SONY

CATALYST BROWSE™

User Manual

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Notice to users

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Chapter 1

Introduction

Catalyst Browse is a powerful clip-management tool for the latest Sony camcorders and decks.

- The Media Browser pane allows you to browse the media files on drives and devices connected to your computer.
- The Video pane allows you to preview media files.
- The Inspector pane allows you to view metadata saved in media files.
- The Adjust Color workspace allows you to adjust the color content of your clips.
- Clip lists allow you to assemble clips when working with XDCAM media in an XD root folder 

, XAVC media in an XD root folder 

, and RAW media in an AxS folder 

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   Catalyst Browse is designed to support clips from Sony cameras and devices. For expanded device support, please consider Catalyst Prepare.

What's new in version 2017.2

- Added support for reading and transcoding Rec.709/HLG clips in both Rec.709 and Rec.2020/S-Log3 (HDR) grading color spaces.
- Added a Waveform Settings dialog to allow you to change the scale of the waveform monitor and enable AIR matching when grading HDR clips.
- Added an **SDR gain** switch to convert between standard- and high-dynamic-range content.
- Added a **Folder** setting to the Add Remote Server dialog to allow you to set the initial folder when connecting to a device via FTP.

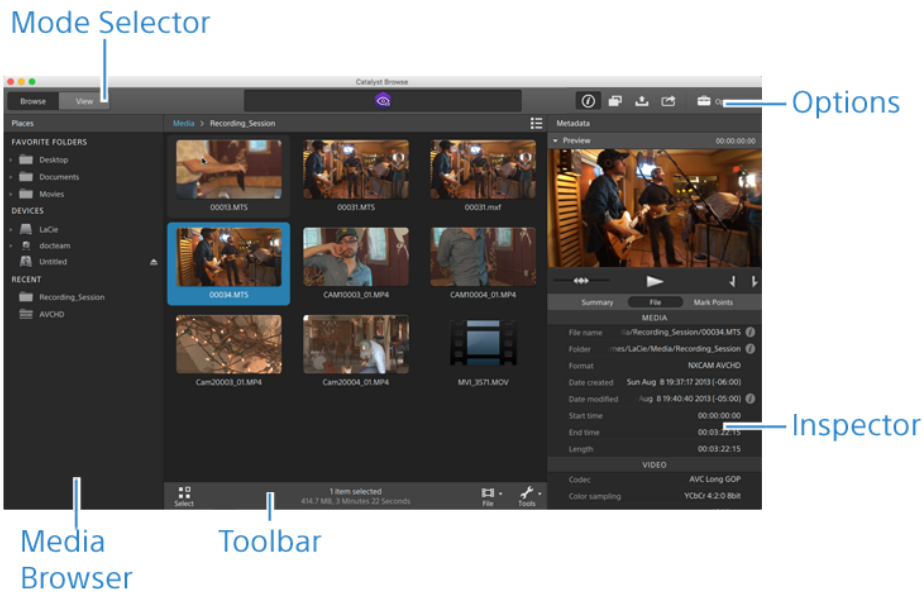
The Catalyst Browse window

The Catalyst Browse window can be displayed in two modes:

- In Media Browser mode, you can use the Media Browser to browse your computer for media files, work with clip lists, and transcode files.
- In View mode, you can preview media, log mark in and out points, and adjust colors.

Click the **Media Browser** or **View** button at the top of the Catalyst Browse window to change modes.

Media Browser mode



View mode

Chapter 2

Finding media

Media Browser mode allows you to browse the media files on drives and devices connected to your computer.

When you double-click a file in Media Browser view, the file is loaded in View mode, where you can preview it or edit it.

For more information, see "Playing media" on page 29, "Marking in and out points for playback" on page 34, "Applying color correction" on page 47, or "Viewing and editing metadata" on page 39.

Catalyst Browse is designed to support clips from Sony cameras and devices. For expanded device support, please consider Catalyst Prepare.

The Media Browser is not available when Catalyst Browse is started in view-only mode.

An on a thumbnail indicates that an error was detected with the clip.

A indicates a clip from an Optical Disc Archive volume.

An on a thumbnail indicates that a clip spans multiple discs on an Optical Disc Archive volume. When you play a clip that spans discs, an indicator is displayed in the timeline to identify the point where the clip switches discs:

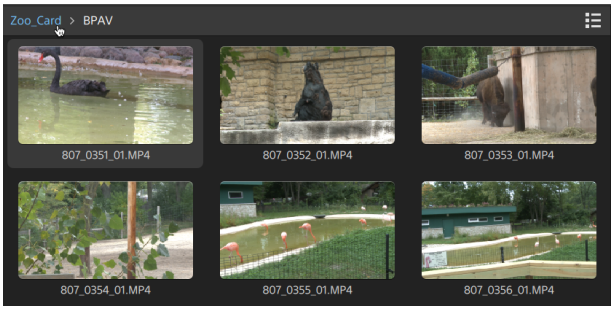
An on a thumbnail indicates a proxy clip that does not have a full-resolution clip available.

Choosing a folder

Click the **Media Browser** button at the top of the Catalyst Browse window to view the Media Browser.

Use the Media Browser to browse your computer for video files.

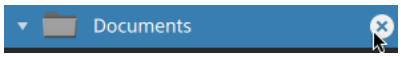
The top of the Media Browser will display the current folder and its parent folder. You can click the link to the parent folder to navigate up one level.



To navigate quickly, click the **File** button at the bottom of the Media Browser and choose **Go to location**.

To add the current folder to the Favorite Folders list in the Places pane, click the **File** button at the bottom of the Media Browser and choose **Add to Favorites**.

To remove a folder from the Favorite Folders list, select the folder in the Places pane and click the **X** button:



Connect to a device via FTP

Click the **Tools** button in the Places pane and choose **Add remote server** to specify a server's connection settings.

To disconnect from a server, select the server in the Places pane and click the button.

To reconnect to a server, click the server in the Remote Devices list.

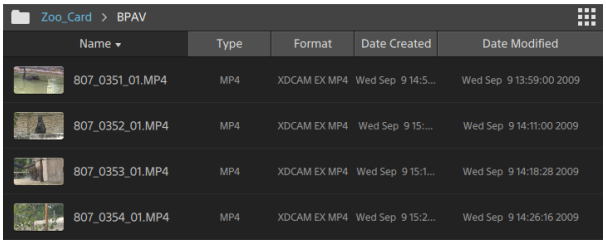
To remove a remote server from the Remote Devices list, select it and then click the **Tools** button in the Places pane and choose **Remove remote server**.

Displaying files in a list or thumbnail mode

Click the button to toggle thumbnail and list mode.

In thumbnail mode ( ), the Media Browser displays thumbnail images and file names.

In list mode ( ), you can click the headings in the Media Browser to sort the file list by various attributes. Click the heading again to sort in ascending or descending order. An arrow is displayed to indicate the current sorting method:



Searching for clips

1. Select the folder you want to search. Subfolders will be included in your search.
2. Click the **Search** button  to display the Search bar at the top of the Media Browser.
3. Type your search terms in the Search bar. The Media Browser displays all clips in the selected folder that contain your search terms in the file name or Summary metadata.

    Select a clip and click **Go to folder**  to navigate to a clip's folder.

   Click the **Close** button  to close the Search bar and clear the search results from the Media Browser.

   Select a different folder to clear your search terms and start a new search in the selected folder.

Selecting files

- Click a file to select it.
- Hold Shift and click the first and last file you want to select to select a range of files.
- Hold Ctrl (Windows) or Command (macOS) to select multiple files.

   Click the **Select** button  to select multiple files without using keyboard modifiers.

Copying files

Copying media allows you to import clips from cameras or decks to your computer, to another camera or deck, or to a centralized storage device. For more information, see "Copying clips" on page 70.

Renaming files

1. Select a file.
2. Click the **File** button  at the bottom of the Media Browser, choose **Rename**, and type a new name in the edit box.

 You can also press F2 to rename the selected file.

Renaming is not available for proxy clips or clips that are part of an AVCHD folder structure.

 Renaming is not available when Catalyst Browse is started in view-only mode.

Deleting files

1. Select a file.
2. Click the **File** button  at the bottom of the Media Browser and choose **Delete**.

   Deleting files from an AVCHD folder structure is not supported.

   Deleting is not available when Catalyst Browse is started in view-only mode.

Showing source clips

1. Select a file.
2. Click the **File** button  at the bottom of the Media Browser and choose **Show in Finder** (macOS) or **Show in Explorer** (Windows) to view the source clip in its containing folder.

Managing SxS and Professional Disc volumes

If you need to format an SxS card, please use the Memory Media Utility.

If you need to format or finalize an XDCAM Professional Disc volume, please use the XDCAM Drive Software.

Supported video formats

Catalyst Browse supports reading the following video formats from volumes or as independent clips:

XDCAM

SD format

Format	Frame Size	Frame Rate	Field Order	Video Codec	Bit Rate	Audio Channels
DV	720x480	59.94i	Lower	DV	25 CBR	4x16 bit
DV	720x576	50i	Lower	DV	25 CBR	4x16 bit
MPEG IMX	720x512	59.94i	Upper	MPEG-2 Intra	30, 40, 50 CBR	4x24 bit / 8x16 bit
MPEG IMX	720x608	50i	Upper	MPEG-2 Intra	30, 40, 50 CBR	4x24 bit / 8x16 bit
Uncompressed	720x486	59.94i	Upper	Uncompressed	90 CBR	4x24 bit / 8x16 bit
Uncompressed	720x576	50i	Upper	Uncompressed	90 CBR	4x24 bit / 8x16 bit

HD format

Format	Frame Size	Pixel Aspect Ratio	Frame Rate	Video Codec	Bit Rate
MPEG HD	1280x720	1.0	50p, 59.94p	MPEG-2 Long GOP	25 CBR
MPEG HD	1280x720	1.0	50p, 59.94p	MPEG-2 Long GOP	35 VBR
MPEG HD	1280x720	1.0	50p, 59.94p	MPEG-2 Long GOP	50 CBR
MPEG HD	1440x1080	1.333	23.976p, 25p, 29.97p, 50i, 59.94i	MPEG-2 Long GOP	17.5 CBR
MPEG HD	1440x1080	1.333	23.976p, 25p, 29.97p, 50i, 59.94i	MPEG-2 Long GOP	25 CBR
MPEG HD	1440x1080	1.333	23.976p, 25p, 29.97p, 50i, 59.94i	MPEG-2 Long GOP	35 CBR
MPEG HD	1440x540	0.667	23.976p, 25p, 29.97p, Over Crank	MPEG-2 Long GOP	8.75 CBR
MPEG HD	1440x540	0.667	23.976p, 25p, 29.97p, Over Crank	MPEG-2 Long GOP	12.5 CBR

Format	Frame Size	Pixel Aspect Ratio	Frame Rate	Video Codec	Bit Rate
MPEG HD	1440x540	0.667	23.976p, 25p, 29.97p, Over Crank	MPEG-2 Long GOP	17.5 CBR
MPEG HD422	1920x1080	1.0	23.976p, 25p, 29.97p, 50i, 59.94i	MPEG-2 Long GOP	35 CBR, 50 CBR
MPEG HD422	1920x540	0.5	23.976p, 25p, 29.97p, Over Crank	MPEG-2 Long GOP	25 CBR

XDCAM EX

Format	Frame Size	Pixel Aspect Ratio	Frame Rate	Field Order	Video Codec	Audio Codec	Bit Rate
DV	720x480	0.9091	59.94p	Lower	DV	PCM, 48 kHz, 16 bit	25 CBR
DV	720x576	1.0926	50i	Lower	DV	PCM, 48 kHz, 16 bit	25 CBR
MPEG HD (EX-HQ)	1280x720	1.0	23.976p, 25p, 29.97p, 50p, 59.94p		MPEG-2 Long GOP	PCM, 48 kHz, 16 bit	35 VBR
MPEG HD (EX-SP)	1440x1080	1.333	50i, 59.94i		MPEG-2 Long GOP	PCM, 48 kHz, 16 bit	25 CBR
MPEG HD (EX-HQ)	1440x1080	1.333	23.976p, 25p, 29.97p, 50i, 59.94i		MPEG-2 Long GOP	PCM, 48 kHz, 16 bit	35 VBR
MPEG HD422 (EX-HQ)	1920x1080	1.0	23.976p, 25p, 29.97p, 50i, 59.94i		MPEG-2 Long GOP	PCM, 48 kHz, 16 bit	35 VBR

XAVC Intra

Format	Frame Size	Pixel Aspect Ratio	Frame Rate	Video Codec	Audio Channels (PCM, 48 kHz, 24 bit)	Bit Rate
XAVC Intra	1440x1080	1.333	50i, 59.94i, 23.976p, 25p, 29.97p	MPEG-4 AVC Intra	8	CBG 50
XAVC Intra	1920x1080	1.0	50i, 59.94i, 23.976p, 25p, 29.97p, 50p, 59.94p	MPEG-4 AVC Intra	8, 16	CBG 100
XAVC Intra	1920x1080	1.0	50i, 59.94i, 23.976p, 25p, 29.97p, 50p, 59.94p	MPEG-4 AVC Intra	8	CBG 200
XAVC Intra HFR	1920x1080	1.0	50p, 50i, 59.94p, 59.94i	MPEG-4 AVC Intra	0	CBG 100
XAVC Intra	2048x1080	1.0	23.976p, 24p, 25p, 29.97p, 50p, 59.94p	MPEG-4 AVC Intra	8	VBR
XAVC Intra	2048x1080	1.0	23.976p, 24p, 25p, 29.97p, 50p, 59.94p	MPEG-4 AVC Intra	8, 16	CBG 100
XAVC Intra	3840x2160	1.0	23.976p, 25p, 29.97p, 50p, 59.94p	MPEG-4 AVC Intra	8	VBR
XAVC Intra	3840x2160	1.0	23.976p, 25p, 29.97p, 50p, 59.94p	MPEG-4 AVC Intra	8, 16	CBG 300
XAVC Intra	4096x2160	1.0	23.976p, 24p, 25p, 29.97p, 50p, 59.94p	MPEG-4 AVC Intra	8	VBR
XAVC Intra	4096x2160	1.0	23.976p, 24p, 25p, 29.97p, 50p, 59.94p	MPEG-4 AVC Intra	8, 16	CBG 300

XAVC Long-GOP

Format	Frame Size	Pixel Aspect Ratio	Frame Rate	Video Codec	Audio	Bit Rate
XAVC Long	1280x720	1.0	50p, 59.94p	MPEG-4 AVC Long, High 422 Profile	4-channel PCM, 48 kHz, 24 bit	80 (Maximum)
XAVC Long	1920x1080	1.0	23.976p, 25p, 29.97p, 50p, 50i, 59.94p, 59.94i	MPEG-4 AVC Long, High 422 Profile	4-channel PCM, 48 kHz, 24 bit	80 (Maximum)
XAVC Long	3840x2160	1.0	23.976p, 25p, 29.97p, 50p, 59.94p	MPEG-4 AVC Long, High Profile	4-channel PCM, 48 kHz, 24 bit	200 (Maximum)
XAVC Long Proxy	480x270	1.0	23.976p, 25p, 29.97p, 50p, 59.94p	MPEG-4 AVC Long, High Profile	MPEG-4 AAC, 2 channels, 48 kHz, 256 kbps MPEG-4 AAC, 6 (5.1) channels, 48 kHz, 640 kbps	1 or .5 Mbps
XAVC Long Proxy	640x360	1.0	23.976p, 25p, 29.97p, 50p, 59.94p	MPEG-4 AVC Long, High Profile	MPEG-4 AAC, 2 channels, 48 kHz, 256 kbps MPEG-4 AAC, 6 (5.1) channels, 48 kHz, 640 kbps	3 Mbps
XAVC Long Proxy	1280x720	1.0	23.976p, 25p, 29.97p, 50p, 59.94p	MPEG-4 AVC Long, High Profile	MPEG-4 AAC, 2 channels, 48 kHz, 256 kbps MPEG-4 AAC, 6 (5.1) channels, 48 kHz, 640 kbps	9 Mbps

XAVC S

Format	Frame Size	Pixel Aspect Ratio	Frame Rate	Video Codec	Audio	Bit Rate
XAVC Long Proxy	480x270	1.0	23.976p, 25p, 29.97p, 50p, 59.94p	MPEG-4 AVC Long, High Profile	MPEG-4 AAC, 2 channels, 48 kHz, 256 kbps	4
XAVC Long Proxy	640x360	1.0	23.976p, 25p, 29.97p, 50p, 59.94p	MPEG-4 AVC Long, High Profile	MPEG-4 AAC, 2 channels, 48 kHz, 256 kbps	10
XAVC Long	1280x720	1.0	23.976p, 25p, 29.97p, 50p, 59.94p	MPEG-4 AVC Long, Main Profile or High Profile	2-channel PCM or AAC, 48 kHz, 16 bit	40
XAVC Long Proxy	1280x720	1.0	23.976p, 25p, 29.97p, 50p, 59.94p	MPEG-4 AVC Long, High Profile	MPEG-4 AAC, 2 channels, 48 kHz, 256 kbps	16
XAVC Long	1280x720	1.0	100p, 119.88p	MPEG-4 AVC Long, Main Profile or High Profile	2-channel PCM or AAC, 48 kHz, 16 bit	80
XAVC Long	1440x1080	1.0	23.976p, 25p, 29.97p, 50p, 59.94p	MPEG-4 AVC Long, Main Profile or High Profile	2-channel PCM or AAC, 48 kHz, 16 bit	80
XAVC Long	1920x1080	1.0	23.976p, 25p, 29.97p, 50p, 59.94p	MPEG-4 AVC Long, Main Profile or High Profile	2-channel PCM or AAC, 48 kHz, 16 bit	80
XAVC Long	1920x1080	1.0	100p, 119.88p	MPEG-4 AVC Long, Main Profile or High Profile	2-channel PCM or AAC, 48 kHz, 16 bit	150
XAVC Long Proxy	1920x1080	1.0	23.976p, 25p, 29.97p, 50p, 59.94p	MPEG-4 AVC Long, High Profile	MPEG-4 AAC, 2 channels, 48 kHz, 256 kbps	25
XAVC Long	3840x2160	1.0	23.976p, 25p, 29.97p	MPEG-4 AVC Long, Main Profile or High Profile	2-channel PCM or AAC, 48 kHz, 16 bit	188
XAVC Long	3840x2160	1.0	50p, 59.94p	MPEG-4 AVC Long, Main Profile or High Profile	2-channel PCM or AAC, 48 kHz, 16 bit	300

XAVC Proxy

Format	Frame Size	Frame Rate	Video Codec	Audio	Bit Rate
XAVC Proxy	480x270	23.976p, 25p, 29.97p, 50p, 59.94p	MPEG-4 AVC Long, Main Profile	MPEG-4 AAC, 2 channels, 48 kHz, 256 kbps	4
XAVC Proxy	640x360	23.976p, 25p, 29.97p, 50p, 59.94p	MPEG-4 AVC Long, Main Profile	MPEG-4 AAC, 2 channels, 48 kHz, 256 kbps	10
XAVC Proxy	720x480	59.94i	MPEG-4 AVC Long, Main Profile	MPEG-4 AAC, 2 channels, 48 kHz, 256 kbps	10
XAVC Proxy	720x576	50i	MPEG-4 AVC Long, Main Profile	MPEG-4 AAC, 2 channels, 48 kHz, 256 kbps	10
XAVC Proxy	1280x720	23.976p, 25p, 29.97p, 50p, 59.94p	MPEG-4 AVC Long, Main Profile or High Profile	MPEG-4 AAC, 2 channels, 48 kHz, 256 kbps	28
XAVC Proxy	1920x1080	50i, 59.94i, 23.976p, 25p, 29.97p, 50p, 59.94p	MPEG-4 AVC Long, Main Profile or High Profile	MPEG-4 AAC, 2 channels, 48 kHz, 256 kbps	28

X-OCN

Format	Frame Size	Bits	Frame Rate	Quality
F5/F55 X-OCN	2048x1080	16	23.976p, 24p, 25p, 29.97p, 50p, 59.94p	LT, ST
F5/F55 X-OCN	4096x2160	16	23.976p, 24p, 25p, 29.97p, 50p, 59.94p	LT, ST

RAW

Format	Frame Size	Bits	Frame Rate	Compression
F5/F55RAW	2048x1080	16	23.976p, 24p, 25p, 29.97p, 50p, 59.94p, HFR (max. 240)	SQ
F5/F55RAW	4096x2160	16	23.976p, 24p, 25p, 29.97p, 50p, 59.94p, 240p	SQ
F65RAW	4096x2160	16	23.976p, 24p, 25p, 29.97p, 50p, 59.94p, HFR (max. 120)	Lite, SQ
FS700RAW	2048x1080	16	23.976p, 25p, 29.97p, 50p, 59.94p, HFR (max. 240)	SQ
FS700RAW	4096x2160	16	23.976p, 25p, 29.97p, 50p, 59.94p, HFR (max. 120)	SQ

HDCAM SR (SStP)

Format	Frame Size	Bits	Color Space	Pixel Aspect Ratio	Frame Rate	Compression (Mbps)
SSTP	1280x720	10	YUV 422	1.0	50p, 59.94p	Lite(220), SQ (440)
SSTP	1920x1080	10	YUV 422	1.0	50i, 59.94i, 23.976p, 24p, 25p, 29.97p, 50p, 59.94p	Lite(220), SQ (440)
SSTP	1920x1080	10	RGB 444	1.0	50i, 59.94i, 23.976p, 24p, 25p, 29.97p, 50p, 59.94p	SQ(440), HQ (880)
SSTP	1920x1080	12	RGB 444	1.0	50i, 59.94i, 23.976p, 24p, 25p, 29.97p, 50p, 59.94p	HQ(880)
SSTP	2048x1080	10	YUV 422	1.0	50p, 59.94p	Lite(220), SQ (440)
SSTP	2048x1080	10	RGB 444	1.0	50i, 59.94i, 23.976p, 24p, 25p, 29.97p	SQ(440)
SSTP	2048x1080	10	RGB 444	1.0	23.976p, 24p, 25p, 29.97p	HQ(880)
SSTP	2048x1080	12	RGB 444	1.0	50i, 59.94i, 23.976p, 24p, 25p, 29.97p	SQ(440)
SSTP	2048x1080	12	RGB 444	1.0	23.976p, 24p, 25p, 29.97p, 50p, 59.94p	HQ(880)
SSTP	2048x1080	12	RGB 444	1.0	23.976p, 24p, 25p, 29.97p	SQ(440)
SSTP	2048x1080	12	RGB 444	1.0	23.976p, 24p, 25p, 29.97p, 50p, 59.94p	HQ(880)
SSTP	2048x1556	10	RGB 444	1.0	23.976p, 24p, 25p	HQ(880)

NXCAM

Format	Frame Size	Pixel Aspect Ratio	Frame Rate	Video Codec	Audio Codec	Bit Rate
AVCHD	1920x1080	1.0	59.94p, 50p,	H.264/MPEG-4 AVC	Dolby AC-3 or PCM 2 channels, 48 kHz, 16 bit	28 Mbps
AVCHD	1920x1080	1.0	59.94i, 50i, 29.97p, 25p, 23.976p	H.264/MPEG-4 AVC	Dolby AC-3 or PCM 2 channels, 48 kHz, 16 bit	24 or 17 Mbps
AVCHD	1280x720	1.0	59.94p, 50p	H.264/MPEG-4 AVC	Dolby AC-3 or PCM 2 channels, 48 kHz, 16 bit	24 or 17 Mbps
AVCHD	1440x1080	1.333	59.94i, 50i	H.264/MPEG-4 AVC	Dolby AC-3 or PCM 2 channels, 48 kHz, 16 bit	9 or 5 Mbps
MPEG-2 SD	720x480	0.9091 or 1.2121	23.976p, 29.97p, 59.94i	MPEG-2	Dolby AC-3 2 channels, 48 kHz, 16 bit	9 Mbps
MPEG-2 SD	720x576	1.0926 or 1.4568	25p, 50i	MPEG-2	Dolby AC-3 2 channels, 48 kHz, 16 bit	9 Mbps

AVC H.264/MPEG-4

Format	Frame Size	Screen Aspect Ratio	Frame Rate	Video Codec	Audio Codec	Bit Rate
H.264/MPEG-4 AVC	1280x720	16:9	50p, 100p, 120p,	AVC	Mono, 48kHz, AAC compression w/ AGC	
H.264/MPEG-4 AVC	1920x1080	16:9	24p, 25p, 30p, 48p, 50p, 60p	AVC	Mono, 48kHz, AAC compression w/ AGC	
H.264/MPEG-4 AVC	1920x1440	4:3	24p, 25p, 30p, 48p	AVC	Mono, 48kHz, AAC compression w/ AGC	
H.264/MPEG-4 AVC	3840x2160	16:9	23.97p. 24p, 25p, 29.97p, 50p, 59.94p	AVC	Mono, 48kHz, AAC compression w/ AGC	
H.264/MPEG-4 AVC	4096x2160	17:9	12p	AVC	Mono, 48kHz, AAC compression w/ AGC	
H.264/MPEG-4 AVC	2704x1524	16:9	25p, 30p	AVC	Mono, 48kHz, AAC compression w/ AGC	
H.264/MPEG-4 AVC	2704x1440	17:9	24p	AVC	Mono, 48kHz, AAC compression w/ AGC	
H.264/MPEG-4 AVC	1280x960	4:3	48p, 100p	AVC	Mono, 48kHz, AAC compression w/ AGC	
H.264/MPEG-4 AVC	848x480	16:9	240p	AVC	Mono, 48kHz, AAC compression w/ AGC	
H.264/MPEG-4 AVC	640x480	4:3	25p, 30p	AVC	Mono, 48kHz, AAC compression w/ AGC	

Format	Frame Size	Screen Aspect Ratio	Frame Rate	Video Codec	Audio Codec	Bit Rate
H.264/MPEG-4 AVC	240x180		25p, 29.97p	AVC	2 channels, 16 bit, AAC compression w/ AGC	
H.264/MPEG-4 AVC	320x180		25p, 29.97p	AVC	2 channels, 16 bit, AAC compression w/ AGC	
H.264/MPEG-4 AVC	320x240		25p, 29.97p	AVC	2 channels, 16 bit, AAC compression w/ AGC	
H.264/MPEG-4 AVC	480x270		25p, 29.97p	AVC	2 channels, 16 bit, AAC compression w/ AGC	
H.264/MPEG-4 AVC	640x480		25p, 29.97p	AVC	2 channels, 16 bit, AAC compression w/ AGC	
H.264/MPEG-4 AVC	1280x720		50p, 60p, 100p,120p	AVC	2 channels, 16 bit, AAC compression w/ AGC	
H.264/MPEG-4 AVC	1280x960		48p, 100p,120p	AVC	2 channels, 16 bit, AAC compression w/ AGC	
H.264/MPEG-4 AVC	1920x1080		24p, 25p, 29.97p, 48p, 50p, 60p	AVC	2 channels, 16 bit, AAC compression w/ AGC	
H.264/MPEG-4 AVC	1920x1440		24p, 25p, 29.97p, 48p	AVC	2 channels, 16 bit, AAC compression w/ AGC	
H.264/MPEG-4 AVC	2704x1524		24p, 25p, 29.97p	AVC	2 channels, 16 bit, AAC compression w/ AGC	

Format	Frame Size	Screen Aspect Ratio	Frame Rate	Video Codec	Audio Codec	Bit Rate
H.264/MPEG-4 AVC	3840x2160		23.97p. 24p, 25p, 29.97p, 50p, 59.94p	AVC	2 channels, 16 bit, AAC compression w/ AGC	
H.264/MPEG-4 AVC	4096x2160		12p	AVC	2 channels, 16 bit, AAC compression w/ AGC	
H.264/MPEG-4 AVC (HVO)	720x480		59.94i	AVC	2 channels, 16 bit, AAC compression w/ AGC	
H.264/MPEG-4 AVC (HVO)	720x576		50i	AVC	2 channels, 16 bit, AAC compression w/ AGC	

AS-11 DPP MXF

Format	Frame Size	Frame Rate	Video Codec	Audio Codec	Bit Rate
IMX-50	720x576	25	MPEG-2 Intra	PCM, 48 kHz, 24 bit	
XAVC Intra	1920x1080	25	MPEG-4 AVC Intra	PCM, 48 kHz, 24 bit	

Avid DNxHD®

Container: MXF

Audio Codec: PCM 44.1 kHz or 48 kHz, 16 bit or 24 bit

Frame Size	Family Name	Color Space/Bits	Frame Rate/Maximum Bit Rate
1920x1080	Avid DNxHD® 444	4:4:4 10 bit	29.97p @ 440 Mbps, 25p @ 365 Mbps, 24p @ 350 Mbps, 23.976p @ 350 Mbps
1920x1080	Avid DNxHD® 220x	4:2:2 10 bit	60p @ 440 Mbps, 59.94p @ 440 Mbps, 50p @ 365 Mbps, 59.94i @ 220 Mbps, 50i @ 185 Mbps, 29.97p @ 220 Mbps, 25p @ 185 Mbps, 24p @ 175 Mbps, 23.976p @ 175 Mbps
1920x1080	Avid DNxHD® 220	4:2:2 8 bit	60p @ 440 Mbps, 59.94p @ 440 Mbps, 50p @ 365 Mbps, 59.94i @ 220 Mbps, 50i @ 185 Mbps, 29.97p @ 220 Mbps, 25p @ 185 Mbps, 24p @ 175 Mbps, 23.976p @ 175 Mbps
1920x1080	Avid DNxHD® 145	4:2:2 8 bit	60p @ 290 Mbps, 59.94p @ 290 Mbps, 50p @ 240 Mbps, 59.94i @ 145 Mbps, 50i @ 120 Mbps, 29.97p @ 145 Mbps, 25p @ 120 Mbps, 24p @ 115 Mbps, 23.976p @ 115 Mbps
1920x1080	Avid DNxHD® 145 (subsampled to 1440x1080)	4:2:2 8 bit	59.94i @ 145 Mbps, 50i @ 120 Mbps
1920x1080	Avid DNxHD® 100 (subsampled to 1440x1080)	4:2:2 8 bit	59.94i @ 100 Mbps, 50i @ 85 Mbps, 29.97p @ 100 Mbps, 25p @ 85 Mbps, 24p @ 80 Mbps, 23.976p @ 80 Mbps
1920x1080	Avid DNxHD® 36	4:2:2 8 bit	60p @ 90 Mbps, 59.94p @ 90 Mbps, 50p @ 75 Mbps, 29.97p @ 45 Mbps, 25p @ 36 Mbps, 24p @ 36 Mbps, 23.976p @ 36 Mbps
1280x720	Avid DNxHD® 220x	4:2:2 10 bit	59.94p @ 220 Mbps, 50p @ 175 Mbps, 29.97p @ 110 Mbps, 25p @ 90 Mbps, 23.976p @ 90 Mbps
1280x720	Avid DNxHD® 220	4:2:2 8 bit	59.94p @ 220 Mbps, 50p @ 175 Mbps, 29.97p @ 110 Mbps, 25p @ 90 Mbps, 23.976p @ 90 Mbps
1280x720	Avid DNxHD® 145	4:2:2 8 bit	59.94p @ 145 Mbps, 50p @ 115 Mbps, 29.97p @ 75 Mbps, 25p @ 60 Mbps, 23.976p @ 60 Mbps
1280x720	Avid DNxHD® 100 (subsampled to 960x720)	4:2:2 8 bit	59.94p @ 100 Mbps, 50p @ 85 Mbps, 29.97p @ 50 Mbps, 25p @ 45 Mbps, 23.976p @ 50 Mbps

Apple ProRes

Container: MOV

Audio Codec: PCM

Format	Frame Size	Frame Rate	Video Codec
ProRes	720x486	59.94i, 30p, 29.97p, 24p, 23.976p	422 (proxy), 422 (LT), 422, 422 (HQ), 4444, 4444 XQ (Windows only)
ProRes	720x576	50i, 25p	422 (proxy), 422 (LT), 422, 422 (HQ), 4444, 4444 XQ (Windows only)
ProRes	960x720	60p, 59.94p, 50p, 30p,29.97p, 24p, 23.976p	422 (proxy), 422 (LT), 422, 422 (HQ), 4444, 4444 XQ (Windows only)
ProRes	1280x720	60p, 59.94p, 50p, 30p,29.97p, 24p, 23.976p	422 (proxy), 422 (LT), 422, 422 (HQ), 4444, 4444 XQ (Windows only)
ProRes	1280x1080	59.94i, 30p, 29.97p, 24p, 23.976p	422 (proxy), 422 (LT), 422, 422 (HQ), 4444, 4444 XQ (Windows only)
ProRes	1440x1080	59.94i, 50i, 30p, 29.97p, 25p, 24p, 23.976p	422 (proxy), 422 (LT), 422, 422 (HQ), 4444, 4444 XQ (Windows only)
ProRes	1920x1080	60p, 59.94p, 50p, 59.94i, 50i, 30p, 29.97p, 25p, 24p, 23.976p	422 (proxy), 422 (LT), 422, 422 (HQ), 4444, 4444 XQ (Windows only)
ProRes	2048x1080	60p, 59.94p, 50p, 30p, 29.97p, 25p, 24p, 23.976p	422 (proxy), 422 (LT), 422, 422 (HQ), 4444, 4444 XQ (Windows only)
ProRes	2048x1556	60p, 59.94p, 50p, 30p, 29.97p, 25p, 24p, 23.976p	422 (proxy), 422 (LT), 422, 422 (HQ), 4444, 4444 XQ (Windows only)
ProRes	3840x2160	60p, 59.94p, 50p, 30p, 29.97p, 25p, 24p, 23.976p	422 (proxy), 422 (LT), 422, 422 (HQ), 4444, 4444 XQ (Windows only)
ProRes	4096x2160	60p, 59.94p, 50p, 30p, 29.97p, 25p, 24p, 23.976p	422 (proxy), 422 (LT), 422, 422 (HQ), 4444, 4444 XQ (Windows only)
ProRes	5120x2160	60p, 59.94p, 50p, 30p, 29.97p, 25p, 24p, 23.976p	422 (proxy), 422 (LT), 422, 422 (HQ), 4444 , 4444 XQ (Windows only)

HDV

Container: MPEG-2 Transport Stream (Windows), MOV (macOS)

Audio Codec: MPEG-1 Audio Layer-2 (Windows). 2 channels, 48 kHz, 16 bit

Format	Frame Size	Pixel Aspect Ratio	Frame Rate	Interlace	Video Codec
HDV	1440x1080	1.333	50i, 59.94i	Upper	MPEG-2 MP@H14

DV

Container: AVI (Windows), MOV (macOS)

Audio Codec: PCM, 2 channels, 32 kHz, 16 bit

Format	Frame Size	Frame Rate	Field Order	Video Codec	Bit Rate	Audio Channels
DV (SD)	720x480	59.94i	Lower	DV	25 CBR	2 channels, 32 kHz, 16 bit
DV (SD)	720x576	50i	Lower	DV	25 CBR	2 channels, 32 kHz, 16 bit

Supported video devices

Catalyst Browse supports the following video volumes and devices:

Folder Structure	Storage Media	Root Folder	Supported Format
XAVC-XD-Style	SxS memory card (exFAT) XQD memory card	XDROOT	XDCAM HD/HD422/IMX/DVCAM, SStP, XAVC Intra, XAVC Long
XAVC-M4-Style	SxS memory card (exFAT) XQD memory card SD card	M4ROOT	XAVC S
XAVC-PX-Style	SD card	PXROOT	XAVC Proxy
AXS-Style	AXS memory card	CINEROOT	F55RAW, F5RAW, FS700RAW
SRM-Style	SR memory card	Media root	F65RAW, SStP
XD-Style	Professional Disc SxS memory card (UDF)	Media root	XDCAM HD/HD422/IMX/DVCAM, XAVC Intra
BPAV-Style	SxS memory card (FAT32) SD card	BPAV	XDCAM EX (MPEG HD, DVCAM)
AVCHD structure	SD card	AVCHD/BDMV	AVCHD

Chapter 3

Playing media

When you double-click a file in Media Browser mode, the file is loaded in View mode, where you can preview the file, log mark in and mark out points, and apply color correction. For more information about using Media Browser mode, please see "Finding media" on page 9.

You can use the toolbar at the top of the pane to adjust and monitor audio levels, select audio channels for preview, scale the video preview, view metadata, and adjust clip settings.

You can use the transport toolbar below the video to choose the playback mode, scrub the video, and control playback.

Previewing video

When you double-click a file in Media Browser mode, the file is loaded in View mode, where you can preview the file, log mark in and mark out points, and apply color correction. For more information about using Media Browser mode, please see "Finding media" on page 9.

You can also choose to display the video preview in a secondary window that you can position anywhere on your screen or on a secondary display. For more information, see "Editing Catalyst Browse options" on page 77.

If you have multiple clips selected in the Media Browser on the left side of the window, the selected clips will play sequentially in the order they are displayed. The file name of the current file will be displayed above the video preview, and a vertical line in the timeline indicates where each selected clip begins:

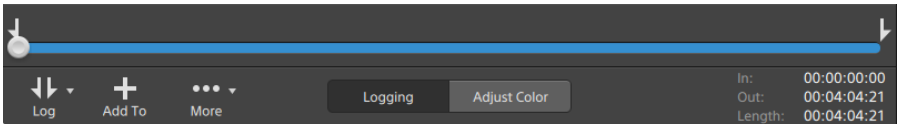
A  indicates a clip from an Optical Disc Archive volume.

An  on a thumbnail indicates that a clip spans multiple discs on an Optical Disc Archive volume. When you play a clip that spans discs, an indicator is displayed in the timeline to identify the point where the clip switches discs:

Enable the **Preview using proxy clips** switch in Options if you want to use proxy clips for playback if they are available. During playback, a **Proxy** indicator is displayed above the video preview. For more information, see "Editing Catalyst Browse options" on page 77.

Click the **Play**  button to start playing the current video. Playback will start from the playback position indicator and continue until the **Mark Out** position or the end of the file.

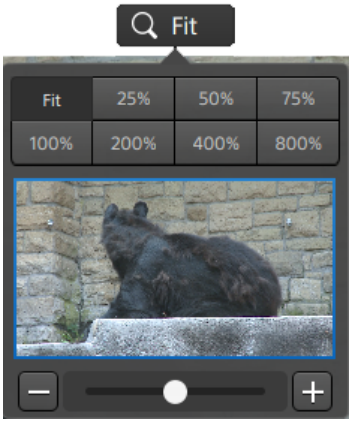
You can click the trackbar below the transport controls to set the play position indicator:



For information about flipping the video, enabling anamorphic stretching, and displaying safe zone and mask guides, please see "Editing clip settings" on page 37.

Scaling the video preview

Click the magnifying glass to adjust the size of the video preview.



- Click **Fit** to scale the video to fill the Video pane.
- Click a preset to scale the video to a predefined magnification level.

  When the level is below 100%, you can drag the blue rectangle to pan and adjust the visible portion of the frame.
- Drag the slider or click the − and + buttons to choose a custom zoom level.
- Click the thumbnail and roll your mouse wheel to zoom in or out.

Toggling full-screen playback

Click ⤢ to display the Video pane in full-screen mode. Press Esc or click the **Close** button to exit full-screen mode.

Adjusting playback settings

Click the **Playback Settings** button to the left of the transport controls to display the Playback Settings controls.

Speed/Quality

Select **Speed** if you want decoding to be optimized to preserve the frame rate.

Select **Quality** if you want decoding to be optimized to preserve video quality.

Real Time/All Frames

Select **Real Time** if you want to play the clip using its source frame rate. Audio is played at its recorded rate, and video frames are skipped if necessary to preserve the playback rate.

Select **All Frames** if you want to ensure that all video frames are played. The frame rate may be reduced if needed to ensure all frames are played. Audio is unavailable in this mode.

- Real Time/Speed:
- Real Time/Quality:
- All Frames/Speed:
- All Frames/Quality:

Using the transport controls

The transport controls below the video preview allow you to control playback:

Button		Description
	Go to Start	Moves the playback position indicator to the **Mark In** position. Click again to move to the beginning of the selected file.
	Previous Frame	Moves the playback position indicator one frame or field to the left.
	Play	Playback will start from the playback position indicator and continue until the **Mark Out** position or the end of the file.
	Next Frame	Moves the playback position indicator one frame or field to the right.
	Go to End	Moves the playback position indicator to the **Mark Out** position. Click again to move to the end of the selected file.
	Loop Playback	Plays only the area between the **Mark In** and **Mark Out** points in a continuous mode. For more information, see "Marking in and out points for playback" on page 34.

Navigating the timeline

After you open a file in View mode, drag the shuttle control to seek forward or backward from the play position indicator to find an edit point. As you drag toward the ends of the shuttle control, playback speed increases. Release the shuttle control to stop playback:

You can also press the J, K, or L keys to use the keyboard as a shuttle control.

Press and hold K while pressing J or L to emulate a shuttle knob mode. Press K+J to scrub left or K+L to scrub right.

Item	Description
J	Scrub reverse mode. Press again to accelerate the playback rate.
K	Pause.
L	Scrub forward mode. Press again to accelerate the playback rate.

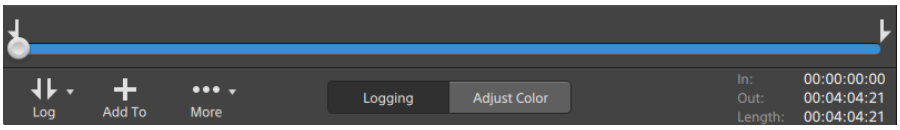
Marking in and out points for playback

If you want to play only a portion of a video, you can select the portion of the video you want to play.

1. Click the **Media Browser** button at the top of the Catalyst Browse window to view the Media Browser.
2. Double-click a file in Media Browser mode to load it in View mode.

   You can also use the Preview pane in Media Browser mode to adjust mark points.

3. Click the **Logging** button at the bottom of the Catalyst Browse window.
4. Click the trackbar below the transport controls to set the play position indicator:

   If the current clip contains discontinuous timecode, an indicator is displayed in the timeline to identify the discontinuity:

5. Click the **Mark In** button.
6. Click the trackbar below the transport controls to set the play position indicator.
7. Click the **Mark Out** button.

When you click the **Play** button, playback will start from the playback position indicator and continue until the **Mark Out** position or the end of the file.

If you want to play the Mark In/Mark Out region in a continuous loop, select the **Loop Playback** button .

You can quickly log mark in/out points by clicking the **In**, **Out**, and **Length** boxes at the bottom of the Catalyst Browse window and typing new timecode values. (Not available for MXF proxy-only clips with embedded timecode.)

Type new values in the **Mark in** and **Mark out** boxes on the Summary tab in the Inspector to edit the clip's mark in and mark out points. (Not available for MXF proxy-only clips with embedded timecode.) For more information, see "Viewing and editing metadata" on page 39.

You can adjust mark in/out points by dragging the indicators above the trackbar.

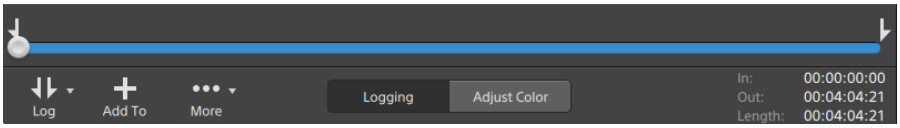
To reset mark in/out points, click the **More** button and choose **Reset mark in/out points**.

If the current file contains essence marks, they will be displayed on the timeline as diamonds . Essence marks are displayed in the Mark Points tab in metadata mode. For more information, see "Viewing and editing metadata" on page 39.

Creating a snapshot of a frame

If you want to create a snapshot of the current frame, click the **More** button and choose **Copy snapshot to clipboard** or **Save snapshot**.

Copying a frame to the clipboard

1. Click the **Media Browser** button at the top of the Catalyst Browse window to view the Media Browser.
2. Double-click a file in Media Browser mode to load it in View mode.
3. Click the **Logging** button at the bottom of the Catalyst Browse window.
4. 

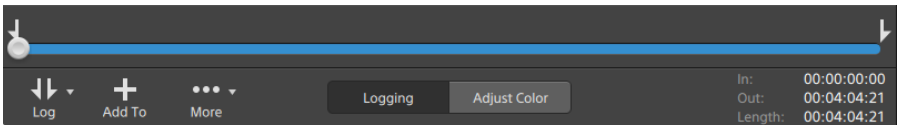
5. Click the **More** button and choose **Copy snapshot to clipboard**.

   Press Ctrl+C (Windows) or ⌘-C (macOS).

   The current frame is copied to the clipboard at its current resolution. For example, if you want to copy a full-resolution frame, set your zoom level to 100%. You can change the size of the image using the magnifying glass button above the video preview. For more information, see "Previewing video" on page 30.

Saving a frame to a file

1. Click the **Media Browser** button at the top of the Catalyst Browse window to view the Media Browser.
2. Double-click a file in Media Browser mode to load it in View mode.
3. Click the trackbar below the transport controls to set the play position indicator:



4. Click the **More** button and choose **Save snapshot**.

   Press Shift+S.

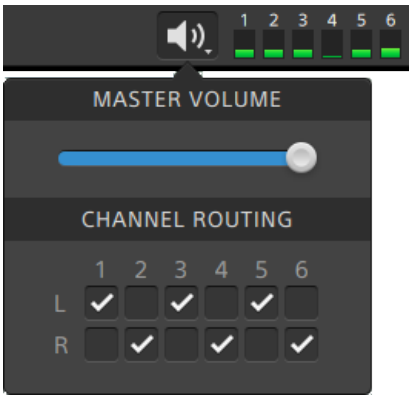
   The current frame is saved at its current resolution. For example, if you want to save a full-resolution frame, set your zoom level to 100%.

   You can change the size of the image using the magnifying glass button above the video preview. For more information, see "Previewing video" on page 30.

   You can save the location and format used for saving the file in Options. For more information, see "Editing Catalyst Browse options" on page 77.

Adjusting and monitoring audio levels

Click the speaker in the activity pane at the top of the Catalyst Browse window to display audio controls.



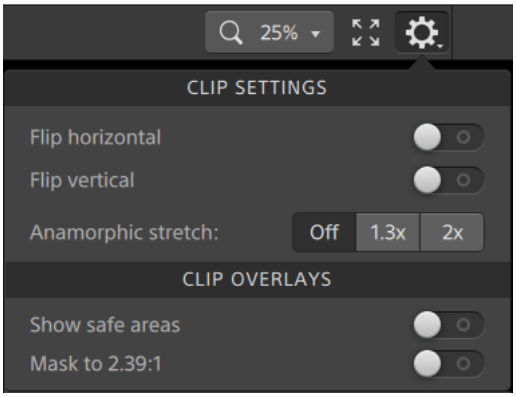
Drag the **Master Volume** fader to increase or decrease audio levels. During preview, the meters allow you to monitor the level of each audio channel.

If you want to choose which audio channels will be played, you can use the **Channel Routing** check boxes. In the example above, the 1st, 3rd, and 5th channels are played through the left speaker and the 2nd, 4th, and 6th channels are played through the right speaker.

Catalyst Browse supports only stereo output devices.

Editing clip settings

Click the ⚙ button to edit clip playback settings.



Item	Description
Flip horizontal Flip vertical	Click the **Flip horizontal** or **Flip vertical** switch to flip the left-to-right or top-to-bottom orientation of the video frame.
Anamorphic stretch	Click the **1.3x** or **2x** button to apply anamorphic stretching to widescreen video, or click **Off** to turn off stretching.
Show safe areas	Click the switch to enable safe area guides and a center point in the video preview. When **Show safe areas** is enabled, Catalyst Browse displays rectangles marking 90% (action safe area) and 80% (title safe area) of the frame to serve as guidelines for framing. Overlays are not displayed when using full-screen preview.
Mask to 2.39:1	Click the switch to enable shading in the video preview to indicate how an anamorphic version of your content will appear. Overlays are not displayed when using full-screen preview.

Chapter 4

Working with clips

Viewing and editing metadata

When you're in Media Browser or View mode, click the **Inspector** button in the toolbar to display metadata for the currently selected file in the Inspector pane.

Click the **Summary** tab to view summary information associated with the file.

Click the **File** tab to view details about the source media and its metadata, including GPS information (if present).

Click the **Mark Points** tab to view essence marks embedded in the file.

If the current file contains essence marks, they will be displayed on the timeline as a diamond .

If the current clip contains discontinuous timecode, an indicator is displayed in the timeline to identify the discontinuity:

When a clip list is selected in Browse mode, the Metadata pane displays additional information about the currently selected clip list. When a clip list is open in View (Clip List or Clip) mode, the Metadata pane displays information about the selected subclip. For more information, see "Working with clip lists" on page 40.

Editing metadata is not available when Catalyst Browse is started in view-only mode.

When you edit the metadata for a proxy file, the metadata for the full-resolution clip is updated when you copy the proxy clip back to the device. For more information, see " Copying files " on page 12.

Editing mark in/out points

Click the Summary tab.

Type new values in the **Mark in** and **Mark out** boxes to edit the clip's mark in and mark out points. For more information, see "Marking in and out points for playback" on page 34.

Editing summary metadata

1. Click the Summary tab.

   Click the **Unlock** button to enable editing summary information for the selected files.

2. Edit the **Status**, **Title**, **Creator**, and **Description** settings as needed.

   When editing metadata for multiple selected files, **(multiple values)** is displayed if the files' metadata does not match. Editing the value will replace the metadata for all selected files.

3. Click **Save** to save the edited metadata values, or click **Revert** to discard your edits.

   Not all media formats support summary metadata.

Editing essence marks

1. Select a clip to display its metadata.
2. Click the Mark Points tab.
3. Click an essence mark's label or timecode value to type a new value.

   Adding and editing essence marks is supported only for XDCAM MXF clips and requires write access to the volume.

Adding a mark point

1. Select a clip to display its metadata.
2. Click the Mark Points tab.
3. Click the trackbar below the video preview to set the cursor position where you want to add a mark point(or click the timecode display to move the cursor to a specific location).
4. Click the **Add Point** button or press E.

Deleting a mark point

1. Select a clip to display its metadata.
2. Click the Mark Points tab.
3. Click an essence mark's label or timecode to select it.
4. Click the **Delete** button .

Working with clip lists

You can create and edit clip lists for the following media types:

- XDCAM media in an XD root folder .
- XAVC media in an XD root folder .
- RAW media in an AxS folder .

A clip list is a PD-EDL (.smi) file that allows you to create a video project that is comprised of multiple, shorter video clips.

Clip lists are a helpful part of a proxy workflow when working with limited bandwidth: copy the proxy clips to your computer, create a clip list using the proxy clips, and then copy the clip list back to the camera or deck. The deck will then play the clip list using your full-resolution source.

 When viewing a clip list,  indicates spanned clips from the same volume, and  indicates spanned clips from different volumes.

Creating a clip list

1. Click the **Media Browser** button at the top of the Catalyst Browse window to view the Media Browser.
2. Navigate to the root folder  or  that contains the clips you want to use.
3. Select the files you want to include in your clip list. You can hold Shift or Control (Windows) / ⌘ (macOS) to select multiple files.
4. Click the **Tools** button  at the bottom of the Catalyst Browse window and choose **New clip list from selection** from the menu.

    If you want create a clip list without choosing clips, click the **Tools** button  at the bottom of the Catalyst Browse window and choose **New empty clip list** from the menu.
5. Type a name for the new clip list and click **OK**.
6. Catalyst Browse loads your new clip list in View mode.

Opening a clip list

1. Click the **Media Browser** button at the top of the Catalyst Browse window to view the Media Browser.
2. Navigate to the root folder  or  that contains the clip list you want to open.
3. Double-click the clip list (.smi file) to open it.

Rearranging clips

In Clip List mode, you can add, remove, and arrange clips in the clip list. Click the **Clip List** button at the bottom of the Catalyst Browse window to switch to Clip List mode.

You can drag clips within the clip list to rearrange them. Drag a clip and drop it to a new position on the clip list to change its position.

Adding clips

In Clip List mode, you can add, remove, and arrange clips in the clip list. Click the **Clip List** button at the bottom of the Catalyst Browse window to switch to Clip List mode.

You can only add clips from the folder where the clip list (.smi) file is saved.

Click the add button at the end of the clip list to display a media browser, where you can select additional clips for your clip list.

You can click the **Add** button at the bottom of the Catalyst Browse window when you're in Clip List mode.

When you add a clip, a vertical line is added to the timeline to indicate where each clip begins:

Removing clips

In Clip List mode, you can add, remove, and arrange clips in the clip list. Click the **Clip List** button at the bottom of the Catalyst Browse window to switch to Clip List mode.

Select a clip and click the **Remove** button at the bottom of the Catalyst Browse window.

Editing clips

In Clip mode, you can log mark in and out points for your clips.

You cannot add, delete or rearrange clips in Clip mode. Use Clip List mode for clip list editing.

1. Open the clip list you want to edit.
2. Click the **Clip** button at the bottom of the Catalyst Browse window to switch to Clip mode.

   You can also double-click a clip in Clip List mode to switch to Clip mode.
3. Select the clip you want to edit.
4. Use the **Mark In** and **Mark Out** buttons to adjust the mark in and out points for the selected clip.

   For more information, see "Marking in and out points for playback" on page 34.

Viewing metadata for clip lists

When you're in Media Browser or View mode, click the **Inspector** button in the toolbar to display metadata in the Inspector pane.

In Browse mode, the Metadata pane displays additional information about the currently selected clip list.

In View (Clip List or Clip) mode, the Metadata pane displays information about the selected subclip.

For more information, see "Viewing and editing metadata" on page 39.

Writing a clip list back to a device

Select a clip list in Media Browser mode and click the **Copy** button at the top of the Catalyst Browse window to write a clip list back to a device. For more information, see "Copying clips" on page 70.

Working with EDLs

You can use Catalyst Browse to import an EDL.

Importing an EDL

1. Click the **Tools** button at the bottom of the Catalyst Browse window and choose **Import EDL**. The Import EDL dialog is displayed.
2. Select the EDL you want to import.
3. Choose a setting from the **Frames per second** drop-down list to set the frame rate of the EDL.
4. Click **Import**. The EDL Import workspace is displayed with the contents of the EDL.

Linking and unlinking clips

After you import an EDL, you can use the EDL Import workspace to link and unlink clips.

To link your clips, select a clip, click the **Link** button (or double-click an unlinked clip's thumbnail) and browse for the source media.

If other unlinked clips exist in the folder, they will be linked automatically. If you want to link only the selected clip, clear the **Automatically link clips** check box.

To unlink a clip, select it and click the **Unlink** button . If you want to unlink all clips, click the **More** button and choose **Unlink all** from the menu.

Replacing clips

You can use the **Replace media** command to replace a clip in an EDL with a different media file.

1. Select a clip in the EDL.
2. Click the **More** button and choose **Replace media** from the menu.
3. Browse to the new clip and click **OK**.

Combining relay clips

You can use Catalyst Browse to combine AVCHD relay-recorded clips into a single clip.

Before combining relay clips, copy them to a single folder. For more information, see "Finding media" on page 9.

1. Select the clips you want to combine.

   Clips must be of the same operating point and the timecode must be sequential.

2. Click the **Tools** button  at the bottom of the Catalyst Browse window and choose **Combine relay clips**. The Combine Relay Clips dialog is displayed.
3. In the **Combined file name** box, type the name you want to use for the new clip.
4. Click **OK**.

Synchronizing multicamera clips

You can use Catalyst Browse to synchronize clips from a multicamera shoot.

When you synchronize clips, the mark-in points of the selected clips are adjusted as needed to allow the clips to play in synchronization. Synchronizing your clips in Catalyst Browse streamlines the process of editing multicamera video in a nonlinear editor.

1. Select the MXF clips you want to synchronize.
2. Click the **Tools** button  at the bottom of the Catalyst Browse window and choose **Synchronize multicamera clips**.

   Progress is displayed while the clips are analyzed and synchronized.

Repairing flash bands

When a camera flash is fired, it can create a band of light in your video.

Catalyst Browse can detect and remove flash bands.

 Flash-band repair is not available when Catalyst Browse is started in view-only mode.

1. Click the **Media Browser** button at the top of the Catalyst Browse window to view the Media Browser.
2. Select the clip you want to repair.
3. Click the **Tools** button  at the bottom of the Catalyst Browse window and choose **Repair flash bands**. The Flash Band workspace is displayed.

4. Use the Flash Band workspace to identify the flash bands you want to repair:

    a. Set the Mark In/Out points to indicate the portion of the clip you want to scan. For more information, see "Marking in and out points for playback" on page 34.

    b. Click the **Detect** button  to scan the clip and mark flash bands automatically. A marker  is added to the timeline, and an entry is created in the Inspector.

     Automatic flash band detection is available only for MXF clips. To mark a flash band manually, click the trackbar below the transport controls to set the play position indicator and click the **Add** button  in the Inspector.

    Please note that automatic and manual flash-band repair can yield different results.

    To remove a flash band marker, select it in the Inspector and click the **Delete** button  .

    Click the **Before/After** button in the top-right corner of the video preview to choose a preview mode so you can compare your original and repaired video before applying the changes.

    - **Before**: full-frame video is displayed in its original state.
    - **After**: full-frame video is displayed in its repaired state.

5. Click **Repair**. The transcode dialog is displayed to allow you to choose settings for the repaired file.

    For more information, see "Transcoding clips" on page 67.

Chapter 5

Applying color correction

If you've used multiple cameras within a project or if the lighting varies between shots, the resulting clips can look noticeably different. You can use color correction to minimize the differences or to apply an artistic look to your clips.

Color-correction settings are applied globally to all clips. If you want to save your color-correction settings, you can transcode clips to create new files. For more information, see "Transcoding, copying, and sharing clips" on page 67.

Color correction is not available when Catalyst Browse is started in view-only mode.

Editing color-correction settings

You can use the color-correction controls to perform color grading that is applied globally to all clips. If you want to save your color-correction settings, you can transcode clips to create new files. For more information, see "Transcoding clips" on page 67.

Color correction is not available when Catalyst Browse is started in view-only mode.

Loading a clip/clip list for color correction and configuring the waveform, histogram, and vectorscope monitors

1. Click the **Media Browser** button at the top of the Catalyst Browse window to view the Media Browser.
2. Double-click a clip or clip list in the Media Browser to load it.

   Color correction is available only in View mode.

3. Click the **Adjust Color** button at the bottom of the Catalyst Browse window. In the Adjust Color workspace, Catalyst Browse displays a waveform/histogram/vectorscope monitor, a video preview, and color controls that you can use to adjust the appearance of your video.

   The waveform/histogram/vectorscope monitor and video preview window allow you to monitor your progress as you adjust color values.

   - Click the **Waveform** button  at the bottom of the window to toggle the waveform monitor.

     The waveform monitor displays the luminance values (brightness or Y component) of your video signal. The monitor plots luminance values on the vertical axis and the width of the current frame on the horizontal axis.

     You can use the buttons at the top of the waveform monitor to display overlaid () or separate () RGB waveforms and isolate colors  .

     #### Waveform settings

     Click the **Settings** button  to open the Waveform Settings dialog. You can use the Waveform Settings dialog to change the scale of the waveform monitor and enable AIR matching when grading HDR clips.

     The controls in the Waveform Settings dialog are available only when the **Grade in** drop-down is set to **Rec-2020/S-Log3 (HDR)**. For more information, see "Choosing a grading color space" on page 77.

     You can click the **%** or **Nits** button to change the units displayed in the waveform.

     The **Units** buttons are available only when the **Display color space** drop-down is set to **Rec.2020/S-Log3**, **Rec.2020/HLG**, **Rec.2020/HLG AIR Matching**, **Rec.2020/PQ**, or **Rec.2020/PQ AIR Matching**. For more information, see "Choosing a color space for the video preview" on page 77.

     When the **Display color space** is set to **Rec.2020/HLG** or **Rec.2020/HLG AIR Matching**, the **Nits** value is calculated for a peak luminance of 1000 cd/m^2.

     When the **Display color space** drop-down is set to **Rec.2020/S-Log3**, you can use the **AIR Matching** switch to toggle AIR (Artistic Intent Rendering) matching to achieve a consistent look between Rec.2020/S-Log3-based grading and a configured HLG (hybrid log-gamma) or PQ (perceptual quantizer) monitor.

     The **AIR Matching** switch is automatically turned on when the **Display color space** drop-down is set to **Rec.2020/HLG AIR Matching** or **Rec.2020/PQ AIR Matching**.

- Click the **Histogram** button  at the bottom of the window to toggle the histogram monitor.

  The histogram monitor displays the number of pixels that exist for each color intensity. The vertical axis represents the number of pixels, and the horizontal axis represents the RGB color range from 0,0,0 to 0,0,255.

  You can use the buttons at the top of the histogram monitor to display overlaid () or separate () RGB histograms and isolate colors  .

- Click the **Vectorscope** button  at the bottom of the window to toggle the vectorscope monitor.

  The vectorscope monitor allows you to monitor the chroma values (color content) of your video signal. The monitor plots hue and saturation on a color wheel.

  The vectorscope displays targets for broadcast-legal saturations of red (R), magenta (Mg), blue (B), cyan (Cy), green (G), and yellow (Yl). Individual colors in your video signal are displayed as dots in the vectorscope. A dot's distance from the center of the scope represents its saturation, and the angle of the line from the dot to the center of the scope represents its hue.

  For example, if an image has a blue cast, the distribution of dots in the vectorscope will be concentrated toward the blue portion of the color wheel. If the image includes out-of-range blue values, the vectorscope display will extend beyond the blue target.

  You can use the vectorscope to calibrate color between scenes. Without calibration, you may see noticeable color differences between scenes from multicamera shoots.

  Click the **Settings** button  to open the Vectorscope Settings dialog.

  The Vectorscope Settings dialog allows you to toggle a monochrome view of the scope, change the scale of the scope, adjust the brightness of the colors displayed in the scope, and adjust the brightness of the scope's guide (graticule).

   Use the 75% **Scale** setting when performing color correction for broadcast, or use the 100% setting when performing color correction for film or Web distribution with a wider color gamut.

- The video preview window displays the current frame at the playback position indicator.

Click the **Split-Screen Preview** button in the top-right corner of the video preview to choose a preview mode. Split-screen previews allow you to split the video preview and waveform/histogram/vectorscope monitor so you can see your affected and unaffected video at the same time.

-  **Before**: full-frame video is displayed in its original state.
-  **After**: full-frame video is displayed in its color-corrected state.

- **Split**: a single frame is displayed in a split-screen view with the original video on the left and the color-corrected video on the right.

  If you want to move the split location, hover over the preview frame. When the split point is displayed, you can drag the handles at the top of bottom of the screen to adjust where the preview is split:

- **2 Up**: two full frames are displayed in a split-screen view with the original video on the left and the color-corrected video on the right.

Adjusting the color wheels

In the Adjust Color workspace, the bottom of the Catalyst Browse window provides color wheels for Lift, Gamma, and Gain. The wheels provide a visual representation of the current levels and allow you to adjust color quickly. As you adjust the controls, the waveform/histogram/vectorscope monitor and video preview will update in real time to allow you to check your progress.

The color wheels are used to edit ASC-CDL (American Society of Cinematographers Color Decision List) parameters.

Click the **Wheels** button to show or hide the color wheels.

Drag the point in the center of the color wheel to pick the hue and saturation you want to add to the video, or drag the slider on the side of the color wheel to increase luminance for all RGB components simultaneously. You can double-click the point to reset the color wheel or double-click the slider handle to reset the luminance.

When you drag the color correction controls, they move in fine increments. To move controls in larger increments, hold Shift while dragging.

Choosing a color space

Click the **Inspector** button in the toolbar to display the Inspector pane. In the Adjust Color workspace, the Color Space section in the Inspector pane provides color space controls that you can use to choose the source and conversion color spaces.

Click the **Unlock** button and choose a setting from the **Source** drop-down list to choose the color space that should be applied to the source media. When you choose a setting, the video preview is updated. The source color space should be detected automatically and does not need to be changed in most cases.

The **Unlock** button is not used when editing RAW or X-OCN video.

When **S-Gamut/S-Log2**, **S-Gamut3.Cine/S-Log3**, or **S-Gamut3/S-Log3** is selected in the **Source** drop-down list, you can choose a color space from the **Convert to** drop-down list.

The **Grade in** box displays the color space that will be used for color grading. Click the **Options** button and choose a setting from the **Grade in** drop-down list to change the setting.

Click the **Reset** button at the bottom of the Inspector pane to reset the **Source** and **Convert to** color space based on the clip's metadata.

Adjusting exposure, temperature, and tint

Click the **Inspector** button in the toolbar to display the Inspector pane. In the Adjust Color workspace, the Source Settings section in the Inspector pane provides the **Exposure index**, **Temperature**, and **Tint** sliders to adjust the color content of your clip.

Exposure, temperature, and tint are not available for all color spaces.

- Drag the **Exposure index** slider to adjust the overall brightness of your video.
- Drag the **Temperature** slider to adjust the color temperature (in Kelvin) of your video. Adjusting the temperature modifies the red and blue gain by adding an offset to the temperature setting saved in a clip's metadata.
- Drag the **Tint** slider to adjust color balance of your video. Adjusting the tint allows you to modify the magenta and green gain to supplement the color temperature setting by adding an offset to the tint setting saved in a clip's metadata.

  Double-click a control to reset its value.

Applying a look profile

You can use the **Look profile** drop-down list to apply a look profile/LUT to a clip.

Click the **Inspector** button in the toolbar to display the Inspector pane. In the Adjust Color workspace, the Look section in the Inspector pane contains the **Look profile** drop-down list.

The **Look profile** drop-down is available only when the Source Color Space **Convert to** drop-down list is set to **S-Gamut/S-Log2** or **S-Gamut3.Cine/S-Log3** and the **Grade in** drop-down list set to **Rec.709**.

If you want to set a default look profile to be applied when no look profile is specified in a clip's metadata, choose a setting from the **Look profile** drop-down list, click the **Look Tools** button, and choose **Make default**.

To replace the clip's current look profile with the default, click the **Look Tools** button, and choose **Reset to default**.

Click the **Reset** button at the bottom of the Inspector pane to reset the **Look profile** based on the clip's metadata.

To add look profiles (including .cube files) to Catalyst Browse, save them in the following folder and then close and restart the application:

Windows: `C:\Users\<user>\Documents\Sony\Catalyst\Color\Looks\`

macOS: `/Users/<user>/Documents/Sony/Catalyst/Color/Looks/`

- The `sgamut-slog2` subfolder is used for S-Gamut/S-Log2 sources.
- The `sgamut3cine-slog3` subfolder is used for S-Gamut3.Cine/S-Log3 sources or **Convert to** choices.
- The `sgamut3-slog3` subfolder is used for S-Gamut3/S-Log3 sources or **Convert to** choices.

Adjusting the tone curve

Click the **Inspector** button in the toolbar to display the Inspector pane. In the Adjust Color workspace, the Tone Curve section in the Inspector pane contains a color curve you can use to adjust the red, green, and blue channels graphically. As you adjust the controls, the waveform/histogram/vectorscope monitor and video preview will update in real time to allow you to check your progress.

The tone curve controls are used to edit look-up tables (LUTs).

- Select the channel you want to adjust by clicking the **Red**, **Green**, or **Blue** button below the color curve , or click the **White** button to adjust all RGB components simultaneously.
- Click the curve to add a control point.
- Select a control point and drag it to adjust it.
- As you adjust the controls, the waveform/histogram/vectorscope monitor and video preview will update in real time to allow you to check your progress. Click **Delete Point** to remove the selected control point.
- Click the **Reset** button at the bottom of the Inspector pane to remove all control points.

Adjusting the color correction sliders

Click the **Inspector** button  in the toolbar to display the Inspector pane. In the Adjust Color workspace, the Color Correction section in the Inspector pane provides **Brightness**, **Contrast**, **Saturation**, **Lift**, **Gamma**, and **Gain** sliders you can use to adjust the values of the red, green, and blue channels. As you adjust the controls, the waveform/histogram/vectorscope monitor and video preview will update in real time to allow you to check your progress.

The sliders are used to edit ASC-CDL (American Society of Cinematographers Color Decision List) parameters.

 For precise control, you can hold Ctrl (Windows) or ⌘ (macOS) or click the numeric value to type a new value.

Drag the **Brightness** slider to adjust the overall lightness of your video.

Drag the **Contrast** slider to adjust the overall contrast of your video.

 Brightness and contrast are not saved explicitly with ASC-CDL files. When exporting an ASC-CDL file, the **Brightness** and **Contrast** settings are incorporated with the other color-correction values. When you reload an exported ASC-CDL file, the **Brightness** and **Contrast** settings will be set to 0.

When exchanging color settings with Catalyst Browse and Catalyst Prepare, click the **Tools** button  at the bottom of the Catalyst Browse window and choose **Save preset** from the menu to preserve **Brightness** and **Contrast** settings.

For more information, see "Exporting color-correction settings" on page 63 and "Applying color-correction settings" on page 53.

Drag the **Saturation** slider to adjust the overall intensity of the color in your video.

To adjust lift, gamma, and gain, drag the **R**, **G**, **B** sliders to adjust the red, green, and blue components of the each parameter, or drag the **Y** slider to adjust luminance for all RGB components simultaneously.

 Double-click a control to reset its value.

Click the **Undo**  and **Redo**  buttons to step forward or backward through your recent edits.

Click the **Reset** button  at the bottom of the Inspector pane to reset all color correction.

Applying color-correction settings

You can use the **Tools** button  at the bottom of the Catalyst Browse window to load color presets or ASC-CDL (American Society of Cinematographers Color Decision List) files to exchange color-grading information.

 Color correction is not available when Catalyst Browse is started in view-only mode.

Applying a color preset

Color presets include the source settings (exposure index, temperature, and tint), look profile, tone curve, and ASC-CDL settings. For more information, see "Editing color-correction settings" on page 47.

1. Click the **Media Browser** button at the top of the Catalyst Browse window to view the Media Browser.
2. Double-click a clip in the Media Browser to load it.

   Color correction is available only in View mode.
3. Click the **Adjust Color** button at the bottom of the Catalyst Browse window.
4. Click the **Inspector** button in the toolbar to display the Inspector pane.
5. Click the **Tools** button at the bottom of the Catalyst Browse window and choose **Load preset** from the menu.
6. In the Load Preset dialog, choose a Catalyst color (.ccolor) file.

   Presets are saved in the following folders by default:

   Windows: `C:\Users\<user>\Documents\Sony\Catalyst\Color\`

   macOS: `/Users/<user>/Documents/Sony/Catalyst/Color`
7. Click **Load**.

   The selected color settings are loaded and applied to all clips that you open.

Applying an ASC-CDL file

1. Click the **Media Browser** button at the top of the Catalyst Browse window to view the Media Browser.
2. Double-click a clip in the Media Browser to load it.

   Color correction is available only in View mode.
3. Click the **Adjust Color** button at the bottom of the Catalyst Browse window.
4. Click the **Inspector** button in the toolbar to display the Inspector pane.
5. Click the **Tools** button at the bottom of the Catalyst Browse window and choose **Load ASC-CDL** from the menu.
6. In the Load ASC-CDL dialog, choose a *.cdl file.
7. Click **Load**.

   The selected color settings are loaded and applied to all clips that you open.

Using a Tangent control

You can use Tangent Element Tk, Kb, Bt, Mf, Vs, or Tangent Wave control panels to adjust color circles and other parameters.

Tangent Element panels must be connected to your computer via USB. When using Tangent Element-Vs on a tablet, your tablet and the computer running Catalyst Browse must be connected to the same network.

To enable control, Tangent Hub must be installed on the computer.

For more information about using and configuring Tangent hardware and software, please refer to the Tangent documentation.

For information about control mappings, please see the control's display or use the Tangent Mapper application.

Video-style (Rec.709) color grading

Use the following workflow when adjusting color grading for video sources.

You can use the color-correction controls to perform color grading that is applied globally to all clips. If you want to save your color-correction settings, you can transcode clips to create new files. For more information, see "Transcoding clips" on page 67.

Grading with Rec.709 gamma

1. Click the **Media Browser** button at the top of the Catalyst Browse window to view the Media Browser.
2. Double-click a clip in the Media Browser to load it.

   Color correction is available only in View mode.

3. Click the **Adjust Color** button at the bottom of the Catalyst Browse window. In this mode, Catalyst Browse displays a waveform/histogram/vectorscope monitor, a video preview, and color controls that you can use to adjust the appearance of your video.

   The waveform/histogram/vectorscope monitor and video preview window allow you to monitor your progress as you adjust color values. For more information, see "Editing color-correction settings" on page 47.

4. Click the **Inspector** button in the toolbar to display the Inspector pane. In the Adjust Color workspace, the Inspector pane provides controls that you will use to adjust color-grading settings.

5. The **Source** drop-down list displays the color space that is applied to your source media. Click the **Unlock** button and choose a setting from the **Source** drop-down list to choose the color space that should be applied to the source media. When you choose a setting, the video preview is updated.

   The source color space should be detected automatically and does not need to be changed in most cases.

   - Choose **S-Gamut/S-Log2** for S-Log2, RAW, or X-OCN sources.
   - Choose **S-Gamut3.Cine/S-Log3** or **S-Gamut3/S-Log3** for S-Log3, RAW, or X-OCN sources.

6. The **Grade in** box displays the color space that should be applied to color grading adjustments. Click the **Options** button and choose **Rec.709** from the **Grade in** drop-down list to change the setting if necessary.

7. If your source video is set to **S-Gamut/S-Log2**, **S-Gamut3.Cine/S-Log3**, or **S-Gamut3/S-Log3**, you can use the Source Settings controls to adjust the **Exposure index**, **Temperature**, and **Tint** of your clip. For more information, see "Editing color-correction settings" on page 47.

8. If your source video is set to **S-Gamut/S-Log2**, **S-Gamut3.Cine/S-Log3**, or **S-Gamut3/S-Log3**, choose a setting from the **Look profile** drop-down list to choose the profile that is applied to convert your video to Rec.709 (full).

   To add look profiles (including .cube files) to Catalyst Browse, save them in the following folder and then close and restart the application:

   Windows: `C:\Users\<user>\Documents\Sony\Catalyst\Color\Looks\`

   macOS: `/Users/<user>/Documents/Sony/Catalyst/Color/Looks/`

   - The `sgamut-slog2` subfolder is used for S-Gamut/S-Log2 sources.
   - The `sgamut3cine-slog3` subfolder is used for S-Gamut3.Cine/S-Log3 sources or **Convert to** choices.
   - The `sgamut3-slog3` subfolder is used for S-Gamut3/S-Log3 sources or **Convert to** choices.

9. Use the color wheels and controls in the Inspector pane to adjust your colors as needed. For more information, see "Editing color-correction settings" on page 47.

10. Click the **Tools** button at the bottom of the Catalyst Browse window and choose **Export color settings** from the menu if you want to export your settings as a 3D LUT file.

    3D LUT export is available only when the **Source** drop-down list is set to an S-Log, RAW, or X-OCN format.

Grading with hypergamma conversion

1. Click the **Media Browser** button at the top of the Catalyst Browse window to view the Media Browser.
2. Double-click a clip in the Media Browser to load it.

   Color correction is available only in View mode.

3. Click the **Adjust Color** button at the bottom of the Catalyst Browse window. In this mode, Catalyst Browse displays a waveform/histogram/vectorscope monitor, a video preview, and color controls that you can use to adjust the appearance of your video.

   The waveform/histogram/vectorscope monitor and video preview window allow you to monitor your progress as you adjust color values. For more information, see "Editing color-correction settings" on page 47.

4. Click the **Inspector** button in the toolbar to display the Inspector pane. In the Adjust Color workspace, the Inspector pane provides controls that you will use to adjust color-grading settings.
5. The **Source** drop-down list displays the color space that is applied to your source media. Click the **Unlock** button and choose a setting from the **Source** drop-down list to choose the color space that should be applied to the source media. When you choose a setting, the video preview is updated.

   The source color space should be detected automatically and does not need to be changed in most cases.

   - Choose **S-Gamut/S-Log2** for S-Log2, RAW, or X-OCN sources.
   - Choose **S-Gamut3.Cine/S-Log3** or **S-Gamut3/S-Log3** for S-Log3, RAW, or X-OCN sources.

6. The **Grade in** box displays the color space that should be applied to color grading adjustments. Click the **Options** button and choose **Rec.709** from the **Grade in** drop-down list to change the setting if necessary.
7. From the **Convert to** drop-down list, choose **709(800)**, **HG8009G33**, or **HG8009G40**.

   When you select **None**, output will be S-Log. When you select **HG8009G33**, or **HG8009G40**, output will be Rec.709 full.

8. If your source video is set to **S-Gamut/S-Log2**, **S-Gamut3.Cine/S-Log3**, or **S-Gamut3/S-Log3**, you can use the Source Settings controls to adjust the **Exposure index**, **Temperature**, and **Tint** of your clip. For more information, see "Editing color-correction settings" on page 47.
9. Use the color wheels and controls in the Inspector pane to adjust your colors as needed. For more information, see "Editing color-correction settings" on page 47.

10. Click the **Tools** button at the bottom of the Catalyst Browse window and choose **Export color settings** from the menu if you want to export your settings as a 3D LUT file.

    3D LUT export is available only when the **Source** drop-down list is set to an S-Log, RAW, or X-OCN format.

Log (cinematic) color grading

Use the following workflow when adjusting color grading for Log sources.

You can use the color-correction controls to perform color grading that is applied globally to all clips. If you want to save your color-correction settings, you can transcode clips to create new files. For more information, see "Transcoding clips" on page 67.

1. Click the **Media Browser** button at the top of the Catalyst Browse window to view the Media Browser.
2. Double-click a clip in the Media Browser to load it.

   Color correction is available only in View mode.
3. Click the **Adjust Color** button at the bottom of the Catalyst Browse window. In this mode, Catalyst Browse displays a waveform/histogram/vectorscope monitor, a video preview, and color controls that you can use to adjust the appearance of your video.

   The waveform/histogram/vectorscope monitor and video preview window allow you to monitor your progress as you adjust color values. For more information, see "Editing color-correction settings" on page 47.
4. Click the **Inspector** button in the toolbar to display the Inspector pane. In the Adjust Color workspace, the Inspector pane provides controls that you will use to adjust color-grading settings.
5. The **Source** drop-down list displays the color space that is applied to your source media. Click the **Unlock** button and choose a setting from the **Source** drop-down list to choose the color space that should be applied to the source media. When you choose a setting, the video preview is updated.
   - Choose **S-Gamut/S-Log2** for S-Log2, RAW, or X-OCN sources.
   - Choose **S-Gamut3.Cine/S-Log3** or **S-Gamut3/S-Log3** for S-Log3, RAW, or X-OCN sources.
6. The **Grade in** box displays the color space that should be applied to color grading adjustments. Click the **Options** button and choose **Log** from the **Grade in** drop-down list to change the setting if necessary.
7. If your source video is set to **S-Gamut/S-Log2**, **S-Gamut3.Cine/S-Log3**, or **S-Gamut3/S-Log3**, you can use the Source Settings controls to adjust the **Exposure index**, **Temperature**, and **Tint** of your clip. For more information, see "Editing color-correction settings" on page 47.

8. Use the color wheels and controls in the Inspector pane to adjust your colors as needed. For more information, see "Editing color-correction settings" on page 47.

9. Choose a setting from the **Look profile** drop-down list to choose the profile that is applied to convert your video to Rec.709 (full).

   When you choose **None** from the **Look profile** drop-down list, the output will be S-Log.

   To add look profiles (including .cube files) to Catalyst Browse, save them in the following folder and then close and restart the application:

   Windows: `C:\Users\<user>\Documents\Sony\Catalyst\Color\Looks\`

   macOS: `/Users/<user>/Documents/Sony/Catalyst/Color/Looks/`

   - The `sgamut-slog2` subfolder is used for S-Gamut/S-Log2 sources.
   - The `sgamut3cine-slog3` subfolder is used for S-Gamut3.Cine/S-Log3 sources or **Convert to** choices.
   - The `sgamut3-slog3` subfolder is used for S-Gamut3/S-Log3 sources or **Convert to** choices.

10. Click the **Tools** button at the bottom of the Catalyst Browse window and choose **Export color settings** from the menu if you want to export your settings as a 3D LUT file.

    3D LUT export is available only when the **Source** drop-down list is set to an S-Log, RAW, or X-OCN format.

Advanced cinematic (ACES) color grading

Use the following workflow when adjusting color grading in the Academy Color Encoding System (ACES) color space.

You can use the color-correction controls to perform color grading that is applied globally to all clips. If you want to save your color-correction settings, you can transcode clips to create new files. For more information, see "Transcoding clips" on page 67.

1. Click the **Media Browser** button at the top of the Catalyst Browse window to view the Media Browser.

2. Double-click a clip in the Media Browser to load it.

   Color correction is available only in View mode.

3. Click the **Adjust Color** button at the bottom of the Catalyst Browse window. In this mode, Catalyst Browse displays a waveform/histogram/vectorscope monitor, a video preview, and color controls that you can use to adjust the appearance of your video.

   The waveform/histogram/vectorscope monitor and video preview window allow you to monitor your progress as you adjust color values. For more information, see "Editing color-correction settings" on page 47.

4. Click the **Inspector** button in the toolbar to display the Inspector pane. In the Adjust Color workspace, the Inspector pane provides controls that you will use to adjust color-grading settings.

5. The **Source** drop-down list displays the color space that is applied to your source media. Click the **Unlock** button and choose a setting from the **Source** drop-down list to choose the color space that should be applied to the source media. When you choose a setting, the video preview is updated.

   - Choose **S-Gamut/S-Log2** for S-Log2, RAW, or X-OCN sources.
   - Choose **S-Gamut3.Cine/S-Log3** or **S-Gamut3/S-Log3** for S-Log3, RAW, or X-OCN sources.

6. The **Grade in** box displays the color space that should be applied to color grading adjustments. Click the **Options** button and choose **ACES** from the **Grade in** drop-down list to change the setting if necessary.

7. If your source video is set to **S-Gamut/S-Log2**, **S-Gamut3.Cine/S-Log3**, or **S-Gamut3/S-Log3**, you can use the Source Settings controls to adjust the **Exposure index**, **Temperature**, and **Tint** of your clip. For more information, see "Editing color-correction settings" on page 47.

8. Use the color wheels and controls in the Inspector pane to adjust your colors as needed. For more information, see "Editing color-correction settings" on page 47.

9. Click the **Tools** button at the bottom of the Catalyst Browse window and choose **Export color settings** from the menu if you want to export your settings as a 3D LUT file.

   Output will be Rec.709 (full).

   3D LUT export is available only when the **Source** drop-down list is set to an S-Log, RAW, or X-OCN format.

High Dynamic Range (HDR) color grading

Use the following workflow to adjust color grading in the Rec.2020/S-Log3 color space and then convert to high dynamic range (Rec.2020/S-Log3, Rec.2020/HLG, or Rec.2020/PQ) or standard dynamic range (Rec.2020 or Rec.709) color spaces for distribution.

You can use the color-correction controls to perform color grading that is applied globally to all clips. If you want to save your color-correction settings, you can transcode clips to create new files. For more information, see "Transcoding clips" on page 67.

1. Adjust Catalyst Browse options for HDR color grading:

    a. Click the Options button  .

    b. From the **Grade in** drop-down list, choose **Rec.2020/S-Log3 (HDR)**.

    When you choose **Rec.2020/S-Log3** from the **Grade in** drop-down list, you can enable the **SDR gain** switch to convert between standard- and high-dynamic-range content.

    When the switch is enabled, a linear gain of +6 dB (2.0x) is applied when reading SDR content, and a linear gain of -6 dB (0.5x) is applied when exporting to an SDR format or displaying on an SDR display.

    c. From the **Display color space** drop-down list in the Application section, choose the color space for the Catalyst Browse video preview window.

    In most cases, choose **Rec.709** for your computer monitor, or you can choose other settings to check your video using scopes. For more information, see "Loading a clip/clip list for color correction and configuring the waveform, histogram, and vectorscope monitors" on page 47.

    d. From the **External monitor device** drop-down list, choose the device where you've connected a monitor that supports the Rec.2020 color gamut and an HDR luminance curve, such as the Sony BVM-X300.

    e. From the **Monitor resolution** drop-down list, choose the appropriate resolution for your external monitor.

    f. From the **Display color space** drop-down list in the External Monitor section, choose the setting that matches the EOTF (electro-optical transfer function) setting on your external monitor.

You can use the AIR Matching (Artistic Intent Rendering) settings to achieve a consistent look between Rec.2020/S-Log3-based grading and a configured HLG (hybrid log-gamma) or PQ (perceptual quantizer) monitor.

When using the Sony BVM-X300 version 2.0, please use the following monitor settings:

- Color Space: ITU-R BT.2020
- EOTF: S-Log3 (Live HDR)
- Transfer Matrix: ITU-R BT.2020
- In the External Monitor section of the Catalyst Browse Options dialog, choose **Rec.2020/S-Log3** from the **Display color space** drop-down list.

  Content mastered using these settings and rendered to HLG or PQ with AIR Matching should have the same look on HLG or PQ monitors or televisions.

  When using settings other than the AIR Matching settings, you can expect variation in the look on different displays due to the system gamma for each color space.

When converting HDR media to standard dynamic range color spaces, use the following settings to preserve your Rec.2020/S-Log3 grading (the dynamic range of the HDR color space will be clamped to the BT.709 gamma curve):

- In Options, set the **Grade in** color space to **Rec.2020/S-Log3 (HDR)**.
- In Options, set the **Display color space** of the video preview to **Rec.709** or **Rec.2020**.

When converting HDR media to standard dynamic range color spaces, use the following settings to preserve more of the dynamic range of the original HDR media:

- In Options, set the **Grade in** color space to **Rec.709**.
- In the Inspector, set the **Convert to** color space to **709(800)**, **HG8009G33**, or **HG8009G40**.

2. Click the **Media Browser** button at the top of the Catalyst Browse window to view the Media Browser.
3. Double-click a clip in the Media Browser to load it.

   Color correction is available only in View mode.

4. Click the **Adjust Color** button at the bottom of the Catalyst Browse window. In this mode, Catalyst Browse displays a waveform/histogram/vectorscope monitor, a video preview, and color controls that you can use to adjust the appearance of your video.

   The waveform/histogram/vectorscope monitor and video preview window allow you to monitor your progress as you adjust color values. For more information, see "Editing color-correction settings" on page 47.

5. Click the **Inspector** button in the toolbar to display the Inspector pane. In the Adjust Color workspace, the Inspector pane provides controls that you will use to adjust color-grading settings.
6. Use the color wheels and controls in the Inspector pane to adjust your colors as needed. For more information, see "Editing color-correction settings" on page 47.
7. Click the **Tools** button at the bottom of the Catalyst Browse window and choose **Export color settings** from the menu if you want to export your settings as a 3D LUT file.

   Output will use the **Display color space** drop-down list in the External Monitor section of the Options dialog (selected in step 1f above).

   3D LUT export is available only when the **Source** drop-down list is set to an S-Log, RAW, or X-OCN format.

Exporting color-correction settings

You can use the **Tools** button at the bottom of the Catalyst Browse window to export color-correction settings to cameras for on-set monitoring or to a nonlinear editor (NLE) for color grading .

Color correction is not available when Catalyst Browse is started in view-only mode.

Saving a color preset

Color presets include the source settings (exposure index, temperature, and tint), look profile, tone curve, and ASC-CDL settings. For more information, see "Editing color-correction settings" on page 47.

1. Click the **Media Browser** button at the top of the Catalyst Browse window to view the Media Browser.
2. Double-click a clip in the Media Browser to load it.

   Color correction is available only in View mode.
3. Click the **Adjust Color** button at the bottom of the Catalyst Browse window.
4. Click the **Inspector** button in the toolbar to display the Inspector pane.
5. Click the **Tools** button at the bottom of the Catalyst Browse window and choose **Save preset** from the menu.
6. In the Save Preset dialog, type a file name to identify your Catalyst color (.ccolor) file.

   Presets are saved in the following folders by default:

   Windows: `C:\Users\<user>\Documents\Sony\Catalyst\Color\`

   macOS: `/Users/<user>/Documents/Sony/Catalyst/Color`
7. Click **OK**.

Exporting an ASC-CDL file

1. Click the **Media Browser** button at the top of the Catalyst Browse window to view the Media Browser.
2. Double-click a clip in the Media Browser to load it.

   Color correction is available only in View mode.
3. Click the **Adjust Color** button at the bottom of the Catalyst Browse window. In this mode, Catalyst Browse displays a waveform/histogram/vectorscope monitor, a video preview, and color controls that you can use to adjust the appearance of your video.
4. Click the **Inspector** button in the toolbar to display the Inspector pane and adjust your color settings as needed. For more information, see "Editing color-correction settings" on page 47.

   Saturation and color wheel/slider settings are saved with ASC-CDL files. Tone curve settings are not saved.

   Brightness and contrast are not saved explicitly with ASC-CDL files. When exporting an ASC-CDL file, the **Brightness** and **Contrast** settings are incorporated with the other color-correction values. When you reload an exported ASC-CDL file, the **Brightness** and **Contrast** settings will be set to 0.

   When exchanging color settings with Catalyst Browse and Catalyst Prepare, click the **Tools** button at the bottom of the Catalyst Browse window and choose **Save preset** from the menu to preserve **Brightness** and **Contrast** settings.

   For more information, see "Exporting color-correction settings" on page 63 and "Applying color-correction settings" on page 53.
5. Click the **Tools** button at the bottom of the Catalyst Browse window and choose **Export color settings** from the menu.
6. Use the Export As dialog box to specify the folder, file name, and settings you want to export:
   a. Use the browser to select the folder where you want to save your file.
   b. In the **File name** box, type the path and file name you want to save your color-correction settings.
   c. Choose **ASC-CDL** from the **Format** drop-down list.
7. Click **Export**.

Exporting a 3D LUT for Resolve or HDLink

When the source is Sony RAW, X-OCN, S-Gamut/S-Log2, S-Gamut3.Cine/S-Log3, or S-Gamut3/S-Log3, you can export a 3D LUT in Resolve or HDLink format.

1. Click the **Media Browser** button at the top of the Catalyst Browse window to view the Media Browser.
2. Double-click a clip in the Media Browser to load it.

   Color correction is available only in View mode.
3. Click the **Adjust Color** button at the bottom of the Catalyst Browse window. In this mode, Catalyst Browse displays a waveform/histogram/vectorscope monitor, a video preview, and color controls that you can use to adjust the appearance of your video.
4. Click the **Inspector** button in the toolbar to display the Inspector pane and adjust your color settings as needed. For more information, see "Editing color-correction settings" on page 47.
5. Click the **Tools** button at the bottom of the Catalyst Browse window and choose **Export color settings** from the menu.

6. Use the Export As dialog box to specify the folder, file name, and settings you want to export:
    a. Use the browser to select the folder where you want to save your file.
    b. In the **File name** box, type the file name you want to save your color-correction settings.
    c. Choose **3D LUT Resolve** or **3D LUT HDLink** from the **Format** drop-down list.
    d. Choose a setting from the **Input color space** drop-down list to specify the color space of your source media.
    e. Choose a setting from the **Output color space** drop-down list to specify the color space that will be used as the output of the LUT.

        Output color space is available only when the **Grade in** color space to **Rec.2020/S-Log3 (HDR)**. For more information, see "High Dynamic Range (HDR) color grading" on page 61.

    f. Select the **Source settings** check box if you want to include exposure, temperature, and tint settings with your LUT.
    g. Select the **Convert to setting** check box if you want to export your LUT using the color space selected in the **Convert to** drop-down list in the Inspector.

        The **Tone curve** and **Color correction** check boxes are available only when **Convert to setting** is selected.

    h. Select the **Tone curve** check box if you want to include the tone curve from the Inspector in your LUT.
    i. Select the **Color correction** check box if you want to include the color correction adjustments curve from the Inspector in your LUT.
    j. Select the **Look profile** check box if you want to include the selected look profile from the Inspector in your LUT. The LUT file will be saved in the folder you selected in step 6a.

        The **Look profile** check box is available only when the grading color space is **Rec.709**.

7. Click **Export**.

Chapter 6

Transcoding, copying, and sharing clips

Catalyst Browse allows you to convert clips to another format or copy them in their source format.

Transcoding clips

Transcoding clips allows you to convert clips to another format. The original clips are not affected (overwritten, deleted, or altered) during the exporting process.

1. Select the clips you want to export in Media Browser or Edit mode.

   The left pane allows you to navigate the folders, and the middle pane displays the contents of the selected folder

   - Click a file to select it.
   - Hold Shift and click the first and last file you want to select to select a range of files.
   - Hold Ctrl (Windows) or ⌘ (macOS) to select multiple files.

     Click the **Select** button to select multiple files without using keyboard modifiers.

     When transcoding multiple files, all files must use the same source settings.

2. Click the **Export** button at the top of the Catalyst Browse window.

3. Use the Export pane to choose a destination and format for your exported files.

    a. The **Export clips to** box displays the path to the folder where the selected files will be exported. You can type a path in the box or click the **Browse** button to choose a folder.

    b. If you want to rename files, select the **Rename files** check box. Renaming ensures that source files will not be overwritten.

        - Type a string in the **Prefix** box if you want to start all file names with the same text.
        - Choose a setting from the **Numbering** drop-down list to indicate whether you want to number clips or use their original file names.
        - Type a string in the **Suffix** box if you want to end all file names with the same text.

          For example, if you wanted to name clips using a convention such as `Commercial_001_Camera1.mxf`, you would type `Commercial_` in the **Prefix** box, choose **3 digits** from the **Numbering** drop-down list, and type `_Camera1` in the **Suffix** box.

          If you're exporting a still-image sequence for use in an editor that has specific file-naming requirements, you can use the **Rename files** controls to ensure your exported files are compliant with your editor's requirements.

    c. Choose a setting from the **Format** drop-down list to indicate the file format you want to use for your exported files.

       When transcoding to DPX format, you can type a value in the **Starting frame index** box to append a numeric index to transcoded file names.

       OpenEXR is available only for RAW or X-OCN sources or for XAVC Intra or SStP sources recorded in SLog2 or SLog3.

       ProRes is available on macOS only.

    d. Choose a setting from the **Render preset** drop-down list to choose the settings that will be used for the exported files.

    e. Choose a setting from the **Crop type** drop-down list to choose the aspect ratio for your transcoded file:

        - **Letterbox/pillarbox**: if the source frame is wider than the destination frame, black bars are displayed at the top and bottom (letterbox). If the source frame is narrower than the destination frame, black bars are displayed on the sides of the frame (pillarbox).
        - **Center crop (cut edges)**: if the source frame does not match the output frame, the frame is centered, and the edges are cropped as needed.
        - **Cinemascope**: crops the frame to a 2.39:1 cinemascope aspect.

f. Choose a setting from the **Encode mode** drop-down list to choose whether you want to optimize image quality or transcoding speed.

g. When exporting to a video format, choose a setting from the **Include** drop-down list to choose whether your exported files will include any color adjustments. For more information, see "Editing color-correction settings" on page 47.

h. When exporting to a video format, choose a setting from the **Output color space** drop-down list to choose the color space that will be used for rendering the new files.

Grading Color Space	Available Output Color Spaces
Rec.709 or ACES	◦ Rec.709 ◦ Rec.2020*
Rec.2020/S-Log3 (HDR)	◦ Rec.709 ◦ Rec.2020* ◦ Rec.2020/S-Log3 (available when transcoding RAW, X-OCN, or S-Log media) ** ◦ Rec.2020/HLG (not available when transcoding PQ media) ** ◦ Rec.2020/HLG AIR Matching (available when transcoding RAW, X-OCN, or S-Log media) ** ◦ Rec.2020/PQ (not available when transcoding HLG media) ** ◦ Rec.2020/PQ AIR Matching (available when transcoding RAW, X-OCN, or S-Log media) ** For more information about AIR Matching, please see "High Dynamic Range (HDR) color grading" on page 61.

* **Rec.2020** is available only when transcoding to 10-bit UHD/4K formats:

- XAVC Intra 3840X2160 or XAVC Intra 4096x2160.
- DPX 10 bit when the source clip is UHD/4K resolution.

** **Rec.2020/S-Log3**, **Rec.2020/HLG**, and **Rec.2020/PQ** are available only when transcoding to the following formats:

- 10-bit UHD/4K/3840x2160 XAVC Intra, XAVC Long, or DPX.
- 10-bit progressive 2K/HD XAVC Intra, XAVC Long, SStP, or DPX.

i. Select the **Use flip and stretch settings** check box if you're working with video that was filmed with an anamorphic lens and want to preserve the **Flip horizontal**, **Flip vertical**, and **Anamorphic stretch** settings when transcoding. When the check box is not selected, letterboxing will be applied.

For more information, see "Editing clip settings" on page 37.

j. Select the **Repair flash bands automatically** check box if want to automatically detect and repair flash bands when transcoding.

   For more information, see "Repairing flash bands" on page 45.

k. Select the **Use mark in/out points** check box if you want to transcode only the portion of the video between the mark in and mark out points. For more information, see "Marking in and out points for playback" on page 34.

l. Select the **Add padding to clips** check box and type a number in the **Seconds** box if you want to preserve media before the mark in/mark out points.

4. Click **Export**.

   Progress is displayed in the activity pane at the top of the Catalyst Browse window. Each export job can contain multiple files if you have multiple files selected in step 2 above. If you have multiple export jobs queued, a separate progress indicator is displayed for each job.

Copying clips

Copying media allows you to import clips from cameras or decks to your computer, to another camera or deck, or to a centralized storage device.

You can drag a clip to a folder on a drive or device in the Places pane to copy the entire clip (with no transcoding, color correction, or renaming).

1. Select the clips you want to copy in Media Browser or Edit mode.

   The left pane allows you to navigate the folders on your computer, and the middle pane displays the contents of the selected folder

   - Click a file to select it.
   - Hold Shift and click the first and last file you want to select to select a range of files.
   - Hold Ctrl (Windows) or ⌘ (macOS) to select multiple files.

     Click the **Select** button  to select multiple files without using keyboard modifiers.

2. Click the **Copy** button  at the top of the Catalyst Browse window.

3. Use the Copy pane to choose a destination for your files.

    a. The **Copy clips to** box displays the path to the folder where the selected files will be copied. You can type a path in the box or click the **Browse** button to choose a folder.

    Click **Go to folder** to swap the source and destination folders: the **Copy files to** folder will be displayed in the Media Browser, and the previous Media Browser folder will be used in the **Copy files to** box.

    Copying to an AVCHD folder structure is not supported.

    b. Select the **Create subfolder** check box if you want to copy the selected clips to a subfolder in the destination.

    The **Create subfolder** check box is not available when copying to a known folder structure.

    c. If you want to rename files, select the **Rename files** check box. Renaming ensures that source files will not be overwritten.

    - Type a string in the **Prefix** box if you want to start all file names with the same text.
    - Choose a setting from the **Numbering** drop-down list to indicate whether you want to number clips or use their original file names.
    - Type a string in the **Suffix** box if you want to end all file names with the same text.

    For example, if you wanted to name clips using a convention such as `Commercial_001_Camera1.mxf`, you would type `Commercial_` in the **Prefix** box, choose **3 digits** from the **Numbering** drop-down list, and type `_Camera1` in the **Suffix** box.

    If you're exporting a still-image sequence for use in an editor that has specific file-naming requirements, you can use the **Rename files** controls to ensure your exported files are compliant with your editor's requirements.

    d. Select the **Copy all related media** radio button if you want to copy all media related to the selected clips (metadata.proxy clips, and extra files).

    e. Select the **Copy proxy only** radio button if you want to copy only proxy-resolution clips and all media related to the selected clips (metadata.proxy clips, and extra files).

    When you edit the metadata for a proxy file, the metadata for the full-resolution clip is updated when you copy the proxy clip back to the device. For more information, see "Viewing and editing metadata" on page 39.

f. Select the **Copy only between mark points** check box if you want to copy only the media between the in and out points when copying files. For more information, see "Marking in and out points for playback" on page 34.

   The **Copy only between mark points** check box is available only when copying MXF clips.

g. Select the **Use fast device-to-device copy** check box if you want to copy clips directly between an XDCAM device and another device via FTP.

   When this check box is selected, clips are copied directly between the devices without copying to your computer.

   Device access is not available during a fast device-to-device copy:

   - Copy progress is not displayed.
   - Device-to-device copy operations cannot be canceled.

4. Click **Copy**.

   Progress is displayed in the activity pane at the top of the Catalyst Browse window. Each copy job can contain multiple files if you have multiple files selected in step 2 above. If you have multiple jobs queued, a separate progress indicator is displayed for each job.

Uploading files to Ci Workspace

1. Select the files you want to upload in Media Browser or Edit mode.
2. Click the **Share** button at the top of the Catalyst Browse window.
3. From the **Upload clip to** drop-down list, choose **Sony Ci**.
4. Use the Share pane to log on to your Ci account and follow the on-screen instructions to upload the selected files to your Ci workspace.

   If your account has multiple workspaces available, you can use the **Workspace** drop-down to choose the workspace that will be used by default.

5. Select the **Upload original clips** radio button if you want to upload the source clips, or select **Transcode clips before upload** and choose your transcoding settings if you want to convert the clips to another format before uploading.

   When you upload the original clips, the source format is preserved, and no color adjustments are applied. When you transcode before uploading, you can choose file format and color-adjustment settings for the uploaded files:

   a. Choose a setting from the **Format** drop-down list to indicate the file format you want to use for your exported files.

   b. Choose a setting from the **Render preset** drop-down list to choose the settings that will be used for the exported files.

   c. Choose a setting from the **Crop type** drop-down list to choose the aspect ratio for your transcoded file:

      - **Letterbox/pillarbox**: if the source frame is wider than the destination frame, black bars are displayed at the top and bottom (letterbox). If the source frame is narrower than the destination frame, black bars are displayed on the sides of the frame (pillarbox).
      - **Center crop (cut edges)**: if the source frame does not match the output frame, the frame is centered, and the edges are cropped as needed.
      - **Cinemascope**: crops the frame to a 2.39:1 cinemascope aspect.

   d. Choose a setting from the **Encode mode** drop-down list to choose whether you want to optimize image quality or transcoding speed.

   e. Choose a setting from the **Include** drop-down list to choose whether your exported files will include any color adjustments. For more information, see "Editing color-correction settings" on page 47.

f. Choose a setting from the **Output color space** drop-down list to choose the color space that will be used for rendering the new files.

Grading Color Space	Available Output Color Spaces
Rec.709 or ACES	◦ Rec.709 ◦ Rec.2020*
Rec.2020/S-Log3 (HDR)	◦ Rec.709 ◦ Rec.2020* ◦ Rec.2020/S-Log3 (available when transcoding RAW, X-OCN, or S-Log media) ** ◦ Rec.2020/HLG (not available when transcoding PQ media) ** ◦ Rec.2020/HLG AIR Matching (available when transcoding RAW, X-OCN, or S-Log media) ** ◦ Rec.2020/PQ (not available when transcoding HLG media) ** ◦ Rec.2020/PQ AIR Matching (available when transcoding RAW, X-OCN, or S-Log media) ** For more information about AIR Matching, please see "High Dynamic Range (HDR) color grading" on page 61.

* **Rec.2020** is available only when transcoding to 10-bit UHD/4K formats:

- XAVC Intra 3840X2160 or XAVC Intra 4096x2160.
- DPX 10 bit when the source clip is UHD/4K resolution.

** **Rec.2020/S-Log3**, **Rec.2020/HLG**, and **Rec.2020/PQ** are available only when transcoding to the following formats:

- 10-bit UHD/4K/3840x2160 XAVC Intra, XAVC Long, or DPX.
- 10-bit progressive 2K/HD XAVC Intra, XAVC Long, SStP, or DPX.

g. Select the **Use flip and stretch settings** check box if you're working with video that was filmed with an anamorphic lens and want to preserve the **Flip horizontal**, **Flip vertical**, and **Anamorphic stretch** settings when transcoding. When the check box is not selected, letterboxing will be applied.

For more information, see "Editing clip settings."

h. Select the **Repair flash bands automatically** check box if want to automatically detect and repair flash bands when transcoding.

For more information, see "Repairing flash bands."

i. Select the **Use mark in/out points** check box if you want to transcode only the portion of the video between the mark in and mark out points. For more information, see "Marking in and out points for playback."

j. Select the **Add padding to clips** check box and type a number in the **Seconds** box if you want to preserve media before the mark in/mark out points.

6. Click **Upload**.

   Progress is displayed in the activity pane at the top of the Catalyst Browse window. If you have multiple upload jobs queued, a separate progress indicator is displayed for each job.

Chapter 7

Editing Catalyst Browse options

Click the **Options** button to edit your application options.

If you need to reset all Catalyst Browse options to their default values, hold Control + Shift when starting the application.

Choosing a grading color space

Choose a setting from the **Grade in** drop-down list to choose the color space that will be used for color grading.

For more information, see "Applying color correction" on page 47.

When you choose **Rec.2020/S-Log3** from the **Grade in** drop-down list, you can enable the **SDR gain** switch to convert between standard- and high-dynamic-range content.

When the switch is enabled, a linear gain of +6 dB (2.0x) is applied when reading SDR content, and a linear gain of -6 dB (0.5x) is applied when exporting to an SDR format or displaying on an SDR display.

Choosing a color space for the video preview

From the **Display color space** drop-down list, choose the color space for the Catalyst Browse video preview window.

Display color space is available only when **Rec.2020/S-Log (HDR)** is selected from the **Grade in** drop-down list.

In most cases, choose **Rec.709** for your computer monitor, or you can choose other settings to check your video using scopes. For more information, see "Loading a clip/clip list for color correction and configuring the waveform, histogram, and vectorscope monitors" on page 47.

For more information, see "Applying color correction" on page 47.

Choosing a video processing device

Choose a setting from the **Video processing device** drop-down list to enable or bypass GPU-accelerated video playback and transcoding.

Choose **CPU** if you want to turn off GPU acceleration, or choose a device from the list to enable GPU-accelerated playback.

The optimal GPU device is automatically selected. Changing this value is intended for advanced users and may be useful for troubleshooting technical problems.

Computers equipped with CPUs that utilize Intel's Quick Sync Video (QSV) technology see improved processing performance for decoding H.264/AVC/MPEG-4 video files.

Choosing snapshot settings

The **Save snapshots to** box displays the path to the folder where the files will be saved when you save a snapshot of the current frame. You can type a path in the box or click the Browse button to choose a folder.

Choose a setting from the **Snapshot image format** drop-down list to choose the file format that will be used for snapshots.

For more information, see "Creating a snapshot of a frame" on page 35.

Enable proxy clip playback

Enable the **Preview using proxy clips** switch if you want to use proxy clips for playback if they are available.

If you're working on a system with limited processing power, creating a proxy file will allow you to preview your media more efficiently.

Video proxy files are used for playback only.

Enable half-step timecode for 50p/60p sources

Enable the **50p/60p half-step timecode display** switch if you want to display half-step timecode for each field in 50p/60p sources. The timecode for field two will be displayed with an asterisk appended:

Field 1: `01:00:17:17`

Field 2: `01:00:17:17*`

Show or hide thumbnail frames

Enable the **Show thumbnails** switch if you want to display thumbnail images in the Media Browser. Turning off the switch can improve performance on some slower storage devices.

Choosing an external video monitor

Choose a setting from the **External monitor device** drop-down list to display your video preview on an external monitor via a Blackmagic Design device:

- DeckLink 4K Extreme 12G, 4K Pro, 4K Extreme, Studio 4K, SDI 4K, HD Extreme, Extreme 3D, and Mini Monitor.
- Intensity Shuttle, Pro 4K, and Pro.
- UltraStudio 4K Extreme, 4K, Pro, SDI, Express, and Mini Monitor.

Choose a setting from the **Monitor resolution** drop-down list to choose the display resolution for your monitor.

Choose a setting from the **Display color space** drop-down list to choose the color space that matches the EOTF (electro-optical transfer function) setting on your external monitor.

When using the Sony BVM-X300 version 2.0, please use the following monitor settings:

Display color space in Catalyst Browse	Color Space	EOTF	Transfer Matrix
Rec.709	ITU-R BT.709	i.e. 2.4	ITU-R BT.709
Rec.2020	ITU-R BT.2020	i.e. 2.4	ITU-R BT.2020
Rec.2020/S-Log-3	ITU-R BT.2020	S-Log3(Live HDR) or S-Log3(HDR)	ITU-R BT.2020
Rec.2020/HLG or Rec.2020/HLG AIR Matching	ITU-R BT.2020	HLG SG Variable(HDR), HLG System Gamma 1.2	ITU-R BT.2020
Rec.2020/PQ or Rec.2020/PQ AIR Matching	ITU-R BT.2020	SMPTE ST 2084(HDR)	ITU-R BT.2020

When **Rec.2020/S-Log (HDR)** is selected from the **Grade in** drop-down list, you can use the AIR Matching (Artistic Intent Rendering) settings to achieve a consistent look between Rec.2020/S-Log3 and a configured HLG (hybrid log-gamma) or PQ (perceptual quantizer) monitor. When using settings other than the AIR Matching settings, you can expect variation in the look on different displays due to the system gamma for each color space.

When converting HDR media to standard dynamic range color spaces, use the following settings to preserve your Rec.2020/S-Log3 grading (the dynamic range of the HDR color space will be clamped to the BT.709 gamma curve):

- In Options, set the **Grade in** color space to **Rec.2020/S-Log3 (HDR)**.
- In Options, set the **Display color space** of the video preview to **Rec.709** or **Rec.2020**.

When converting HDR media to standard dynamic range color spaces, use the following settings to preserve more of the dynamic range of the original HDR media:

- In Options, set the **Grade in** color space to **Rec.709**.
- In Options, set the **Display color space** of the video preview to **Rec.709** or **Rec.2020**.
- In the Inspector, set the **Convert to** color space to **709(800)**, **HG8009G33**, or **HG8009G40**.

For more information, see "High Dynamic Range (HDR) color grading" on page 61.

Enabling the secondary window

Enable the **Show secondary window** switch if you want to show the video preview in a secondary window that you can position anywhere on your screen or on a secondary monitor.

Chapter 8

Keyboard shortcuts

Shortcut keys can help streamline your work with Catalyst Browse software. The available shortcut keys are arranged in tables according to function.

Global shortcuts

The following keyboard shortcuts are available when the Video or Media Browser pane has focus.

Command	Windows Shortcut	macOS Shortcut
Enter full-screen preview/playback	F11 or Ctrl+F	⌘-F or Control-⌘-F
Exit full-screen preview/playback	Esc, F11, or Ctrl+F	Esc, ⌘-F, or Control-⌘-F
Switch between Media Browser/View workspaces	Alt+W	Option-W
Show/hide the Inspector pane	Alt+1	Option-1
Show/hide the Copy pane	Alt+2	Option-2
Show/hide the Export pane	Alt+3	Option-3
Show/hide the Share pane	Alt+4	Option-4
Show/hide the secondary window	Alt+V	Option-V
Open application help	F1	Fn-F1 (F1 if the **Use all F1, F2, etc. keys as standard function keys** setting is selected)

Media Browser

The following keyboard shortcuts are available when the Media Browser pane has focus.

Command	Windows Shortcut	macOS Shortcut
Navigate files/folders	Up, Down, Left, or Right Arrow	Up, Down, Left, or Right Arrow
Open/close folder in tree view	Right/Left Arrow	Right/Left Arrow
Select all files	Ctrl+A	⌘-A
Deselect all files	Ctrl+D	⌘-D
Delete selected files	Delete	Delete or fn+Delete
Load file and start/pause playback	Spacebar	Spacebar
Load file into Video pane Open selected folder	Enter or Ctrl+Down Arrow	Return or ⌘-Down Arrow
Navigate up one level	Backspace	⌘-Up Arrow
Go to start/end of list	Home End	Home End
Move selection up/down one page	Page Up Page Down	Page Up Page Down

Editing

The following keyboard shortcuts are available when the View pane has focus.

Command	Windows Shortcut	macOS Shortcut
Switch Logging/Clip List/Clip/Adjust Colors	` ~	` ~
Save a snapshot of the current frame to a file.	Shift+S	Shift+S
Reset mark in and mark out points to the beginning and end of the clip.	Shift+R	Shift+R
Switch between Before/After/Split/2 Up video preview in Adjust Color mode.	1/2/3/4	1/2/3/4
Show/hide the Media Browser in View mode	Ctrl+B	⌘-B

Playback and preview

The following keyboard shortcuts are available when the Video pane has focus.

Command	Windows Shortcut	macOS Shortcut
Go to start	Ctrl+Home	⌘-Home
	Ctrl+Up Arrow	⌘-Up Arrow
		Fn- Left Arrow
Go to end	Ctrl+End	⌘-End
	Ctrl+Down Arrow	⌘-Down Arrow
	End	Fn- Right Arrow
Go to previous frame	Left Arrow	Left Arrow
Go to next frame	Right Arrow	Right Arrow
Go to previous clip	[	[
Go to next clip	]	]
Start/pause playback	Spacebar	Spacebar
Shuttle playback	J/K/L Press J or L once for 1x playback. Press J or L twice for 1.5x playback. Press J or L three times for 2x playback. Press J or L four times for 4x playback. Press K to pause playback. Press and hold K while pressing J or L to emulate a shuttle knob mode: press K+J to turn the knob to the left or K+L to turn the knob to the right.	
Toggle looped playback	Q	Q
	Ctrl+L	⌘-L
Set Mark In point	I	I
Set Mark Out point	O	O
Add shot mark (to supported file types)	E	E
Go to Mark In point	Shift+I	Shift+I
	Home	Home

Command	Windows Shortcut	macOS Shortcut
Go to Mark Out point	Shift+O End	Shift+O End
Save a snapshot of the current frame to a file.	Shift+S	Shift+S
Reset Mark In/Out points	Shift+R	Shift+R
Go to previous marker (including Mark In/Out)	Ctrl+Left Arrow	⌘-Left Arrow
Go to next marker (including Mark In/Out)	Ctrl+Right Arrow	⌘-Right Arrow
Copy current frame to clipboard	Ctrl+C	⌘-C
Enter full-screen playback	F11 Ctrl+F	⌘-F Control-⌘-F
Show/hide the secondary window	Alt+V	Option-V
Zoom to fit	Ctrl+0	⌘-0
Zoom to 100%	Ctrl+1	⌘-1
Zoom in	Ctrl++	⌘-+
Zoom out	Ctrl+-	⌘--
Show/hide the Media Browser in View mode	Ctrl+B	⌘-B

Chapter 9

Gestures

Media Browser pane

Gesture	Result
Tap	Selects and loads a file.
Double-tap	Opens a file in the Video pane.
One-finger drag (touchscreen) Two-finger drag (trackpad)	Scrolls the list vertically.
One-finger flick (touchscreen) Two-finger flick (trackpad)	Scrolls the list with inertia.

Video pane

Gesture	Result
Double-tap	Toggles the zoom level between 100% and Fit.
One-finger drag (touchscreen) Two-finger drag (trackpad)	Pans the image.
One-finger flick (touchscreen) Two-finger flick (trackpad)	Pans the image with inertia.
Pinch	Zooms the image in and out.

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