

# High Dynamic Range with Hybrid Log-Gamma



Can your facility handle High Dynamic Range?

Yes! - If you choose Hybrid Log-Gamma

## Key Features:

- ▶ Supports OTT, Cable, Packaged Media or Live Terrestrial or Satellite operation
- ▶ No cumbersome metadata to lose or corrupt
- ▶ Fully backward compatible
- ▶ Use all existing distribution chains
- ▶ HDR monitors only needed for key point critical assessment
- ▶ Native compatibility with SDR monitors
- ▶ Supports normal Production processes, PiP and multiscreens
- ▶ Royalty free
- ▶ Proven in broadcast and broadband trials

SMPTE 2015 Conference demonstration  
Loews Hollywood Hotel  
Room: Nicols Canyon  
Times:

Monday October 26: 12:00pm - 6:30pm  
(Oktoberfest beer reception outside room: 5:30pm - 6:30pm)  
Tuesday October 27: 10:00am - 6:00pm  
Wednesday October 28: 10:00am - 2:00pm

Developed by

**BBC** | R&D



# Hybrid Log-Gamma



Photos courtesy of ATEME

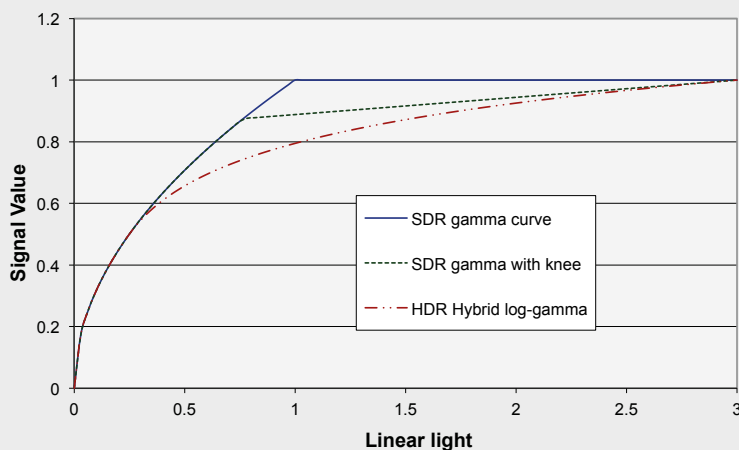
Standard Dynamic Range  
(SDR)

High Dynamic Range  
(HDR)

Hybrid Log Gamma (HLG) extends the capacity to capture and deliver highlights in any type of content by adding a log function to the top half of a traditional camera gamma curve.

This is similar to using a camera knee but with the advantage that the log curve is standardised and so the highlights can be stretched back by a high dynamic range display.

A standard dynamic range display will still show all the detail in the highlights, but without the extra brightness. Hence, the HLG system is not only backward compatible to SDR, but can provide better pictures than a standard gamma.



## What is HDR & HLG?

A. HDR stands for High Dynamic Range and it uses the valuable capability of modern displays to show the picture in high contrast. High contrast gives the impression of sharpness.

Q. I have heard of HDR but what is HLG?

A. HLG or Hybrid Log Gamma is the BBC's and NHK's elegant solution to implement HDR across the many networks and devices of today.

Q. We have heard of ITU-R BT.2020 what is it?

A. ITU is a Standards body and ITU-R BT.2020 is the latest standard for UHD TV.

Q. We have heard of SMPTE ST 2084 what is it?

A. SMPTE ST 2084 is one of the contenders to be an HDR standard to accompany ITU-R BT.2020.

Q. Is HLG a Standard?

Yes, HLG is standardised as ARIB STD-B67. The BBC and NHK are also working to standardise HLG at the ITU and SMPTE.

Q. We have heard of Scene referred and Display referred, what does that mean?

A. In a scene referred system the signal represents the image captured by the camera. This signal may be shown on any display. This is the way conventional TV works. Display referred signals, such as ST 2084, represent the light output on the grading screen. This sounds good, but is a problem if the user screen differs from the grading screen, when processing is required to render the picture. Metadata is required for this rendering.

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