

Mixing ARRI LogC3 and LogC4 On Set

GUIDELINE

Date: November 25, 2024

Version History

Version	Author	Change Note
2023-12-07	Simon Duschl	Document creation
2024-11-25	Simon Duschl	Minor changes and added ALEXA 265

Table of Contents

Version History	2
Table of Contents	3
Introduction	4
1 Camera settings & setup	4
1.1 ALEXA 35 or ALEXA 265	5
1.2 ALEXA Mini LF	5
2 Live grading in ACES	5
2.1 ACES basic information	5
2.2 Software for using ACES	6
Pomfort Livegrade Studio	6
QTAKE	6
WonderLookPro	6
Fimlight Prelight	6
Assimilate Live Assist	6
Technicolor DP Lights	6
3 Links	7
4 Contact	7

Introduction

With introduction of our ALEXA 35 camera system, we also introduces a new color science, REVEAL, and the latest ARRI encoding, named ARRI LogC4.

LogC4 is the latest logarithmic curve, developed by ARRI and is currently used by two camera systems:

- ALEXA 35
- ALEXA 265

Legacy camera models can not output LogC4 over SDI, but can capture ARRIRAW, which then can be debayered into REVEAL color science, which means LogC4/AWG4.

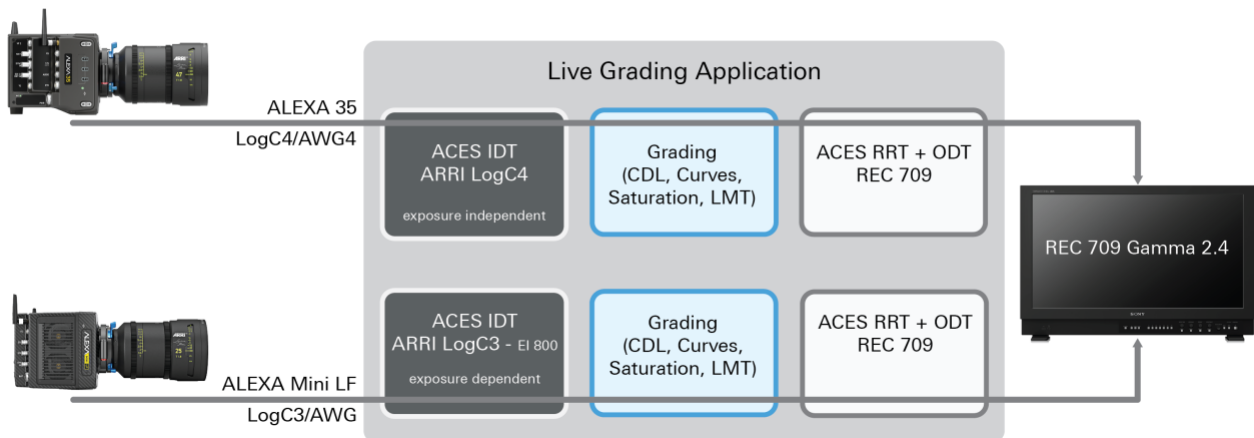
The ALEXA 35 and ALEXA 265 can both output LogC4 on its SDI outputs. Earlier cameras like for example the ALEXA Mini LF can only output LogC3 on its SDI outputs. The questions is now:

How can we bring both, LogC3/AWG3 and LogC4/AWG4 signals, together on set? At the moment, we suggest using ACES when working on a mixed ARRI camera project. This short guideline will show you a basic on set ACES workflow with an ALEXA Mini LF with LogC3/AWG3 output over SDI and an ALEXA 35 or ALEXA 265 with LogC4/AWG4 output over SDI.

Please note: This guideline will only show you one option out of many other possibilities. From our point of view the best solution for this use-case is by using an ACES workflow on set.

1 Camera settings & setup

Let's say your A-Camera is an ALEXA 35 or ALEXA 265 and your B-Camera is an ALEXA Mini LF. The ALEXA 35 or ALEXA 265 outputs ARRI LogC4, whereas the ALEXA Mini LF outputs ARRI LogC3 on both SDI outputs. In this short chapter we show how to set the camera correctly to get a LogC based image downstreamed into your pipeline by using ACESct and final image on a Rec. 709 Gamma 2.4 display. Our basic setup is a wired connection.

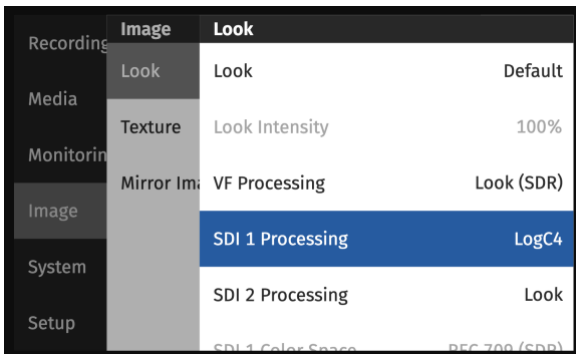


In case you're display has HDR capabilities, you can of course switch your RRT + ODT from Rec. 709 (SDR) to ST. 2084/PQ. (HDR). The RRTs + ODTs are specified by ACES.

Please note: Wireless Video signals at reduced bit-depth/quality can also be accommodated. For our ALEXA 35 we're offering Wireless Video Optimized (WVO) LogC4. To get known to the basic of WVO we suggest reading our [WVO LogC4 – Technical Note](#).

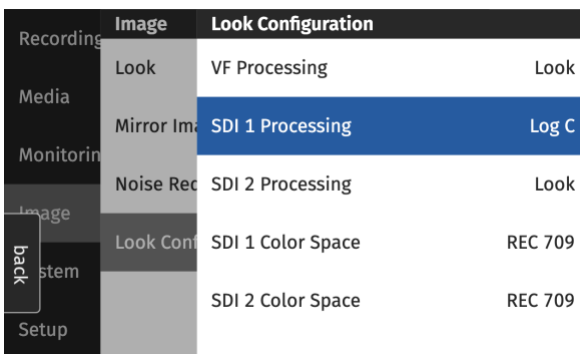
1.1 ALEXA 35 or ALEXA 265

In the camera menu go to Image -> Look -> SDI 1 Processing and set the SDI 1 Processing to “LogC4”. This sets the output of SDI1 to LogC4.



1.2 ALEXA Mini LF

In the camera menu go to Image -> Look Configuration -> SDI 1 Processing and set the SDI 1 Processing to “Log C”. This sets the output of SD1 to LogC3.



2 Live grading in ACES

2.1 ACES | basic information

The official ACES IDTs for ARRI Cameras can be found online on the [AMPAS ACES github](#) project. Commonly used post-production and on-set tools should have already included the official IDTs. For grading ACEScct was inveted an should be used.

Next to the IDTs and for getting

a basic understanding of ACES we suggest having a look into the [ACES Primer on ACES Central](#).

2.2 Software for using ACES

Pomfort Livegrade Studio

Livegrade implements the ACES color pipeline including IDT transforms, working color spaces such as ACEScct and ACEScc, LMT, RRT and ODT transforms to be used on camera live signals and still images (e.g. for reference) on the film set. - <https://pomfort.com/livegradestudio/>

QTAKE

QTake has a very good ACES color pipeline implemented. It can combine various input signals and supports basic color grading e.g. CDL, LMTs, 3D-LUTs. - <https://qtakehd.com/>

WonderLookPro

A software solution from TV-Logic for setting up your color workflow on set. You will need external hardware e.g. IS-mini X (LUT box). Within the application you can easily setup your ACES IDTs and load it into your LUT box. - <http://ismini.tvlogic.tv/en/wlp/wonderlookpro-overview.html>

Fimlight Prelight

<https://www.fimlight.ltd.uk/store/prelight-downloads/>

Assimilate Live Assist

<https://www.assimilateinc.com/products/liveassist/>

Technicolor DP Lights

<https://www.technicolor.com/create/dp-lights>

3 Links

ACES Primer on ACES Central	https://acescentral.com/user-guides/
AMPAS ACES Github Project	https://github.com/ampas/aces-dev/tree/dev/transforms/ctl/idt/vendorSupplied/arri/alex
Pomfort Knowledge Base	https://pomfort.com/workflow/aces/
	https://kb.pomfort.com/livegrade/advanced-grading-features/aces-grading-mode/
Pomfort Livegrade Studio	https://pomfort.com/livegradestudio/
QTake	https://qtakehd.com/

4 Contact

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