

RAW Viewer

V2.1

Help

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Overview

RAW Viewer is an application software that allows you to view RAW/XAVC/SStP files recorded via the F65/PMW-F55/PMW-F5/NEX-FS700 unit or a combination of the unit and the SR-R4/AXS-R5 portable memory recorder. You can view and perform basic color grading on files transferred to your computer using an SRPC-5/SR-PC4 data transfer unit or files stored on memory cards inserted into an SR-D1/AXS-CR1/SBAC-US20 drive unit.

In addition, you can export RAW files to DPX, Open EXR, SStP, or ProRes¹⁾ format to facilitate file-based post-production workflow.

1) Only for Mac

This application supports the following file formats.

File format		Extension
RAW	F65RAW	MXF
	F55RAW	MXF
	F5RAW	MXF
	FS700RAW	MXF
XAVC		MXF
SStP		MXF

The resolutions supported for each format are as follows.

Resolution	SStP	XAVC
4096 × 2160	No	Yes
3840 × 2160	No	Yes
2048 × 1556	No	No
2048 × 1080	No	Yes
1920 × 1080	Yes	Yes
1280 × 720	No	No

1) Interlaced (50i/59.94i) files are not supported.

Menu Bar

Mac Menu



RAW Viewer menu

- About RAW Viewer: Displays version information.
- Services: Executes various commands provided by the Mac OS.
- Hide RAW Viewer: Minimizes RAW Viewer.
- Hide Others: Hides other applications.
- Show All: Shows all applications.
- Quit RAW Viewer: Exits RAW Viewer.

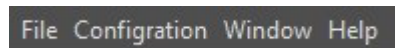
Configuration menu

See the following "Configuration Menu" section.

Window menu

See the following "Window Menu" section.

Windows Menus



File menu

- Exit: Exits RAW Viewer.

Configuration menu

See the following "Configuration Menu" section.

Window menu

See the following "Window Menu" section.

Help menu

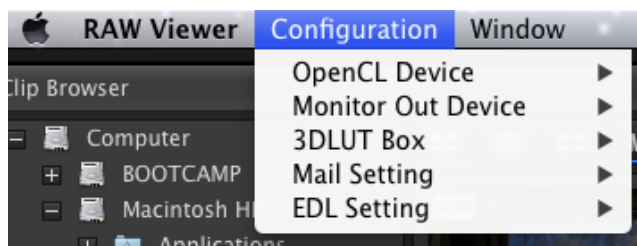
- About RAW Viewer: Displays version information.



Note: There is no command to minimize RAW Viewer in the Windows version of the application. To minimize RAW Viewer, click [Show desktop] in the Windows taskbar as shown in the following.



Configuration Menu



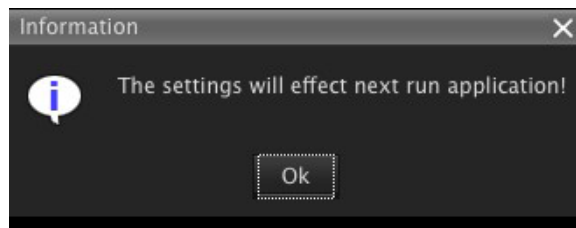
OpenCL Device

You can specify whether to use the OpenCL device of the GPU during RAW development. If a GPU that supports OpenCL exists, it will be selected by default.

1. Select your desired setting in the list that appears in the [OpenCL Device] menu.

When you select [Auto (Experimental)], the optimal resource allocation will be selected automatically for image processing. This allows high-speed image processing in multi-CPU/-GPU environments.

The following dialog box appears when you select a setting.



2. Click the [OK] button. The OpenCL device settings configured here will be applied after you restart the application.

When you restart the application for the first time after selecting [Auto (Experimental)], the startup process may take some time, as the optimal resource allocation is determined. The startup time will depend on the number of CPUs and GPUs installed on the computer.

If you change the CPU/GPU configuration, the resource allocation must be recalculated and startup will take some time again.



Note: The high-speed image processing resulting from the [Auto (Experimental)] setting will only affect playback and not affect export operations.

Monitor Out Device

When devices to which external monitors are connected are connected to the computer, the name of the connected devices are displayed, and you can select one device and format pair you want to use. When a device and format are selected, the video will be displayed on both the Clip Viewer and the external monitor.

Selecting [Update] refreshes the display of the device names.

The following Blackmagic Design devices are recommended. The supported operating systems are indicated in parentheses.

- UltraStudio SDI (Windows)
- UltraStudio Mini Monitor (Mac)
- UltraStudio 4K (Mac)
- UltraStudio Express (Mac)



Note: To verify the video in an external monitor, match the output format selected in [Monitor Out Device] with the input signal configured on the external monitor.

3DLUT Box

When HDLink-series devices that will be used for 3D LUT monitoring are connected to the computer, the connected device names will be displayed, and you can select one device to use. If Parameter Setting configurations are modified while a device is selected, the 3D LUT will be exported to the HDLink device automatically.

When a device is selected, nothing will be displayed in the Clip Viewer.

The 3D LUT for the S-Gamut/S-Log2 or S-Gamut3.Cine/S-Log3 input is exported to the HDLink device. Set one of these color spaces as the SDI-Out of the camera.

3DLUT Box includes the following submenus.

- Update: Updates the display of the connected device name to the most recent status.
- (device name): Displays the name of the connected device.
- Input Color Space: Selects the color space of the input source.
- Video Range: When a check mark is placed, video range 3D LUT data is sent. When the check mark is cleared, full range 3D LUT data is sent.
- Reset: Resets the 3D LUT data of the connected device.
- Download: Saves the 3D LUT data to the connected device. The saved data will be used as the default values the next time the device is turned on.

The 3D LUT Box supported by RAW Viewer is the HDLink series from Blackmagic Design.

Mail Setting

You can enable email notifications on the status of export tasks performed in the Task Queue window.

1. Select [Mail Account] in the [Mail Setting] menu, and configure the originating email account.
 2. Select [Add Mail Address] in the [Mail Setting] menu, and add destination email addresses.
- To use this function, you must also enable the [Notification] setting in the Export window.

EDL Setting

If [Use Clip Name of Comment as Reel] is selected, clip names will appear in the [Reel] column of the EDL Import window when importing EDLs (Edit Decision Lists). If this is not selected, the reel names will appear.

Window Menu

Layout

Configure settings for the layout of each of the RAW Viewer tool windows.

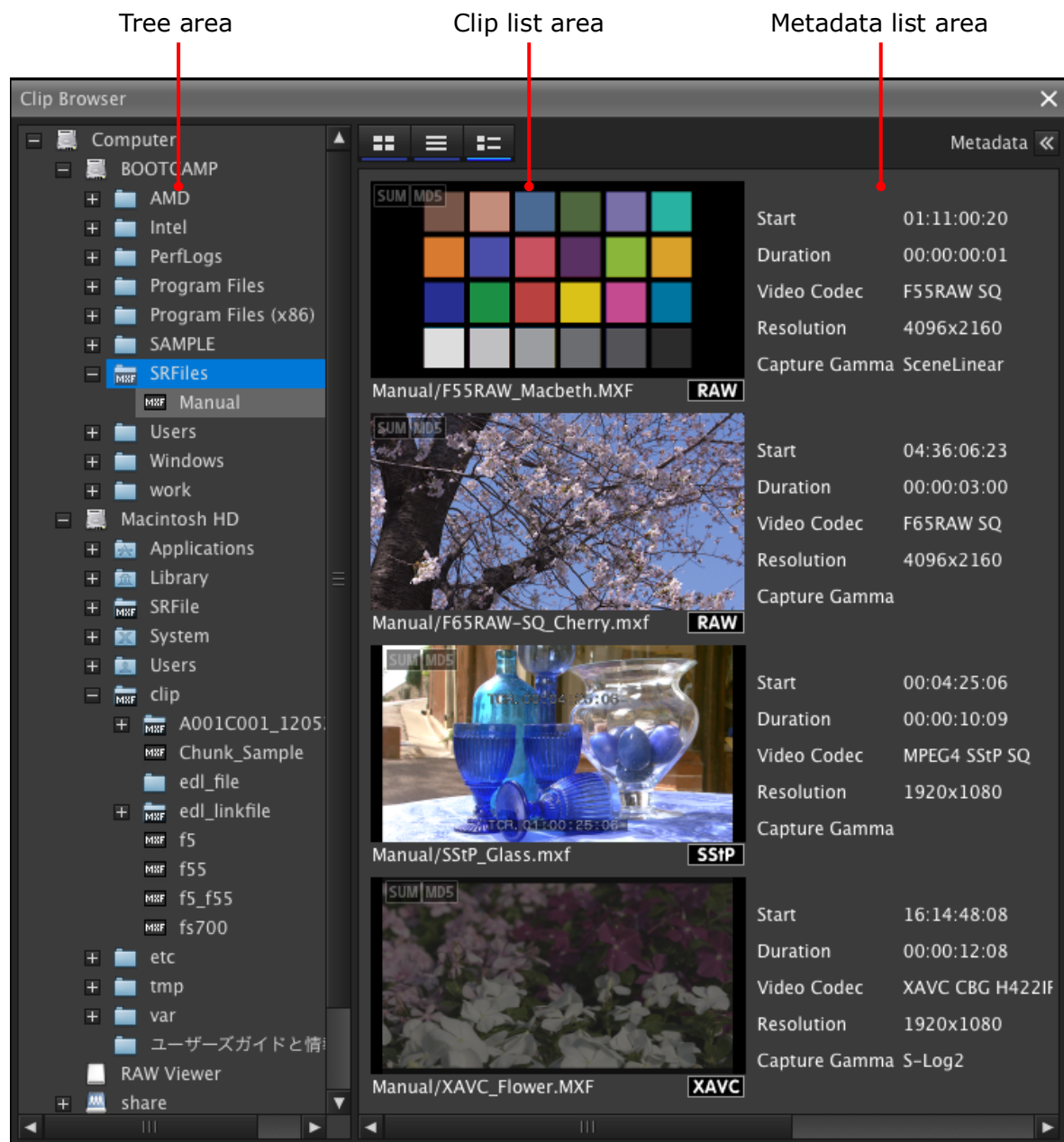
- Default: Restores the factory default layout settings.
- (layout name): Loads a layout saved using [Add Layout].
- Add Layout: Saves the current positions and sizes of each tool window under a specified name.
- Manage Layout: Allows you to manage and delete stored layouts.

Clip Browser, Clip Viewer, Parameter Setting, Task Queue, EDL Import, Waveform, Histogram

Displays/hides each of the tool windows.

Clip Browser

The Clip Browser window allows you to navigate through folders containing MXF files and check clip metadata.



Tree Area

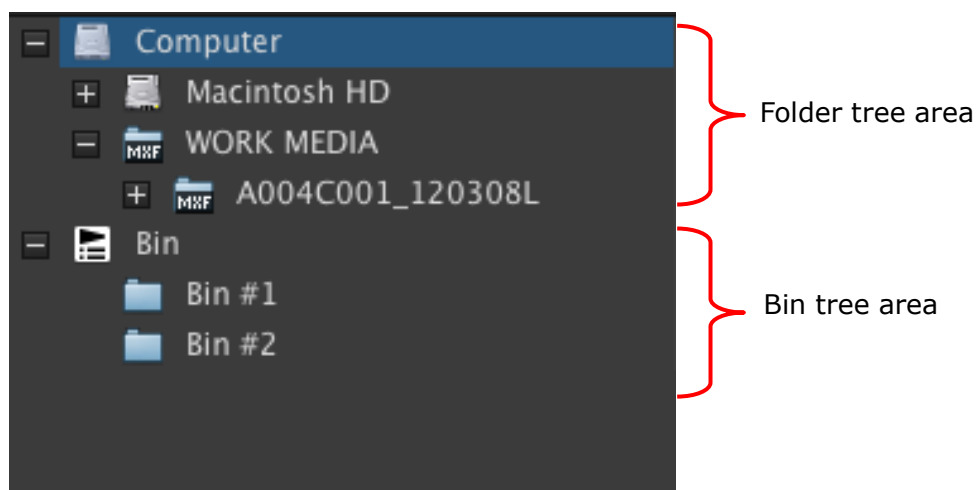
The tree area displays folders stored on the computer and the mounted drives in the folder tree area, and folders (bins) containing clip shortcuts in the bin tree area.

Folder tree area

Displays a tree structure of local folders and drives. If MXF files are stored in subfolders, the  icon (Windows) or  icon (Mac) is displayed on the folder. If there are MXF files in the subfolders of the selected folder, the respective subfolders will be displayed in gray. If there are MXF files located directly under the folder, the files will be displayed using the  icon.

Bin tree area

Displays bins for saving clip shortcuts. You can save shortcuts for multiple clips, located in folders or mounted drives, together in a bin and then perform batch operations on all the clips. You can add bins to Bin Manager, the top-level bin, which is displayed by default. Drag-and-drop clips from the clip list area to add the clips to the bins.



Folder tree area context menu

The following commands are available in the context menu for folders in the folder tree area.

- Update: Updates the display of the selected folder and its subfolders.
- Generate M01: Generates M01 files for the MXF files for the clips in the selected folder.
- Generate MD5: Generates MD5 files for the MXF files for the clips in the selected folder.
- Check SRSum: Compares the SRSum files with the MXF files for the clips in the selected folder.
- Check MD5: Compares the MD5 files with the MXF files for the clips in the selected folder.
- Check SRSum & Generate MD5: Compares the SRSum files with the MXF files for the clips in the selected folder, and generates MD5 files.

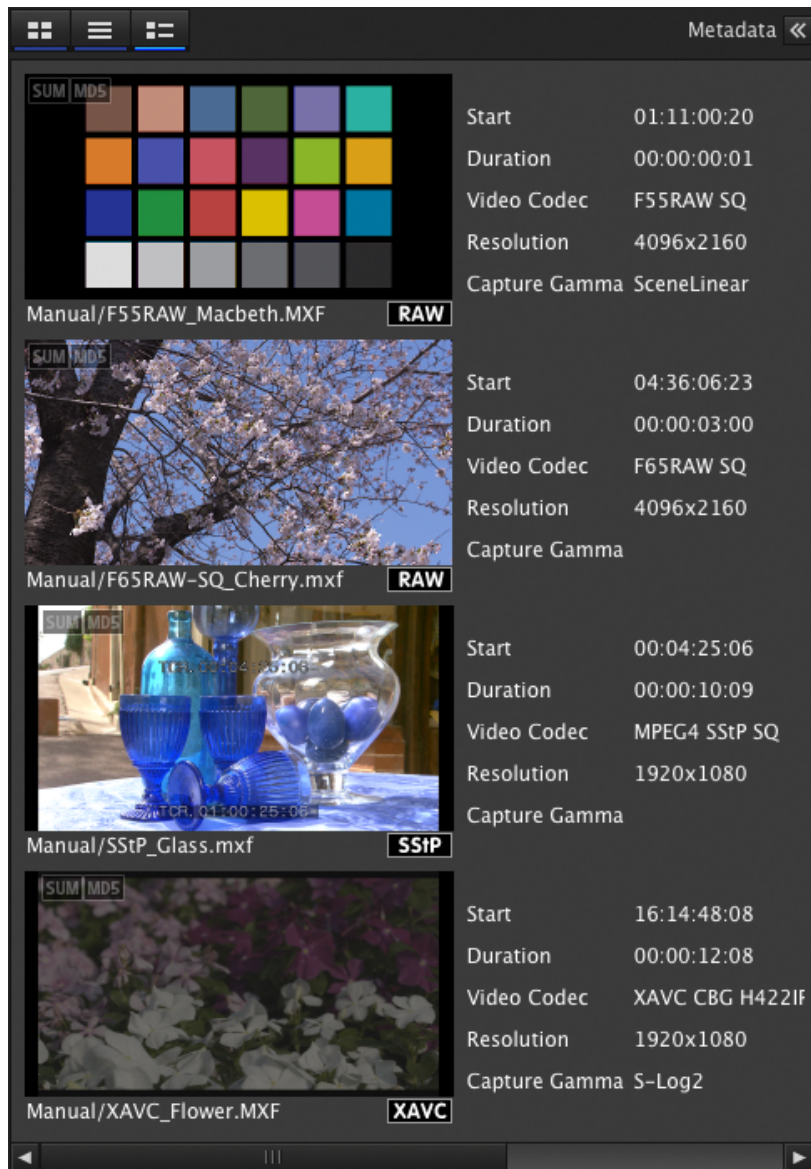
Bin tree area context menu

The following commands are available in the context menu for bins in the bin tree area.

- Update: Updates the display of the selected bin.
- New Bin: Creates a new bin.
- Bin Rename: Renames the selected bin.
- Delete Bin: Deletes the selected bin.
- Generate M01: Generates M01 files for the MXF files for the clips in the selected bin.
- Generate MD5: Generates MD5 files for the MXF files for the clips in the selected bin.
- Check SRSum: Compares the SRSum files with the MXF files for the clips in the selected bin.
- Check MD5: Compares the MD5 files with the MXF files for the clips in the selected bin.
- Check SRSum & Generate MD5: Compares the SRSum files with the MXF files for clips in the selected bin, and generates MD5 files.

Clip List Area

The clip list area displays a list of clips stored in the folder, subfolder, or bin selected in the tree area.



You can select one of the following viewing modes.



Thumbnail view

Displays thumbnails of clips.



Text view

Displays names and properties of clips.



Thumbnail & text view

Displays thumbnails, names, and properties of clips.

If a clip is stored in a subfolder, the name of the subfolder is displayed before the name of the clip.

Thumbnail

Icons that indicate the clip's status and attributes appear on the clip thumbnail.



SRSUM/MD5 icons

Indicates the check status of the SRSum file or MD5 file. The icons appear as follows depending on the status. (The SRSUM icon is used as an example.)

- : SRSum/MD5 files have been checked, and no warning occurred.
- : SRSum/MD5 files have been checked, and a warning occurred.
- : SRSum/MD5 files exist, but have not been checked.
- : SRSum/MD5 files do not exist.

CHUNK icon

This appears for a clip composed of multiple files due to chunk recording on the PMW-F55/PMW-F5. If a clip composed of multiple files is missing any files, the icon will be framed in a dotted line.

- : Chunk clip.
- : Chunk clip with missing files.

Format icon

Indicates the recording format of the file.

- : RAW file
- : XAVC file
- : SStP file

When a clip requires salvaging, its thumbnail will appear as follows. When you select such a clip and execute [Recover Clip] from its context menu, the clip will be salvaged.



Clip list area context menu

The following commands are available in the context menu for clips in the clip list area.

- Update: Updates the clip list to the current information.
- View: Changes the viewing mode of the clip list.
- Arrange Clips by: Changes the sort order of clips in the clip list.
- Generate M01: Generates an M01 file for the MXF file for the selected clip.
- Recover Clip: Salvages the selected clip.
- Generate MD5: Generates an MD5 file for the MXF file for the selected clip.
- Check SRSum: Compares the SRSum file with the MXF file for the selected clip.
- Check MD5: Compares the MD5 file with the MXF file for the selected clip.
- Check SRSum & Generate MD5: Compares the SRSum files with the MXF files for clips in the selected bin, and generates MD5 files.
- Delete Clip in Bin: Deletes the selected clip shortcut.
- Reveal: Opens the folder in which the clip is stored in Explorer (Windows) or Finder (Mac).

Metadata List Area

The metadata list area displays metadata for the clips selected in the clip list area.

The [Value (MXF)] column displays metadata stored in the MXF file.

The [Value (M01)] column displays metadata stored in the M01.XML file associated with the MXF file. Metadata values in the [Value (M01)] column that begin with an asterisk (*) can be modified.

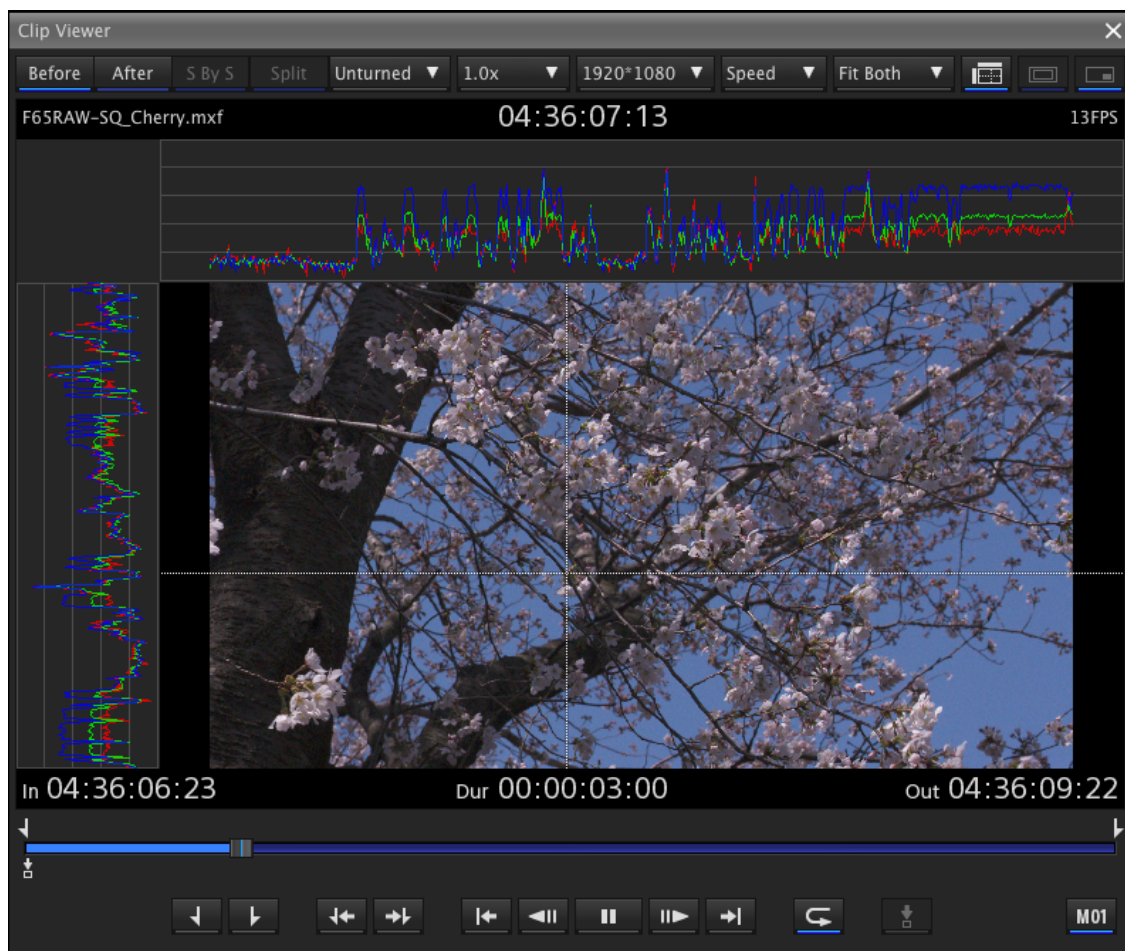
Name	Value (MXF)	Value (M01)
Creation Date	2012-04-05 12:24:45	2012-04-05 12:24:45
Last Update		2013-12-05 17:18:40
UMID	060A2B34010101050...	060A2B34010101050101...
Start	04:36:06:23	04:36:06:23
End	04:36:09:22	04:36:09:22
Duration	00:00:03:00	00:00:03:00
Poster Frame		
Drop Frame	NDF	NDF
Video Codec	F65RAW SQ	F65RAW SQ
Resolution	4096x2160	4096x2160
Aspect Ratio	256:135	256:135
Format FPS	23.98p	23.98p
Capture FPS		23.98p
Pixel Aspect		1:1
Flip		
Number of A...	16	16
Audio Codec	LPCM	LPCM
Audio Bit De...	24	24
Audio Sampli...	48000	48000
Exposure Ind...	800	800
ND Filter Wh...		
Image Sens...		
Shutter Spe...		
ISO Sensitivity	800	800
White Balance	5500	5500
Capture Ga...		
Gamma for ...	SceneLinear	SceneLinear
Camera Attri...	F65 10034	F65 10034
Effective Mar...	4096:2160	4096:2160
Rotary Shutt...	ON	ON
Raw Black C...	512	512
Raw Grav Co...	1504	1504

Clip Viewer

The Clip Viewer window allows you to playback clips. When you double-click a clip in the clip list area of the Clip Browser window, the clip is displayed in the Clip Viewer window.

You can also specify vertical and horizontal lines on the screen and display their RGB levels as waveforms.

Double-click the screen to switch to full-screen mode. Double-clicking again returns the screen to normal display.



If there are invalid frames in a clip, those frames will be displayed as white images.

Selecting the Display Method

Click the following buttons to select the method in which clips are displayed.

- Before button (shortcut key "b")
Clips are played back with only the Grading Color Space, Color, Tone Curve, and Viewer Settings parameters of the Parameter Setting window applied.
- After button (shortcut key "a")
Clips are played back with the parameters of the Parameter Setting window applied.

- S By S button (shortcut key "c" toggles between Split)
Before and After versions of clips are shown side by side.
- Split button (shortcut key "c" toggles between S By S)
A split view of the Before and After versions of clips is shown.
The position of the split can be adjusted using a mouse.



Note: When [Monitor Out Device] is selected, the [S By S] and [Split] buttons cannot be selected.

Flip Setting

Unturned ▼

Flips the image display vertically or horizontally.

- Unturned: Displays the image without flipping.
- Flip H: Flips the left and right of the image.
- Flip V: Flips the top and bottom of the image.
- Flip HV: Flips the top, bottom, left, and right of the image.

De-Anamorphic Setting

1.0x ▼

Selects the scaling for de-anamorphic display. You can select from 1.0x, 1.3x, or 2.0x.

Resolution Setting

4096*2160 ▼

Selects the playback resolution. The selectable resolutions will differ depending on the video format.

When [Monitor Out Device] is selected, [3480*2160] or [1920*1080] will be displayed depending on the selected format and cannot be changed.

Quality Setting

Speed ▼

Selects the playback quality by specifying whether to prioritize [Quality] (image quality) or [Speed] (processing speed).

When the format is XAVC or SStP, this item does not appear.

When the format is RAW, [Quality] may not be selectable depending on the resolution.

Zoom Setting



Selects the size at which the video is displayed. The aspect ratio is always fixed.

- Fit Both: Automatically scale to fit inside the Clip Viewer window.
- Fit Width: Automatically scale to fit the width of the Clip Viewer window.
- Fit Height: Automatically scale to fit the height of the Clip Viewer window.
- 25%: Reduce to 25%.
- 50%: Reduce to 50%.
- 75%: Reduce to 75%.
- 100%: No scaling (pixel for pixel).
- 125%: Enlarge to 125%.
- 150%: Enlarge to 150%.
- 200%: Enlarge to 200%.
- 400%: Enlarge to 400%.
- 800%: Enlarge to 800%.

Waveform Display Setting



Displays/hides the waveforms.

When the button is enabled, a vertical dotted line and a horizontal dotted line appear on the clip, and waveforms that indicate the RGB levels on those lines appear above and to the left of the clip.

Clicking the button again hides the waveforms.

The dotted lines can be dragged using a mouse. Dragging the point where the vertical and horizontal lines intersect allows you to move both lines simultaneously.

The waveforms have an 8-bit display precision.

If the [S By S] or [Split] button is selected, you cannot display the waveforms.

Effective Marker Setting



Displays/hides the effective marker. The display size of the effective marker is determined by the metadata of the MXF file or XML file. The effective marker is displayed by a white dotted line.

This cannot be selected when [Monitor Out Device] is selected.

Navigator Setting



Displays/hides the navigator. If the navigator display is enabled, it will automatically appear if the image is scaled such that it is too large to fit in the Clip Viewer window (i.e. larger than would result from a zoom setting of [Fit Both]).

- When the image does not fit in the Clip Viewer window, you can move the area shown.
- The area shown can be changed by dragging the blue frame in the navigator.
- The area shown can also be changed by dragging the image in the Clip Viewer window directly.

Time Codes

The following time codes appear in the Clip Viewer window. You can select time code display or frame number display from the context menu. You can also click a time code and enter a value directly.

- Current Time
Shows the time code of the clip's current frame.
You can jump to a particular time code by entering the time code.
- In Point Time
Shows the time code of the clip's In point.
You can set the In point at a particular time code by entering the time code.
- Out Point Time
Shows the time code of the clip's Out point.
You can set the Out point at a particular time code by entering the time code.
- Duration Time
Shows the duration time code.
You can set the duration by entering a time code.

FPS Display

Displays the FPS value during playback.

Position Bar

Indicates the current playback position, the In/Out points, etc. relative to the clip's start and end.

- : Indicates the playback position. You can scrub to change the display position.
- : Indicates In point positions.

- : Indicates Out point positions.
- : Indicates the separations between files in a chunk clip.
- : Indicates thumbnail positions if there is an M01 file.

Control Buttons

These buttons control clip playback.



Mark In (shortcut key "i")

Sets the In point to the current position.



Mark Out (shortcut key "o")

Sets the Out point to the current position.



Go to Mark In

Jumps to the In point.



Go to Mark Out

Jumps to the Out point.



Go to Start

Jumps to the start of the clip.



Step Backward (shortcut key "←")

Steps backward one frame per click.

If this button is clicked while the Shift key is held down, the position steps backward ten frames per click.



Play / Still (shortcut key SPACE)

Plays the clip, or pauses playback.



Step Forward (shortcut key "→")

Steps forward one frame per click.

If this button is clicked while the Shift key is held down, the position steps forward ten frames per click.



Go to End

Jumps to the end of the clip.



Loop Play

Enables/disables loop playback mode. In loop playback mode, the clip will loop back to the start repeatedly.

Poster Frame



Uses a still image of the time line position as the clip's thumbnail.

This cannot be selected if there is no M01 file or if an EDL file was imported.

Overwrite M01.XML File



Selects whether to overwrite the M01.XML file. In overwrite mode, In/Out points, flip settings, de-anamorphic display settings, and other settings are saved to the M01.XML file. The next time it is loaded in M01 mode in the Clip Viewer window, the values saved to the M01.XML files will be used as the default values.

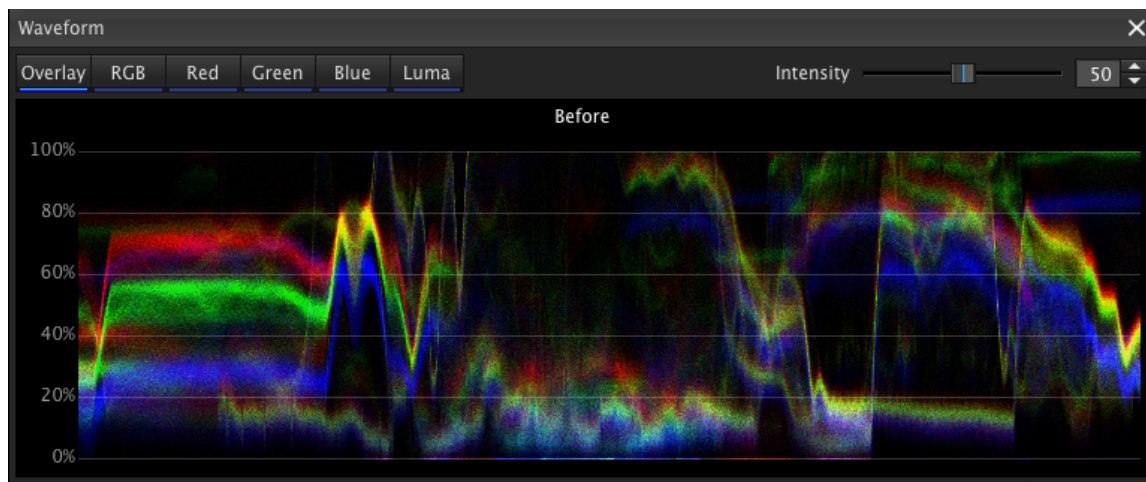
This cannot be selected if there is no M01 file or if an EDL file was imported.

Waveform

If a check mark is placed next to [Waveform] in the [Window] menu, a waveform monitor for the video displayed in the Clip Viewer window appears.

When the [Before] button or [After] button is selected in the Clip Viewer window, the waveform monitor of the displayed video appears. When the [S By S] button or [Split] button is selected, waveform monitors for both the “before” and “after” videos appear.

The waveform monitors have an 8-bit display precision.



Overlay button

Displays the red, green, and blue waveforms overlapping each other.

RGB button

Displays the red, green, and blue waveforms side by side from left to right.

Red button

Displays only the red waveform.

Green button

Displays only the green waveform.

Blue button

Displays only the blue waveform.

Luma button

Displays a waveform of the luminance level.

Intensity

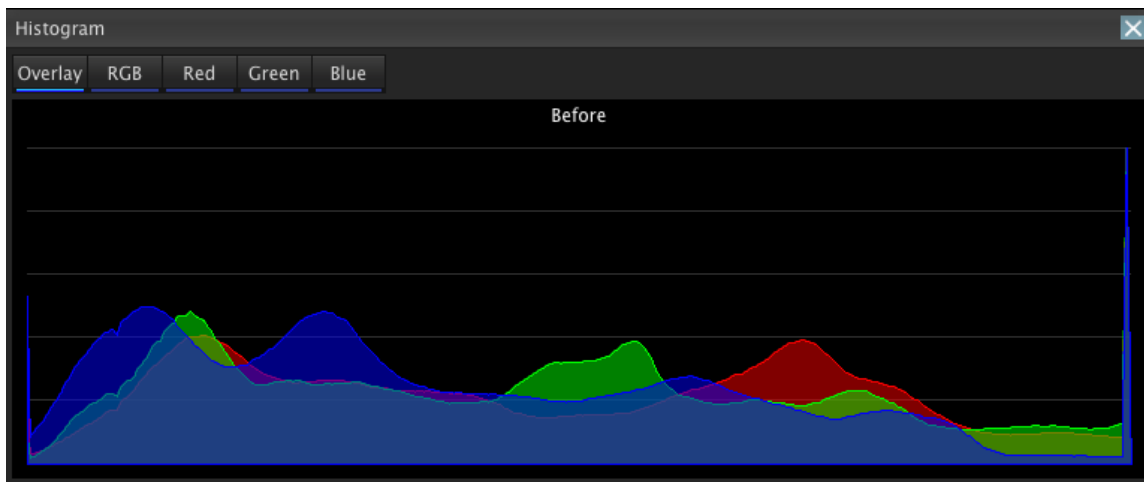
Adjusts the brightness of the waveform monitor.

Histogram

If a check mark is placed next to [Histogram] in the [Window] menu, histograms for the video displayed in the Clip Viewer window appear.

When the [Before] button or [After] button is selected in the Clip Viewer window, the histogram for the displayed video appears. When the [S By S] button or [Split] button is selected, histograms for both the “before” and “after” videos appear.

The histograms have an 8-bit display precision.



Overlay button

Displays the red, green, and blue histograms overlapping each other.

RGB button

Displays the red, green, and blue histograms side by side from left to right.

Red button

Displays only the red histogram.

Green button

Displays only the green histogram.

Blue button

Displays only the blue histogram.

Parameter Setting

RAW Workflow

RAW files store the output from Sony cinema cameras, such as the F65 and F55, preserving their wide latitude and color gamut.

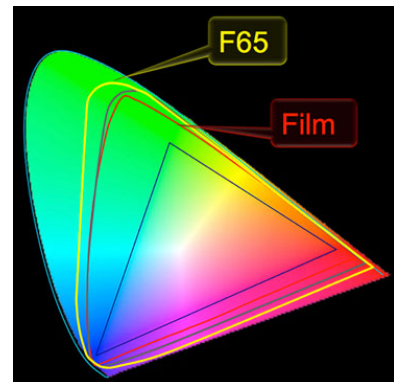
RAW format digital representation

16-bit scene linear (Approx. 1300% Latitude)

S-Gamut3 RGB reference primaries (same for S-Gamut)

Item	CIE x	CIE y
Red	0.730	0.280
Green	0.140	0.855
Blue	0.100	-0.050

Reference White CIE-D65 (0.3127, 0.329)



RAW Viewer supports the following three types of workflow for the development and conversion of RAW files without loss of its richness to promote integration with post-production color grading processes. With the different view modes, the Clip Viewer window can be used not only for viewing clips, but also for checking the original state of the RAW data or the expected color grading result with ASC-CDL and Monitor LUT applied at each stage in the pipeline.

Video Workflow

Workflow in which grading is performed in a 709 color space. Select the color and tone which will act as the starting point for grading in the Input Settings, and perform general ASC-CDL adjustments.

In the Input Settings, you can select the color and tone in [Color] and [Tone Curve].

ACES Workflow

Workflow that conforms to the ACES workflow defined by AMPAS-IIF.

ASC-CDL controls based on ACES Proxy specifications and RRT/ODT viewing are possible when [ACES Log] is selected for [Grading Color Space] in the Input Settings.

Log Workflow

Pipeline ideal for existing cinematic grading workflows.

In the Input Settings, perform log-based workspace conversion, and perform color adjustments in ASC-CDL or the tone curve editor. During this time, viewing that incorporates the application of Monitor LUT which performs Log→Video conversion is possible. In addition, you can import 3DLUT to Input Settings and Monitor LUT, and perform various workspace adjustments and viewing.

S-Gamut3.Cine is available as a color space that is ideal for grading in Log Workflow.

S-Gamut3.Cine RGB reference primaries

Item	CIE x	CIE y
Red	0.766	0.275
Green	0.202	0.872
Blue	0.089	-0.087

Reference White CIE-D65 (0.3127, 0.329)

Workspace Conversion

Provides a way to perform processing and workspace conversion that is independent from the above color processes, and to transfer to grading tools. You can select the following in [Bake] of Export Control.

S-Gamut3.Cine / S-Log3

Use in workflow with S-Log3 DPX. This allows operations that are highly compatible with past CineonLog workflows. This is also ideal when using 10bit DPX.

S-Gamut / S-Log2

Use in workflow with S-Log2 DPX. This is also ideal when using 10bit DPX.

S-Gamut3 / S-Log3

S-Gamut3 / Linear

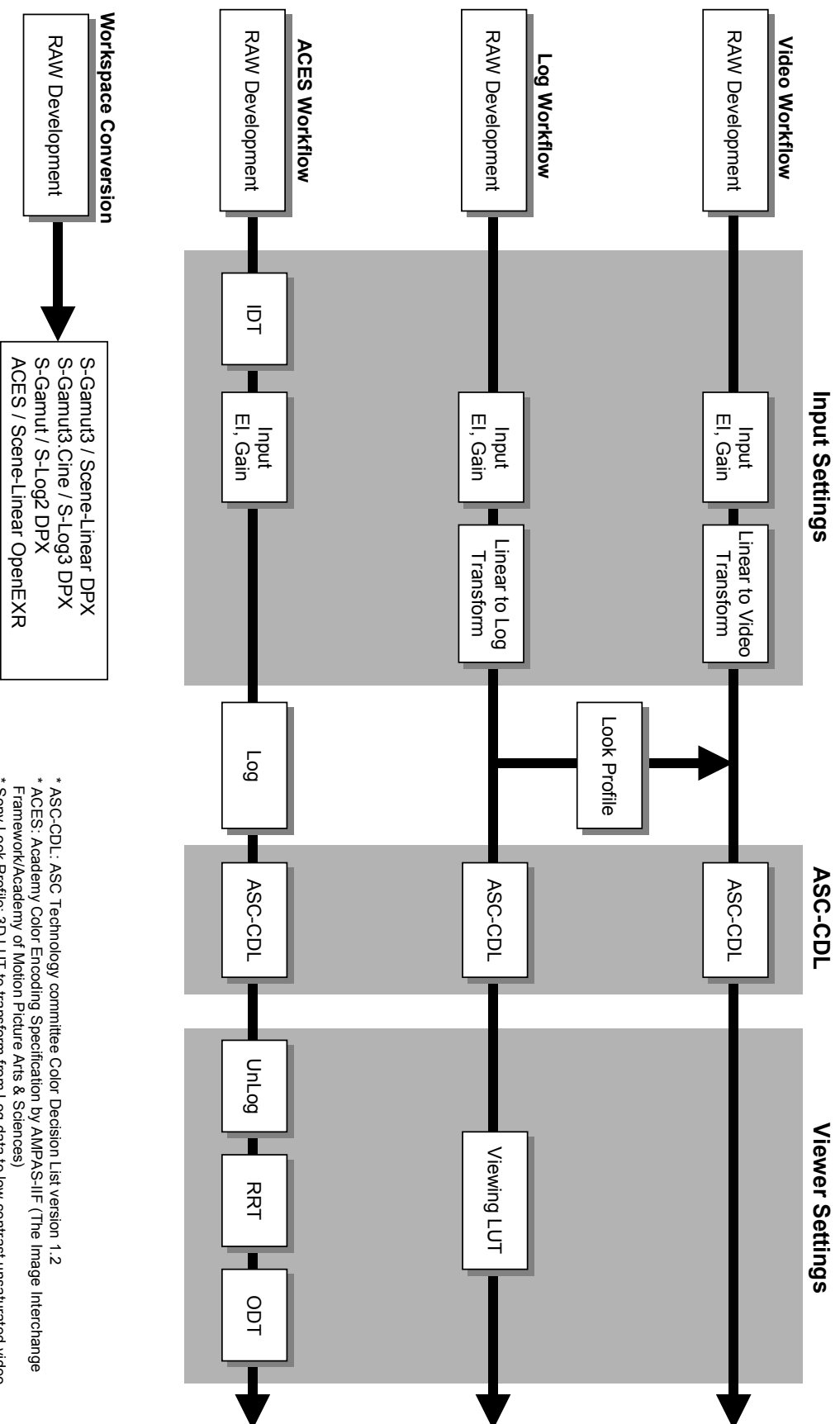
This conversion process is intended to maintain maximum faithfulness to the camera's precision recording. S-Log3 is ideal when using 10bit DPX, while Linear is ideal when using 16bit DPX.

RAW and S-Log2/S-Log3 code values

Chart reflection	Video level [IRE]	Raw code value (16bit)	S-Log2 code value (10bit)	S-Log3 code value (10bit)
0%	0%	512	90	95
18%	20%	1504	347	470
90%	100%	5472	582	645
1180%	1311%	65535	997	929

ACES

Media conversion for grading tools that support ACES. This supports conversion into ACES-compatible OpenEXR files.

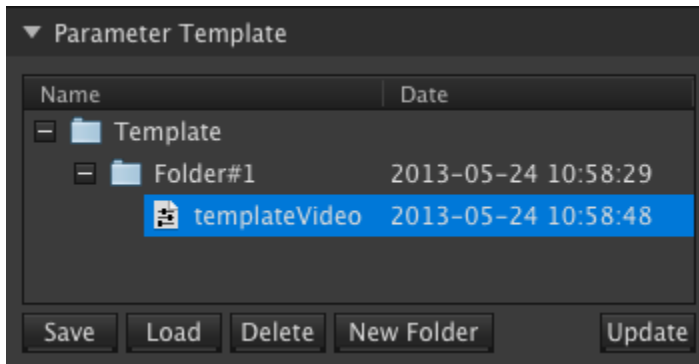


* ASC-CDL: ASC Technology committee Color Decision List version 1.2
 * ACES: Academy Color Encoding Specification by AMPAS-IIF (The Image Interchange Framework/Academy of Motion Picture Arts & Sciences)
 * Sony Look Profile: 3D LUT to transform from Log data to low contrast unsaturated video data as good start point of grading.



Note: When you reselect a clip in the Clip Browser window, all parameter settings described in the following section will retain their current values. Values adjusted using the metadata of a RAW file as a base are retained for the Exposure and Kelvin parameters.

Parameter Template



You can save and then load templates based on a desired set of user preferences.

Clicking the [Save] button saves the settings that are valid at that point as a template. To load a saved template, select the template and then click the [Load] button. You can also create folders in which to save templates.

- Save button: Saves the current settings as a template in the selected folder.
- Load button: Loads the settings from the selected template.
- Delete button: Deletes the selected template or folder.
- New Folder button: Creates a new folder for storing templates.
- Update button: Updates the display in the Parameter Template area.

Parameter Control

Load button

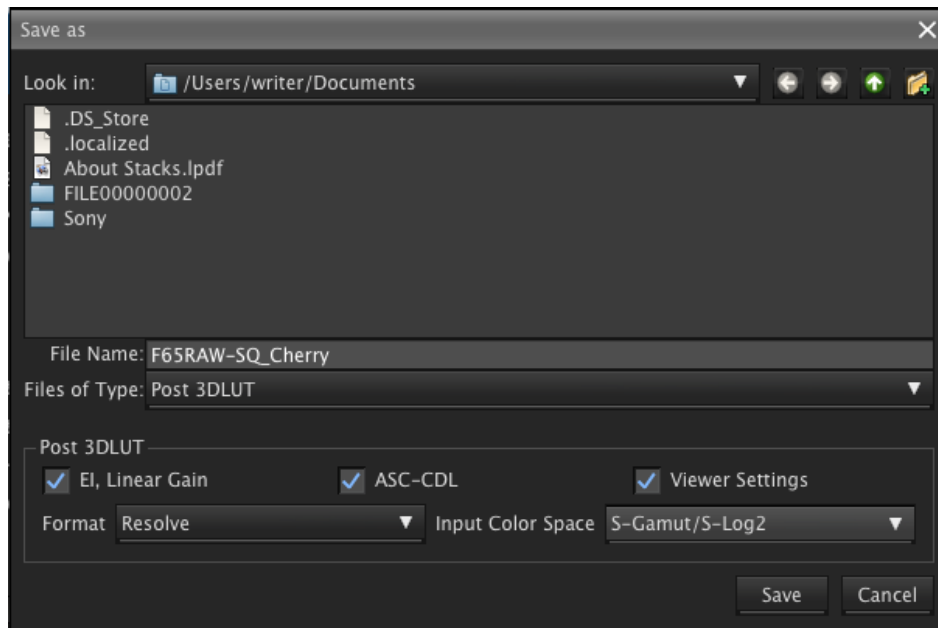
Specify and load the XML file that outputted the settings information.

Save as button

Saves the configured parameters to one of the following file formats.

- Post 3DLUT
- ASC-CDL
- Camera LUT

When you click [Save as], a dialog box for specifying the file format and file name appears.



Select the file type for the saved file in [File of Type]. The items that can be configured differ depending on the file format.

Post 3DLUT

Select whether to include the setting values for the following items in the 3DLUT data.

- EI, Linear Gain (values for [Exposure Index] and [Linear Gain] of the Input Settings menu)
- ASC CDL (values for the ASC-CDL menu)
- Viewer Settings (values for the Viewer Settings menu)

Select the 3DLUT format in [Format] and the color space of the input file for the 3DLUT generated in [Input Color Space].

The setting values for the [Color] and [Tone Curve] are always included in the 3DLUT data.

ASC-CDL

Encode all the parameters in the ASC-CDL menu of Parameter Control to ASC-CDL, and export them as a color decision list (*.cdl).

No setting items.

Camera LUT

Save the adjustment results of the tone curve editor found in the Input Settings. When [Look Profile] is set to a value other than [NoLUT] in the Input Settings, the camera LUT cannot be saved.

You can configure the following settings.

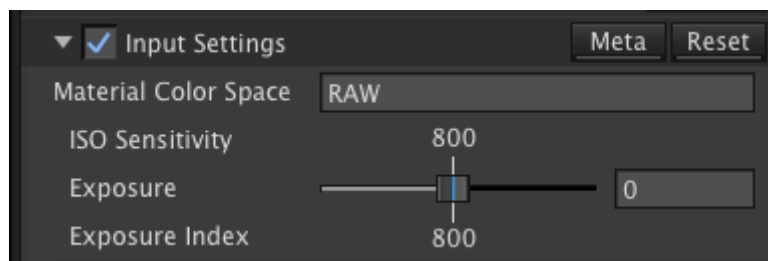
- Model: Selects the camera. You can select [F65] or [F55/F5].
- Type: Selects the file type. When [Model] is [F65], you can select [Gamma] or [LUT]. When [Model] is [F55/F5], you can only select [LUT].
- Media: Selects the media to which to save the file. When [Model] is [F65], you can select [MS] ("Memory Stick") or [SD] (SD memory card). When [Model] is [F55/F5], you can only select [SD].

When you click the [Save] button, the file is saved to the following folder.

- For F65: MSSONY¥PRO¥CAMERA¥F65 ("Memory Stick") or PRIVATE¥SONY¥PRO¥CAMERA¥F65 (SD memory card)
- For F55/F5: PRIVATE¥SONY¥PRO¥CAMERA¥PMWF55_F5 (SD memory card)

If the folder does not already exist on the specified media, it will be created automatically.

Input Settings



The Exposure Index displays the EI value that was set at the time of shooting. If the EI value differs from the standard ISO sensitivity for shooting, push or pull processing is automatically applied. If you move the [Exposure] slider back to the ISO sensitivity of the time of shooting, you can view the content in its original recorded condition, without the application of push and pull processing.

The [ISO Sensitivity], [Exposure], and [Exposure Index] values vary in tandem.

Checkbox

Enables the specified value for each parameter when selected, or uses the default value when cleared.

Meta button

Returns settings to MXF file metadata values.

Reset button

Resets settings to default values.

Material Color Space

Indicates the color space of an MXF file.

ISO Sensitivity

Indicates ISO sensitivity value of an MXF file. This parameter is written into an MXF file shot by the camera.

Exposure

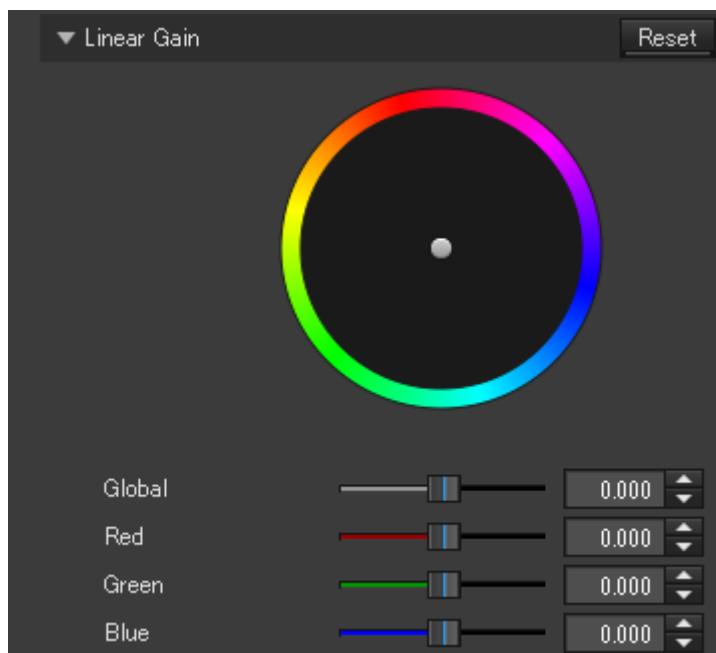
Adjusts brightness based on the original EI of the recording. The selectable brightness values are as follows (ISO Index).

(80, 100, 125, 160, 200, 250, 320, 400, 500, 640, 800, 1000, 1250, 1600, 2000, 2500, 3200, 4000, 5000, 6400, 8000, 10000)

Exposure Index

Indicates Exposure Index value of an MXF file. This shows the camera Sensitivity (EI value) setting used when the media recorded.

Linear Gain



Adjust the RGB of the gain using the color circle. When you perform adjustments, the red, green, and blue sliders will change accordingly.

This parameter is the gain of the Scene-Linear area immediately after image processing and before tone mapping is performed for Log and Video. It is equivalent to Printer Light of DI process. Use this for general color balance adjustments.

Reset button

Resets the [Linear Gain] adjustment value to default values.

Global

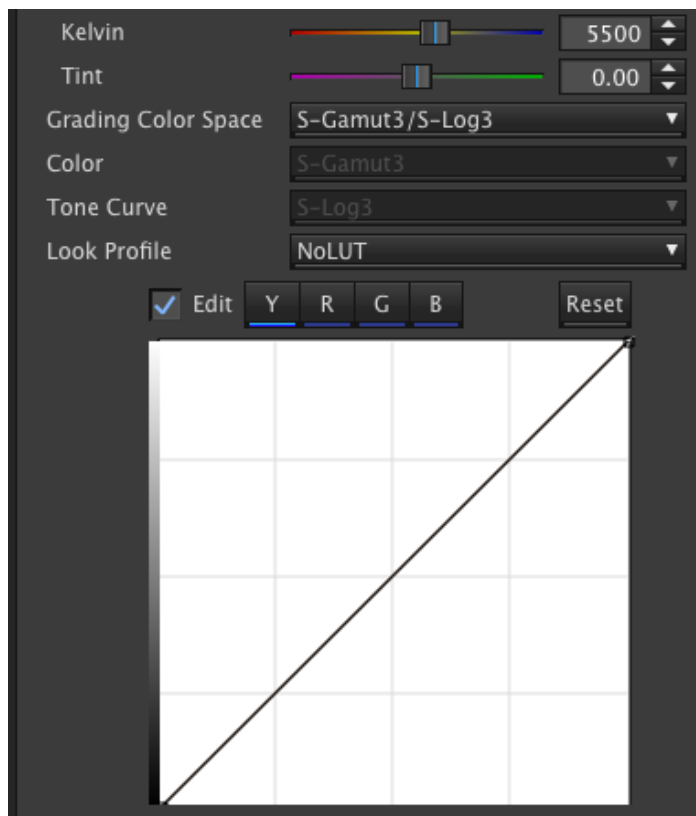
Allows you to perform total adjustments while maintaining RGB value relationships.

The range is from -2.000 to 2.000, and the default is 0.000.

Red, Green, Blue

Adjusts the RGB gain.

The range is from -2.000 to 2.000, and the default is 0.000.



Kelvin

Adjusts the color temperatures. This modifies red and blue gain based on the black-body radiator RGB balance curve. The default value is the color temperature setting configured on the camera.

The range is 2000 to 15000.

Tint

Adjusts the color balance. Adjust the green and magenta gain to supplement the [Kelvin] color temperature adjustments.

The range is from -1.00 to 1.00, and the default is 0.00.

Grading Color Space

Selects the color space.

- S-Gamut/S-Log2
- S-Gamut3/S-Log3
- S-Gamut3.Cine/S-Log3
- ACES Log
- Custom

Color

When [Custom] is selected for [Grading Color Space], this selects the color gamut. The following color gamuts are displayed.

- REC709
- S-Gamut

- S-Gamut3
- S-Gamut3.Cine

Tone Curve

When [Custom] is selected for [Grading Color Space], this selects the tone curve. The user imported 1D LUT will also appear.

Look Profile

When [S-Gamut/S-Log2] or [S-Gamut3.Cine/S-Log3] is selected for [Grading Color Space], this selects the LUT.

Tone curve editor

Edits the tone curve.

Edit

When a check mark is placed, you can edit the results of the [Color] and [Tone Curve] selection.

When the check mark is cleared, the combined results of the curve selected for [Tone Curve] and the tone curve editor adjustment value will be displayed. When 3D LUT is selected for [Color], only the tone curve editor adjustment value will be displayed.

Y

Displays a luminance graph.

R, G, B

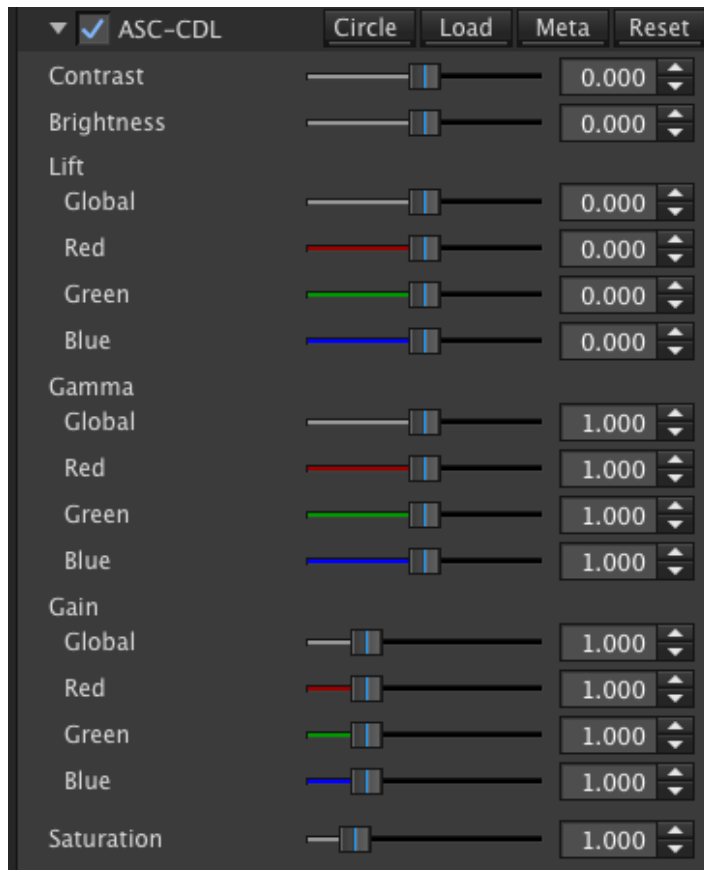
Displays RGB graphs.

Reset button

Resets tone curve editor adjustment results to default values.

ASC-CDL

All of the parameters in the ASC-CDL, including Contrast and Brightness, are ASC-CDL encoded and are applied during processing and viewing.



Checkbox

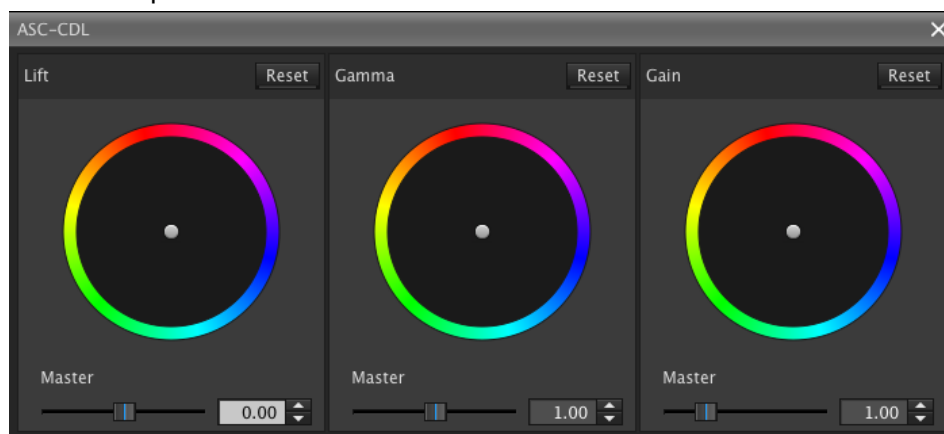
Selects whether to apply the ASC-CDL parameters.

Circle button

Displays the color circle window for adjusting the lift, gamma, and gain.

When you adjust the color circles, the red, green, and blue sliders for the ASC-CDL will change accordingly.

Using the [Master] slider allows you to perform adjustments while maintaining RGB value relationships.



Load button

Import ASC-CDL parameters from an external file.

The following file formats are supported.

- Color Decision List Format (*.cdl)
- Color Correction Collection Format (*.ccc)

Meta button

Resets ASC-CDL parameters to the metadata values of an MXF file.

Reset button

Resets ASC-CDL parameters to default values.

Contrast

Adjusts the tone curve while keeping it the center of luminance value. The adjustment results of the following [Brightness] parameter is reflected in the center of luminance. The range is from -1.000 to 1.000, and the default is 0.000.

Brightness

Adjusts the brightness of the image by lifting all luminance. The range is from -10.000 to 10.000, and the default is 0.000.

Lift

Adjust the black level while maintaining the white level. The range is from -1.000 to 1.000, and the default is 0.000.

Gamma

Adjusts the gamma and the intermediate gradation. The range is from 0.001 to 2.000, and the default is 1.000.

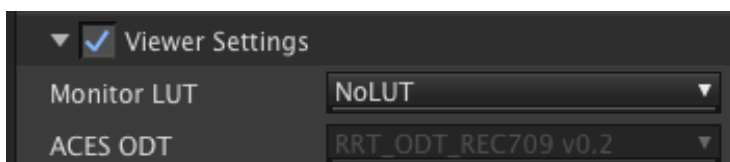
Gain

Adjusts the gain. The range is from 0.000 to 4.000, and the default is 1.000.

Saturation

Adjusts the saturation. The range is from 0.000 to 5.000, and the default is 1.000.

Viewer Settings



Checkbox

Selects whether to apply the Viewer Settings parameters.

Monitor LUT

Selects the LUT to use for the screen display.

ACES ODT

When [ACES Log] is selected for [Grading Color Space] under the Input Settings, this selects the transform. The Reference Rendering Transform (RRT) and Output Device Transform (ODT) are applied.

Adding User LUT

You can add the user defined LUT. You can add 3D LUT (*.cube) or 1D LUT (*.lut).

Store the LUT file in the Documents/Sony/RAW Viewer/Data/LUT folder. LUT files stored in the same folder are automatically loaded and added to the LUT list when you launch RAW Viewer.

The Documents/Sony/RAW Viewer/Data/LUT folder is automatically created the first time you start RAW Viewer.

The 3D LUT will appear and can be selected under [Input Settings] > [Look Profile] or [Viewer Settings] > [Monitor LUT].

The 1D LUT will appear and can be selected under [Input Settings] > [Tone Curve].

Export

Supported Formats

RAW files can be exported to the following formats.

SStP files and XAVC files cannot be exported to formats other than Trim.

Video formats

Format	Resolution	Bit Depth
DPX ¹⁾	8192 × 4320 7680 × 4320 6144 × 3240 4096 × 2160 3840 × 2160 2048 × 1080 1920 × 1080 8192 × 2160 (De-Ana ×2) 4096 × 1080 (De-Ana ×2)	16-bit integer 10-bit integer
Open EXR ²⁾	8192 × 4320 7680 × 4320 6144 × 3240 4096 × 2160 3840 × 2160 2048 × 1080 1920 × 1080 8192 × 2160 (De-Ana ×2) 4096 × 1080 (De-Ana ×2)	32-bit float 16-bit float
Trim	-	-
SStP	1920 × 1080	10-bit, 12-bit
ProRes ³⁾	2048 × 1080 1920 × 1080	10-bit, 12-bit

1) DPX Version 2 (Method A for 10-bit)

2) Open EXR version2

3) Only for Mac



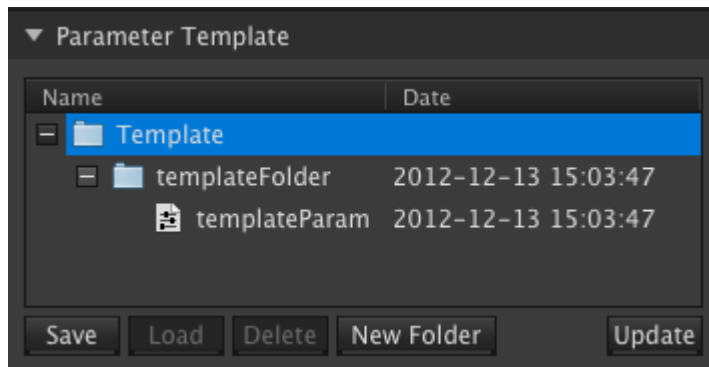
Note:

- For Trim, if the positions of In/Out points are set such that the duration is the same as the source file, the UMID of the generated output file is identical to that of the source file.
- Trim cannot be exported for chunk clips.
- Depending on the video format, some resolutions may not be selectable.

Audio formats

Format	Sampling Rate	Bit Depth	Bit Rate
BWF	48 kHz	24-bit	2304 kbps

Export Template



You can save and then load templates based on a desired set of user preferences.

Clicking the [Save] button saves the settings that are valid at that point as a template. To load a saved template, select the template and then click the [Load] button. You can also create folders in which to save templates.

- Save button: Saves the current settings as a template in the selected folder.
- Load button: Loads the settings from the selected template.
- Delete button: Deletes the selected template or folder.
- New Folder button: Creates a new folder for storing templates.
- Update button: Updates the display in the Parameter Template area.

In addition to the functions above, you can rename a template from the context menu of the selected template.

Export Control

Before you export a clip, make export settings to determine the image processing parameters and output format. Once you complete the settings, click the [Submit] button to schedule an export of the clip. When you select a clip in the Clip Browser or EDL Import window, all parameter settings except name maintain the previous values.

▼ Export Control

Bin: /Users/writer/Documents

Name: F65RAW-SQ_Cherry

Create Sub Folder: ☐ On ☒ Off

Duplication: Sub Folder

Notification: ☒ On ☐ Off [Setting](#)

Format: DPX

▼ ☒ Video

Codec: RGB444

Resolution: 1920*1080

Quality/Speed: ☒ Quality ☐ Speed

Scaling: Letter Box

Bit Depth: 16

Bake: Input Setting Only

Delimiter: .

Number of Digits: 5

Start: 00000

ASC-CDL: ☐ On ☒ Off

Flip: Unturned

▼ ☒ Audio

☒ All

☒ 1-2 ☒ 3-4 ☒ 5-6 ☒ 7-8

☒ 9-10 ☒ 11-12 ☒ 13-14 ☒ 15-16

Bin

Specifies the output folder.

On Windows, the default is C:/Users/[User]/Documents.

On Mac, the default is /Users/[User]/Documents.

Name

Specifies the output file name. Prohibited characters are shown in the following.

The default is the name of the selected clip in Clip Browser window (period and extension not included).

Prohibited characters: / ? ! * : | " < > ¥

Create Sub Folder

When [On] is selected, a subfolder with the same name as the clip is automatically created, and the output files are stored in this subfolder.

The default is [On].

Duplication

Select the process to perform when a specified file name already exists in the folder. This setting is disabled when [Create Sub Folder] is set to [On].

The default is [Error].

Error

Terminate the task in an error.

Over Write

Overwrite the file.

Sub Folder

Automatically create a subfolder, and store the file in the subfolder.

Example:

1. Duplication: Error

- sample.000100.dpx - sample.000199.dpx already exist.
- Submit a task to export sample.000050.dpx - sample.000250.dpx.
 - An error occurs when attempting to duplicate sample.000100.dpx - sample.000199.dpx.



Note: The leading "0" characters in the sequence number are not used for the duplication check.

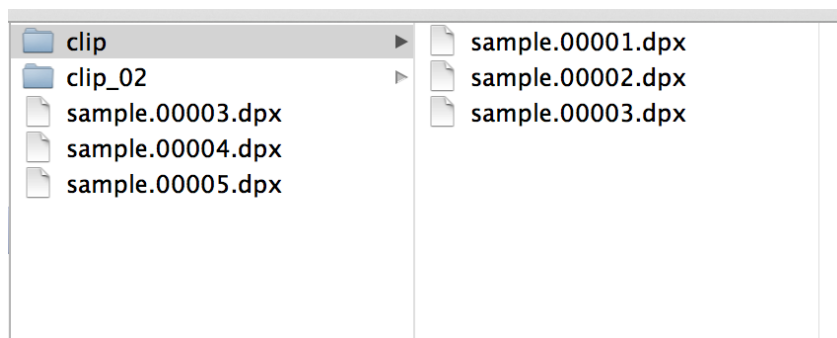
For example, sample.0010.dpx and sample.00010.dpx are handled as duplicate files.

2. Duplication: Over Write

- sample.000100.dpx - sample.000199.dpx already exist.
- Submit a task to export sample.000050.dpx - sample.000250.dpx.
 - sample.000050.dpx - sample.000099.dpx will be exported.
 - sample.000100.dpx - sample.000199.dpx will be overwritten.
 - sample.000200.dpx - sample.000250.dpx will be exported.

3. Duplication: Sub Folder

- sample.000003.dpx - sample.000005.dpx already exist.
- The clip name is "clip."
- Submit a task to export sample.000001.dpx - sample.000003.dpx.
 - The "clip" folder is created and sample.000001.dpx - sample.000003.dpx will be exported to that folder. If the "clip" folder already exists, the "clip_02" folder is created.

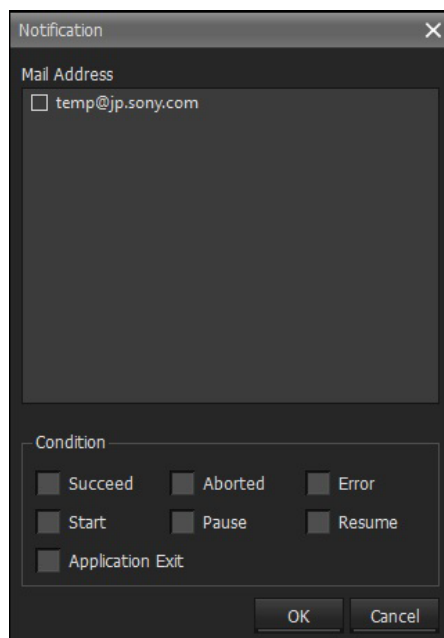


Notification

Select [On] to receive an email notification on the status of tasks in the task queue, and then enable the setting by clicking [Setting] button.

The default is [Off].

1. Click the [Setting] button. The following dialog box appears.



2. Select the email addresses for sending notifications.
3. Select the status conditions to include in notifications.

Status	Meaning
Succeed	Task completed successfully
Aborted	Task aborted by clicking [Abort] or [Abort All] buttons
Error	Task error occurred
Start	Task started
Pause	Task paused
Resume	Task resumed
Application Exit	RAW Viewer exited

4. Click the [OK] button.

Format

Selects the output format.

The default is [DPX].

When you select [CSV] (Cooke Lens Meta), you can output Cooke Lens metadata as CSV files.

Video

Specifies the output video format.

This is always enabled when [MXF] or [QuickTime] (Mac only) is selected for [Format].

Codec

Selects the codec used during output. The available options will differ depending on the output format.

When [Trim] is selected, the section between the In point and the Out point will be output in its original format.

Resolution

Selects the output resolution. The available options will differ depending on the output format.

The default is 4096*2160.

Quality/Speed

Selects the RAW processing algorithm to apply (Quality priority or Speed priority).

Depending on the combination of the video format and resolution, this setting may be disabled.

The default is [Quality].

Scaling

Selects the process that is used when changing aspect ratio.

Letter Box

Outputs with black bars at the top and bottom of the video.

Center Crop without Scaling

Outputs with the left and right sides of the video cropped.

Scale with De-Ana 2.0x

Outputs with the horizontal resolution of the video scaled by 2x.

Scale with De-Ana 1.3x

Outputs with the horizontal resolution of the video scaled by 1.3x.

Bit Depth

Selects the output bit depth. The available options will differ depending on the output format.

Format	Bit Depth
DPX	10 / 16 (default)
Open EXR	16 (default) / 32

Format	Bit Depth
SStP	10 / 12
ProRes ¹⁾	10 / 12

1) Only for Mac

Bake

Selects video processing parameters to apply.

S-Gamut/Linear

Outputs S-Gamut/Linear.

S-Gamut/S-Log2

Outputs S-Gamut/S-Log2.

S-Gamut3/Linear

Outputs S-Gamut3/Linear.

S-Gamut3/S-Log3

Outputs S-Gamut3/S-Log3.

S-Gamut3.Cine/S-Log3

Outputs S-Gamut3.Cine/S-Log3.

ACES/Linear

Outputs ACES/Linear.

Input Setting Only

Only the parameters under Input Settings are applied for the output. Since the Input Settings are always processed in a linear space, use this for push (or pull) processing and white balance adjustments in an S-Log2 workflow.

ALL

This mode allows you to output images that are similar to the monitor display. All the parameters specified under Parameter Control will be applied. Be aware that color gamuts and latitudes originally held by the RAW files will be lost.

Delimiter

Specify the characters to be used as separators between output file names and sequence numbers. You can select from periods (.), underscores (_), and hyphens (-).

The default is periods (.).

Number of Digits

Specify the number of digits to include in the sequence numbers that are added to sequential files.

The range is from 4 to 10, and the default is 5.

Start

Specify the starting number of the sequence numbers that are added to sequential files.

The default is 00000.

Example:

When [Format], [Name], [Delimiter], [Number of digits], and [Start] are set as follows:

Format: DPX

Name: Sample

Delimiter: . (period)

Number of digits: 6

Start: 000001

The first output file name is Sample.000001.dpx.

ASC-CDL

Select [On] to encode all the parameters in the ASC-CDL menu of Parameter Control to ASC-CDL, and export them as a color decision list (*.cdl).

The version of the exported ASC-CDL data is V1.01.

The default is [Off].

Flip

Flips the image output vertically or horizontally.

- Unturned: Outputs the image without flipping.
- Flip H: Flips the left and right of the image.
- Flip V: Flips the top and bottom of the image.
- Flip HV: Flips the top, bottom, left, and right of the image.

Audio

Selects the audio channels for output.

When [MXF] or [QuickTime] (Mac only) is selected for [Format], all of the channels will always be selected.

Clip Source

Specifies the output file source.

- Viewer: Clips displayed in the Clip Viewer.
- Selected Clips: Clips selected in the clip list area.
- Bin: All clips in the selected bin.
- EDL: Clips linked to EDL files.



Note: If you submit multiple clips when [Selected Clips], [Bin], or [EDL] is selected and [Bake] is set to [Input Setting Only] or [ALL], the setting values configured at the time of submission will be applied to all submitted tasks. However, values adjusted using the metadata of each clip as a base will be applied for the Exposure and Kelvin parameters. ¹⁾

For example, if Clip A with an EI value of 800 and Clip B with an EI value of 1600 are submitted at the same time with Exposure set to +1/3, the values applied at the time of the bake process will be as follows.

Clip A: 1000 (800 increased by 1/3)

Clip B: 2000 (1600 increased by 1/3)

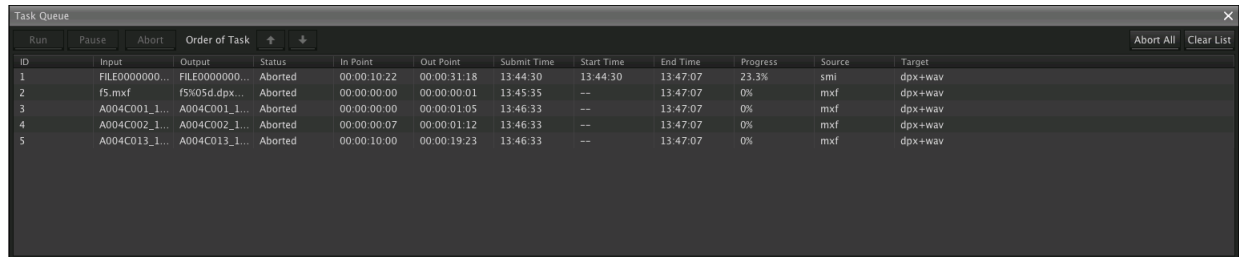
1) When [Bake] is set to [Input Setting Only], the values for Input Settings will be applied. When it is set to [ALL], the values for Input Settings, ASC-CDL, and Viewer Settings will be applied.

Submit button

When you click the [Submit] button, the task is registered to the task queue according to the Export settings. If there are any errors, an error dialog box appears.

Task Queue

The Task Queue displays a list of tasks registered by the Submit button of Export window. You can control task operations here.



ID	Input	Output	Status	In Point	Out Point	Submit Time	Start Time	End Time	Progress	Source	Target
1	FILE0000000...	FILE0000000...	Aborted	00:00:10:22	00:00:31:18	13:44:30	13:44:30	13:47:07	23.3%	smi	dpx+wav
2	f5.mxf	f5%05d.dpx...	Aborted	00:00:00:00	00:00:00:01	13:45:35	--	13:47:07	0%	mxmf	dpx+wav
3	A004C001_1...	A004C001_1...	Aborted	00:00:00:00	00:00:01:05	13:46:33	--	13:47:07	0%	mxmf	dpx+wav
4	A004C002_1...	A004C002_1...	Aborted	00:00:00:07	00:00:01:12	13:46:33	--	13:47:07	0%	mxmf	dpx+wav
5	A004C013_1...	A004C013_1...	Aborted	00:00:10:00	00:00:19:23	13:46:33	--	13:47:07	0%	mxmf	dpx+wav

The export tasks are processed one at a time in the order from top to bottom listed in the Task Queue window. You can change the order as desired. The output folder of tasks can be revealed by double clicking the desired task in the Task Queue.



Note: When you made the setting Sub Folder to Duplication in the Export window, a double-click reveals not the sub folder but the output folder.



Note: In case of exporting to DPX / Open EXR, the characters displayed in the [Output] column are in the following format.

[Name].%0[Number of digits]d.[dpx/exr]

Example:

Format: DPX

Name: FILE34

Delimiter: . (period)

Number of digits: 5

--> The characters displayed in the [Output] column are FILE34.%05d.dpx.

The following table explains the status that is displayed to Status column.

Status	Meaning
Running	Task running
Queued	Task queued
Paused	Task paused
Succeed	Task completed successfully
Aborted	Task aborted by clicking [Abort] or [Abort All] buttons
Error	Task is error for any reason

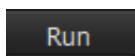


Note: The following events may cause an error:

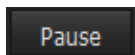
- Duplication is set to Error in the Export window, and a file with the same name as the output file already exists.
- There is not enough free space at the output destination.
- There is an incorrect frame in the source file.

Task Operations

The following operations can be performed in the Task Queue window.



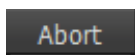
Processes the selected task that is being paused or queued



Temporally stops processing the selected task processed



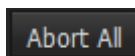
Note: This button is disabled for tasks for clips recorded in the SR-D1.



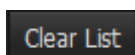
Aborts the selected task



Rearranges the order of tasks



Aborts all tasks other than aborted, succeed and error tasks

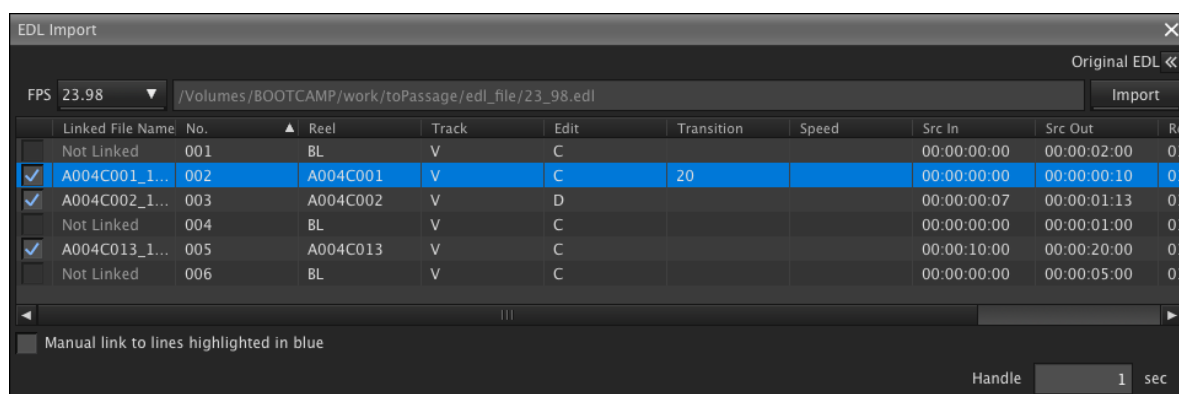


Clears all tasks other than running, queued and paused tasks.

EDL Import

The EDL Import window displays the content of an imported EDL file, and allows you to link each row of the EDL file to clips. To link clips, drag and drop clips from the Clip List Area of the Clip Browser to the EDL Import window. When you set Export Control Clip Source to EDL and perform export afterward, an output file will be created according to content of the EDL file.

RAW Viewer supports the CMX3600 EDL format.



Click the [Import] button, and select the EDL file to import. When the EDL file is imported, the content of the EDL are displayed in a list.

If you click the [Original EDL<<] button, the content of the EDL is displayed as text on the right side of the EDL Import window.

FPS

Specifies the frame rate (FPS) of the EDL to be imported.

List display items

The following items included in the EDL are displayed in the list. The check boxes to the left will be selected for each row to which clips are linked. During EDL export, the selected rows will be submitted together.

Linked File Name: File name of linked clip

No.: Event number

Reel: Reel name

Track: Track type

Edit: Edit type

Transition: Duration of transition (displayed as number of frames)

Speed: FPS value when changing the speed

Src In: In point time code of the source

Src Out: Out point time code of the source

Rec In: In point time code of the recorder/master

Rec Out: Out point time code of the recorder/master

Manual Link to Lines Highlighted in Blue

Select this check box when manually linking EDL rows to clips. When this is selected and you select a row and then drag and drop a clip onto the row, the clip is linked to the selected row.

Handle

Specifies the lengths of the overlaps to be added before and after In/Out points during EDL export.

Linking clips to EDLs

There are two methods for linking: auto link and manual link.



Note: Clips cannot be linked in the following situations.

- The In/Out points of the EDL are not within the clip's time code range.
- The FPS value selected in the EDL Import window does not match the FPS value of the clip.

Auto link

When the name of the clip is identical to the name of a reel in the EDL, the clip will be linked. When you drag and drop a clip onto the EDL, the clip will link automatically to the row with the same reel name. You can drag and drop multiple clips at one time when using auto link. If there are no rows with the same reel name, nothing will occur.

If the reel with the same name is already linked to another clip, a dialog allowing you to select which clip to link appears.

Examples: The following examples indicate the results when comparing clip names or reel names for matches.

- When comparing reel names (i.e., when [Use Clip Name of Comment as Reel] is disabled), the reel name is compared with the leading characters of the clip name that was dragged and dropped.

[Example 1]

When the Reel item is A001C001 and the Clip Name is A001C001_121218JZ.mxf: Match

[Example 2]

When the Reel item is A001 and the Clip Name is A001C001_121218JZ.mxf: Match

- When comparing clip names (i.e., when [Use Clip Name of Comment as Reel] is enabled), the clip name is compared with the clip name that was dragged and dropped (excluding their extensions).

[Example 1]

When the Reel item is A001C001_121218JZ.avi and the Clip Name is A001C001_121218JZ.mxf: Match

[Example 2]

When the Reel item is A001C001_121218JZ and the Clip Name is A001C001_121218JZ.mxf: Match

[Example 3]

When the Reel item is CLIP0001 and the Clip Name is Clip0001.MXF: Match

Manual link

The clip that you drag and drop is linked to the selected row displayed in blue, regardless of the reel name. You can only drag and drop one clip at a time when using manual link.

To perform manual linking, select the [Manual Link to Lines Highlighted in Blue] check box.

Verifying linked clips

You can verify linked clips using one of the following two methods.

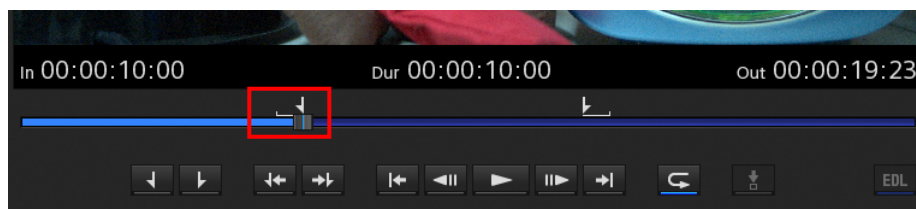
- Verify the In/Out points of the clip in the Clip Viewer.
- Verify the metadata or other information on the clip in the Clip Browser.

Verifying the In/Out points of the clip in the Clip Viewer

Double-click the selected row in EDL Import.

The In/Out points of the selected clip will be displayed in the Clip Viewer with the transition and speed changes applied.

If overlap settings were specified in Handle, white lines that indicate the Handle lengths appear before and after the In/Out points.



Note: If you change the In/Out points in the Clip Viewer, the In/Out points during EDL export will also change. If the In/Out points are not as you expected due to speed changes, etc., change the In/Out points in the Clip Viewer.

Verifying the metadata or other information on the clip in the Clip Browser

Right-click the selected row in EDL Import, and select [Open In Clip Browser].

The linked clips appear in the Clip List Area of the Clip Browser, and you can verify the metadata and other information.

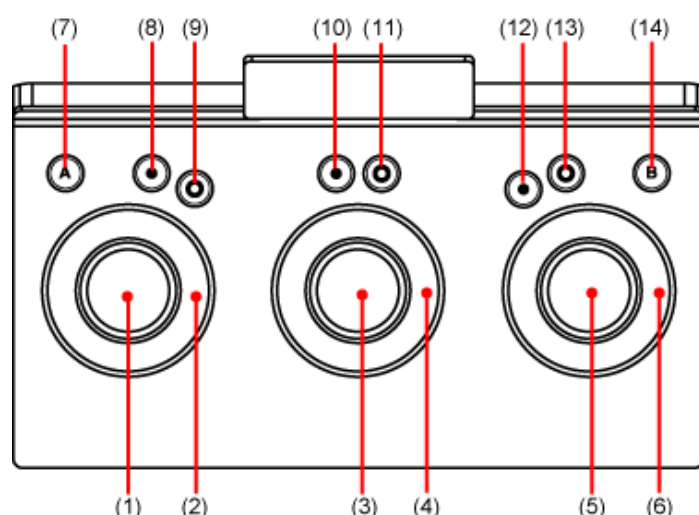
Appendix

Tangent element Controls

You can connect Tangent Device control panels to the computer via USB, and use them to control color circles and other parameters. To enable control, Tangent Hub must be installed on the computer.

Tangent element-Tk

The following functions from [Parameter Setting] > [ASC-CDL] (page 29) are assigned to each of the controls on the element-Tk under default settings.

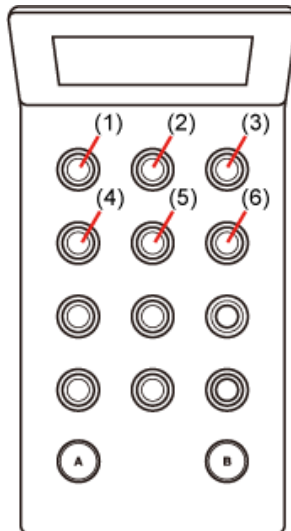


(1)	Adjusts the [Circle] > [Lift] color circle.
(2)	Adjusts the [Circle] > [Lift] > [Master] slider or the [ASC-CDL] > [Saturation] slider.
(3)	Adjusts the [Circle] > [Gamma] color circle.
(4)	Adjusts the [Circle] > [Gamma] > [Master] slider or the [ASC-CDL] > [Contrast] slider.
(5)	Adjusts the [Circle] > [Gain] color circle.
(6)	Adjusts the [Circle] > [Gain] > [Master] slider or the [ASC-CDL] > [Brightness] slider.
(7)	Switches the functions assigned to (2), (4), and (6).
(8)	Resets adjustments made for (1).
(9)	Resets adjustments made for (2).
(10)	Resets adjustments made for (3).
(11)	Resets adjustments made for (4).
(12)	Resets adjustments made for (5).

(13)	Resets adjustments made for (6).
(14)	Switches the functions assigned to (2), (4), and (6).

Tangent element-Kb

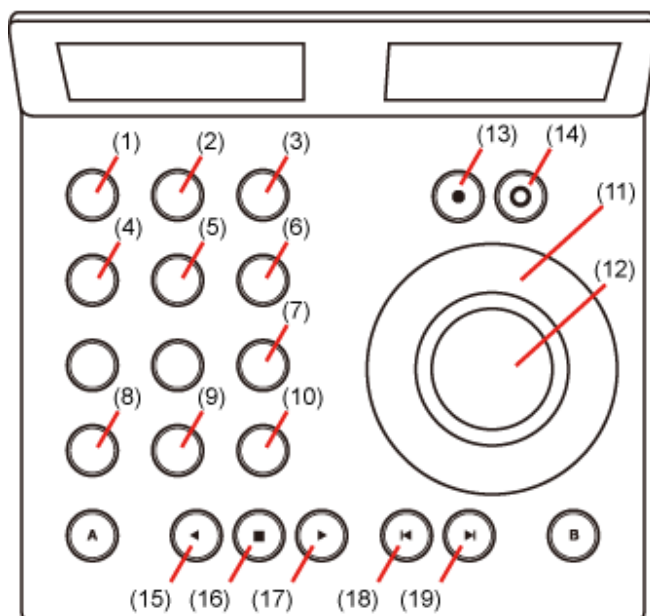
The following functions from the Parameter Settings are assigned to each of the controls on the element-Kb under default settings.



(1)	Adjusts the [Exposure] slider for [Input Settings].
(2)	Adjusts the [Kelvin] slider in for [Input Settings].
(3)	Adjusts the [Tint] slider in for [Input Settings].
(4)	Adjusts the [Saturation] slider for [ASC-CDL].
(5)	Adjusts the [Contrast] slider for [ASC-CDL].
(6)	Adjusts the [Brightness] slider for [ASC-CDL].

Tangent element-Mf

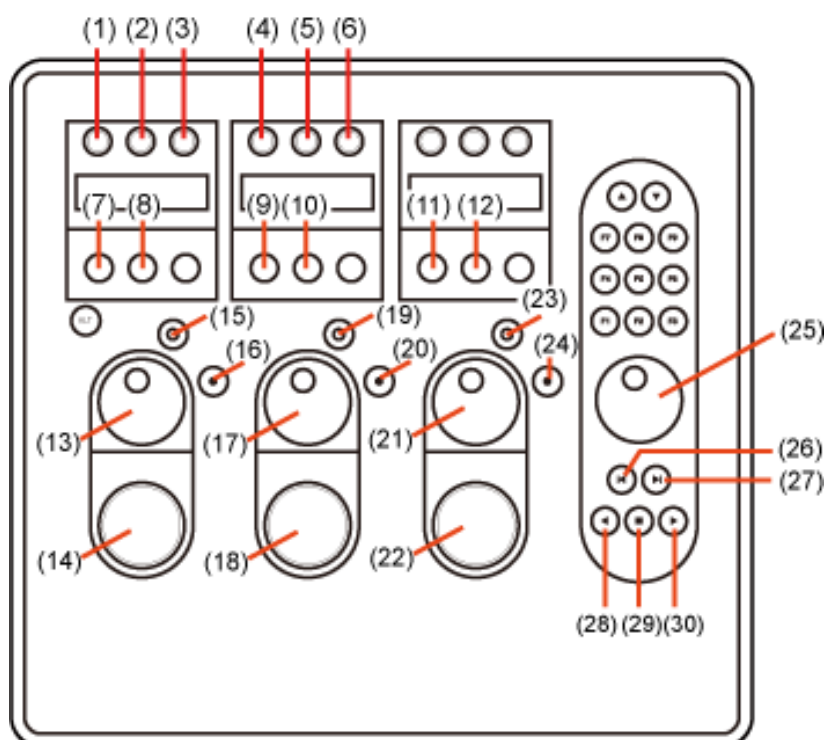
The following clip playback and gain adjustment functions are assigned to each of the controls on the element-Mf under default settings.



(1)	Sets the In point to the current position ([Mark In] button).
(2)	Sets the Out point to the current position ([Mark Out] button).
(3)	Displays the "before" image ([Before] button).
(4)	Jumps to the In point ([Go to Mark In] button).
(5)	Jumps to the Out point ([Go to Mark Out] button).
(6)	Displays the "after" image ([After] button).
(7)	Displays the "before" and "after" image side-by-side ([S By S] button)
(8)	Starts playback ([Play] button).
(9)	Pauses playback ([Still] button).
(10)	Displays a split view of the "before" and "after" image ([Split] button).
(11)	Performs jog playback. This also adjusts the [Global] slider for [Linear Gain].
(12)	Adjusts the color circle for [Linear Gain].
(13)	Resets adjustments made for [Linear Gain].
(14)	Resets adjustments made on the [Global] slider for [Linear Gain].
(15)	Moves one frame backward ([Step Backward] button).
(16)	Starts or pauses playback ([Play]/[Still] button).
(17)	Moves one frame Forward ([Step Forward] button).
(18)	Jumps to the start point ([Go to Start] button).
(19)	Jumps to the end point ([Go to End] button).

Tangent Wave Panel

The following functions are assigned to each of the controls on the Tangent Wave panel under default settings



(1)	Adjusts the [Contrast] slider for [ASC-CDL].
(2)	Adjusts the [Brightness] slider for [ASC-CDL].
(3)	Adjusts the [Saturation] slider for [ASC-CDL].
(4)	Adjusts the [Exposure] slider for [Input Settings].
(5)	Adjusts the [Kelvin] slider in for [Input Settings].
(6)	Adjusts the [Tint] slider in for [Input Settings].
(7)	Displays the "before" image ([Before] button).
(8)	Displays the "after" image ([After] button).
(9)	Displays the "before" and "after" image side-by-side ([S By S] button)
(10)	Displays a split view of the "before" and "after" image ([Split] button).
(11)	Jumps to the In point ([Go to Mark In] button).
(12)	Jumps to the Out point ([Go to Mark Out] button).
(13)	Adjusts the [Master] slider for [ASC-CDL] > [Lift].
(14)	Adjusts the color circle for [ASC-CDL] > [Lift].
(15)	Resets adjustments made on the [Master] slider for [ASC-CDL] > [Lift].
(16)	Resets adjustments made for [ASC-CDL] > [Lift].
(17)	Adjusts the [Master] slider for [ASC-CDL] > [Gamma].
(18)	Adjusts the color circle for [ASC-CDL] > [Gamma].
(19)	Resets adjustments made on the [Master] slider for [ASC-CDL] > [Gamma].

(20)	Resets adjustments made for [ASC-CDL] > [Gamma].
(21)	Adjusts the [Master] slider for [ASC-CDL] > [Gain].
(22)	Adjusts the color circle for [ASC-CDL] > [Gain].
(23)	Resets adjustments made on the [Master] slider for [ASC-CDL] > [Gain].
(24)	Resets adjustments made for [ASC-CDL] > [Gain].
(25)	Performs jog playback.
(26)	Jumps to the start point ([Go to Start] button).
(27)	Jumps to the end point ([Go to End] button).
(28)	Moves one frame backward ([Step Backward] button).
(29)	Starts or pauses playback ([Play]/[Still] button).
(30)	Moves one frame Forward ([Step Forward] button).

LUT File Formats



Note:

Line numbers ("Lx" in the tables below) do not appear in the actual LUT files.

1D LUT Files

Five types of lookup table (.lut) file formats supported by the software are described in the following examples.



Note:

This software handles 1D-LUT as conversion to Scene-Linear compatibility.

LUT file type 1: R, G, and B have the same value (the same curve)

"LUT: 1 1024" in the header indicates one output data block (common to R, G, and B) corresponding to the 10-bit (1024) input data.

The bit depth of the output is determined by the maximum output value.

(This is an example of 10-bit input and 10-bit output.)

#	Comment
LUT:	1 1024
# (Line No,)	Output value
L1	0
L2	0
L3	1
	.
	.
	.
L1023	1023
L1024	1023

LUT file type 2: R, G, and B have individual values (individual curves) and are aligned vertically in the order of R, G, B

"LUT: 3 1024" in the header indicates three separate output data blocks (for R, G, and B) corresponding with the 10-bit (1024) input data.

The bit depth of the output is determined by the maximum output value.

The output values on lines L1 to L1024 are R values, the values on lines L1025 to L2048 are G values, and the values on lines L2049 to L3072 are B values.

(This is an example of 10-bit input and 10-bit output.)

```
# Comment
LUT: 3 1024
# (Line No,)    Output value
L1              0
L2              0
L3              1
.
.
.
L1023           1023
L1024           1023
L1025           0
L1026           0
L1027           1
.
.
.
L2047           1023
L2048           1023
L2049           0
L2050           0
L2051           0
.
.
.
L3071           1022
L3072           1023
```

LUT file type 3: R, G, and B have individual values (individual curves) and are aligned horizontally

"LUT10" in the header indicates the bit depth of the output is 10 bits.

The bit depth of the input is determined by the maximum number of lines.

(This is an example of 10-bit input and 10-bit output.)

# Comment				
LUT10				
# (Line No,)	Input value	Output R	Output G	Output B
L1	0	2	2	2
L2	1	2	2	2
L3	2	2	2	2
		.		
		.		
		.		
L1023	1022	1023	1023	1023
L1024	1023	1023	1023	1023

LUT file type 4: R, G, and B have individual values (individual curves) and are aligned horizontally

The bit depth is not indicated in the header. It is automatically determined by the number of lines and their values.

(This is an example of 10-bit input and 10-bit output.)

# Comment				
# (Line No,)	Input value	Output R	Output G	Output B
L1	0	2	2	2
L2	1	2	2	2
L3	2	2	2	2
		.		
		.		
		.		
L1023	1022	1023	1023	1023
L1024	1023	1023	1023	1023

LUT file type 5: R, G, and B have individual values (individual curves) and are aligned horizontally

The bit depth is not indicated in the header. It is automatically determined by the number of lines and their values.

There are no lines for input values.

(This is an example of 10-bit input and 10-bit output.)

# Comment			
# (Line No,)	Output R	Output G	Output B
L1	2	2	2
L2	2	2	2
L3	2	2	2
	.		
	.		
	.		
L1023	1023	1023	1023
L1024	1023	1023	1023

3D LUT Files

The 3D lookup table (.cube) file format supported by the software is described in the following example.



Note:

- Input Setting 3DLUT is handled as a conversion to S-Log2 compatibility.
- Cube size up to 66 is supported.
- LUT files are loaded to the memory while the software is running, and this may affect memory usage conditions and software running time. Be aware of this when using multiple files.

# Comment			
LUT_3D_SIZE	3		
# (Line No,)	Output(R),	Output(G),	Output(B)
L1	0.000000	0.000000	0.000000
L2	0.500000	0.000000	0.000000
L3	1.000000	0.000000	0.000000
L4	0.000000	0.500000	0.000000
L5	0.500000	0.500000	0.000000
L6	1.000000	0.500000	0.000000
	.		
	.		
	.		

L25	0.000000	1.000000	1.000000
L26	0.500000	1.000000	1.000000
L27	1.000000	1.000000	1.000000

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