v02  
NCAR_Edit_v03
```

39.12.4 Proxies

- Proxies can be regenerated if originals exist.
- They are less critical than originals.
- Still keep them if they save time.

39.12.5 Exports

- Store review exports separately from final exports.
- Do not confuse review files with masters.

39.12.6 Archive

Final archive should include:

Item	Include
Camera originals	yes

Item	Include
Audio originals	yes
Clip log	yes
Project files	yes
Final exports	yes
LUT/settings notes	yes
Proxies	optional
Cache/render files	usually optional

Final storage rule:

Originals and logs are irreplaceable. Proxies and cache are replaceable. Protect accordingly.

Chapter 40. Created Deliverables and Templates

40.1 Excel/XLSX Clip Name Footage Description Log

The project created an Excel/XLSX-style Clip Name Footage Description Log concept to track clips from production through post.

The Excel version is the master sortable/filterable log. It is better than paper for:

- sorting by reel,
- filtering by scene,
- tracking selects,
- tracking backup status,
- tracking proxy status,
- tracking import status,
- recording detailed notes,
- managing large projects.

The Excel log should support the whole workflow:

shoot → slate → field note → full card offload → spreadsheet completion → NLE
import → proxy tracking → edit status

The Excel log is not just a list of filenames. It is the project's media intelligence sheet.

Core Excel columns:

Column	Purpose
Date	shoot date
Project Code	short project ID
Physical Card ID	reusable card
Reel ID	A001 etc.
Reel Folder	full folder name
Camera File	original filename
Unique Clip ID	A001_C0001
Scene Code	INT_ACT etc.
Description	what is in the clip
Shot Type	WS/MS/CU/etc.
Take	take number
Audio Routing	CH1/CH2/CH3 Or Other Boom sources
Look/Format	S-Log3, LUT, codec
Quality Note	focus/exposure/audio
Status	select/review/hold/reject
Backup	copied/verified
Import	NLE status
Proxy	proxy status
Notes	additional details

The Excel log is completed after offload because the actual camera filenames must be verified.

40.2 Word/DOCX Clip Name Footage Description Log

The Word/DOCX version is the printable field/document version.

It is useful for:

- production binders,
- handwritten notes,
- simple clip tracking,
- non-spreadsheet users,
- quick review sheets,
- sharing with someone who does not use Excel.

The Word version should not try to do everything the Excel version does. Its purpose is readability and field usability.

Recommended Word log table:

Reel Clip Unique Clip ID Scene Take Description Audio Status Notes

Example:

Reel	Clip	Unique Clip ID	Scene	Take	Description	Audio	Status	Notes
A001	C0001	A001_C0001	INT_ACT	T01	indoor action scene	CH1 TX1 / CH2 safety	Review	check focus
A001	C0002	A001_C0002	EXT_DLG	T01	outdoor dialogue	CH1 TX1 / CH2 TX2	Select	wind okay
A001	C0003	A001_C0003	EXT_CHASE	T01	outdoor chase	scratch/lavs	Review	check motion

The Word version is ideal for printing and marking up on set.

40.3 Clip Log sheet

The Clip Log sheet is the main working sheet in the Excel workbook.

It should include the most complete set of clip-level fields.

Recommended Clip Log structure:

Field Group	Columns
Identification	Date, Project Code, Reel ID, Physical Card ID, Camera
File Identity	Reel Folder, Camera File, Unique Clip ID
Scene Info	Scene Code, Scene/Subject, Shot Type, Take, Location
Description	Clip description, performance/action notes
Audio	Audio routing, RØDE mode, boom used, audio notes
Camera	Base ISO, EI, WB, LUT, codec, frame rate
Quality	focus note, exposure note, audio note
Post	status, imported, proxy, synced, backup
Notes	freeform comments

The Clip Log sheet should be the master clip record.

For the first three example clips:

Unique Clip ID	Scene Code	Description
A001_C0001	INT_ACT	indoor action scene

Unique Clip ID	Scene Code	Description
A001_C0002	EXT_DLG	outdoor dialogue scene
A001_C0003	EXT_CHASE	outdoor chase scene

Those descriptions can be expanded after review.

40.4 Project Setup sheet

The Project Setup sheet records the rules for the project so the log remains consistent.

It should include:

Setup Item	Example
Project Name	Nelson Actor Reel
Project Code	NCAR
Camera	FX6
Default Mode	Cine EI
Default Color/Gamma	S-Gamut3.Cine/S-Log3
Default LUT Monitor	s709
Internal Rec MLUT	Off
Default Codec	XAVC-I
Default Frame Rate	23.98p / 24p
Reel Format	A001, A002
Unique Clip Formula	Reel + Camera File Stem
Production Card IDs	CFE-01, CFE-02
Settings Card Label	FX6 SETTINGS — DO NOT FORMAT

The Project Setup sheet prevents the user from reinventing rules during a shoot.

It also documents the baseline for future reopening of the project.

40.5 Code Lists sheet

The Code Lists sheet contains standardized dropdown values or reference values.

Suggested code lists:

40.5.1 Scene codes

Code	Meaning
INT_ACT	indoor action

Code	Meaning
EXT_DLГ	exterior dialogue
EXT_CHASE	exterior chase
INT_INT	interior interview
EXT_INT	exterior interview
BROLL	b-roll
ROOM	room tone
TEST	test clip

40.5.2 Shot type codes

Code	Meaning
WS	wide shot
MS	medium shot
MCU	medium close-up
CU	close-up
ECU	extreme close-up
OTS	over-the-shoulder
INS	insert
RXN	reaction
MOV	moving shot

40.5.3 Audio routing codes

Code	Meaning
CH1_TX1_CH2_SAFETY	one transmitter with safety
CH1_TX1_CH2_TX2	two-transmitter split
CH1_TX1_CH2_SILENT	one transmitter in split mode
CH1_TX1_CH2_TX2_CH3_BOOM	two lavs plus boom
CH1_MERGED_CH2_BOOM	merged lavs plus boom
SCRATCH	scratch/reference audio

40.5.4 Status codes

Code	Meaning
Select	strong usable clip
Review	needs review
Hold	keep but not priority
Reject	likely unusable

Code	Meaning
Audio Issue	audio problem
Focus Issue	focus problem
Exposure Issue	exposure problem
Test	technical test only

The Code Lists sheet keeps the log clean and consistent.

40.6 Paper Log sheet

The Paper Log sheet is the printable minimal field log.

It should not contain every Excel field. It should be simple enough to use while shooting.

Recommended Paper Log:

PROJECT:
DATE:
CAMERA:
PHYSICAL CARD:
REEL:
AUDIO SETUP:
LOOK / LUT:
FRAME RATE:

CLIP LOG
Reel | Clip | Scene | Take | Short Note | Status

Example filled paper log:

Reel	Clip	Scene	Take	Short Note	Status
A001	C0001	INT_ACT	T01	indoor action	review focus
A001	C0002	EXT_DLG	T01	outdoor dialogue	check wind
A001	C0003	EXT_CHASE	T01	outdoor chase	check motion

The paper log should be fast enough that the operator actually uses it.

Field rule:

One short line per clip is better than a perfect spreadsheet that never gets filled out.

40.7 How to use these templates in the field

Use the templates in a two-stage workflow.

40.7.1 Before the shoot

Prepare:

1. Project code.
2. Physical card labels.
3. Reel ID starting point.
4. Printed paper log.
5. Excel log workbook.
6. Word log if desired.
7. Code lists.
8. Audio routing plan.
9. File structure on storage drive.

Before rolling first clip, fill the paper log header:

Project: NCAR
Date: 2026-05-15
Camera: FX6
Card: CFE-01
Reel: A001
Audio: CH1 TX1 / CH2 TX2
Look: S-Log3 clean / s709 monitor

40.7.2 During the shoot

For each clip:

1. Slate verbally or visually.
2. Record the take.
3. Write one short field log line.
4. Mark obvious problems.
5. Do not fill every detailed spreadsheet column on set.

Example:

A001 C0001 INT_ACT indoor action – review focus
A001 C0002 EXT_DLG outdoor dialogue – check wind
A001 C0003 EXT_CHASE outdoor chase – good movement / check audio

40.7.3 After the shoot

After offload:

1. Copy full card.
2. Verify.
3. Make backup.
4. Open actual camera file list.

5. Transfer paper log notes into Excel.
6. Create unique clip IDs.
7. Add audio/camera/look fields.
8. Add backup/import/proxy status.
9. Update Word log if needed.

The field log becomes the memory bridge. The Excel log becomes the master record.

40.8 How to use these templates in post

In post-production, the templates help organize the edit.

40.8.1 Resolve/Premiere import

Use the log to create bins:

A001
A002
INT_ACT
EXT_DLG
EXT_CHASE
SELECTS

40.8.2 Audio inspection

Use the Audio Routing column to know what should be on each channel.

Example:

Audio Routing	Post Check
CH1 TX1 / CH2 TX2	inspect separate channels
CH1 TX1 / CH2 safety	CH2 is lower duplicate
CH1 TX1 / CH2 silent	center CH1 mono
CH1 TX1 / CH2 TX2 / CH3 boom	label boom track
CH1 merged lavs / CH2 boom	do not expect separate lavs

40.8.3 Selects

Use the Status column to find:

- Select,
- Review,
- Hold,
- Audio Issue,
- Focus Issue,

- Exposure Issue.

This speeds up editing because the user does not have to watch every clip blindly at first.

40.8.4 Proxy tracking

Use Proxy Created to know which clips are ready for smooth editing.

Unique Clip ID Proxy Created

A001_C0001	Yes
A001_C0002	Yes
A001_C0003	No

40.8.5 Backup tracking

Use backup fields to make sure nothing is at risk.

Reel Backup 1 Backup 2 Verified

A001	Yes	Yes	Yes
A002	Yes	No	Pending

Do not format or delete anything until backup status is complete.

40.8.6 Final project archive

At the end of the project, archive:

- full camera originals,
- RØDE onboard audio,
- boom/external audio,
- room tone,
- Excel log,
- Word log,
- project files,
- final exports,
- LUT/settings notes,
- relevant proxy files if desired.

Final deliverable/template rule:

The log is not paperwork for its own sake. It is the map that keeps footage, sound, scenes, cards, and post-production from becoming confused.

PART VIII — APPENDICES AND QUICK REFERENCES

Appendix A. One-Transmitter RØDE Quick Reference

A.1 Final settings table

Use this setup when recording **one person with one RØDE transmitter and one RØDE receiver**, with the FX6 recording the same microphone to CH1 and CH2 at two different levels.

Item	Final Setting
RØDE transmitter	Worn by subject
RØDE receiver	Mounted on FX6 shoe if desired
Actual audio connection	RØDE receiver 3.5 mm output to FX6 INPUT1
FX6 INPUT1 physical switch MIC	
FX6 INPUT2 physical switch	Not used for this baseline
Phantom power	Off / do not use MIC+48V
RØDE receiver output gain	0 dB
FX6 audio Reference	-30 dB
CH1 Source	INPUT1 MIC
CH2 Source	INPUT1 MIC
CH1 dial	7
CH2 dial	5
CH1 role	Main dialogue
CH2 role	Lower safety copy
Headphones	MDR-7506 into FX6 headphone jack
Normal speech target	-12 to -18 dB
Loud speech/shout target	around -10 dB
Clipping limit	never 0/red

Correct signal path:

```

RØDE transmitter
  ↓ wireless
RØDE receiver
  ↓ 3.5 mm output
3.5 mm-to-XLR cable/adaptor
  ↓

```

```
FX6 INPUT1 set to MIC
↓
CH1 INPUT1 main
CH2 INPUT1 lower safety
```

Do not confuse physical mounting with audio routing. The RØDE receiver can sit on the FX6 shoe, but the shoe is only a mounting location in this setup. The audio still requires the 3.5 mm cable into the FX6 audio input.

A.2 Safety-track workflow

The one-transmitter safety-track workflow records the same mic twice:

Channel	Signal	Level	Purpose
CH1	RØDE via INPUT1	higher	main dialogue
CH2	same RØDE via INPUT1	lower	safety backup

Use this workflow when:

- only one person is speaking,
- the scene may include shouting or loud emotional moments,
- you want a lower backup inside the FX6,
- you do not need a second transmitter on CH2.

The safety track is useful only if CH2 is actually lower than CH1. The final proven level relationship is:

```
CH1 dial 7 = main
CH2 dial 5 = lower safety
```

If CH1 clips during a shout, CH2 may still be usable.

Do not use this setup for two separate people unless both people are intentionally being recorded together into one input. For two separate RØDE transmitters, use the split-track workflow instead.

A.3 Target meter levels

Use the FX6 meters to verify recorded level.

Voice / Sound	Target
Normal speaking voice	-12 to -18 dB
Strong/loud speech	around -12 to -10 dB
Shout/laugh	around -10 dB if possible

Voice / Sound	Target
Red / 0 dB	avoid; clipping danger

Meter rule:

Normal voice: healthy but not hot
 Loud voice: still below clipping
 0/red: never the target

Headphone loudness is not recording level. If the headphones are too loud, reduce FX6 headphone volume. Do not lower the recording level unless the meters are too hot.

A.4 Troubleshooting checklist

Problem	Likely Cause	Correction
No meter movement	INPUT1 not set to MIC	Move INPUT1 switch to center MIC
Weak signal	RØDE output too low	Raise RØDE receiver output to 0 dB
FX6 dial near 10 but still weak	gain staging wrong	fix RØDE output first; consider -40 dB Reference only after retest
Audio clips	CH1 too high / RØDE too hot	lower CH1 dial or reduce RØDE output
CH2 not safer	CH2 dial too high	set CH2 around 5
Headphones loud	headphone volume high	lower FX6 headphone volume
TV audible	room bleed	turn off TV, close doors, move subject
Breathing loud	mic too close to breath path	move mic 6–8 inches below chin
Clothing rub	transmitter/lav touching fabric	reposition mic and secure clothing
Noise remains after lowering headphones	noise is recorded by mic	fix room/noise source; do not just lower headphone volume

One-transmitter pre-roll callout:

RØDE 0 dB.
 INPUT1 MIC.
 Reference -30.
 CH1 INPUT1 dial 7.
 CH2 INPUT1 dial 5.
 Headphones clean.
 Normal voice -12 to -18.
 Shout below red.

Appendix B. Two-Transmitter RØDE Split Quick Reference

B.1 Receiver Split mode

Use **RØDE Split mode** when two people are each wearing one RØDE transmitter and you want each person recorded separately.

Correct objective:

TX1 → FX6 CH1
TX2 → FX6 CH2

Do not use Merged mode if the goal is separate tracks.

RØDE Mode	Result	Use
Merged	TX1 and TX2 combined	simple mix, no separate control
Split	TX1 and TX2 separated left/right	professional two-person workflow

Split-mode test:

Test	Correct Result
Speak into TX1 only	CH1 moves; CH2 mostly quiet
Speak into TX2 only	CH2 moves; CH1 mostly quiet
Speak into both	CH1 and CH2 move independently

If one transmitter makes both channels move equally, stop and troubleshoot before recording.

B.2 Cable Techniques routing

Use the Cable Techniques stereo breakout cable:

3.5 mm TRS stereo male
↓
dual XLR-3M male

Project cable type:

Cable Techniques CT-GO2-YX3M-15
RØDE Wireless GO II-style "Y" to 2 XLR-3M low-profile cable

Required function:

Cable End	Function
3.5 mm TRS male plugs into RØDE receiver output	
Red XLR-3M	left / CH1 side
Blue XLR-3M	right / CH2 side

Do not substitute:

- ordinary headphone splitter,
- generic Y cable,
- single 3.5 mm-to-XLR,
- dual XLR female cable,
- RØDE SC11 for this FX6 XLR split task,
- passive adapter chain that does not preserve left/right split correctly.

B.3 Blue XLR / Red XLR table

Cable Plug FX6 Input FX6 Channel

Red XLR	INPUT1	CH1
Blue XLR	INPUT2	CH2

Field phrase:

Red to INPUT1.
Blue to INPUT2.
CH1 equals INPUT1.
CH2 equals INPUT2.

If people are reversed in post, either swap transmitter assignments, swap XLRs, or document the actual channel layout. The important point is that TX1 and TX2 are separated.

B.4 CH1/CH2 setup

FX6 physical input switches:

Input Setting

INPUT1 MIC
INPUT2 MIC

Phantom power:

Input	Phantom Power
INPUT1 receiving RØDE	Off / never MIC+48V
INPUT2 receiving RØDE	Off / never MIC+48V

FX6 channel routing:

Channel Input Select

CH1 INPUT1

CH2 INPUT2

Reference:

Input MIC Reference

INPUT1 -30 dB

INPUT2 -30 dB

Starting dials:

Channel Starting Dial

CH1 7

CH2 7

In split mode, CH2 is not safety. CH2 is Person 2's main audio. Adjust CH1 and CH2 separately for each person's real voice level.

B.5 TX1/TX2 test

Perform this test every time the two-transmitter system is installed.

TX1 test

1. TX1 on.
2. TX2 silent or off.
3. Speak into TX1.
4. Confirm CH1 moves.
5. Confirm CH2 stays mostly quiet.

TX2 test

1. TX2 on.
2. TX1 silent.
3. Speak into TX2.
4. Confirm CH2 moves.
5. Confirm CH1 stays mostly quiet.

Both test

1. Person 1 speaks.
2. Person 2 speaks.
3. Both speak briefly.
4. Confirm independent channel movement.
5. Listen with headphones.
6. Record short test.
7. Play back before serious recording.

Split-system pre-roll callout:

RØDE Split.
Cable Techniques installed.
Red INPUT1.
Blue INPUT2.
INPUT1 MIC.
INPUT2 MIC.
CH1 INPUT1.
CH2 INPUT2.
Reference -30 both.
TX1 only moves CH1.
TX2 only moves CH2.
Headphones clean.

Appendix C. Boom Mic Quick Reference

C.1 Three-track layout (No! See FX6 Audio Setup Field Guide Ver. 1.0)

Use the professional three-track layout when recording two RØDE transmitters plus a boom mic.
(No...Field Guide Setup differs and is already tested and setup—ignore Audio pgs 353-355)

FX6 Channel	Source	Physical Path
CH1	RØDE TX1	Red XLR to FX6 INPUT1
CH2	RØDE TX2	Blue XLR to FX6 INPUT2
CH3	Boom mic	Sony XLR-K3M/K2M via Shoe CH1
CH4	Off or optional Shoe CH2 unused unless needed	

Signal layout:

RØDE receiver in Split mode
↓ Cable Techniques cable
Red XLR → FX6 INPUT1 → CH1
Blue XLR → FX6 INPUT2 → CH2

Boom mic
↓ XLR cable
Sony XLR-K3M/K2M INPUT1

↓ Multi Interface Shoe
FX6 CH3 / Shoe CH1

This preserves:

- isolated lav 1,
- isolated lav 2,
- separate boom.

C.2 XLR-K3M/K2M mounting

The Sony XLR-K3M or XLR-K2M plugs into the FX6 Multi Interface Shoe.

It does not plug into:

- FX6 INPUT1,
- FX6 INPUT2,
- the RØDE receiver,
- the Cable Techniques cable.

Physical setup:

Device	Connection
RØDE receiver	3.5 mm output to Cable Techniques cable
Red XLR	FX6 INPUT1
Blue XLR	FX6 INPUT2
XLR-K3M/K2M	FX6 Multi Interface Shoe
Boom mic	Adapter INPUT1

Boom adapter check:

Adapter seated.
Boom in adapter INPUT1.
CH3 receives Shoe CH1.
CH4 off unless used.

C.3 CH3/Shoe CH1 routing

FX6 channel concept:

FX6 Channel	Input Select
CH1	INPUT1
CH2	INPUT2
CH3	Shoe CH1

FX6 Channel Input Select
CH4 Off or Shoe CH2

Boom test:

1. Speak into TX1.
2. CH1 should move.
3. Speak into TX2.
4. CH2 should move.
5. Speak into boom.
6. CH3 should move.
7. CH4 should remain off/unused unless deliberately configured.
8. Record test.
9. Play back all channels.

C.4 Phantom-power decision table

Phantom power is source-specific.

Source	Correct Input Setting
RØDE receiver	MIC; never MIC+48V
Phantom-powered shotgun/condenser boom	MIC+48V on boom adapter input only
Battery-powered boom mic	MIC
Dynamic mic	MIC
External mixer line feed	LINE

Absolute rule:

Never send phantom power to the RØDE receiver.

Boom-specific rule:

Use phantom power only if the boom microphone requires it, and only on the input connected to that boom.

C.5 Pro versus lower-cost setup comparison

Need	Setup	Result
One person with safety	CH1 INPUT1 / CH2 INPUT1	main + lower safety
Two separate RØDE lavs	RØDE Split + Cable Techniques	CH1 TX1 / CH2 TX2
Two lavs plus separate boom	Add XLR-K3M/K2M	CH1 TX1 / CH2 TX2 / CH3 boom

Need	Setup	Result
Two lavs plus boom without adapter	RØDE Merged + boom INPUT2	CH1 merged lavs / CH2 boom
Maximum post control	Pro three-track	isolated lavs and boom
Lower gear complexity	Merged lavs plus boom	lavs baked together

Boom pre-roll callout:

CH1 TX1.
CH2 TX2.
CH3 boom.
No phantom to RØDE.
Boom phantom only if required.
Headphones clean.
Test all three channels.

Appendix D. Cine EI Indoor Quick Reference

D.1 Base ISO

Indoor Base ISO decision:

Interior Condition	Base ISO
Lit actor reel	800
Lit feature dialogue	800
Controlled interview with key light	800
Window daylight interior	800
Dim documentary room	12800 may be needed
Night practical-only scene	12800 may be needed
Scene too dark but lighting can be added	Add light and use 800 if practical
Scene too dark and light cannot be added	12800

Indoor rule:

Use Base ISO 800 when you can control or add light.
Use 12800 only when the scene genuinely needs low-light capability.

Check ND first. If the room is dark and ND is accidentally On, clear ND before changing base ISO.

D.2 Shutter

Indoor cinematic shutter:

Frame Rate	Shutter
24p	1/48 or 180°
30p	1/60 or 180°
60p	1/120 or 180°

Indoor rule:

Do not change shutter to fix brightness unless solving flicker or making deliberate motion choice.

If lighting flicker appears, test shutter adjustment deliberately.

D.3 Aperture

Indoor aperture guide:

Shot	Aperture
Solo actor close-up	f/2.8–f/4
Dramatic close-up	f/2.8–f/4
Interview	around f/4
Two-person dialogue	f/4–f/5.6
Walk/movement	f/4–f/5.6
Wide/action	f/5.6 if focus reliability matters

Aperture rule:

Choose aperture for depth, emotion, and focus.
Do not choose shallow aperture if the eyes will go soft.

D.4 ND

Indoor ND starting point:

ND Clear

Use ND indoors only if:

- bright windows overpower scene,
- studio lights are too bright,
- desired aperture must be preserved,
- the image is too bright at correct shutter/aperture.

Do not use ND in a dark interior.

Indoor ND callout:

Inside: start Clear.
Add ND only if too bright.

D.5 WB

Indoor white balance:

Setting	Use
A	main indoor custom WB
B	alternate indoor/exterior setup
Preset	fixed fallback
ATW	avoid for controlled actor/feature work

Indoor WB procedure:

1. Turn off bad overhead lights if possible.
2. Establish key/practical lighting.
3. Place gray/white card at subject face position.
4. Set WB A.
5. Press WB SET.
6. Check skin through LUT.
7. Lock WB for matching shots.

Indoor rule:

White balance for the face under the actual key light.

D.6 LUT

Indoor LUT monitoring:

Destination	Setting
VF/Proxy/Stream MLUT	On if desired
SDI/HDMI MLUT	On for external monitor
Internal Rec MLUT	Off
External monitor LUT	Off/not used if FX6 sends MLUT

Indoor LUT phrase:

Monitor LUT On.

Internal Rec LUT Off.
Recording clean S-Log3.

D.7 Focus

Indoor focus workflow:

1. Place subject.
2. Set aperture.
3. Use Focus Magnifier.
4. Focus near eye.
5. Check two-person depth if applicable.
6. Recheck after zoom/reframe.
7. Test if movement occurs.

Indoor focus rule:

Actor reel close-up = near eye sharp.
Two-person scene = enough depth for both if both matter.

D.8 Audio

Indoor audio checklist:

Item	Check
RØDE gain	0 dB
INPUT1/INPUT2	MIC
Phantom to RØDE	Off
CH routing	correct mode
Headphones	MDR-7506
TV	off/isolated
HVAC	reduced if possible
Clothing rub	checked
Breathing	mic 6–8 inches below chin
Room tone	record 20–30 sec

Indoor pre-roll callout:

Cine EI.
Base ISO chosen.
Shutter 180.
Aperture chosen.
ND Clear.
WB locked.
LUT monitor on, internal record off.

Focus checked.
Audio routed.
Room clean.

Appendix E. Cine EI Outdoor Quick Reference

E.1 Base ISO

Outdoor daylight baseline:

Base ISO 800

Use Base ISO 800 for:

- bright daylight,
- open shade,
- overcast day,
- exterior dialogue,
- exterior actor close-up,
- documentary interview,
- chase/action scene.

Use Base ISO 12800 only for genuine low-light exterior conditions:

- night exterior,
- very dark available light,
- documentary low-light moment.

Outdoor rule:

Daylight exterior = Base ISO 800 + Variable ND.

E.2 Shutter

Outdoor shutter guide:

Frame Rate	Shutter
24p	1/48 or 180°
30p	1/60 or 180°
60p	1/120 or 180°

Outdoor rule:

Do not raise shutter because sun is bright.
Use ND.

Change shutter only for:

- flicker,
- stylized action,
- deliberate motion effect,
- technical requirement.

E.3 Aperture

Outdoor aperture guide:

Shot	Aperture
Emotional close-up	f/2.8–f/4 if focus allows
Interview	f/4–f/5.6
Two-person dialogue	f/4–f/5.6
Walk-and-talk	f/4–f/5.6
Chase/action	f/5.6–f/8 if focus is difficult
Wide/context	f/5.6–f/8

Outdoor rule:

Choose aperture for look and focus.
Use Variable ND to control exposure.

E.4 Variable ND

Outdoor ND baseline:

Variable ND On

Procedure:

1. Set Base ISO 800.
2. Set shutter 180°.
3. Choose aperture.
4. Turn Variable ND On.
5. Adjust ND using waveform/zebras.
6. Check face and highlights.
7. Record test if important.

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Use Auto ND only when documentary movement through changing light makes manual ND impractical.

Auto ND guide:

Situation	Auto ND
Actor reel	usually no
Feature dialogue	usually no
Sit-down interview	usually no
Walk-and-talk through changing light	can be useful
Fast documentary	can be useful

E.5 WB

Outdoor white balance options:

Condition	WB Approach
controlled exterior	custom B
open shade	custom B preferred
daylight fallback	Preset/fixed daylight
fast documentary	fixed daylight or quick custom
changing sun/shade	choose dominant face light

Outdoor rule:

White balance for the face, not the sky.

Avoid ATW for controlled actor/feature shots. Use it only if documentary conditions demand speed and color drift is acceptable.

E.6 Exposure tools

Outdoor exposure must use tools because sun/glare can mislead the monitor.

Use:

- waveform,
- zebras,
- Focus Magnifier,
- monitor shade if possible,
- test recording.

Outdoor exposure priorities:

Scene	Priority
Actor close-up	face/eyes
Dialogue	both faces
Interview	subject face and audio
Chase/action	focus/motion and highlight control
Landscape/context	protect important highlights

Outdoor warning:

A bright monitor image is not exposure truth.
Use waveform/zebras.

E.7 Focus

Outdoor focus problems:

- bright sun makes monitor hard to see,
- longer lenses increase focus sensitivity,
- moving subjects drift out of focus,
- shallow aperture increases risk,
- heat/background shimmer may distract.

Outdoor focus checklist:

Check	Action
Monitor visibility	shade if possible
Focus Magnifier	use for critical shots
Near eye	check for close-ups
Two-person	f/4–f/5.6
Movement	rehearse
Zoom change	recheck focus
Face/Eye AF	test before relying

Outdoor focus rule:

Bright sun makes focus judgment harder.
Use magnification and safer aperture when needed.

E.8 Audio/wind

Outdoor audio must be protected from wind and environment.

Outdoor audio checklist:

Item	Check
Lav windscreen	installed
Boom wind protection	installed if boom used
RØDE routing	verified
Headphones	worn
Wind rumble	checked
Traffic	evaluated
Aircraft/mowers	listen before rolling
Clothing rub	checked
Split TX1/TX2	tested
Room/ambient tone	record if useful

Outdoor pre-roll callout:

Base ISO 800.
Shutter 180.
Aperture chosen.
Variable ND On.
WB locked.
Waveform/zebras checked.
Focus checked.
Wind/audio checked.
Slate and roll.

Appendix F. Actor Reel Lighting Quick Reference

F.1 Face

Actor reel face priority:

The actor's face must be readable.

Face lighting checklist:

Item	Check
Key light	soft and directional
Shadow side	shaped but not dead
Skin	natural, not gray
Forehead/nose	not clipped
Background	not brighter than face unless intentional

Item	Check
WB	locked
Exposure	waveform checked
LUT	viewing only

Actor reel face warning:

Do not make the actor too dark in pursuit of a muted look.

F.2 Eyes

Actor reel eye priority:

Eyes must be sharp and alive.

Eye checklist:

Item	Check
Focus	near eye sharp
Catchlight	present if appropriate
Shadow	not hiding both eyes
Glasses	glare controlled
Monitor	magnifier used
Aperture	not too shallow for performance movement

Eye rule:

If the eyes are soft, the take is damaged.

F.3 Background

Actor reel background should support the performer.

Control:

- bright objects,
- loud colors,
- logos,
- clutter,
- white walls,
- windows,
- moving screens,
- random household items.

Background checklist:

Item	Desired State
color	muted
brightness	controlled
clutter	removed
depth	subject away from wall
practicals	dimmed/controlled
distraction	none stronger than actor

Background rule:

The viewer should look at the actor first.

F.4 Performance priority

Actor reel hierarchy:

1. performance,
2. clean dialogue,
3. sharp eyes,
4. readable face,
5. controlled background,
6. cinematic lighting,
7. muted grade.

Do not sacrifice performance clarity for:

- extreme darkness,
- unnecessary zoom,
- overly shallow focus,
- aggressive LUT,
- distracting lighting,
- loud art direction.

Actor reel final callout:

Cinematic but clear.

Muted but alive.

Stylish but performance-first.

Appendix G. Feature Scene Lighting Quick Reference

G.1 Motivated source

Feature lighting should appear motivated.

Possible motivations:

- window,
- lamp,
- hallway,
- doorway,
- TV,
- streetlight,
- car headlights,
- practical room light,
- sun direction.

Motivated lighting rule:

The audience should feel where the light comes from, even if a hidden light is doing the real work.

Motivated-source checklist:

Item	Check
visible/practical source	plausible
key direction	matches source
reverse angle	still believable
background	supports source
WB	consistent
practical brightness	controlled

G.2 Continuity

Feature scenes must cut together.

Continuity checklist:

Item	Track
WB	same or deliberate change

Item	Track
aperture	consistent depth
exposure	faces match
key direction	consistent motivation
LUT monitoring	same look
audio routing	same channel plan
background	not shifting distractingly
props	consistent
eyeline	correct
focal length	intentional pattern

Continuity rule:

Do not make every angle a separate lighting experiment.

G.3 Contrast

Feature contrast should be shaped, not accidental.

Contrast tools:

- soft key,
- negative fill,
- back edge,
- controlled practical,
- background level,
- wardrobe tone,
- set color.

Contrast checklist:

Problem	Fix
too flat	add negative fill / move key
too dark	add fill or raise key slightly
background too bright	dim/control/reframe
shadows muddy	expose cleanly and light intentionally
harsh face	soften key

Contrast rule:

Create mood with lighting ratio, not underexposure.

G.4 Palette

Feature palette should be intentional.

Preferred muted palette:

- charcoal,
- navy,
- gray,
- olive,
- brown,
- taupe,
- cream,
- burgundy,
- rust,
- dark wood,
- aged metal.

Avoid unless intentional:

- neon colors,
- bright red,
- saturated green,
- royal blue,
- busy patterns,
- shiny plastic,
- bright white in key areas.

Palette rule:

Control color before the camera records it.

Feature final callout:

Design the scene.
Match the coverage.
Preserve the negative.
Finish the look in the grade.

Appendix H. Documentary Interview Quick Reference

H.1 Face

Documentary face priority:

The subject must look credible, natural, and readable.

Interview face checklist:

Item	Check
key light	soft and believable
eyes	sharp
skin	natural
background	relevant but controlled
WB	locked
exposure	waveform checked
contrast	shaped but not theatrical
monitor LUT	viewing only

Documentary face warning:

Do not over-stylize the subject until credibility suffers.

H.2 Audio

Documentary audio priority:

Clean speech is essential.

Audio checklist:

Item	Check
lav	placed cleanly
boom	used if available
RØDE gain	0 dB baseline
INPUT switches	MIC for RØDE
phantom	never to RØDE
headphones	MDR-7506
room noise	checked
wind	controlled outdoors
room tone	recorded
onboard backup	enabled if available

Interview audio callout:

Listen before asking the first real question.

H.3 Background

Documentary background should support the subject.

Good background:

- relevant,
- simple,
- not too bright,
- not cluttered,
- not logo-heavy,
- not dominated by windows,
- not full of loud colors,
- has some depth.

Background checklist:

Problem	Fix
bright window	reframe/curtain/move subject
clutter	remove or angle away
flat wall	move subject away
irrelevant objects	remove
logos	remove/avoid
TV/screen	turn off

Documentary background rule:

Preserve truth, remove distractions.

H.4 Setup speed

Documentary setup must be fast enough to preserve subject energy.

Fast interview order:

1. choose quiet room,
2. choose background,
3. place subject,
4. set soft key/window angle,
5. set WB,
6. set exposure,
7. set focus,

8. set audio,
9. record test,
10. begin.

Fast documentary callout:

Quiet room.
Clean face.
Sharp eyes.
Good audio.
Controlled background.
Roll.

Appendix I. File Naming Quick Reference

I.1 Reel folder format

Use:

YYYYMMDD_PROJECT_FX6_A001

Example:

20260515_NCAR_FX6_A001

Breakdown:

Element	Meaning
20260515	date
NCAR	project code
FX6	camera
A001	reel ID

More examples:

20260515_NCAR_FX6_A001
20260515_NCAR_FX6_A002
20260516_NCAR_FX6_A003

Do not put long scene descriptions in the reel folder name.

I.2 Unique Clip ID

Formula:

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Unique Clip ID = Reel ID + "_" + Camera File Stem

Examples:

Reel ID Camera File Unique Clip ID

A001	C0001.MXF	A001_C0001
A001	C0002.MXF	A001_C0002
A002	C0001.MXF	A002_C0001
A003	C0001.MXF	A003_C0001

Use Unique Clip ID in:

- log,
- notes,
- bins,
- slates,
- proxy names if desired,
- audio backup references.

Do not rename camera originals just to create the Unique Clip ID. The ID can live in the log and NLE display name.

I.3 Physical card ID

Label physical cards:

CFE-01
CFE-02
CFE-03

Physical card ID means the reusable card. Reel ID means the recorded/offloaded batch.

Example:

Physical Card	Reel
CFE-01	A001
CFE-02	A002
CFE-01 reused later	A003

Card rule:

Same physical card reused = new reel ID.

I.4 Settings card label

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Settings card label:

FX6 SETTINGS — DO NOT FORMAT

Short version:

FX6 SETTINGS
DO NOT FORMAT

Settings card stores:

- ALL Files,
- User Files,
- Scene Files,
- LUT files,
- setup notes.

Do not use the settings card as a normal production recording card.

I.5 Do-not-do examples

Do not use long reel folder names:

20260515_Nelson_Cyr_Actor_Reel_Netflix_Muted_Color_Cine_EI_Outdoor_Dialogue_C
hase_Scenes_Final_Version_A001

Use:

20260515_NCAR_FX6_A001

Do not rename camera originals like:

Outdoor_chase_scene_best_take_actor_runs_down_driveway_version_final.MXF

Use log entry:

Unique Clip ID	Description
A001_C0003	outdoor chase scene

Do not dump all clips into:

ALL_FOOTAGE/
C0001.MXF
C0002.MXF
C0001.MXF

Use:

```
01_CAMERA_ORIGINALS/  
  20260515_NCAR_FX6_A001/  
  20260515_NCAR_FX6_A002/
```

File naming final callout:

Short names for files and folders.
Rich descriptions in the log.
Full card folders preserved.

Appendix J. Offload and Backup Quick Reference

J.1 Copy full card

Copy the full card structure into a reel folder.

Correct:

```
01_CAMERA_ORIGINALS/  
  20260515_NCAR_FX6_A001/  
    [full card copy]
```

Do not copy only MXF files.

Do not mix cards.

Do not rename originals.

Do not delete support files.

Full-card copy statement:

Copy the card root contents into the reel folder exactly.

J.2 Verify

Verify before formatting.

Minimum verification:

Check	Required
destination folder exists	yes

Check	Required
folder size plausible	yes
clips visible	yes
first clip opens	yes
last clip opens	yes
log updated	yes
second backup made	yes before formatting

Better verification:

- file count comparison,
- copy tool verification,
- checksum/verified copy software,
- import test in Resolve/Premiere.

Verification rule:

If verification is uncertain, do not format.

J.3 Second backup

Make at least two copies before formatting.

Minimum:

Copy	Location
Copy 1	working/edit drive
Copy 2	backup drive/NAS/external

Better:

Copy	Location
Copy 1	working drive
Copy 2	local backup
Copy 3	NAS/archive drive

Backup sequence:

```
Camera card
↓
Working drive
↓ verify
Backup drive
↓ verify
```

Only then format card if needed

J.4 Log

Update log after offload.

Log fields:

Field	Example
Physical Card	CFE-01
Reel	A001
Reel Folder	20260515_NCAR_FX6_A001
Copy Status	copied
Verify Status	verified
Backup 1	yes
Backup 2	yes
Notes	no issues

Also log RØDE onboard files if used.

J.5 Format only after confirmation

Before formatting production card, confirm:

Check	Required
full card copied	yes
copy verified	yes
second backup made	yes
RØDE onboard audio copied	yes, if used
room tone/audio copied	yes
log updated	yes
card is not settings card	yes
user confirms erase	yes

Format warning:

Never format FX6 SETTINGS — DO NOT FORMAT card as production media.

Offload final callout:

Copy full card.
Verify.

Back up.
Log.
Only then format.

Appendix K. Resolve/Premiere Proxy Quick Reference

K.1 Import rule

Import organized reel folders, not a flat pile of MXF files.

Correct source:

```
01_CAMERA_ORIGINALS/  
  20260515_NCAR_FX6_A001/  
  20260515_NCAR_FX6_A002/
```

NLE bin structure:

```
FX6_CAMERA_ORIGINALS/  
  A001_20260515_NCAR/  
  A002_20260515_NCAR/
```

Import rule:

Import by reel.
Preserve reel identity.
Use log for descriptions.

Do not mix same-name clips from different cards without reel context.

K.2 Proxy rule

Use proxies when original playback is heavy.

Preferred proxy options:

Proxy	Use
1080p DNxHR LB	light editing
1080p DNxHR SQ	better-looking edit proxy
720p proxy	weak system / large documentary project

Proxy workflow:

```
High-quality FX6 original
↓
Full-card backup
↓
Proxy generation
↓
Edit with proxy
↓
Grade/export from original
```

Do not lower capture quality only because editing is slow. Use proxies.

K.3 Grade/export rule

Grade and export from the best practical source.

Preferred:

Stage	Media
Editing	proxies if needed
Color grading	camera originals
Final export	camera originals
Archive	originals + project files + logs

Before final export:

- confirm proxies are not accidentally used for final if full-res is expected,
- confirm originals are online,
- confirm audio channels are correct,
- confirm LUT/grade pipeline is correct,
- confirm frame rate is correct.

Final export rule:

Proxies are for editing speed.
Originals are for final quality.

K.4 Audio-channel inspection rule

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Inspect audio channels after import.

Possible expected layouts:

Setup	CH1	CH2	CH3
One RØDE safety	TX1 main	TX1 lower safety	—
Two RØDE split	TX1	TX2	—
One RØDE permanent split	TX1	silent	—
Two lavs + boom	TX1	TX2	boom
Merged lavs + boom	merged lavs	boom	—

Post inspection:

1. Solo CH1.
2. Identify source.
3. Solo CH2.
4. Identify source.
5. Solo CH3 if present.
6. Label tracks.
7. Center mono dialogue.
8. Disable silent tracks if needed.
9. Do not assume muting an entire clip proves separation.

Audio post rule:

Inspect channels individually.
Do not judge split audio by muting the whole event.

Final project closeout callout:

Reels preserved.
Clip IDs logged.
Audio channels identified.
Proxies attached.
Originals backed up.
Final export from full-quality media.

###

FX6 CINE EI Muted-Color Shooting System Handbook V7.0

The final source document for creating the re-named V7.0 published handbook below is the docx file named... FX6_CINE_EI_Muted-Color_Shooting_System_Handbook_V1.0_WORKING_NAV_GUIDE_REPAIRED_V7.

Published file name and final title: “FX6 CINE EI Muted-Color Shooting System Handbook V7.0” .docx and/or .pdf