

# Color workflows for mixing LogC3 and LogC4 Sample Projects

WORKFLOW GUIDELINE

Date: June 22, 2023

## Version History

Version	Author	Change Note
2022-08-30	Simon Duschl	Added Chapters and Screenshots
2022-08-30	Florian Martin „Utsi“	Added Resolve Projects
2022-09-01	Simon Duschl	Added Filmlight Workflows
2022-09-15	Simon Duschl	Link for LUT packages
2022-09-20	Simon Duschl	Updated chapter 2.1.2
2023-06-21	Simon Duschl	Add “Decode as LogC4” option for LogC3

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# 1 Introduction

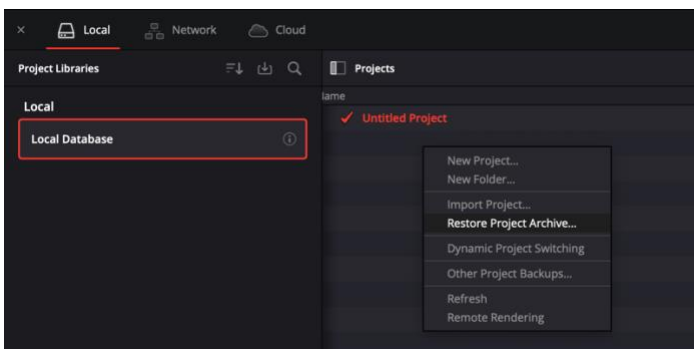
This workflow guideline will help you mix LogC3 and LogC4 footage within a single project. This guide references a number of different color grading tools and contains options for different workflows, e.g. color managed workflows or REVEAL Color Science workflows. It provides the project settings required, and sample projects files and footage are available as downloads at the end of this document.

## 2 Color workflows for mixing LogC3 and LogC4

There are different chapters for different color grading tools available in this section. Currently you will find sample projects and corresponding settings for Blackmagic Resolve Studio and Filmlight Baselight.

### 2.1 Blackmagic Resolve Studio

Since the release of Blackmagic Resolve Studio Version 18.0.1 it's now possible to work natively with LogC4 footage from our ARRI ALEXA 35 camera. To import the sample project files, please open the Resolve project manager > right-click and select "Restore Project Archive". Select and import the corresponding \*.dra project archive. Please find the sample project files under the chapter "[Download](#)" within this document.



### 2.1.1 Non-color managed workflows in REVEAL Color Science

Please find the sample project file under “[Downloads](#)” section within this document.

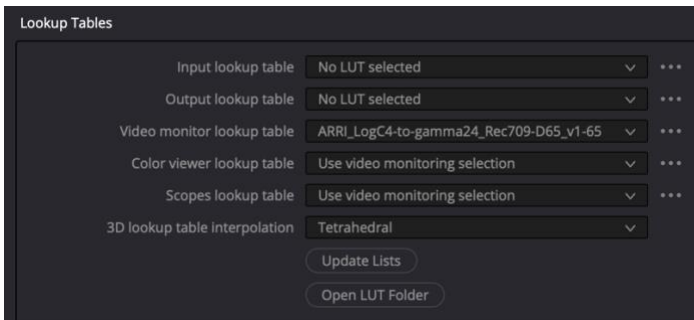
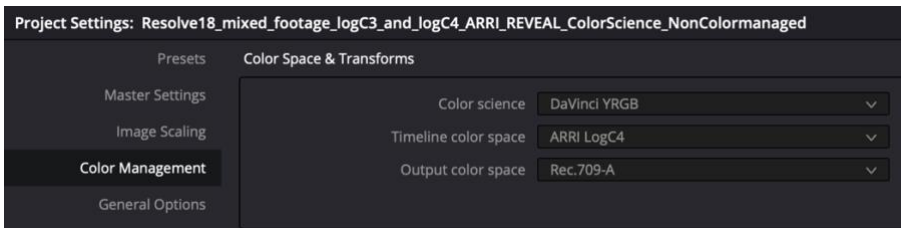
**Please note:**

With introduction of DaVinci Resolve Studio 18.5 it is now possible to debayer ARRIRAW footage from LogC3/AWG3 based ARRI Cameras into the new REVEAL Color Science (LogC4/AWG4)

As another alternative you can use our [ARRI Reference Tool](#) to convert ALEXA Mini LF & ALEXA LF ARRIRAW footage to LogC4 ProRes4444XQ. This intermediate format needs to be tagged manually in DaVinci Resolve Studio as LogC4.

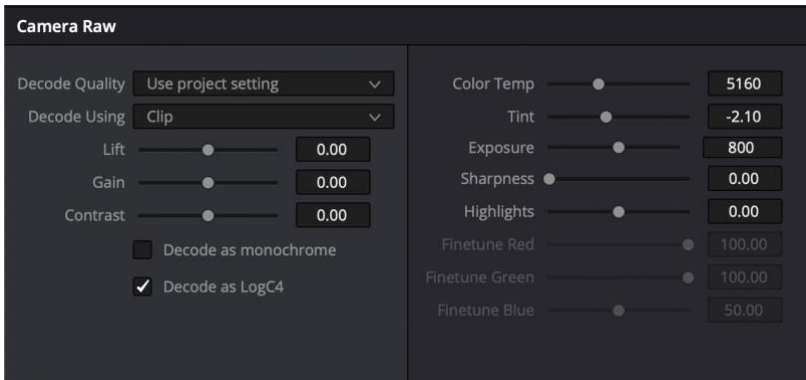
For a Resolve Non-color managed workflow in REVEAL Color Science working space, your project settings should match these settings:

- Project Settings | Color Management
  - Color science: DaVinci YRGB
  - Timeline color space: ARRI LogC4
  - Output color space: Rec. 709-A (valid for macOS)
- Lookup Tables:
  - Video monitor lookup table: [ARRI\\_LogC4-to-gamma24\\_Rec709-D65\\_v1-65.cube](#)

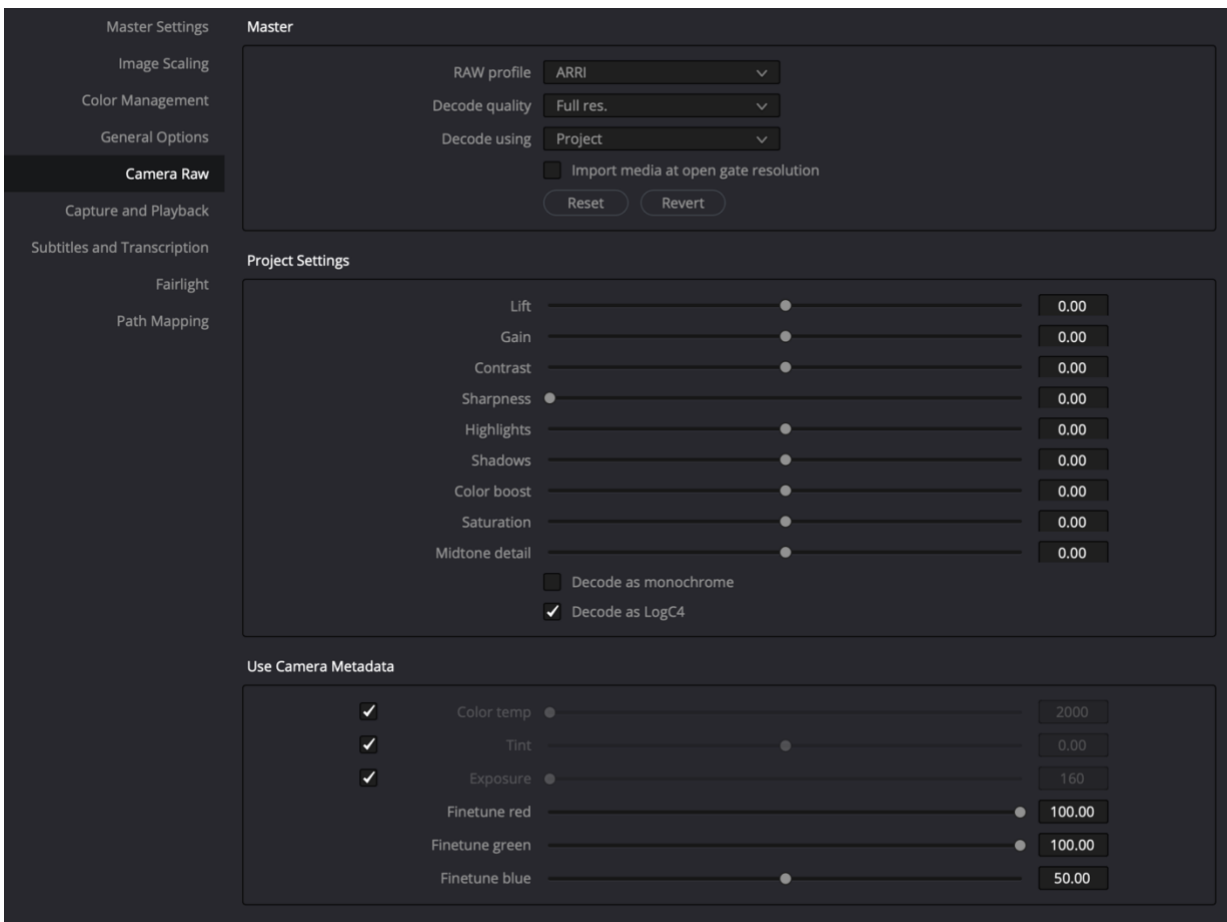


In addition to this project settings the LogC3 / AWG3 footage from an Log3 / AWG3 based ARRI camera e.g. ALEXA Mini LF can now be debayered in the Camera Raw clip or project settings within DaVinci Resolve Studio. You have two possibilities to activate this option within DaVinci Resolve Studio:

- Toggle on the option “Decode as LogC4” to get REVEAL color science in the Camera Raw clip settings for each clip



- Toggle on the option “Decode as LogC4” to get REVEAL color science in the global Camera Raw project settings

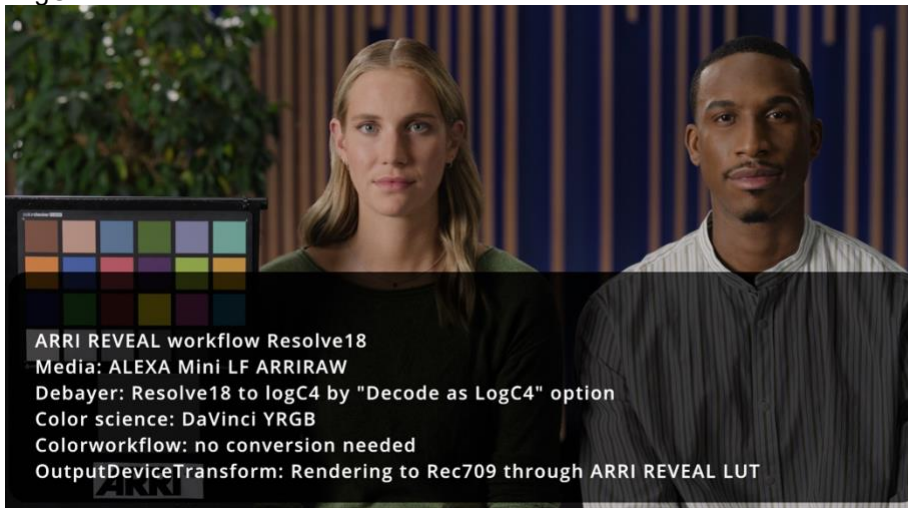


Your clips should result in following settings:

- ALEXA 35 ARRIRAW debayer to LogC4 / ARRI Wide Gamut 4 with color workflow in REVEAL Color



- ALEXA Mini LF ARRIRAW directly debayered to LogC4 / ARRI Wide Gamut 4 with “Decode as LogC4”



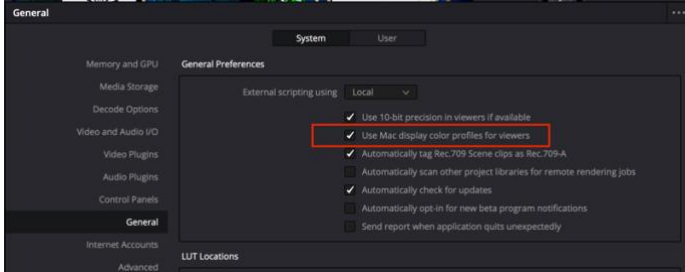
- ALEXA Mini LF ARRIRAW LogC3 to LogC4 debayer with ARRI Reference Tool to ProRes4444XQ LogC4 / ARRI Wide Gamut 4



## 2.1.2 Color managed workflow in REVEAL Color Science

Please find the sample project file under “[Downloads](#)” within this document.

Working with this color managed workflow results in an oversaturated and generally incorrect image in the Resolve Studio GUI “Viewer/Monitor”. However, the monitoring path (e.g. SDI output) will be processed correctly and can be used for viewing. **This behavior depends on whether the option “Use mac display color profiles for viewer” is selected or not. Correctly this is turned on for macOS systems.**



### Please note:

With introduction of DaVinci Resolve Studio 18.5 it is now possible to debayer ARRIRAW footage from LogC3 / AWG3 based ARRI Cameras into the new REVEAL Color Science (LogC4 / AWG4)

As another alternative you can use our [ARRI Reference Tool](#) to convert ALEXA Mini LF & ALEXA LF ARRIRAW footage to LogC4 ProRes4444XQ. This intermediate format needs to be tagged manually in DaVinci Resolve Studio as LogC4.

For a Resolve color managed workflow in REVEAL Color Science working space, your project settings should match these settings:

- Project Settings | Color Management
  - Color science: DaVinci YRGB Color Managed
  - [ ] Automatic color management (OFF)
  - Color processing mode: Custom
  - Input color space: ARRI LogC4
  - Timeline color space: ARRI LogC4
  - Timeline working luminance: HDR 1000
  - Output color space: Same as Timeline
  - Limit output gamut to: Output color space
  - Input DRT: None
  - Output DRT: None
  - [X] Use inverse DRT for SDR to HDR conversion (YES)
  - [X] Use white point adaption (YES)
  - [X] Use color space aware grading tools (YES)
  - Apply resize transformations in: Gamma
  - Graphics white level: 100 nits (can also be any other nit level)
  - [X] HDR mastering is for 1000 nits
- Loopup Tables:
  - Video monitor lookup table: [ARRI LogC4-to-gamma24 Rec709-D65\\_v1-65.cube](#)



Project Settings: Resolve18\_mixed\_footage\_logC3\_and\_logC4\_ARRI\_REVEAL\_ColorScience

Presets

Master Settings

Image Scaling

**Color Management**

General Options

Camera RAW

Capture and Playback

Subtitles

Fairlight

Path Mapping

Color Space & Transforms

Color science: DaVinci YRGB Color Managed

Automatic color management

Color processing mode: Custom

Input color space: ARRI LogC4

Timeline color space: ARRI LogC4

Timeline working luminance: HDR 1000

Output color space: Same as Timeline

Limit output gamut to: Output color space

Input DRT: None

Output DRT: None

Use inverse DRT for SDR to HDR conversion

Use white point adaptation

Use color space aware grading tools

Apply resize transformations in: Gamma

Graphics white level: 100 nits

HDR mastering is for 1000 nits

Lookup Tables

Input lookup table: No LUT selected

Output lookup table: No LUT selected

Video monitor lookup table: ARRI\_LogC4-to-gamma24\_Rec709-D65\_v1-65

Color viewer lookup table: Use video monitoring selection

Scopes lookup table: Use video monitoring selection

3D lookup table interpolation: Tetrahedral

Update Lists

Open LUT Folder

Your clips should result in following settings:

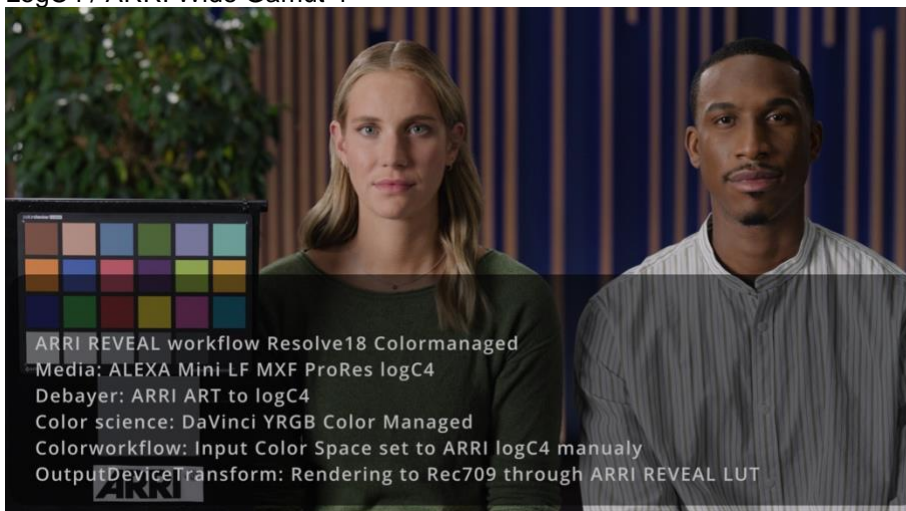
- ALEXA 35 ARRIRAW debayer to LogC4 / ARRI Wide Gamut 4 with color workflow in REVEAL Color



- ALEXA Mini LF ARRIRAW directly debayered to LogC4 / ARRI Wide Gamut 4 with “Decode as LogC4”



- ALEXA Mini LF ARRIRAW LogC3 to LogC4 debayer with ARRI Reference Tool to ProRes4444XQ LogC4 / ARRI Wide Gamut 4

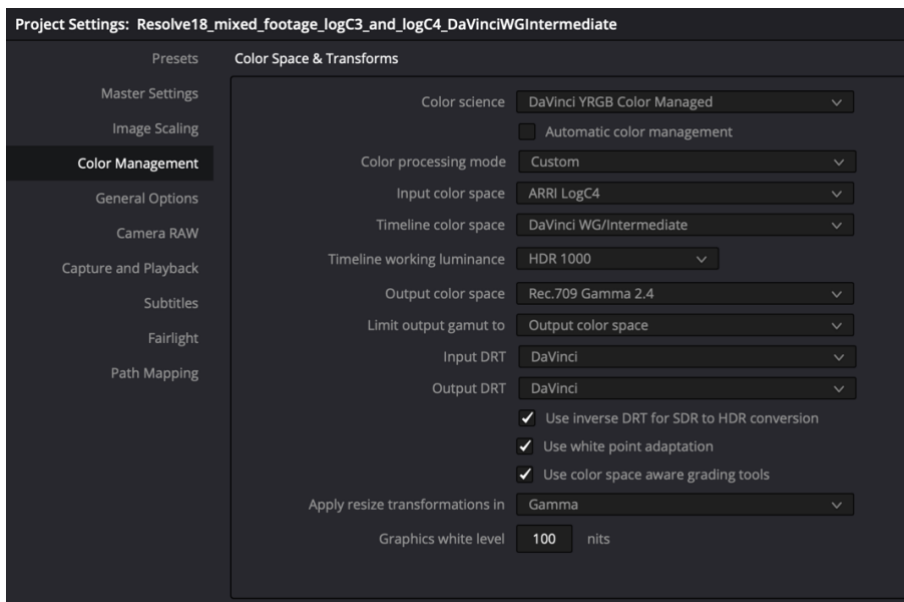


### 2.1.3 Color managed workflow in DaVinci WG/Intermediate

Please find the sample project file under “[Downloads](#)” section within this document.

For a Resolve color managed workflow in DaVinci WG/Intermediate working space, your project settings should match these settings:

- Project Settings | Color Management
  - Color science: DaVinci YRGB Color Managed
  - Automatic color management (OFF)
  - Color processing mode: Custom
  - Input color space: ARRI LogC4
  - Timeline color space: DaVinci WG/Intermediate
  - Timeline working luminance: HDR 1000
  - Output color space: Rec. 709 Gamma 2.4 (can also be any other color space)
  - Limit output gamut to: Output color space
  - Input DRT: DaVinci
  - Output DRT: DaVinci
  - Use inverse DRT for SDR to HDR conversion (YES)
  - Use white point adaption (YES)
  - Use color space aware grading tools (YES)
  - Apply resize transformations in: Gamma
  - Graphics white level: 100 nits (can also be any other nit level)

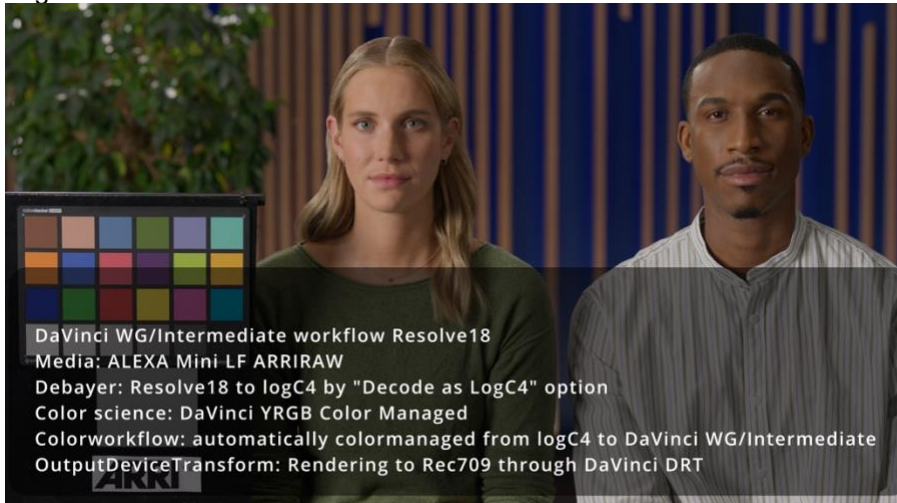


Your clips should result in following settings:

- ALEXA 35 ARRIRAW debayer to LogC4 / ARRI Wide Gamut 4 with color workflow in DaVinci WG/Intermediate



- ALEXA Mini LF ARRIRAW directly debayered to LogC4 / ARRI Wide Gamut 4 with “Decode as LogC4”

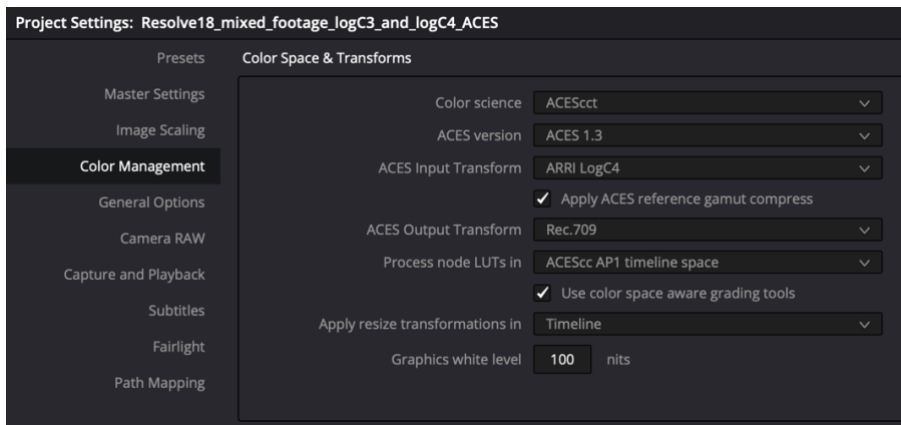


## 2.1.4 Color workflow in ACES

Please find the sample project file under “[Downloads](#)” section within this document.

For a color workflow in ACES working space, your project settings should match these settings:

- Project Settings | Color Management
  - Color science: ACEScct
  - ACES version: ACES 1.3
  - ACES Input Transform: ARRI LogC4
  - [X] Apply ACES reference gamut compress (ON)
  - ACES Output Transform: Rec709 (can also be any other color space)
  - Process node LUTs in: ACEScc AP1 timeline space
  - [X] Use color space aware grading tools (ON)
  - Apply resize transformations in: Timeline
  - Graphics white level: 100 nits (can also be any other nit level)



Your clips should result in following settings:

- ALEXA 35 ARRIRAW debayer to LogC4 / ARRI Wide Gamut 4 with color workflow in ACES




- ALEXA Mini LF ARRIRAW directly debayered to LogC4 / ARRI Wide Gamut 4 with “Decode as LogC4”

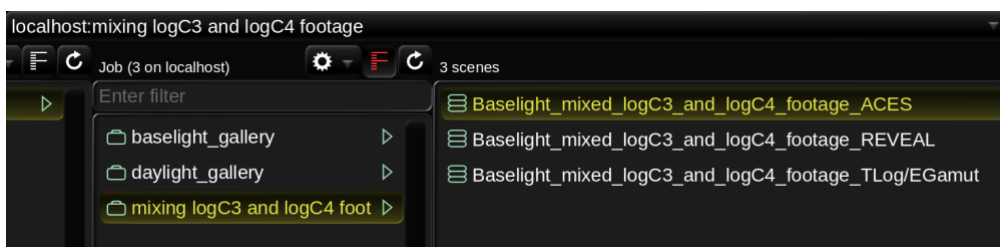
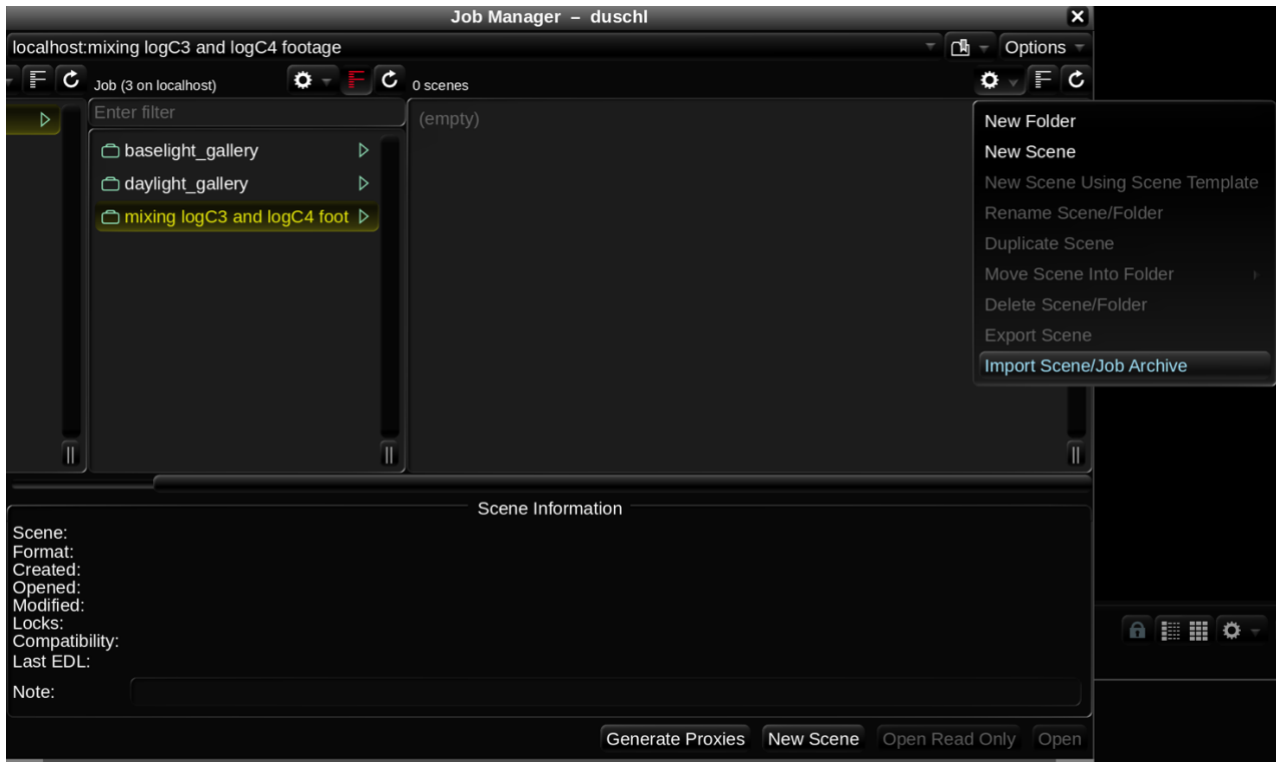


## 2.2 Filmlight Baselight

The public beta available for Filmlight Baselight (Version 5.3.17096 and later) is required to work natively with LogC4 footage from our ARRI ALEXA 35 camera.

Please ensure to get the official [ARRI REVEAL DRT family from the Filmlight website](#). Follow the instructions on the website to import the ARRI REVEAL DRT family correctly into Filmlight Daylight/Baselight.

In Filmlight “projects” are split up into “Jobs” and “Scenes”. To import the sample projects, please open the job manger and create a new job. Select  and import the \*.bljob job file. Please find the \*.bljob job file under the chapter “[Downloads](#)” within this document. In addition to the job file, please also download the revelant sample footage found in the download link and relink to project.

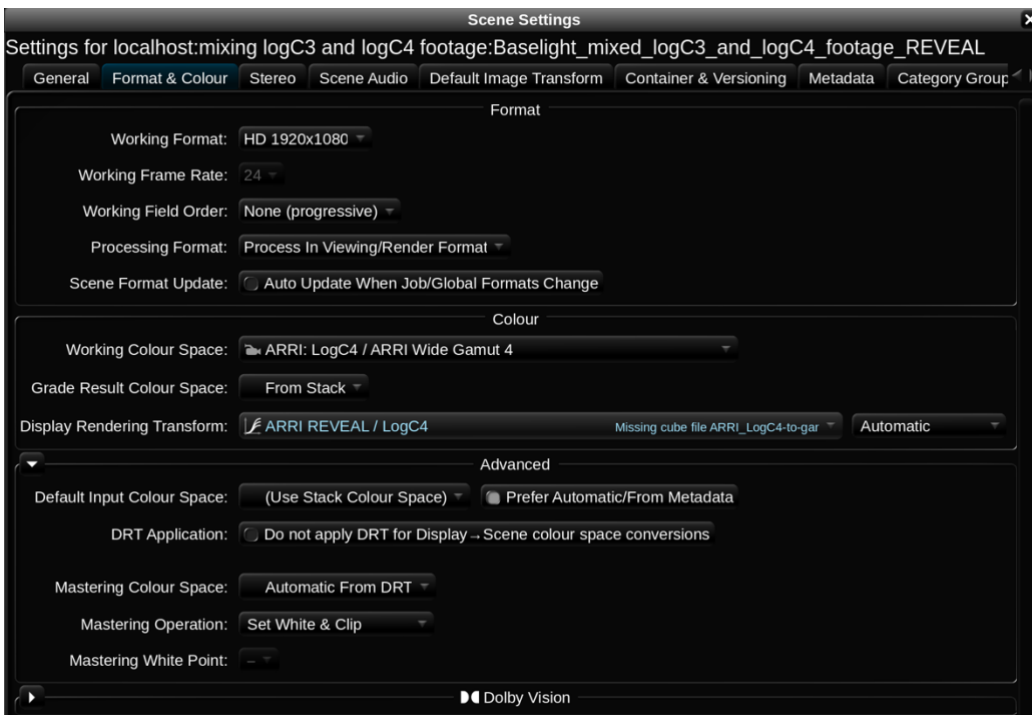


### 2.2.1 Color workflow in REVEAL Color Science

Please find the sample project and footage files under “[Downloads](#)” section within this document.

For a color workflow in Filmlight TLog/EGamut working space, your scene settings should match these settings:

- Scene Settings | Format & Colour
  - Colour
    - Working Colour Space: ARRI: LogC4 / ARRI Wide Gamut 4
    - Grade Result Colour Space: From Stack
    - Display Rendering Transform: ARRI REVEAL / LogC4
  - Advanced
    - Default Input Colour Space: (Use Stack Colour Space) [X] Prefer Automatic





Your "Colour Space Journey" should result in following settings:

- ALEXA 35 ARRIRAW debayer to LogC4 / ARRI Wide Gamut 4 with color workflow in ARRI Color

The screenshot shows the 'Colour Space Journey' window for a project named '220825\_Resolve\_mixed\_logC3andlogC4\_sample/01\_original\_footage/01\_ALEXA35/A\_0002C041\_220712\_143319\_a12RK.mxf'. The interface displays the following settings:

- Sequence: Automatic Input Colour Space → ARRI: LogC4 / ARRI Wide Gamut 4
- Stack: Graded in → ARRI: LogC4 / ARRI Wide Gamut 4
- Cursor: converted with family DRT ARRI REVEAL / LogC4 [Theatrical 48 nits]
- Viewing Colour Space:  DCI: 2.6 Gamma / P3 DCI
- Mastering Colour Space:  DCI: 2.6 Gamma / P3 D65
- Mastering White Point: From Colour Space

The video preview shows two people sitting in front of a blue background with a color chart and a plant. A text overlay in the bottom left corner of the preview reads:

REVEAL workflow Baselight  
Media: ALEXA 35 ARRIRAW  
Debayer: Baselight to logC4 (ADA-7 HW)  
Color science: ARRI REVEAL / LogC4  
Colorworkflow: none necessary  
OutputDeviceTransform: Rendering to Rec709 through ARRI REVEAL

- ALEXA Mini LF debayer to Linear / ARRI Wide Gamut 3 with color workflow in REVEAL Color

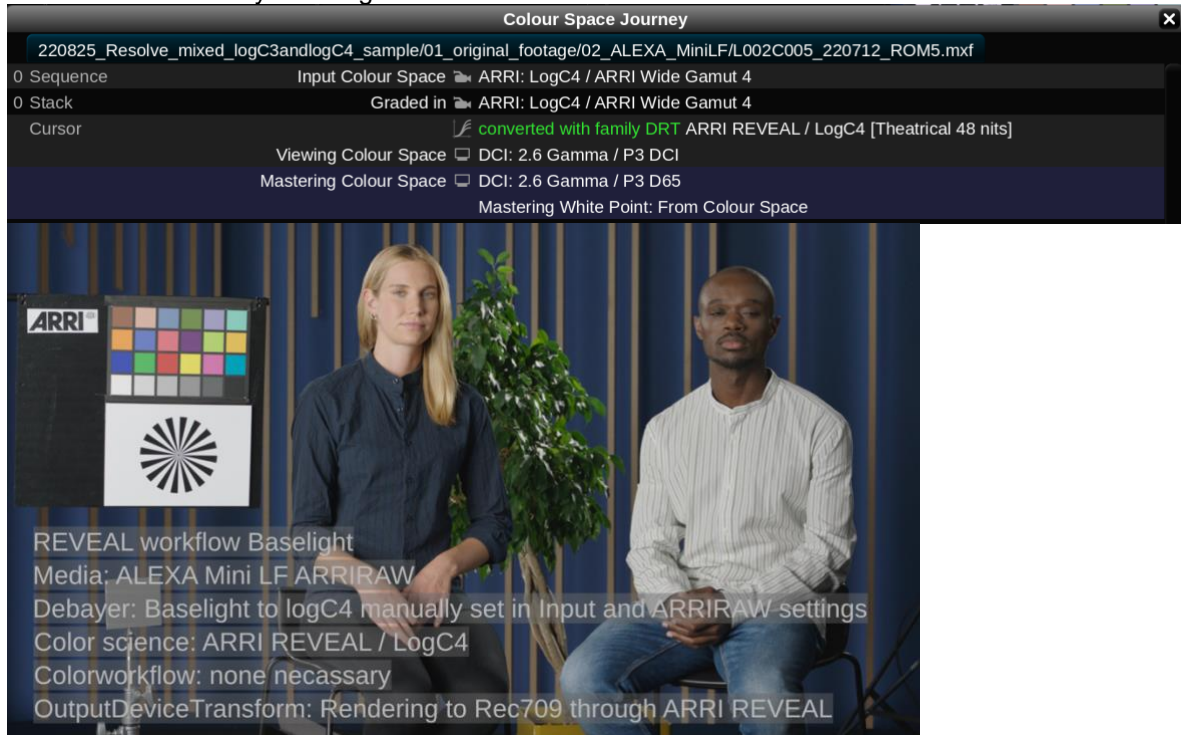
The screenshot shows the 'Colour Space Journey' window for a project named '220825\_Resolve\_mixed\_logC3andlogC4\_sample/01\_original\_footage/02\_ALEXA\_MiniLF/L002C005\_220712\_ROM5.mxf'. The interface displays the following settings:

- Sequence: Automatic Input Colour Space → ARRI: Linear / ARRI Wide Gamut 3
- Stack: Working Colour Space → ARRI: LogC4 / ARRI Wide Gamut 4
- Stack: Graded in → ARRI: LogC4 / ARRI Wide Gamut 4
- Cursor: converted with family DRT ARRI REVEAL / LogC4 [Theatrical 48 nits]
- Viewing Colour Space:  DCI: 2.6 Gamma / P3 DCI
- Mastering Colour Space:  DCI: 2.6 Gamma / P3 D65
- Mastering White Point: From Colour Space

The video preview shows two people sitting in front of a blue background with a color chart and a plant. A text overlay in the bottom left corner of the preview reads:

REVEAL workflow Baselight  
Media: ALEXA Mini LF ARRIRAW  
Debayer: Baselight to logC3 (ADA-5 SW)  
Color science: ARRI REVEAL / LogC4  
Colorworkflow: logC3 to logC4 through Baselight  
OutputDeviceTransform: Rendering to Rec709 through ARRI REVEAL

- ALEXA Mini LF debayer to LogC4 / ARRI Wide Gamut 4 with color workflow in REVEAL Color



**Please note:**

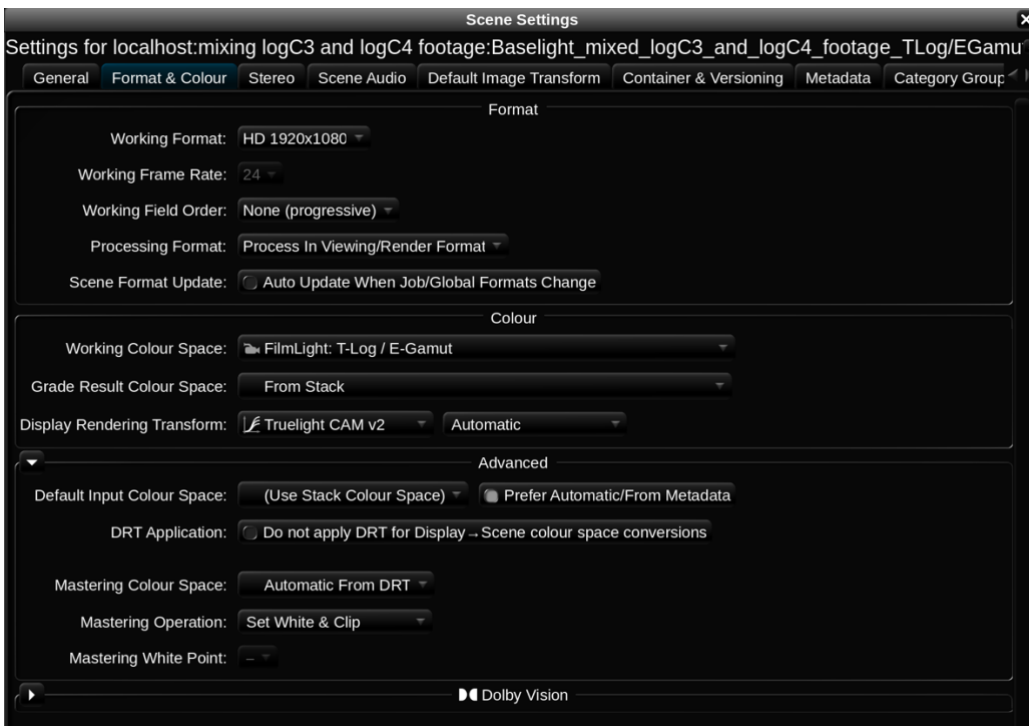
You must switch manually from LogC3 to LogC4 debayer in ARRIRAW settings.

## 2.2.2 Color workflow in Filmlight TLog/EGamut

Please find the sample project and footage files under “[Downloads](#)” section within this document.

For a color workflow in Filmlight TLog/EGamut working space, your scene settings should match these settings:

- Scene Settings | Format & Colour
  - Colour
    - Working Colour Space: Filmlight: T-Log/E-Gamut
    - Grade Result Colour Space: From Stack
    - Display Rendering Transform: Truelight CAM v2 / Automatic
  - Advanced
    - Default Input Colour Space: (Use Stack Colour Space) [X] Prefer Automatic



Your "Colour Space Journey" should result in following settings:

- ALEXA 35 ARRIRAW debayer to LogC4 / ARRI Wide Gamut 4 with color workflow in T-Log/E-Gamut

Colour Space Journey

220825\_Resolve\_mixed\_logC3andlogC4\_sample/01\_original\_footage/01\_ALEXA35/A\_0002C041\_220712\_143319\_a12RK.mxf

0 Sequence Automatic Input Colour Space ARRI: LogC4 / ARRI Wide Gamut 4  
0 converted

Working Colour Space FilmLight: T-Log / E-Gamut

0 Stack Graded in FilmLight: T-Log / E-Gamut

Cursor converted with family DRT Truelight CAM v2 [Cinema 48 nits]

Viewing Colour Space DCI: 2.6 Gamma / P3 DCI

Mastering Colour Space DCI: 2.6 Gamma / P3 D60

Mastering White Point: From Colour Space

T-Log/E-Gamut workflow Baselight  
Media: ALEXA 35 ARRIRAW  
Debayer: Baselight to logC4 (ADA-7 HW)  
Color science: Truelight CAM v2  
Colorworkflow: logC4 to T-Log/E-Gamut  
OutputDeviceTransform: Rendering to Rec709 through Truelight CAM v2

- ALEXA Mini LF debayer to Linear / ARRI Wide Gamut 3 with color workflow in T-Log/E-Gamut

Colour Space Journey

220825\_Resolve\_mixed\_logC3andlogC4\_sample/01\_original\_footage/02\_ALEXA\_MiniLF/L002C005\_220712\_ROM5.mxf

0 Sequence Automatic Input Colour Space ARRI: Linear / ARRI Wide Gamut 3  
0 converted

Working Colour Space FilmLight: T-Log / E-Gamut

0 Stack Graded in FilmLight: T-Log / E-Gamut

Cursor converted with family DRT Truelight CAM v2 [Cinema 48 nits]

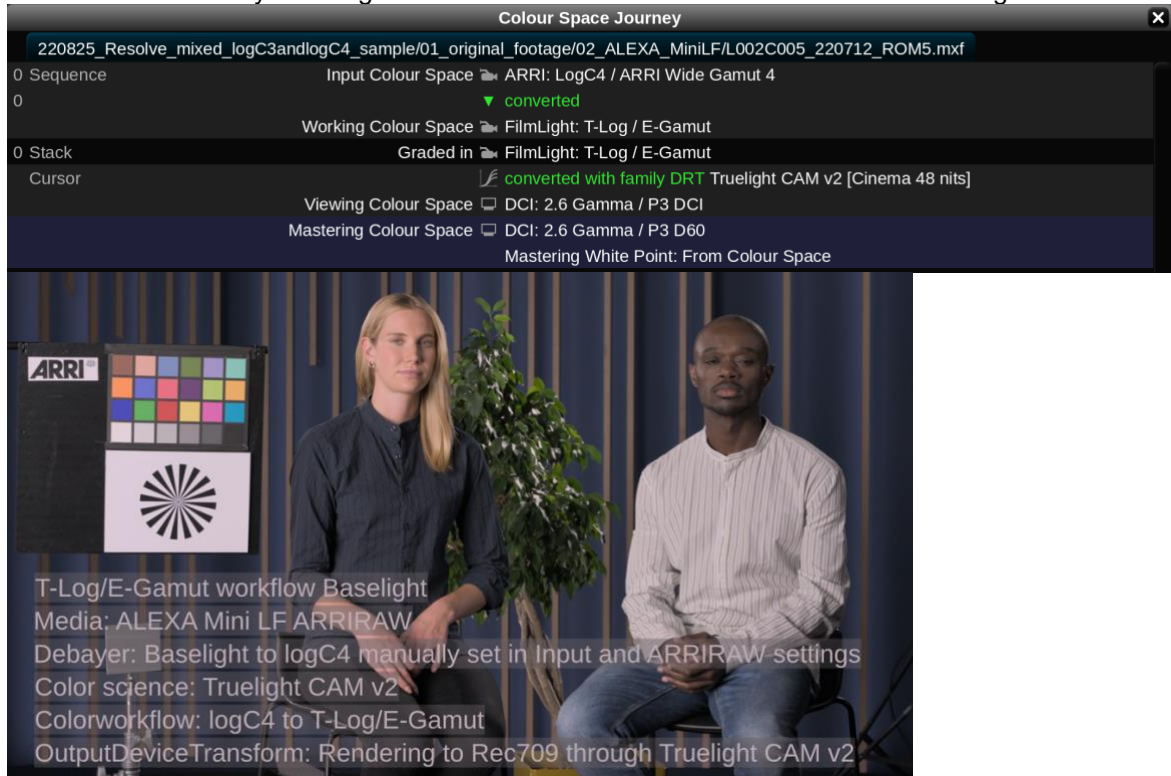
Viewing Colour Space DCI: 2.6 Gamma / P3 DCI

Mastering Colour Space DCI: 2.6 Gamma / P3 D60

Mastering White Point: From Colour Space

T-Log/E-Gamut workflow Baselight  
Media: ALEXA Mini LF ARRIRAW  
Debayer: Baselight to logC3 (ADA-5 SW)  
Color science: Truelight CAM v2  
Colorworkflow: logC3 to T-Log/E-Gamut  
OutputDeviceTransform: Rendering to Rec709 through Truelight CAM v2

- ALEXA Mini LF debayer to LogC4 / ARRI Wide Gamut 4 with color workflow in T-Log/E-Gamut



**Please note:**

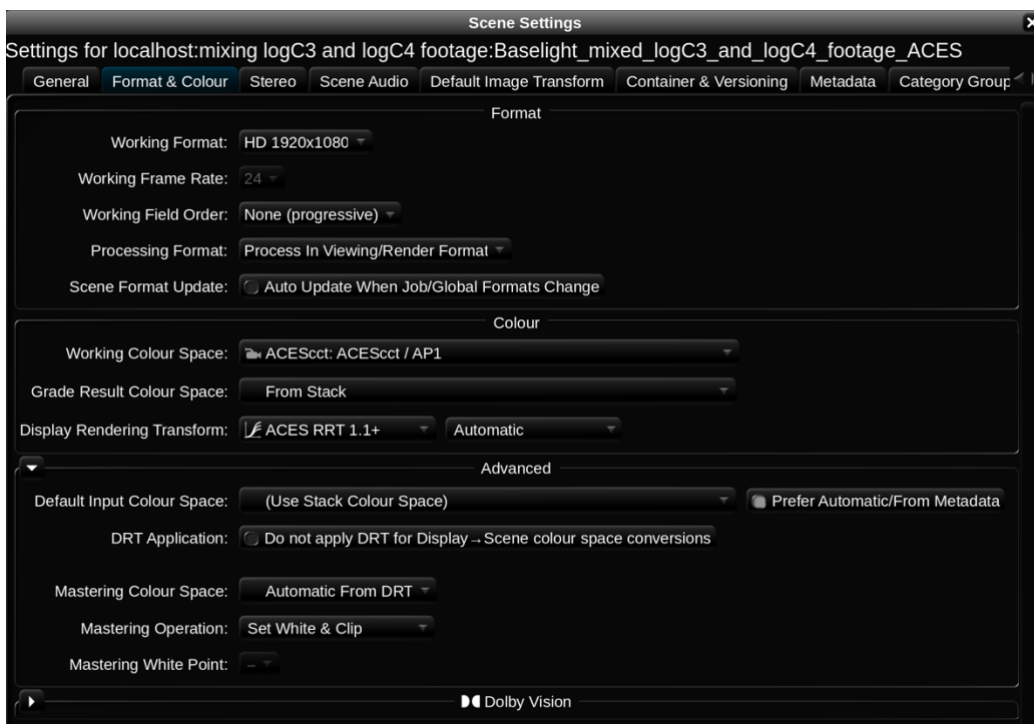
You must switch manually from LogC3 to LogC4 debayer in ARRIRAW settings.

### 2.2.3 Color workflow in ACES

Please find the sample project and footage files under “[Downloads](#)” section within this document.

For a color workflow in ACES working space, your scene settings should match these settings:

- Scene Settings | Format & Colour
  - Colour
    - Working Colour Space: ACEScct: ACEScct/AP1
    - Grade Result Colour Space: From Stack
    - Display Rendering Transform: ACES RRT 1.1+ / Automatic
  - Advanced
    - Default Input Colour Space: (Use Stack Colour Space) [X] Prefer Automatic



Your "Colour Space Journey" should result in followin settings:

- ALEXA 35 ARRIRAW debayer to LogC4 / ARRI Wide Gamut 4 with color workflow in ACEScct/AP1

Colour Space Journey

220825\_Resolve\_mixed\_logC3andlogC4\_sample/01\_original\_footage/01\_ALEXA35/A\_0002C041\_220712\_143319\_a12RK.mxf

0 Sequence Automatic Input Colour Space ARRI: LogC4 / ARRI Wide Gamut 4  
0 converted

Working Colour Space ACEScct: ACEScct / AP1

0 Stack Graded in ACEScct: ACEScct / AP1

Cursor converted with family DRT ACES RRT 1.1+ [Cinema 48 nits]

Viewing Colour Space DCI: 2.6 Gamma / P3 DCI

Mastering Colour Space DCI: 2.6 Gamma / P3 D60

Mastering White Point: From Colour Space

ACEScct workflow Baselight  
Media: ALEXA 35 ARRIRAW  
Debayer: Baselight to logC4 (ADA-7 HW)  
Color science: ACEScct / AP1  
Colorworkflow: IDT automatically applied by Baselight  
OutputDeviceTransform: Rendering to Rec709 through ACES1.1+

- ALEXA Mini LF debayer to Linear / ARRI Wide Gamut 3 with color workflow in ACEScct/AP1

Colour Space Journey

220825\_Resolve\_mixed\_logC3andlogC4\_sample/01\_original\_footage/02\_ALEXA\_MiniLF/L002C005\_220712\_ROM5.mxf

0 Sequence Automatic Input Colour Space ARRI: Linear / ARRI Wide Gamut 3  
0 converted

Working Colour Space ACEScct: ACEScct / AP1

0 Stack Graded in ACEScct: ACEScct / AP1

Cursor converted with family DRT ACES RRT 1.1+ [Cinema 48 nits]

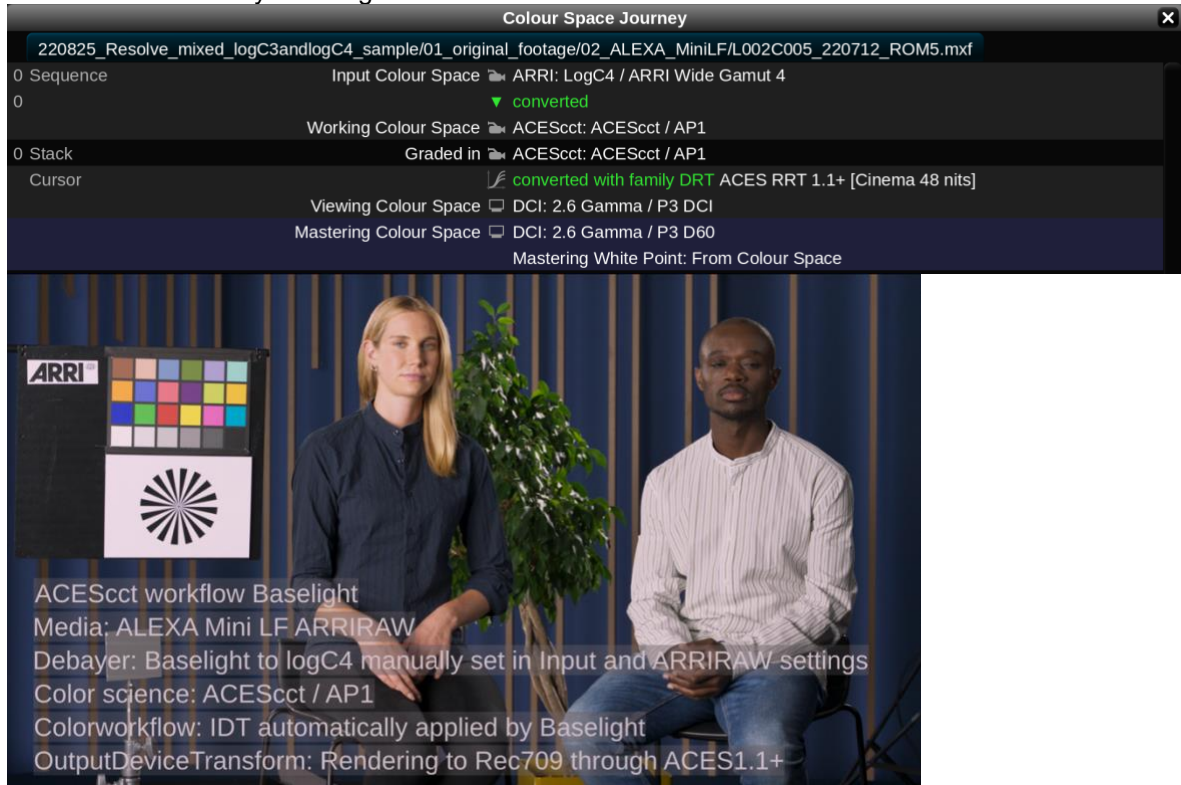
Viewing Colour Space DCI: 2.6 Gamma / P3 DCI

Mastering Colour Space DCI: 2.6 Gamma / P3 D60

Mastering White Point: From Colour Space

ACEScct workflow Baselight  
Media: ALEXA Mini LF ARRIRAW  
Debayer: Baselight to logC3 (ADA-5 SW)  
Color science: ACEScct / AP1  
Colorworkflow: IDT automatically applied by Baselight  
OutputDeviceTransform: Rendering to Rec709 through ACES1.1+

- ALEXA Mini LF debayer to LogC4 / ARRI Wide Gamut 4 with color workflow in ACEScct/AP1



**Please note:**

You must switch manually from LogC3 to LogC4 debayer in ARRIRAW settings.



### 3 Downloads

You will find the corresponding project files (e.g. Resolve Studio or Filmlight Baselight/Daylight job file) and ARRIRAW sample files here under this download link.

The sample projects are packed into a \*.tar file and need to be extracted. Please relink the footage contained in the \*.tar to your project.

- Blackmagic Resolve Studio (Version 18.5) project archives incl. footage:
  - [None-color managed workflow in REVEAL Color Science](#)
  - [Color managed workflow in REVEAL Color Science](#)
  - [Color managed workflow in DaVinci WG/Intermediate](#)
  - [Color workflow in ACES](#)
  
- Filmlight Baselight/Daylight (Version 5.3.17096) job file incl. footage:
  - [Color workflow in REVEAL Color Science](#)
  - [Color workflow in T-Log/E-Gamut](#)
  - [Color workflow in ACES](#)
  
- [ARRI LogC4 LUT Package](#)

### 4 Contact

In case you have questions or recommendations, please contact the Digital Workflow Solutions group within ARRI via email: [digitalworkflow@arri.de](mailto:digitalworkflow@arri.de)