Rendering Dailies in DaVinci Resolve

from ARRI Original Camera Files

WORKFLOW GUIDELINE

Date: 3 December 2024

Version History

Version	Author	Change Note
2010-12-15	Martin	First document
2016-06-08	Heugel	Update for Resolve 12.5
2018-11-16	Hübsch	Update for Resolve 15.2
2019-10-25	Friedmann	Update for Resovle 16
2024-12-03	Duschl	Update for Resovle 19.x

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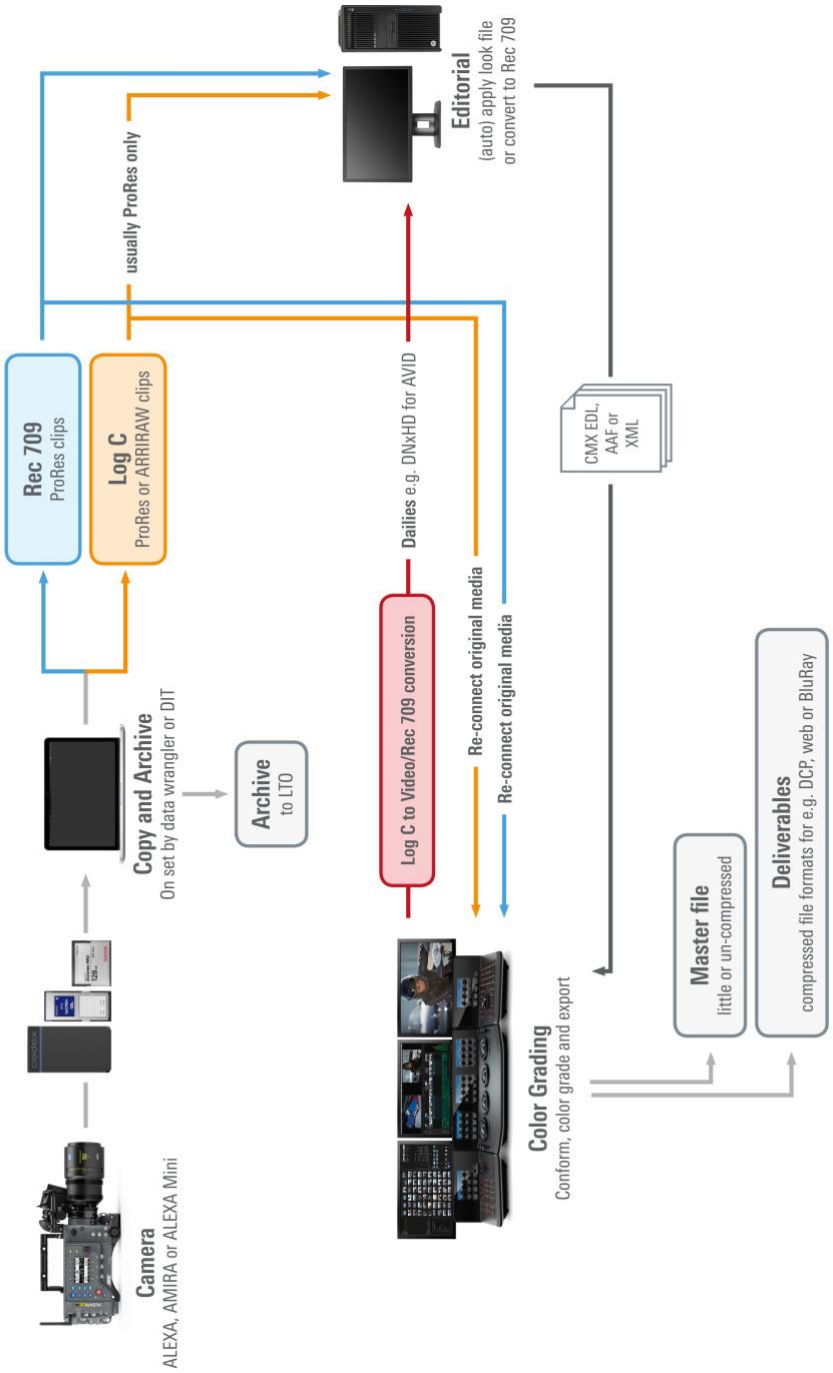
Introduction

Shooting Original Camera Files in ARRIRAW or AppleProRes with an ARRI camera usually requires dailies processed in SDR or HDR color spaces. Blackmagic's Resolve for Mac/Win/Linux can be an easy and fast solution to create color corrected or just delogged dailies. The available workflows include the possibility to use 3D LUTs on all shots or different LUTs on single shots, primary grading with the possibility to export a CDL plus a full DI secondary grading environment.

A basic knowledge and understanding of the software DaVinci Resolve is a must for the described workflow below. If you have never used DaVinci Resolve before, please refer to the DaVinci Resolve manual.

Please note: In this example, we assume a typical online-offline workflow. Nowadays, it is also possible to work directly with the original camera files if the hardware has the appropriate performance. Alternatively, some tools also offer an internal proxy workflow.

Workflow Overview

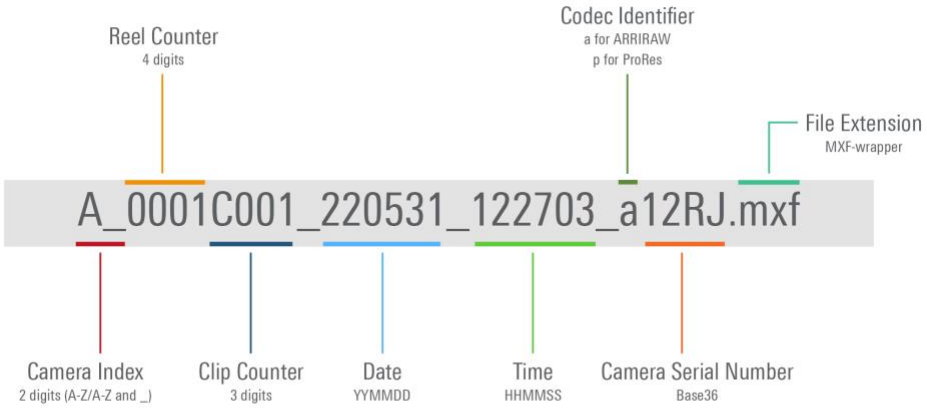


The ARRI Clip & Reel Naming Convention

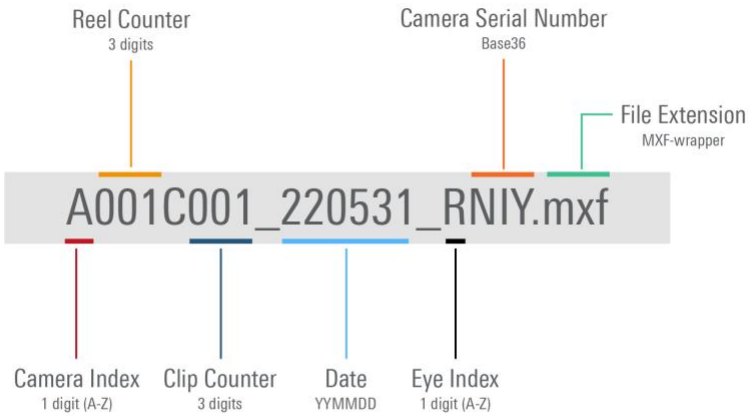
Clip Name

All ARRI cameras record Original Camera Files (OCFs) with the following naming conventions. We've updated the "ARRI Clip and Reel Naming Convention" with introduction of our ALEXA 35 camera system. More information is available on our "Editorial Workflow" website. The Clip Name is being reflected in the file name of the clip and is also stored in the metadata of each clip.

Clip Name | ALEXA 35 and later



Clip Name | ALEXA Classic/XT/SXT, Mini, AMIRA, Mini LF, LF, 65

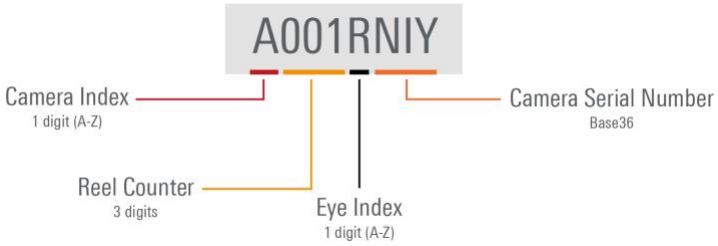


Reel Name

The file header of a clip holds the „Reel Name“ of the shot. For our example file mentioned above this would result in the following Reel Name:

Reel Name | ALEXA 35 and later

Reel Name | ALEXA Classic/XT/SXT, Mini, AMIRA, Mini LF, LF, 65

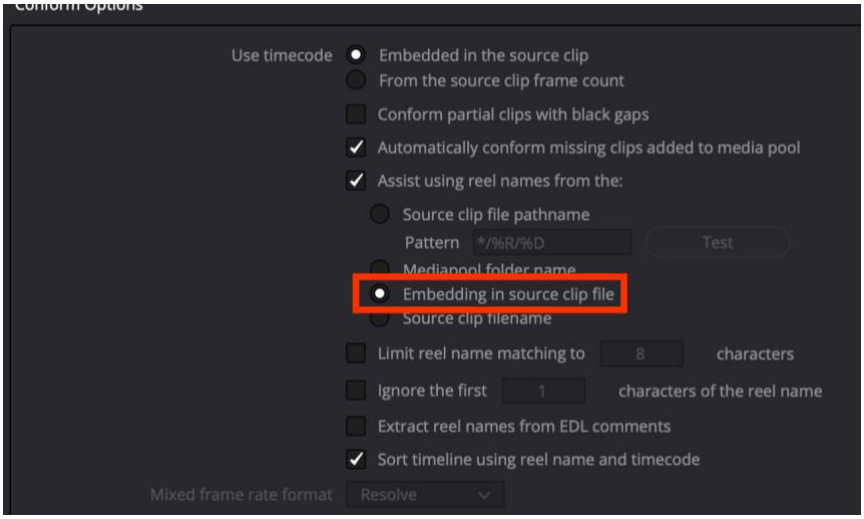


The “Reel Name” is generated from the camera index, reel counter and camera ID. To keep the “Reel Name” in any render generated from Resolve we need to tell Resolve what information should be used here, since we have two options here:

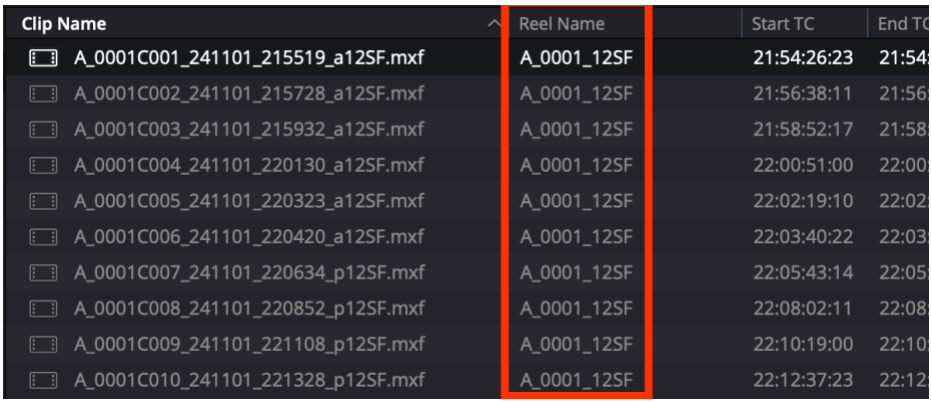
- Clip Name
- Reel Name

Conform Options in DaVinci Resolve

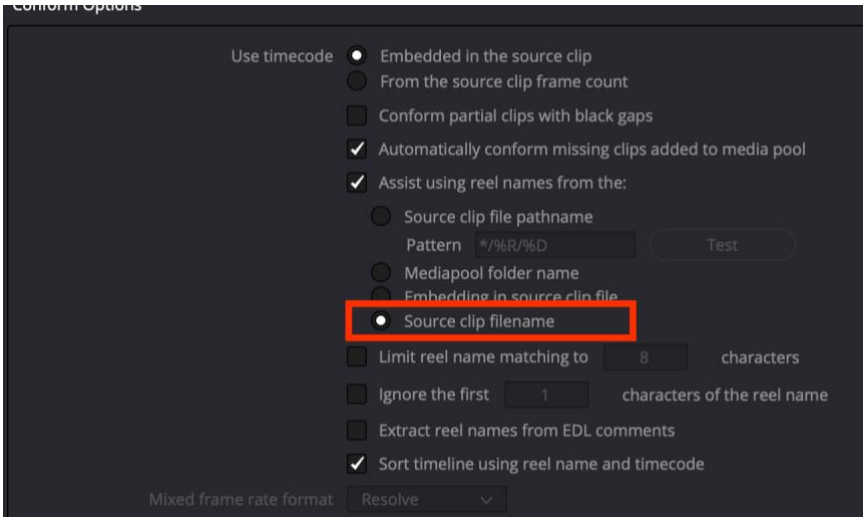
Go to the *Project Settings*, choose *General Options* from the list on the left and activate the following option in the *Conform Options*: Assist using reel numbers from the: **Embedding in source clip file**

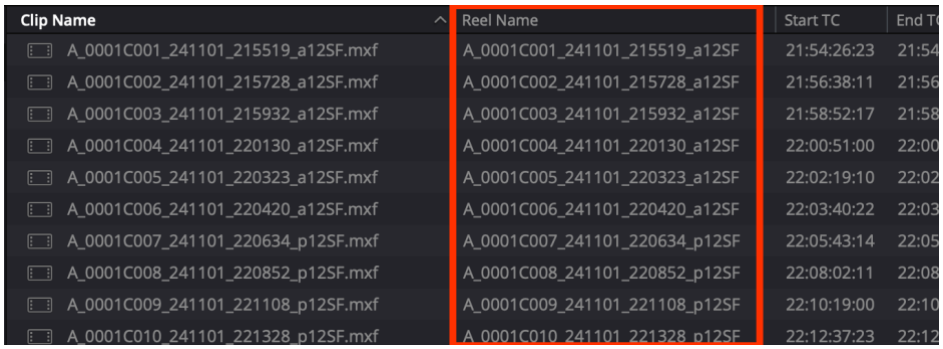


After this option has been selected, all camera original files will import with the correct “Reel Name”. The Reel Name information is being extracted from the file header of each file.



Another option is using the option “Source clip filename”. This would result in the full “Clip Name” as “Reel Name” within DaVinci Resolve. For a consistent workflow we suggest setting one or the other for the whole project. It can be necessary switching this on a clip-based manner on edge-cases.





Please note: More clear is using the full clip name, since it’s almost impossible generating identical names in that case. Nevertheless, please check with your editor and post-production facility before starting with the project. Otherwise a none-matching workflow could result in issues in a later step of post-production.

Applying 3D LUTs to your timeline and footage

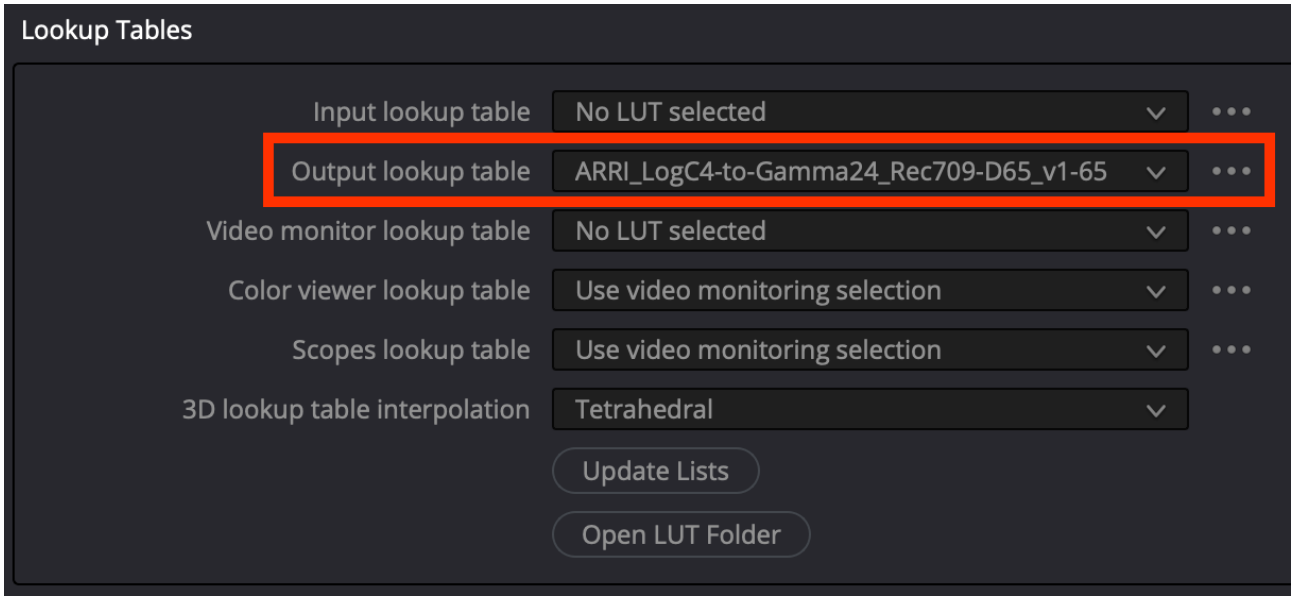
To convert all your shots from an ARRI LogC to a video color space you need to apply a Display Render Transform (DRT) as a 3D LUT. To ensure that the correct DRT is being applied we suggest using the 3D LUTs from our official ARRI LUT packages. The LUT packages are available here:

- LogC4 LUT Package
- LogC3 LUT Package

Depending on the used camera system, it's necessary applying the correct Display Render Transform (DRT) 3D LUT e.g. for ALEXA 35 you must use 3D LUTs from the ARRI LogC4 LUT package. For more informationa bout our ARRI LogC4 we refer to our LogC4 website.

Place the LUT in Resolves LUT folder (this is the default location):
/Library/Application Support/Blackmagic Design/DaVinci Resolve/LUT/

To activate newly imported LUTs go to the *Color Management* page in your *Project Settings* and press the **Update Lists** button.



Loading the 3D LUT into the *Output lookup table* still gives you the opportunity adjusting the grading on the LogC signal, before the signal get's converted by the 3D LUT.

If you prefer to grade in video color space use the 3D LUT in *Input lookup Table*. This will first apply the 3D LUT to your image and second your grading.

Please note: There are various ways of applying a Display Render Transform (DRT) 3D LUT in DaVinci Resolve.

Other commonly used options for applying a display render transform in DaVinci Resolve are:

- in the Project Settings *Lookup Tables* section
- in the *Color* page by adding it as a 3D LUT to a node (clip-based or full timeline)
- in the *Color* page by using a *Color Space Transform (CST)* effect (clip-based or full timline)

Please note: The last option "Color Space Transform (CST) requires additional knowledge for color spaces and color transformations and can be used from professional users.

DaVinci Resolve and Anamorphic Workflows

For the processing of Anamorphic Original Camera Files (OCFs) there's another short guideline showing the basic steps for a correct processing. We refer the *"ARRI ALEXA 35 - Anamorphic Formats in Post-Production - Workflow Guideline"*.

Rendering your footage for editing

Open the *Deliver* page and activate the following options: First, please choose your rendering format. There are different options for different applications available. Some well-known are:

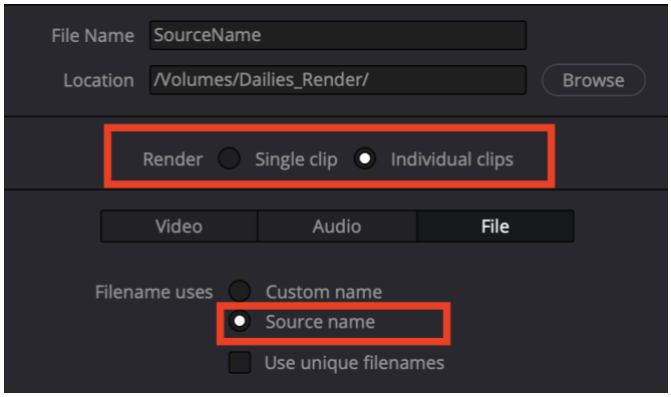
- Dailies for Adobe Premiere Pro or Apple Final Cut
  - ProRes LT (*.mov)
  - ProRes Proxy (*.mov)
- Dailes for Avid Media Composer
  - DNxHD 36 / 85 / 90 / 90x / 185 / 185x (.mxf)
  - DNxHR LB / SQ / HQ / HQX / 444 (.mxf)

e.g. ProRes LT or Proxy for Final Cut Pro or DNxHD 36 for AVID Media Composer, gives you very small files in full HD resolution. In the later projects phase you can relink back to the Original Camera Files e.g. for Color Correction or Mastering.

Next activate the following settings:

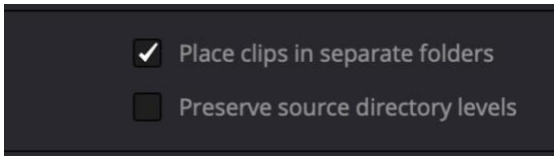
Render as: Individual clips

Filename uses: Source Name



This will keep the naming of your render files consistent to the original files, which makes it easier to track down issues during further production.

If you are pursuing a complex workflow the option to Place clips in separate folders, might be handy: “[...] when the filenames of clips coming from the same source media file may cause them to overwrite one another. This option is also commonly used when rendering VFX plates for additional postproduction work, allowing the VFX department to identify clips quickly and distribute the work accordingly.“ (Blackmagic Resolve Manual).



Please note: We recommend contacting your post-production supervisor to comply with any necessary naming conventions during the whole production.

Contact

In case you have questions or recommendations, please contact our Digital Workflow Support via email at: digitalworkflow@arri.de.