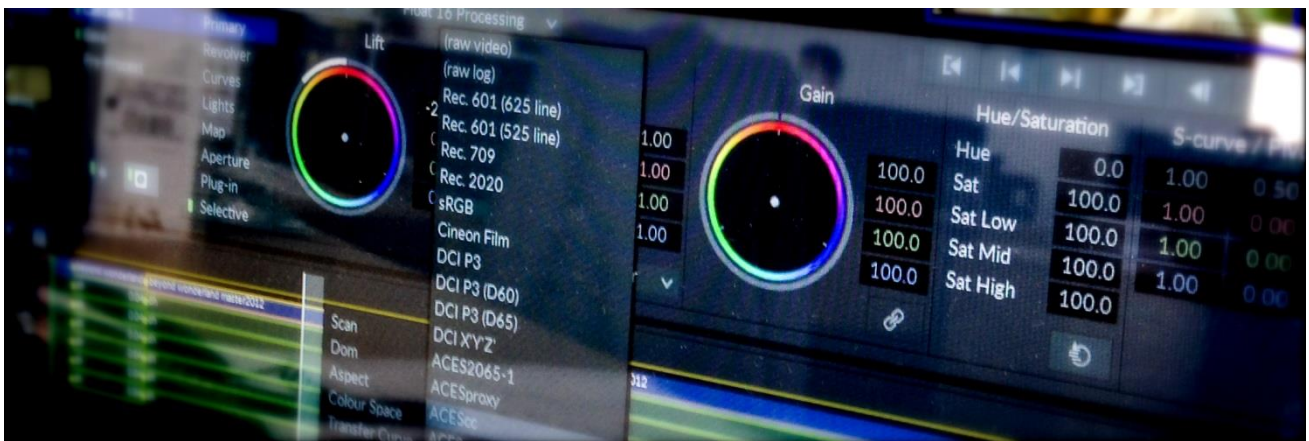


# Quantel Rio Rio Assist

## V4.4.0 New Feature List



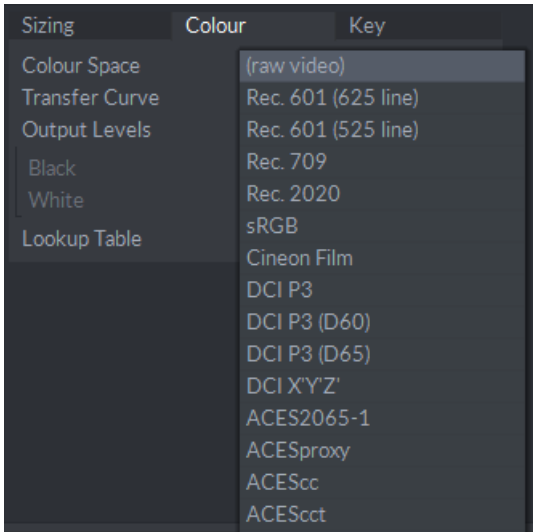
If you have any questions please contact Damon Hawkins  
[damon.hawkins@s-a-m.com](mailto:damon.hawkins@s-a-m.com)

**V4.4.0 – New Features – April 2017**

- Colorspace on Export
- New Tracker choices
- Extended LUT support
- Tangent panel support
- Color - YUV legal box changes
- Extended 32 channel audio support
- 120p timeline editing support
- Canon 1.5 SDK Update
- Float clips exported to integer formats
- RED 6.2.2 SDK Update

### Colourspace on Export

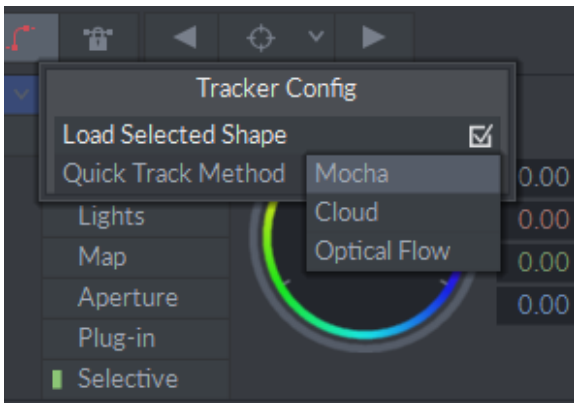
Colourspace transformations can now be achieved as a part of the export process. This means deliverables in different colourspace with different transfer curves can be made.



Colour Space and Transfer Curve choices are available in the 'Colour' tab in the Export menu.

### New Tracker choices

There are now two additional tracker choices – Cloud and Optical Flow. Either these or the Mocha tracker can be set as the 'Quick Track Method'.

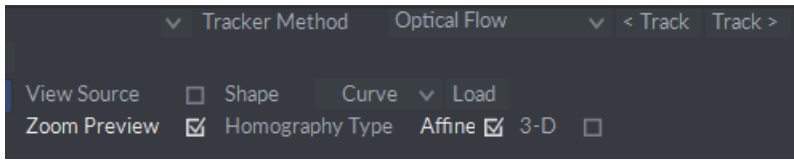


The two new tracker choices each have their own advantages:

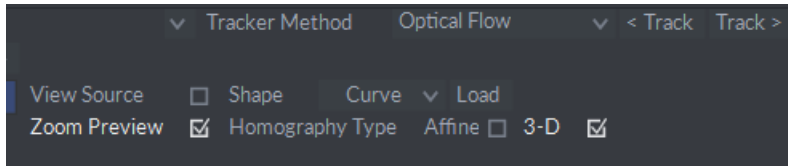
**Cloud** – this is the slightly faster of the two and tries to uniquely match features based within the defined area. This is good for when a feature set within a picture is clearly defined and remains so over the duration of the track.

**Optical Flow** – this tracks the movement of every pixel and is probably more suited to tracks where the features within the tracked area change over time.

Both tracking methods have a choice of Homography Type:



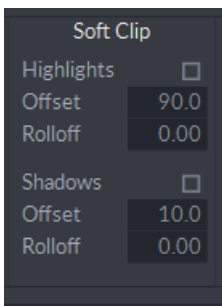
**Affine** - this method produces a homography without matrix perspective transformation – this is analogous to Mocha Shear method. The transformation produced by a affine homography preserves parallelism of coordinates.



**3-D** - this produces a homography matrix with perspective transformation – this is analogous to Mocha Perspective method. The transformation produced by a perspective homography does not preserve parallelism of coordinates.

### Color - YUV legal box changes

When MLTFX Float Processing was selected in previous software versions the YUV legal box was ignored, consequently this has now been replaced by a 'Soft Clip' box as shown below.



There is a 'Highlights' checkbox for the whites that when checked will clip in both source and float processing, likewise for the blacks where there is a 'Shadows' check box. The 'Offset' will control the amount of clipping and the 'Rolloff' will soften this clipping with a soft roll off rather than a hard clip.

## Extended LUT support

The majority of 3<sup>rd</sup> party LUTs can now be used within Rio. Please see the chart below for details.

File Extension	LUT File Format	3D-LUT	1D-LUT	1D-FLUT	CDL	Matrix	Range
.txt	SAM Cube Format	R/W <sup>1</sup>					
.3dmesh	Colorfront 3D LUT Format	R					
.ccc	ASC CDL Format				R/W <sup>2</sup>		
.cms	Nucoda CMS Format	R/W <sup>1</sup>	R				
.cube	DaVinci Resolve Cube Format	R/W <sup>1</sup>	R				
.itx	Iridas ITX Cube Format	R/W <sup>1</sup>					
.spi1d	Sony Pictures Imageworks 1D-LUT Format		R				
.spi3d	Sony Pictures Imageworks 3D-LUT Format	R/W <sup>1</sup>					
.spimtx	Sony Pictures Imageworks Matrix Format					R	
Can be used in anywhere <sup>3</sup> ?		Y	N	N	N	N	N
Can be used in MLTFX Pre-process?		Y	Y	Y	Y	Y	Y

### Notes:

- 3D-LUTs can be created in these formats using "Base Cube"+"Make Cube" in the MLTFX Pre-process menu.  
The default format/extension is "SAM Cube.txt" – other formats can be created by explicitly specifying an extension, i.e. ".spi3d".
- CDL transforms can be created using "Export" in the MLTFX CDL menu.  
The default format/extension is "ASC CDL .ccc"
- By "anywhere" it means the following menus: Import, Export, SDI Output, Effects, and Cineon Utils.

### Tangent panel support

The Tangent Elements panels are supported on all Rios. It will require the Tangent Hub to be installed prior to connecting any panels. This can be downloaded from the Tangent website here:

<http://www.tangentwave.co.uk/tangent-support/>



Full Tangent manual documentation can be downloaded from here:

<https://s-a-m.com/support/post-and-editing/>

or Club Rio users can also access it from here:

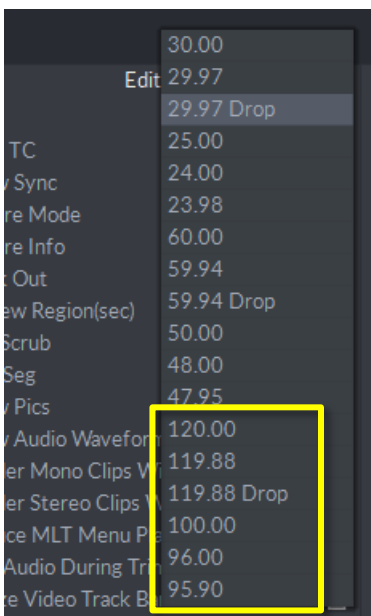
[Tangent Panel Mapping](#)

#### Note:

The Tangent Mapper is not supported.

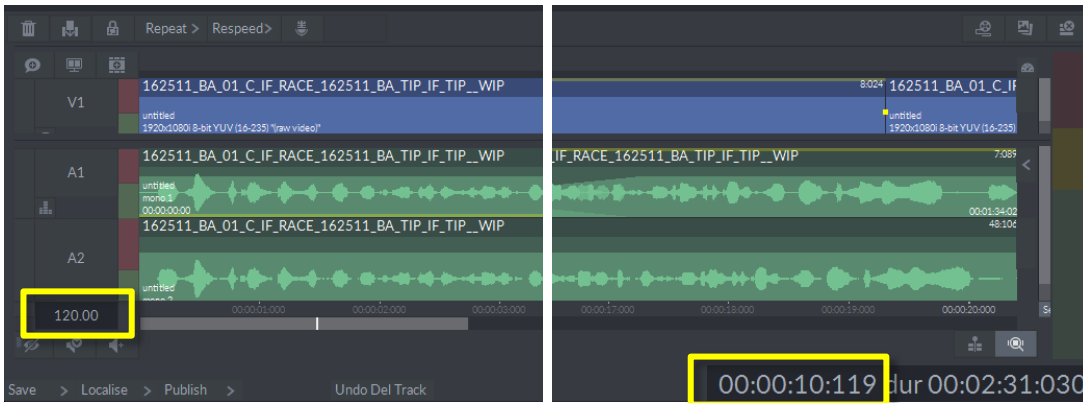
### 120p timeline editing support

Rio will now support 96p/100p/120p timeline workflows. In the F1 menu there is now an additional choice of high frame rates as shown below.



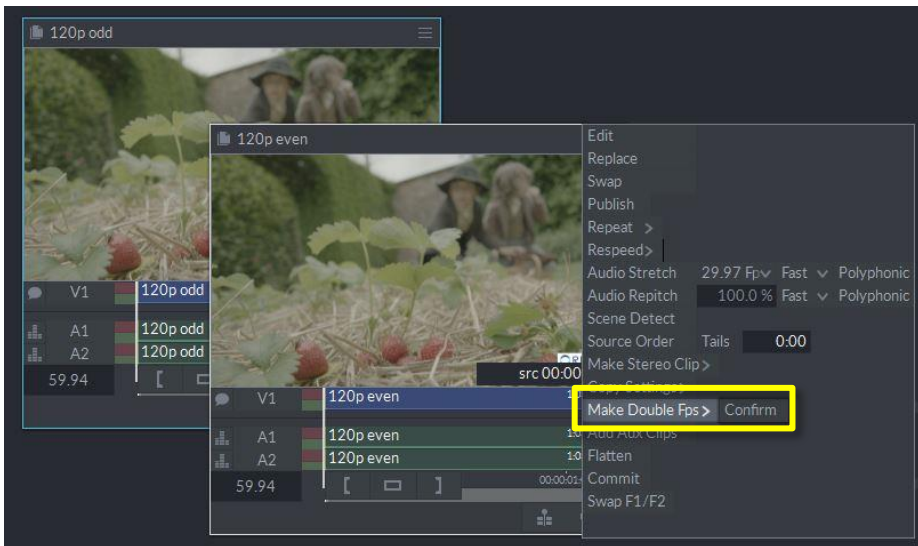
When one of these frame rates is selected on the timeline then the SDI output must be set to the equivalent 48p/50p/60p frame rate.

This new feature allows users to work with and produce 96p/100p/120p timelines all the way up to 8K, however for realtime playout the equivalent 48p/50p/60p frame rate needs to be selected on the SDI output. There is no 96p/100p/120p fps option on the SDI output. To maintain realtime playout of the timeline then only every other frame is played off disk.

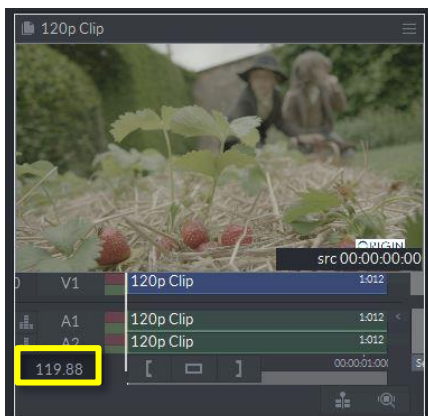


120p timeline with a 120 fps timecode count

With the addition of this new HFR feature there is also the ability to combine two, for example odd and even framed clips, of 48p/50p/60p into a single 96p/100p/120p clip without any processing. This is a similar process to making a stereo clip. Lasso two clips together on the desktop and then select 'Make Double FPS' and Confirm.



A resultant double FPS clip will be produced on the Desktop.



There are some rules/restrictions when it comes to combining two clips to make a double FPS clip.

What is allowed:

- 48, 50 or 60p clips
- multi-segments
- transitions

Restrictions:

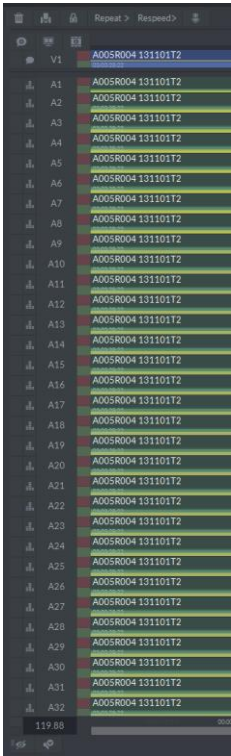
- two clips have to be absolutely identical in structure
- no history of any kind (MLTFX, Effects)
- no stretch
- no multi-layer timeline, so no more than one track

Use case:

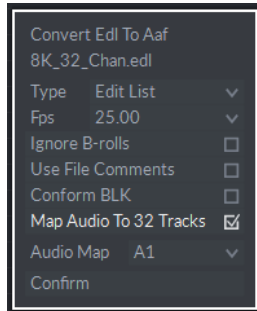
Conform two 60p clips using the same EDL without any M2 commands. Take A and B clips onto the desktop and merge them into one 120p clip.

### Extended 32 channel audio support

32 channel audio support has been expanded to support 32 mono audio tracks in edit and is also now supported within the conform menu.

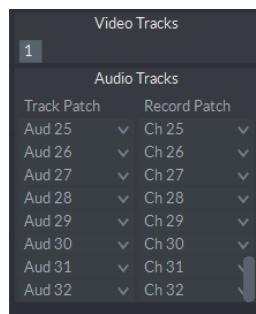


32 mono channels



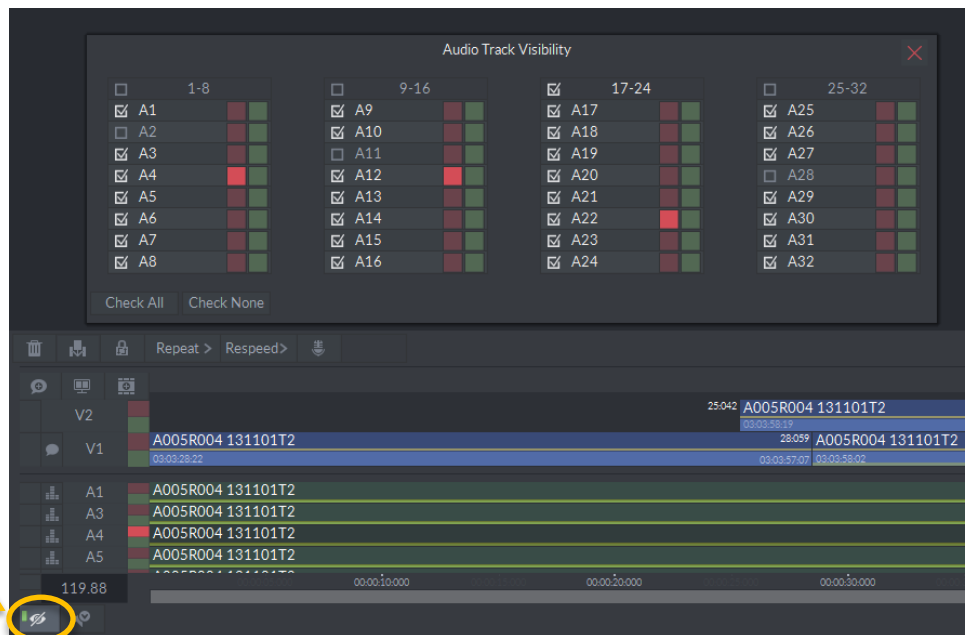
It is possible to convert an EDL file into an AAF and map (if required) the A1, A2, A3, A4 to all 32 channels.

This is achieved by selecting the check box as shown and source audio track when converting.



32 audio channel conform

There is a new Audio Track Visibility window that can be toggled on/off displaying solo/mute visibility, plus allows tracks to be disabled by unchecking the tick box.



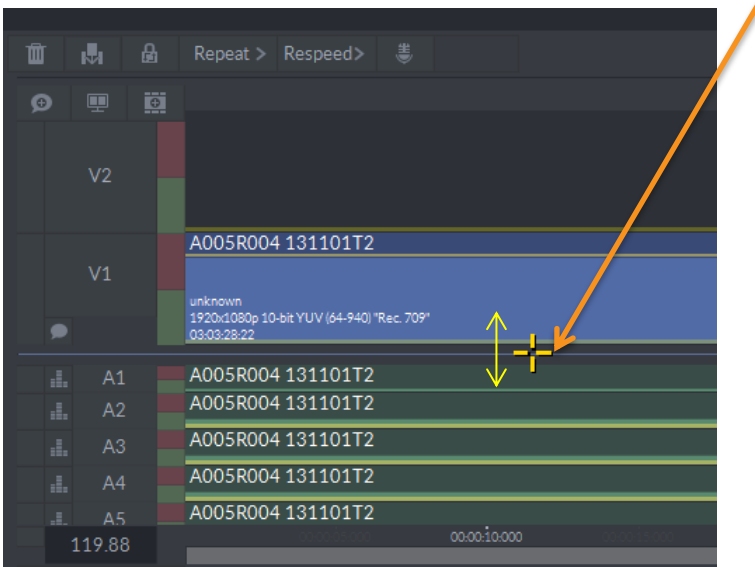
Audio Track Visibility Window on/off

Audio Track Visibility Window – see all track states at a glance

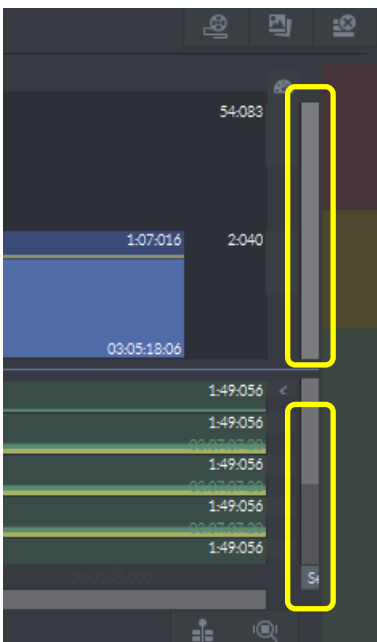


In Edit as it is now possible to display all 32 tracks of mono audio it has been necessary to make some changes to the way audio tracks and video tracks are displayed.

There is now a separator between audio and video tracks.



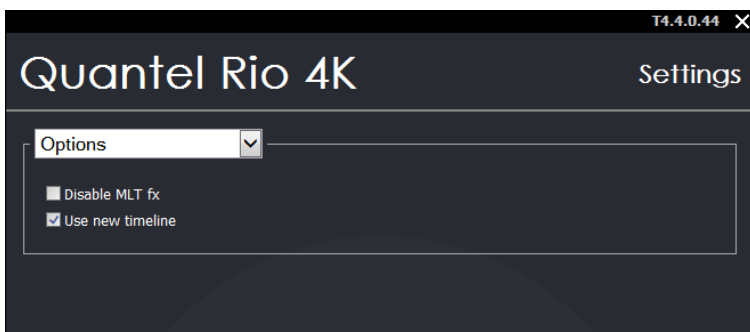
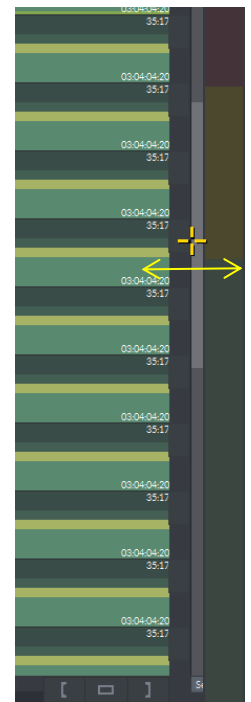
Adjusting this can be used to scale up just the audio tracks height, and can also be used to grow/shrink the video section.



If the number of audio tracks or video tracks is too many for the space then they will become scrollable via a scroll bar (as highlighted) on the right hand side of the timeline. There are separate ones for both audio and video.

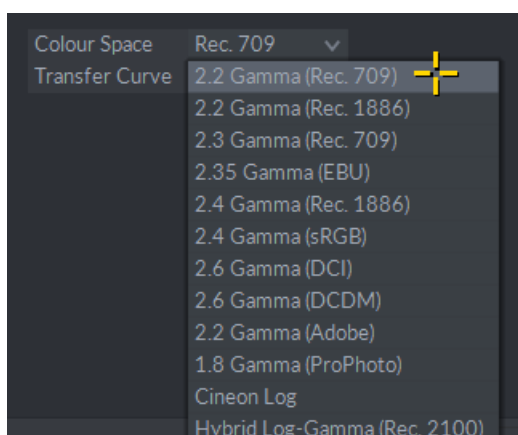
Both the audio and video tracks will always reach their minimum size before becoming scrollable.

By clicking on the scroll bars and moving to the left and right then the tracks will be scaled within the existing height. Left to grow and right to shrink.



All the new timeline options described above can be turned off if required by unchecking the box highlighted in the Settings Menu.

## Conform/Record - Colourspace and Transfer Curve support



The colourspace and transfer curve choices are now available in the Conform and Record menus. These apply to SDI ingest only.

### Canon 1.5 SDK Update

Upgraded Canon SDK to 1.5,

Added new colour space widgets:

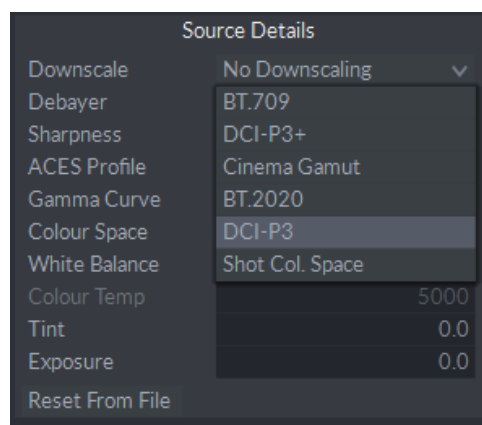
- BT 709
- DCI P3 +
- Cinema Gamut
- BT 2020
- DCI P3
- Camera original colour space

Added new downscale sizes:

- 4K DCI (4096 x 2160)
- 2K DCI (2048 x 1080)

Added new gamma curves:

- Canon Log 2
- Canon Log 3
- DCI Gamma
- SMPTE2084



Colour space and transfer curves will be set appropriately

### Note:

The following Curves and colour spaces only work with C700 camera footage:

Gamma curves:

- Canon Log3
- WideRec709
- DCI

Colour spaces:

- DCI-P3
- DCI-P3 +
- Cinema Gamut

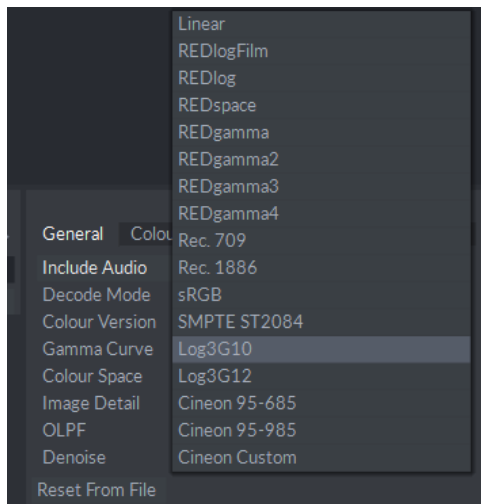
When using older camera footage, those options will not be available as they are unsupported.

### Float clips exported to integer formats

Previously float 16 and float 32 clips could only be exported as EXR files, and integer files couldn't. This has now been addressed and both integer and float files can be exported to any required format.

### RED 6.2.2 SDK Update

This update includes support for Millennium DXL files and the new RED Gamma Curves Log3G10 and Log3G12.



Please note that some of the RED Gamma Curves (REDGamma – REDGamma4) will be stored in RAW Log which is a better default than the previous Cineon Log.