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KAYENNE/KARRERA/ GV KORONA

K-FRAME

Version 17.2.0

Release Notes

13-06166-010-AD

2024-6-7

Patent Information

This product may be protected by one or more patents.

For further information, please visit: www.grassvalley.com/patents/

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Title	Kayenne/Karrera/GV Korona Release Notes
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K-Frame Version 17.2 Release Notes

About this Manual

This document describes the new features and other information specific to the K-Frame Video Production Center, Version 17.2 switcher software for the Kayenne, Karrera, and GV Korona systems.

IMPORTANT: V17.2.0 is only supported by the GV K-Frame XP and GV K-Frame X (Video Production Center).

For More Information

For information about installing, configuring, and operating K-Frame systems, see the K-Frame Video Production Center Documentation Libraries found on the Grass Valley website at grassvalley.com and on the USB thumb drive provided with your system.

New in this Release

Clipping support

When in Clip mode, the SMPTE Nominal Range (or Narrow Range) values are passed, but the sub black levels (0x04 – 0x3F) are clipped to 0x40 and the super white levels (0x3AD – 0x3FB for Y) (0x3C1 – 0x3FB for Cr, Cb) are clipped to the threshold level (0x3AC for luminance, 0x3C0 for chroma).

When in Pass mode, all SMPTE Full Range (SDI-based) values are passed, which includes the sub blacks and the super whites. (0x04 – 0x3FB).

The clipping levels are (for 10 bit video) min=64, max=940 for Y (luminance) and min=64, max=960 for Cr, Cb (chrominance). These values in hexadecimal are (0x40, 0x3AC) and (0x40, 0x3C0).

The clipping feature provided in the Eng Setup -> Video Settings menu is a simple On/Off mode that has global effect for all outputs (Gearbox, IP, and Format Conversion boards) in the switcher frame.

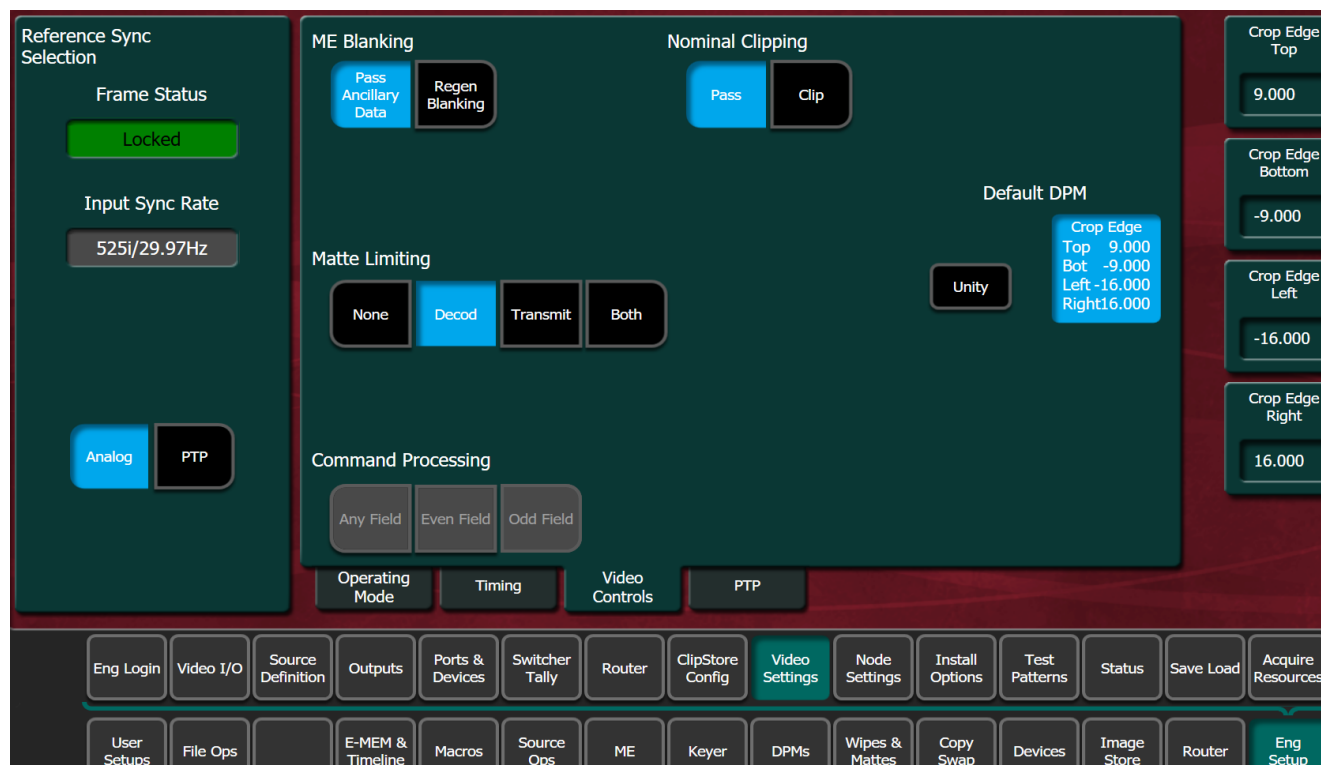
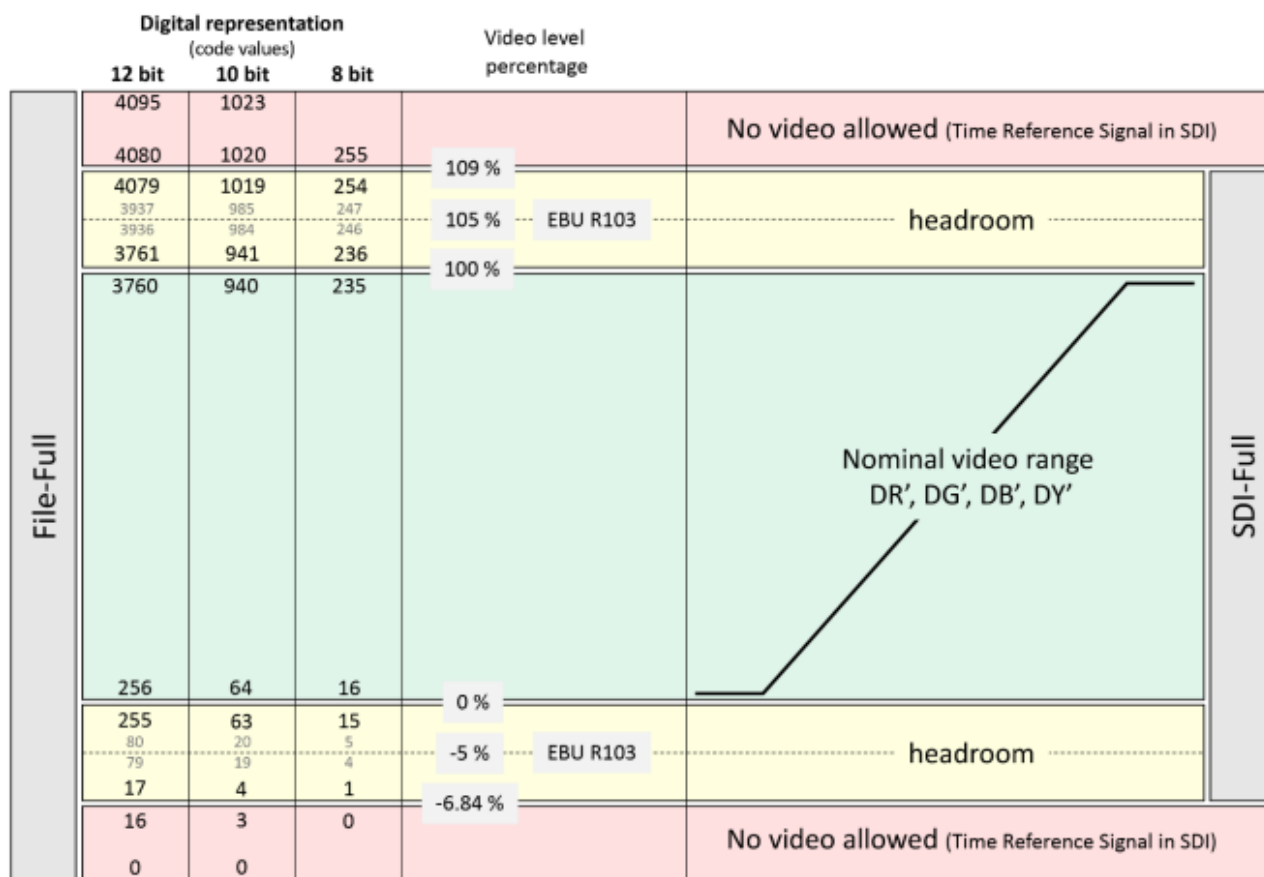


Table 1

System Bit Depth	Range in Digital Sample (Code) Values		
	Nominal Video Range	Preferred Min. / Max.	Total Video Signal Range
8-bit	16 - 235	5 - 246	1 - 254
10-bit	64 - 940	20 - 984	4 - 1019
12-bit	256 - 3760	80 - 3936	16 - 4079
16-bit	4096 - 60160	1280 - 62976	256 - 65279



APPENDIX B: NARROW AND FULL RANGE

Traditional SDI has used 0-700mv to represent levels from black to white which is typically referred to as 0IRE to 100IRE. Within a 10-bit system this range has been represented by black at 64 decimal and white at 940 decimal that allows for overshoot and undershoot within the video signal and has been termed Narrow range as defined in ITU-R BT.2100.

In file based workflows however the full range of video levels can be used to improve accuracy in color conversion in a 10-bit or 12-bit system. Therefore in 10-bits 0 is represented as black and white is represented by 1023 decimal, however in SDI codewords are used for bits 0-3d and 1020d-1023d and are excluded from the active video signal. Hence when a file is converted to SDI the data maybe scaled or clipped depending on the device to the allowed range of SDI levels from black at 4d to white at 1019d. Similarly in a 12-bit workflow the range of allowed values is from 16d represented as black to 4092d represented white as shown in Figure B1.



FIGURE B1. Code Values for 10-bit and 12-bit Y or RGB.

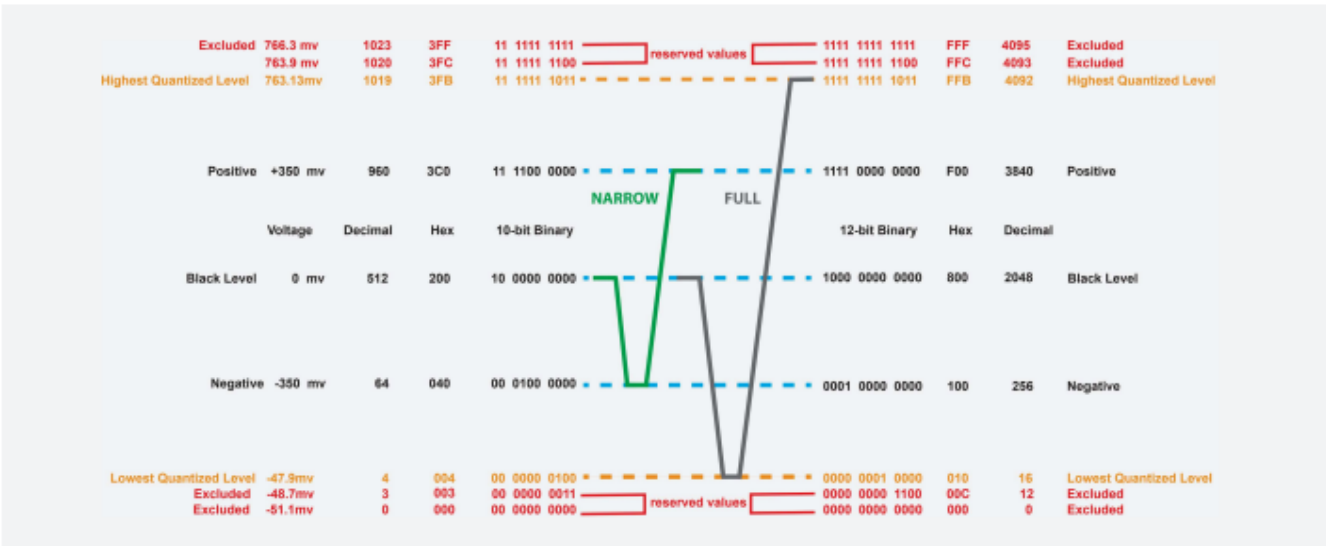


FIGURE B2. Code Values for 10-bit and 12-bit Cb and Cr.



Contact Us

Grass Valley Technical Support

For technical assistance, contact our international support center, at 1-971-999-0894 (US and Canada) or +1 530 478 4148.

To obtain a local phone number for the support center nearest you, please consult the Contact Us section of Grass Valley's website (www.grassvalley.com).

An online form for e-mail contact is also available from the website.

Corporate Head Office

Grass Valley
3499 Douglas-B.-Floreni
St-Laurent, Quebec H4S 2C6
Canada
Telephone: +1 514 333 1772
Fax: +1 514 333 9828
www.grassvalley.com