

Gamut / Gamma Transfer 3D LUT (3D Look-Up Table)

- LUT Category

Viewing LUT

- LUT Overview

A 3D LUT that converts from Cinema Gamut / BT.2020 Gamut / BT.709 Gamut and Canon Log / Canon Log 2 / Canon Log 3

- File Format

.cube format

- Correspondence Table

Input			Output			
Gamut	Gamma	Range	Gamut	Gamma	Range	Grids
Cinema Gamut	Canon Log 2 Canon Log 3	Full	BT.709 Gamut	Wide DR	Full,	17,33,65
Cinema Gamut	Canon Log 2 Canon Log 3	Full	DCI-P3 Gamut	DCI (Gamma2.6)	Full	17,33,65
Cinema Gamut	Canon Log 2 Canon Log 3	Full	BT.2020 Gamut	Wide DR	Full,	17,33,65
Cinema Gamut	Canon Log 2 Canon Log 3	Full	BT.2020 Gamut	PQ	Full,	17,33,65
Cinema Gamut	Canon Log 2 Canon Log 3	Full	BT.2020 Gamut	HLG	Full,	17,33,65
BT.2020 Gamut	Canon Log Canon Log 2 Canon Log 3	Full	BT.709 Gamut	Wide DR	Full,	17,33,65

BT.2020 Gamut	Canon Log Canon Log 2 Canon Log 3	Full	BT.2020 Gamut	Wide DR	Full,	17,33,65
BT.709 Gamut	Canon Log	Full	BT.709 Gamut	Wide DR	Full,	17,33,65
BT.709 Gamut	Canon Log 2 Canon Log 3	Full	BT.709 Gamut	Wide DR	Full,	17,33,65

- File naming conventions

[Gamut]_[Gamma]-to-[Gamut]_[Gamma]_[GridNum]_[Range][Range]_[Version].cube
 (1) (2) (3) (4) (5) (6) (7) (8)

Example: CinemaGamut_CanonLog-to-BT709_BT709_17_FF_Ver.1.1.cube

1. Input gamut
2. Input gamma
3. Output gamut
4. Output gamma
5. Grids
6. Input range (N: Narrow, F: Full)
7. Output range (N: Narrow, F: Full, L: Linear)
8. Version

- Explanation of the data format

Example: 17 Grid version

Lines beginning with the pound sign (#) Comments about the 3D LUT file
 LUT_3D_SIZE 17 Table size (17 x 17 x 17)

0.000000 0.000000 0.000000 Data (R G B, red fastest)
 0.000026 0.000000 0.000000
 0.079094 0.000000 0.001118
 0.205855 0.000250 0.000000
 :

- LUTs for conversions to Wide DR

The Narrow range version of Wide DR is a curve that was used into the super-whites (outputs over 100%), whereas with the Full range version of Wide DR, this curve is compressed in a format to fit within 100% output.

- Nominal signal levels of conversion LUT from Canon Log 2/3 to PQ/HLG

These LUT are used to convert to the perceptual quantization (PQ) and Hybrid Log-Gamma (HLG) defined by Recommendation ITU-R BT.2100-2.

Conversion is performed to achieve the signal levels described in TABLE 1 of Report ITU-R BT.2408-1.

- HLG-Vivid

This HLG corresponds to the traditional colour described in section 6.5 of Report ITU-R BT.2390-4.

This results in expression with higher saturation than that of the BT.2100 compliant HLG.

- About HLG Knee

The curve is based on BT. 2100 compliant HLG and has a wider dynamic range by compressing the high luminance part.

- Differences with Ver. 1. *

By improving the gamut/gamma conversion algorithm, we have achieved higher color reproducibility.