ARRI LUT Naming Convention

LUT Packages LogC4 v1 & LogC3 v1-2

GUIDELINE

Date: March 27, 2023

Version History

Version	Author	Change Note
2021-04-29	Simon Duschl	Update Namings & LUT Generator
2021-05-07	Florian Martin	Updated Namings
2022-08-25	Christian Grafwallner	Updated Namings
2022-09-15	Simon Duschl	Updated <tags>
2023-03-27	Simon Duschl	DRT and 3D-LUTs in ALEXA 35

Table of Contents

Introduction

This Document shall give a overview for future Look Up Table (LUT) namings for different purposes.

In current releases of ALEXA 35 Camera Software Updates (SUPs) the DRT (Display Render Transform) is fixed to our official DRTs/3D-LUTs, which are also available in our ARRI LogC4 LUT Package. The user can select between four different DRTs for the SDI outputs.

The following table shows the naming of our in-camera DRT and its corresponding 3D-LUT from our ARRI LogC4 LUT Package:

Naming in ARRI LogC4 LUT Package	**Naming in ALEXA 35**
ARRI_LogC4-to-Gamma24_Rec709-D65_v1	REC 709 (SDR)
ARRI_LogC4-to-Gamma24_Rec2020-D65_v1	REC 2020 (SDR)
ARRI_LogC4-to-St2084_1K_Rec2100-D65_DW100_v1	REC 2100 / PQ (HDR)
ARRI_LogC4-to-HLG_1K_Rec2100-D65_DW100_v1	REC 2100 / HLG (HDR)

Please note: Currently it's not possible to bypass our DRTs in any way, but ARRI is working on a feature called 'ARRI Custom Color Managemen (CCM)' which will offer the capability to users for loading custom DRTs for SDR and HDR. This update for the ALEXA 35 can be expected in June 2023 at the earliest.

1 ARRI LUT Package Naming Convention

For a better distinction and better understanding our conversion LUTs for different purposes in post-production our suggestion is to use the following naming convention for ARRI LUTs. LogC4 LUTs are our newest LUT for our newest camera systems (ALEXA 35 and newer). LogC3 should be used for our existing, older camera systems (including ALEXA Mini LF). Each LUT shall have at least 65 mesh points.

Naming Convention <tags>:

<Creator> _ <LogCVersion> -to- <GammaValue> _ <PeakWhite> _ <TargetColorSpace> - <WhitePoint> _ <DiffuseWhiteForHDR> _ <VideoRenderingVersion> - <MeshPoints>

<Creator>	=	ARRI	= offical ARRI Look-Up-Tables (LUTs)
<LogCVersion>	=	LogC4	= LogC Version 4 (used in ALEXA 35 and newer)
		LogC3	= LogC Version 3 (used in ALEXA Mini LF/LF/SXT/Mini and AMIRA
´<GammaValue>	=	2.4	= Rec709
		2.6	= P3
		HLG	= Hybrid Log Gamma
		St2084	= PQ
<PeakWhite>	=	1K	= 1000 Nits. *(only for HLG or PQ)*
		2K	= 2000 Nits *(only for HLG or PQ)*
		4K	= 4000 Nits *(only for HLG or PQ)*
<TargetColorSpace>	=	Rec709	= BT.709 Color Space
		P3	= P3 Color Space
		Rec2020-P3lim	= P3 limited Color Space within Rec. 2020
		Rec2020	= Rec. 2020 Color Space
<WhitePoint>	=	D60	= 6000K White Point
		D65	= 6500K White Point
		DCI	= 6300K White Point
<DiffuseWhiteForHDR>	=	no value	= not present for SDR
		DW100	= Diffuse White 100 for HDR
		DW200	= Diffuse White 200 for HDR
<VideoRenderingVersion>=		beta09	= preview beta 0.9
		V1	= offical released version 1.0
		V2	= future release version 2.0 (newer than version 1.0)
<MeshPoints>	=	17	= 17 Mesh points
		33	= 33 Mesh points
		65	= 65 Mesh points

1.1 LogC4

LogC4 is used in following camera systems:

- ALEXA 35

1.1.1 LogC4 version 1.0 for Standard Dynamic Range (SDR)

- ARRI_LogC4-to-Gamma24_Rec709-D65_v1-33.cube
- ARRI_LogC4-to-Gamma24_Rec709-D65_v1-65.cube
- ARRI_LogC4-to-Gamma24_Rec2020-D65_v1-33.cube
- ARRI_LogC4-to-Gamma24_Rec2020-D65_v1-65.cube
- ARRI_LogC4-to-Gamma26_P3-D65_v1-33.cube
- ARRI_LogC4-to-Gamma26_P3-D65_v1-65.cube
- ARRI_LogC4-to-Gamma26_P3-DCI_v1-33.cube

1.1.2 LogC4 version 1.0 for High Dynamic Range (HDR)

- ARRI_LogC4-to-HLG_1K_Rec2100-D65_DW100_v1_33.cube
- ARRI_LogC4-to-HLG_1K_Rec2100-D65_DW100_v1_65.cube
- ARRI_LogC4-to-HLG_1K_Rec2100-P3lim-D65_DW100_v1_33.cube
- ARRI_LogC4-to-HLG_1K_Rec2100-P3lim-D65_DW100_v1_65.cube
- ARRI_LogC4-to-HLG-1K_P3-D65_DW100_v1-33.cube
- ARRI_LogC4-to-HLG-1K_P3-D65_DW100_v1-65.cube
- ARRI_LogC4-to-St2084_1K_Rec2100-D65_DW100_v1_33.cube
- ARRI_LogC4-to-St2084_1K_Rec2100-D65_DW100_v1_65.cube
- ARRI_LogC4-to-St2084_1K_Rec2100-P3lim-D65_DW100_v1_33.cube
- ARRI_LogC4-to-St2084_1K_Rec2100-P3lim-D65_DW100_v1_65.cube
- ARRI_LogC4-to-St2084-1K_P3-D65_DW100_v1-33.cube
- ARRI_LogC4-to-St2084-1K_P3-D65_DW100_v1-65.cube

1.2 LogC3

LogC3 is used in following camera systems:

- ALEXA Mini LF
- ALEXA LF
- ALEXA SXT
- ALEXA Mini
- ALEXA 65
- AMIRA
- ALEXA XT
- ALEXA Classic

1.2.1 LogC3 version 1.0 for Standard Dynamic Range (SDR)

- ARRI_LogC3-to-Gamma24_Rec709_D65-Classic_33.cube
- ARRI_LogC3-to-Gamma24_Rec709_D65-v1_33.cube
- ARRI_LogC3-to-Gamma24_Rec2020_D65-v1_33.cube
- ARRI_LogC3-to-Gamma26_P3_D60-v1_33.cube
- ARRI_LogC3-to-Gamma26_P3_D65-v1_33.cube
- ARRI_LogC3-to-Gamma26_P3_DCI-v1_33.cube

1.2.2 LogC3 version 1.0 for High Dynamic Range (HDR)

- ARRI_LogC3-to-HLG_1K_P3-D65_DW100_v2_33.cube
- ARRI_LogC3-to-HLG_1K_P3-D65_DW100_v2_65.cube
- ARRI_LogC3-to-HLG_1K_P3-D65_DW200_v2_33.cube
- ARRI_LogC3-to-HLG_1K_P3-D65_DW200_v2_65.cube
- ARRI_LogC3-to-HLG_1K_Rec2100-D65_DW100_v1_33.cube
- ARRI_LogC3-to-HLG_1K_Rec2100-D65_DW100_v2_33.cube
- ARRI_LogC3-to-HLG_1K_Rec2100-D65_DW100_v2_65.cube
- ARRI_LogC3-to-HLG_1K_Rec2100-D65_DW200_v1_33.cube
- ARRI_LogC3-to-HLG_1K_Rec2100-D65_DW200_v2_33.cube
- ARRI_LogC3-to-HLG_1K_Rec2100-D65_DW200_v2_65.cube
- ARRI_LogC3-to-St2084_1K_P3-D65_DW100_v2_33.cube
- ARRI_LogC3-to-St2084_1K_P3-D65_DW100_v2_65.cube
- ARRI_LogC3-to-St2084_1K_P3-D65_DW200_v2_33.cube
- ARRI_LogC3-to-St2084_1K_P3-D65_DW200_v2_65.cube
- ARRI_LogC3-to-St2084_1K_Rec2100-D65_DW100_v1_33.cube
- ARRI_LogC3-to-St2084_1K_Rec2100-D65_DW100_v2_33.cube
- ARRI_LogC3-to-St2084_1K_Rec2100-D65_DW100_v2_65.cube
- ARRI_LogC3-to-St2084_1K_Rec2100-D65_DW200_v1_33.cube
- ARRI_LogC3-to-St2084_1K_Rec2100-D65_DW200_v2_33.cube
- ARRI_LogC3-to-St2084_1K_Rec2100-D65_DW200_v2_65.cube
- ARRI_LogC3-to-St2084_2K_P3-D65_DW100_v2_33.cube
- ARRI_LogC3-to-St2084_2K_P3-D65_DW100_v2_65.cube
- ARRI_LogC3-to-St2084_2K_P3-D65_DW200_v2_33.cube
- ARRI_LogC3-to-St2084_2K_P3-D65_DW200_v2_65.cube
- ARRI_LogC3-to-St2084_2K_Rec2100-D65_DW100_v1_33.cube
- ARRI_LogC3-to-St2084_2K_Rec2100-D65_DW100_v2_33.cube
- ARRI_LogC3-to-St2084_2K_Rec2100-D65_DW100_v2_65.cube
- ARRI_LogC3-to-St2084_2K_Rec2100-D65_DW200_v1_33.cube
- ARRI_LogC3-to-St2084_2K_Rec2100-D65_DW200_v2_33.cube
- ARRI_LogC3-to-St2084_2K_Rec2100-D65_DW200_v2_65.cube
- ARRI_LogC3-to-St2084_4K_P3-D65_DW100_v2_33.cube
- ARRI_LogC3-to-St2084_4K_P3-D65_DW100_v2_65.cube
- ARRI_LogC3-to-St2084_4K_P3-D65_DW200_v2_33.cube

- ARRI_LogC3-to-St2084_4K_P3-D65_DW200_v2_65.cube
- ARRI_LogC3-to-St2084_4K_Rec2100-D65_DW100_v1_33.cube
- ARRI_LogC3-to-St2084_4K_Rec2100-D65_DW100_v2_33.cube
- ARRI_LogC3-to-St2084_4K_Rec2100-D65_DW100_v2_65.cube
- ARRI_LogC3-to-St2084_4K_Rec2100-D65_DW200_v1_33.cube
- ARRI_LogC3-to-St2084_4K_Rec2100-D65_DW200_v2_33.cube
- ARRI_LogC3-to-St2084_4K_Rec2100-D65_DW200_v2_65.cube
- ARRI_LogC3-to-St2084_108_P3-D65_DW34_v2_33.cube
- ARRI_LogC3-to-St2084_108_P3-D65_DW34_v2_65.cube

2 Downloads

You will find our official LUT packages online on our website.

2.1 LogC4

The LogC4 package can be found in the download section here:
https://www.arri.com/en/learn-help/learn-help-camera-system/alexa-35-workflows

2.2 LogC3

The LogC3 LUTs can be configured by using our ARRI LUT Generator on our website:
https://www.arri.com/en/learn-help/learn-help-camera-system/tools/lut-generator

3 Contact

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