

SONY

# CATALYST PREPARE

TM



User Manual

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# Table of Contents

|  |    |
|--|----|
| Table of Contents .....                      | 5  |
| Introduction .....                           | 7  |
| What's new in version 2022.1 .....           | 7  |
| The Catalyst Prepare window .....            | 7  |
| Working with libraries .....                 | 9  |
| Creating or opening a library .....          | 9  |
| Closing the library .....                    | 9  |
| Adding media to a library .....              | 10 |
| Organizing media in a library .....          | 15 |
| Editing library clips .....                  | 22 |
| Working with subclips in a library .....     | 23 |
| Exporting media from a library .....         | 24 |
| Working with FTP devices .....               | 24 |
| Transcoding presets .....                    | 49 |
| Relinking library media .....                | 51 |
| Backing up a volume .....                    | 51 |
| Finding media .....                          | 53 |
| Supported video formats for reading .....    | 58 |
| Supported video devices .....                | 83 |
| Playing media .....                          | 85 |
| Previewing video .....                       | 85 |
| Navigating the timeline .....                | 90 |
| Marking in and out points for playback ..... | 91 |
| Creating a snapshot of a frame .....         | 92 |

|   |     |
|---|-----|
| Adjusting and monitoring audio levels .....   | 94  |
| Editing clip settings .....                   | 94  |
| Working with clips .....                      | 97  |
| Viewing and editing metadata .....            | 97  |
| Exporting custom metadata .....               | 101 |
| Working with clip lists .....                 | 102 |
| Working with storyboards .....                | 106 |
| Working with EDLs .....                       | 111 |
| Catalog export .....                          | 112 |
| Combining relay clips .....                   | 113 |
| Synchronizing multicamera clips .....         | 114 |
| Stabilizing clips .....                       | 114 |
| Stitching clips .....                         | 117 |
| Repairing flash bands .....                   | 118 |
| Applying color correction .....               | 121 |
| Editing Color Adjustments controls .....      | 121 |
| Applying color-correction settings .....      | 133 |
| Using a Tangent control .....                 | 135 |
| Video-style (Rec.709) color grading .....     | 136 |
| Log (cinematic) color grading .....           | 139 |
| Advanced cinematic (ACES) color grading ..... | 140 |
| High Dynamic Range (HDR) color grading .....  | 141 |
| Exporting color-correction settings .....     | 150 |
| Editing Catalyst Prepare options .....        | 157 |
| Keyboard shortcuts .....                      | 169 |
| Gestures .....                                | 175 |
| Index .....                                   | 176 |

# Chapter 1

## Introduction

Catalyst Prepare is the fast, simple, reliable path from camera to post. You can use Catalyst Prepare to copy and back up clips, organize your media clips, create subclips, apply color correction, and export clips.

## What's new in version 2022.1

- Added support for a Cine EI workflow:
  - The Adjust Color workspace now includes an **EI mode** control that you can use to apply an exposure index automatically using metadata or manually.
  - Files that include LUT metadata now display a  badge in the Organize pane and display the LUT on the File tab of the Inspector pane.
  - The Adjust Color workspace now includes a **LUT mode** control that you can use to apply a LUT automatically using metadata or manually.
- Added support for lens breathing compensation.
- Added support for additional aspect ratios in the **Masking ratio** drop-down list in Clip Settings. Aspect markers from Sony cameras are supported and preserved even when the clip is rotated.
- Added support for cataloging clips in PDF or CSV format.
- Added support for previewing 8K XAVC HS Long 422 clips.
- Added support for transcoding to XAVC S format with LPCM 48kHz, 24-bit, 4-channel audio.
- Added support for transcoding to XAVC S Intra or Long 422 10-bit.
- Updated SR Live video processing to the latest specification.

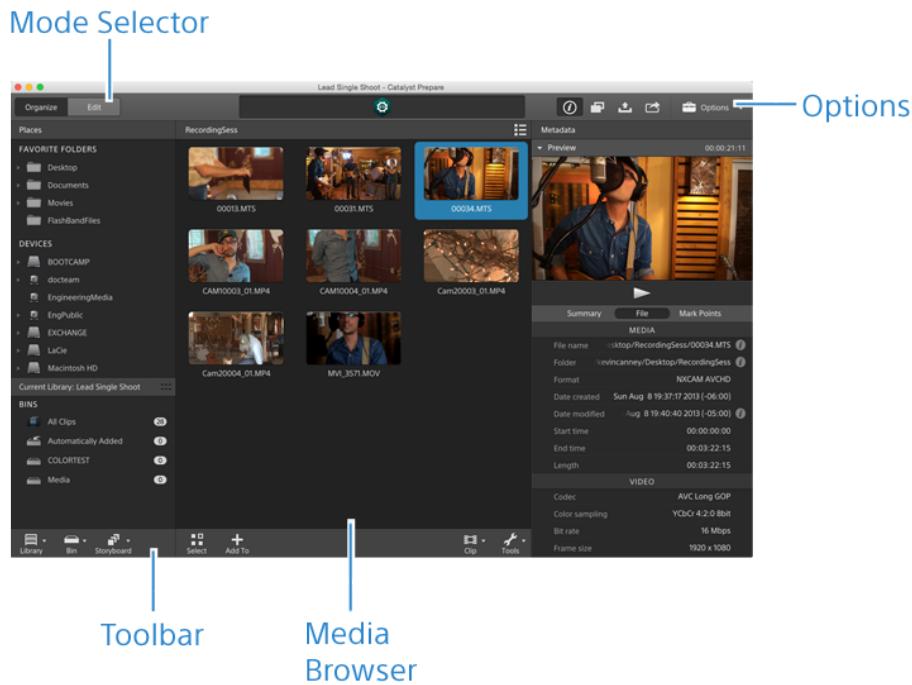
## The Catalyst Prepare window

The Catalyst Prepare window can be displayed in two modes:

- In Organize mode, you can make a checksum-verified, full-volume backup; browse your computer for media files; copy media to your computer; add to your media libraries; organize library clips using bins; export clips to additional volumes or devices; upload to Sony Media Cloud Services Ci; and transcode files.
- In Edit mode, you can preview media, mark in and out points, and apply looks and color correction.

Click the **Organize** or **Edit** button at the top of the Catalyst Prepare window to change modes.

## Organize mode



## Edit mode



# Chapter 2

## Working with libraries

You can use libraries in Catalyst Prepare to organize your media.

### Creating or opening a library

You can use different libraries to manage your media. A library helps you organize your clips, and you can use bins for even more control.

For example, creating a separate library for each project helps you keep your media organized and allows you to quickly find the right media for each project.

In Catalyst Prepare, you can have one library open at a time.

#### Creating a library

1. Click the **Organize** button at the top of the Catalyst Prepare window.
2. Click the **Library** button  at the bottom of the Catalyst Prepare window and choose **New** from the menu.
3. Use the New Library dialog to choose the folder and file where you want to save your new library.
4. Click **OK**.

#### Opening a library

1. Click the **Organize** button at the top of the Catalyst Prepare window.
2. Click the **Library** button  at the bottom of the Catalyst Prepare window and choose **Open** from the menu.
3. Browse to the library folder you want to load, select it, and click **Open**.



You can also double-click a .cpreplib file in Windows Explorer or macOS Finder.

#### Closing the library

If you want to work with clips independently of a library, you can use the **Close** command. After you've closed the library, **(No Library)** is displayed in the application's title bar.



Some Catalyst Prepare features are unsupported without an open library:

- When no library is opened, color adjustments are applied globally to all clips for previewing. If you want to save your color-correction settings, you can transcode clips to create new files. For more information, see "[Exporting media from a library](#)" on page 24.

Color adjustments to clip lists or spanned clips are not available when a library is open.

- When no library is opened, Channel Assignment controls in the Inspector are not available. For more information, see "[Assigning audio channels](#)" on page 99.
- When no library is opened, storyboard support is not available. For more information, see "[Working with storyboards](#)" on page 106.
- When no library is opened, bin support is not available. For more information, see "[Adding bins to a library](#)" on page 17.

1. Click the **Organize** button at the top of the Catalyst Prepare window.
2. Click the **Library** button  at the bottom of the Catalyst Prepare window and choose **Close** from the menu.

## Adding media to a library

To add media to a Catalyst Prepare library, you can copy clips from folders or devices attached to your computer, or you can choose to add clips without copying them to your computer.



To add a local folder to the library without copying clips, click the **Bin** button  at the bottom of the Catalyst Prepare window in Organize mode, choose **Create from folder**, and browse to a folder on your computer. The folder and any clips in the folder are added to the current library.

When you edit a clip that is not included in the current library, the metadata is saved to the library without modifying the original clip. The clip is added to the Automatically Added bin. The following actions will add a clip to the Automatically Added bin in the current library:

- Changing in/out points.
- Adjusting color correction.
- Editing metadata.
- Editing audio channel assignments.

When browsing your clips, a badge is displayed in grid mode  or list mode  to identify clips that are included in the current library. Click the badge to display more information about the clip.



Clip lists and spanned clips are not supported in Catalyst Prepare libraries.

## Copying media from a device

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.

1. Click the **Organize** button at the top of the Catalyst Prepare window.

The **Places** pane on the left side of the Catalyst Prepare window displays a list of the decks, cameras, and card readers that are connected to your computer.

2. Click the **Library** button  to choose the library where you want to add media (or create a new library).
3. Select a device in the **Devices** list to display its media.
4. Select the media clips you want to import.
  - Click a file to select it.



Growing MXF files are displayed with the following icon: 

Copying is not available when growing and nongrowing files are selected.

- 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.

5. Click the **Copy** button at the top of the Catalyst Prepare window.
6. Use the Copy pane to choose a destination for your files.
  - a. Choose how you want to copy the selected clips:
    - Select **Copy clips to library** to copy the clips from your device to your computer and add them to the current library. The clips will be copied to a timestamped folder (YYYY-MM-DD hh.mm.ss) in the library (\_cpreplib) folder.
    - Select **Copy clips to custom destination** if you want to choose where to copy the clips when adding them to the current library. Click the **Browse** button to choose a folder, and select the **Create subfolder** check box if you want to copy the selected clips to a named or timestamped subfolder in the destination.
  - b. Select the **Add to bin** check box and choose a bin from the drop-down list if you want to copy the clips to a bin in the selected library (or create a new bin). For more information, see "Organizing media in a library" on page 15.

The **Add to bin** check box is not available when copying from a library.
  - 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** check box if you want to copy all media related to the selected clips (metadata.proxy clips, and extra files).
  -  When **SR Live metadata source** is set to **External file** in the Options pane, .srm files are not included with the copy operation. For more information, see "["SR Live for HDR settings" on page 162](#)".
  - e. Select the **Copy clips only** radio button if you want to copy only full-resolution clips.
  - f. 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).
  - g. Select the **Copy only between mark points** check box if you want to copy only the media between the in and out points. For more information, see "["Marking in and out points for playback" on page 91](#)".
  -  If you've logged mark in and out points, partial copying is not supported for some clip formats. Those clips will be transcoded using the **Default transcode format** setting in Options. For more information, see "["Marking in and out points for playback" on page 91](#)" or "["Editing Catalyst Prepare options" on page 157](#)".
  - h. Select the **Close growing files** check box if you want to close growing MXF files generated by Sony decks when copying is complete.
  -  When you're copying via FTP from Sony decks, growing files are closed automatically, and the check box is always selected. If you're copying from a local drive, you can select the check box to close growing files or clear the check box to copy the files without closing them.

If the copy destination is an FTP device, copied MXF files are not converted to closed files.
  - i. Select the **Embed NRT metadata** check box if you want to embed non-real-time metadata from an XML sidecar file into an MXF file.
  - j. Select the **Copy with verification** check box if you want to verify clips as they are copied.
-  The **Copy with verification** controls are not available when the source or destination volume is an FTP device or when the destination volume is a Professional Disc Drive unit.

- Choose a setting from the **Verification mode** drop-down list to choose whether you want to verify the write operation only or also verify reading the source file.



**Verify read/write** is not available when the source volume is a Professional Disc Drive unit.

- Choose a setting from the **Hash type** drop-down list to choose the method (MD5, SHA1, CRC32, or xxHash64) that will be used to verify your copied clips.

- Click the **Copy** button to copy the selected clips and add them to your library.

Progress is displayed in the activity pane at the top of the Catalyst Prepare 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.

The imported clips will be available in Organize mode in the folder you selected above.

## Adding media from a device without copying

If you want to include clips in your library without copying the files to your computer, you can drag them from the device to a library bin.

- Click the **Organize** button at the top of the Catalyst Prepare window.

The **Places** pane on the left side of the Catalyst Prepare window displays a list of the decks, cameras, and card readers that are connected to your computer.

- Click the **Library** button  to choose the library where you want to add media (or create a new library).
- Select a device in the **Devices** list to display its media.
- Select the media clips you want to add to the library.

- Click a file to select it.



Growing MXF files are displayed with the following icon:



Copying is not available when growing and nongrowing files are selected.

- 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.

5. Drag the clips from the middle pane to a bin on the left side of the Catalyst Prepare window.



You can also drag clips from the Organize pane to a bin or storyboard in the Places pane.

The device's clips are added to the library and are identified with a badge when you browse your device in grid mode  or list mode .

## Organizing media in a library

Organize mode allows you to view the clips on your computer's file system, attached devices, and libraries.

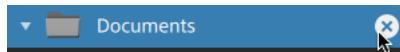
Select a folder in the Places pane to view the clips in a folder or device.



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:



Select a library bin or storyboard in the Current Library pane to view a library's clips.

For more information, see "Adding media to a library" on page 10.

## Choosing a library

1. Click the **Organize** button at the top of the Catalyst Prepare window.
2. The Places pane lists the current library. Click the **Library** button  to choose a different library or create a new library.

The library's media is displayed in the right side of the Catalyst Prepare window.



Click the button to toggle thumbnail and list mode.

For more information, see "Creating or opening a library" on page 9.

## Adding bins to a library

Bins are virtual folders within libraries that you can use to organize your media files. Bins are saved with your library and do not affect the way media is saved on your computer.

Click the **Bin** button  at the bottom of the Catalyst Prepare window and choose a command from the menu:

- Choose **New** to add a new bin to the library. You can use bins to organize media within a library.
  - Choose **Create from folder** to quickly add a local folder to the library without copying clips. The folder and any clips in the folder are added to the current library.
-  To create multiple bins quickly, select folders in the folder contents pane, right-click and choose **Add selected folders as bins**. A bin is created for each selected folder, and the folders' clips are added to the current library.

## Adding clips to a bin

1. Use the Media Browser to browse your computer for video files.
2. Drag a clip (or folder) from the Media Browser to a bin in the Bins list.

 To include a clip in more than one bin, drag it from the All Clips bin (or a local folder or device) to each bin where you want to include a link to the clip.

You can also drag a clip from one bin to another to move it.

You can also choose to add a clip to a bin when adding it to your library. For more information, see "[Adding media to a library](#)" on page 10.

 Clip lists or spanned clips () cannot be added to bins.

## Deleting bins from a library

1. Select a bin in the Bins list.
2. Click the **Bin** button  at the bottom of the Catalyst Prepare window and choose **Delete** from the menu.

You're prompted with a confirmation dialog. If you also want to delete the source files from your computer, select the check box.
3. Click **Delete**.

 If a folder or media file is moved or deleted outside of Catalyst Prepare, it is displayed with the following icon: 

## Renaming bins

1. Select a bin in the Bins list.
2. Click the **Bin** button  at the bottom of the Catalyst Prepare window and choose **Rename** from the menu.
3. Type a new name in the box and click **OK**.

## Cleaning a bin

1. Select a bin in the Bins list.
2. Click the **Bin** button  at the bottom of the Catalyst Prepare window and choose **Clean**. The Clean dialog is displayed.
3. Select the check box for each type of clip you'd like to remove from the selected bin:
  - **Delete items older than X days:** Removes clips that were added to the library before the number of days you specify.
  - **Delete items that can no longer be found:** Removes clips that are no longer available on disk or are on disks that are not connected.

The dialog displays a list of clips that will be removed from the selected bin.

4. Click **OK**.

## Exporting a library's bins as folders

1. Click the **Organize** button at the top of the Catalyst Prepare window.
2. The Places pane lists the current library. Click the **Library** button  to choose a different library or create a new library.

The library's media is displayed in the right side of the Catalyst Prepare window.

 Click the button to toggle thumbnail  and list  mode.

3. Click the **Library** button  and choose **Export bins as folders**.

4. Choose the folder where you want to export your library's bins, and then click **OK**.

Progress is displayed in the activity pane at the top of the Catalyst Prepare window.



The exported folders are named to match the library's bin names.

Only the portion of the video between the mark in and mark out points will be copied. For more information, see ["Marking in and out points for playback" on page 91](#).

If you've logged mark in and out points, partial copying is not supported for some clip formats. Those clips will be transcoded using the **Default transcode format** setting in Options. For more information, see ["Marking in and out points for playback" on page 91](#) or ["Editing Catalyst Prepare options" on page 157](#).

## Exporting a library's bins to Premiere

1. Click the **Organize** button at the top of the Catalyst Prepare window.

2. The Places pane lists the current library. Click the **Library** button to choose a different library or create a new library.

The library's media is displayed in the right side of the Catalyst Prepare window.



Click the button to toggle thumbnail and list mode.

3. Click the **Library** button and choose **Export bins to Premiere**.

4. Choose the folder where you want to create a new Premiere Pro project containing your library's bins and clips, and then click **OK**.

Progress is displayed in the activity pane at the top of the Catalyst Prepare window.



The exported folders are named to match the library's bin names.

Only the portion of the video between the mark in and mark out points will be copied. For more information, see ["Marking in and out points for playback" on page 91](#).

If you've logged mark in and out points, partial copying is not supported for some clip formats. Those clips will be transcoded using the **Default transcode format** setting in Options. For more information, see ["Marking in and out points for playback" on page 91](#) or ["Editing Catalyst Prepare options" on page 157](#).

## Exporting a library's bins to Final Cut Pro X

1. Click the **Organize** button at the top of the Catalyst Prepare window.
2. The Places pane lists the current library. Click the **Library** button  to choose a different library or create a new library.

The library's media is displayed in the right side of the Catalyst Prepare window.

 Click the button to toggle thumbnail  and list  mode.

3. Click the **Library** button  and choose **Export bins to Final Cut Pro X**.
4. Choose the folder where you want to create a new Final Cut Pro X project containing your library's bins and clips, and then click **OK**.

Progress is displayed in the activity pane at the top of the Catalyst Prepare window.

 The exported folders are named to match the library's bin names.

Only the portion of the video between the mark in and mark out points will be copied. For more information, see "[Marking in and out points for playback](#)" on page 91.

If you've logged mark in and out points, partial copying is not supported for some clip formats. Those clips will be transcoded using the **Default transcode format** setting in Options. For more information, see "[Marking in and out points for playback](#)" on page 91 or "[Editing Catalyst Prepare options](#)" on page 157.

## Working with storyboards

You can create and edit storyboards to create a video project that is comprised of multiple, shorter video clips.

For more information, see "[Working with storyboards](#)" on page 106.

## Moving clips between bins

When you're using bins to organize your library, you can easily move clips between bins.

1. In the Places pane on the left side of the Catalyst Prepare window, select the bin that contains the clips you want to move.
2. Select the clips you want to move in the Media Browser.

3. Click the **Move** button  at the bottom of the Media Browser.
4. Choose your destination folder from the **Move clip to bin** drop-down list.
5. Click the **Move** button.



You can also drag a clip from one bin to another to move it.

To include a clip in more than one bin, drag it from the All Clips bin (or a local folder or device) to each bin where you want to include a link to the clip.

## Renaming clips

Renaming a library clip allows you to edit the name that is displayed in your Catalyst Prepare library. Renaming a clip does not rename the source media file on the disk.



If you want to rename a file on disk, browse to a device or local folder in the Places pane, and select a clip. Click the **File** button  at the bottom of the Media Browser, choose **Rename**, and type a new name in the edit box. The file and all instances of the file in your library are updated.

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

## Removing clips from a library (or bin)

1. Select a clip in the Media Browser.
2. Click the **Clip** button  at the bottom of the Catalyst Prepare window and choose **Remove** from the menu.

The Remove Clips dialog is displayed to allow you to choose to remove the selected clip only or all clips that use the source media.

If you want to remove all clips that use the source media, you can select the **Also delete the associated source file from disk** check box to delete the source file from disk. Selecting this check box automatically selects the **Also remove the clip from other bins** check box.

If you want to remove the clip from all bins without deleting the source clip, select only the **Also remove the clip from other bins** check box.



If a folder or media file is moved or deleted outside of Catalyst Prepare, it is displayed with the following icon: 

## Consolidating a library

Consolidating a library gathers all the library's clips to a single folder. When you consolidate a library, clips are copied to the new destination folder; the original clips are not moved.

1. Click the **Organize** button at the top of the Catalyst Prepare window.
2. In the Places pane, click the **Library** button  and choose **Consolidate** from the menu.

 If any of the library's clips cannot be found, you'll be prompted to relink the library clips. For more information, see "[Relinking library media](#)" on page 51.
3. Click **OK** to start copying media.

## Saving and renaming a library (Save As)

You can use **Save As** to create a copy of the current library with a new name or to a different folder.

1. Click the **Organize** button at the top of the Catalyst Prepare window.
2. In the Places pane, click the **Library** button  and choose **Save As** from the menu.
3. Choose the folder where you want to save the library.
4. Select the **Consolidate media with new library** check box if you want to copy clips to a subfolder in the destination folder. You can choose to copy the selected clips to a named or timestamped subfolder in the destination.
5. Click **OK** to start copying media.

## Showing source clips

1. Select a file.
2. Click the **Clip** 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.

## Editing library clips

In Edit mode, you can preview media, log mark in and out points, and apply looks and color correction.

1. Click the **Organize** button at the top of the Catalyst Prepare window.
2. Select the clip you want to edit.

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

3. Click the **Edit** button at the top of the Catalyst Prepare window to open the selected clip in Edit mode.



You can also double-click a clip in Organize mode to open it in Edit mode.

In Edit mode, the left pane allows you to browse the file system or the library's clips; the center pane allows you to preview the file, log mark in and mark out points, and apply color correction; and the right pane allows you to view and edit metadata for the selected file in the Inspector.

- For more information about previewing media, please see "[Playing media](#)" on page 85.
- For more information about logging mark in and out points, please see "[Marking in and out points for playback](#)" on page 91.
- For more information about applying color correction, please see "[Applying color correction](#)" on page 121.
- For more information about using the Inspector, please see "[Viewing and editing metadata](#)" on page 97.

## Working with subclips in a library

A subclip is a library reference to a clip. You might create a subclip that uses different color correction than the source media or that uses different mark in and mark out points.

Subclips save disk space when transferring media to the NLE: you can transcode only material of interest and apply a meaningful name to simplify the editing stage.

When you view your library in Organize mode, subclips are labeled with the original clip name and a number — MainClip - Subclip 1, MainClip - Subclip 2, and so on — or you can provide your own name.

### Creating subclips

1. Click the **Organize** button at the top of the Catalyst Prepare window.
2. Double-click a clip to open it in Edit mode.
3. Use the **Mark In** and **Mark Out** buttons to adjust the length of your subclip. For more information, see "[Marking in and out points for playback](#)" on page 91.
4. Click the **Create Subclip** button . The Subclip Name dialog is displayed.

The subclip is created using the base name of the original clip. Edit the clip name if needed and click **OK** to add the subclip to your library.



The **Create Subclip** button is displayed under a **Log** button when the Catalyst Prepare window is too narrow to display the full toolbar.

## Deleting subclips

1. Click the **Organize** button at the top of the Catalyst Prepare window.
2. Select the subclip you want to delete.
3. Click the **Clip** button at the bottom of the Media Browser and choose **Remove**.

The Remove Clips dialog is displayed to allow you to choose to remove the selected clip only or all clips that use the source media.

If you choose to remove all clips that use the source media, you can select the **Also delete the associated source file from disk** check box to delete the source file from disk.

## Exporting media from a library

Catalyst Prepare provides you with several methods to transcode and share clips from your library.

## Working with FTP devices

You can use Catalyst Prepare to work with clips on a remote server using FTP/FTPS.

### Connect to an FTP device

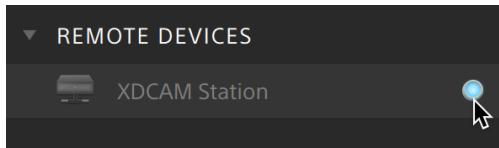
Click the **Tools** button at the top of the Places pane and choose **Add remote server** to specify a server's connection settings.

| Item         | Description   |
|--------------|---|
| Server name  | Type a name to identify the server. This name will be displayed in the Remote Devices list in the Places pane.                                    |
| Protocol     | Choose a setting from the drop-down list to indicate whether you'll connect to the server via an <b>FTP</b> or <b>FTPS (Explicit)</b> connection. |
| Address/Port | Type the address or host name of the server and the port.   |
| Folder       | If you want to connect to a specific folder on the server, type its name here. Leave  |

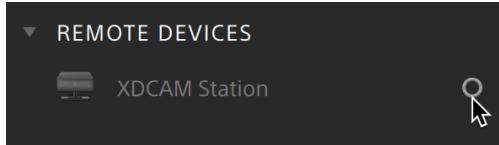
| Item      | Description   |
|-----------|---|
|           | this box blank to connect to the root of the device.              |
| User name | Type the user name that you want to use to connect to the server. |
| Password  | Type the password for the specified user name.                    |

#### Disconnecting from or reconnecting to a server

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



To reconnect to a server, select the server in the Places pane and click the button:



#### Editing a server's settings

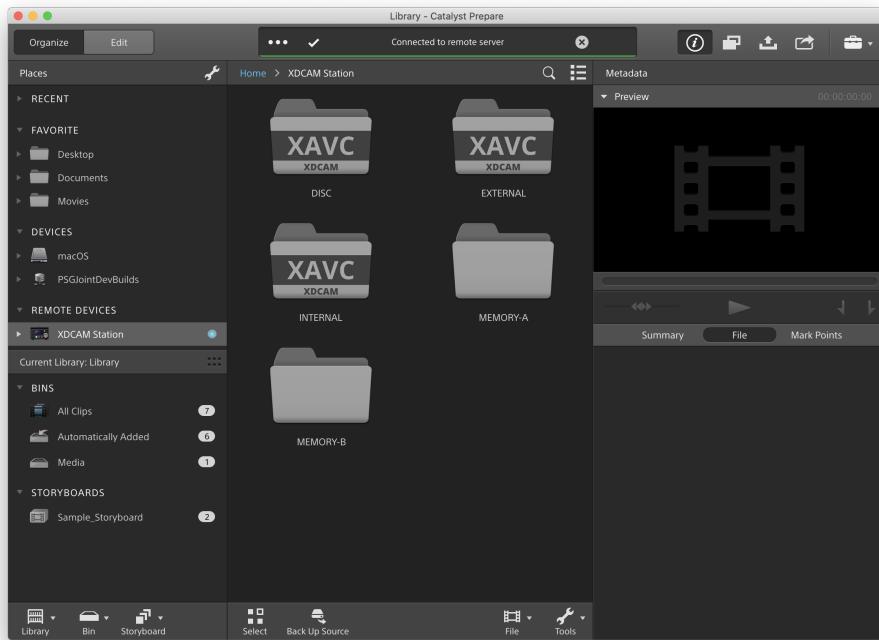
To edit the settings for a connected server, select it and then click the **Tools** button at the top of the Places pane and choose **Edit remote server**.

#### Removing a server

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

#### Browsing the contents of an FTP device

1. Connect to the FTP device. For more information, see "Connect to an FTP device" on page 24.
2. In the Places pane, select your FTP device. The contents of the device are displayed in the center pane.



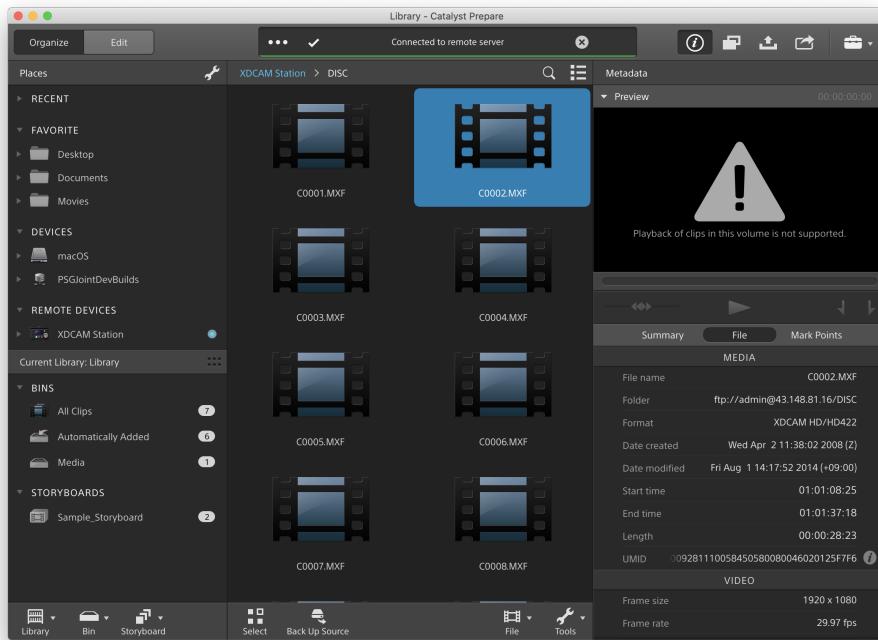
3. In the center pane, select a clip.

- You can use the Inspector pane to view the selected clip's metadata. For more information, see "[Viewing and editing metadata](#)" on page 97.

 Audio and video preview are not available over FTP connections.

- Right-click the selected clip and choose **Rename** to edit the clip's name.
- Right-click the selected clip and choose **Delete** to remove the selected clip from the device.

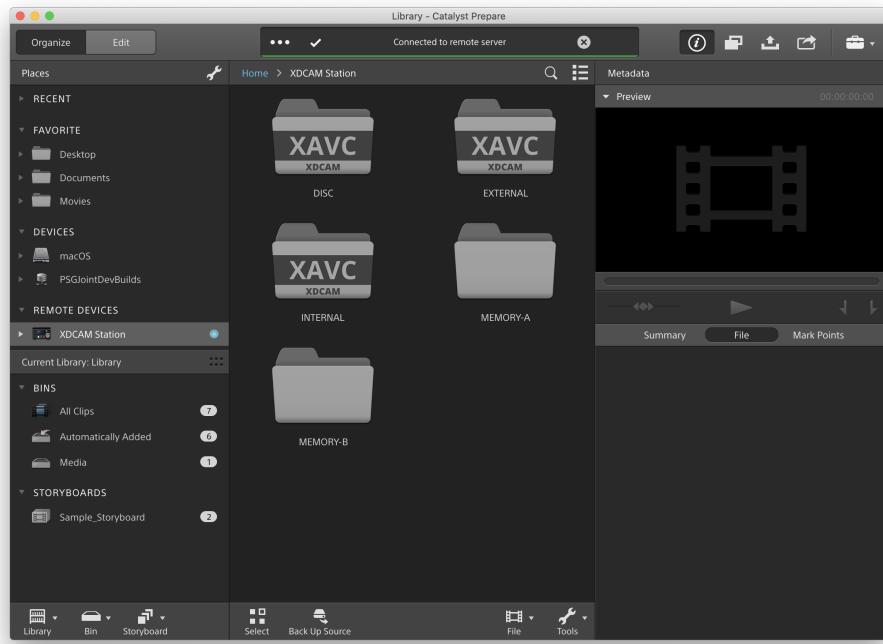
 Copying, renaming, or deleting clip lists to SxS media and USB storage on the PZW-4000 is not supported.



## Copying clips from an FTP device to your library or computer

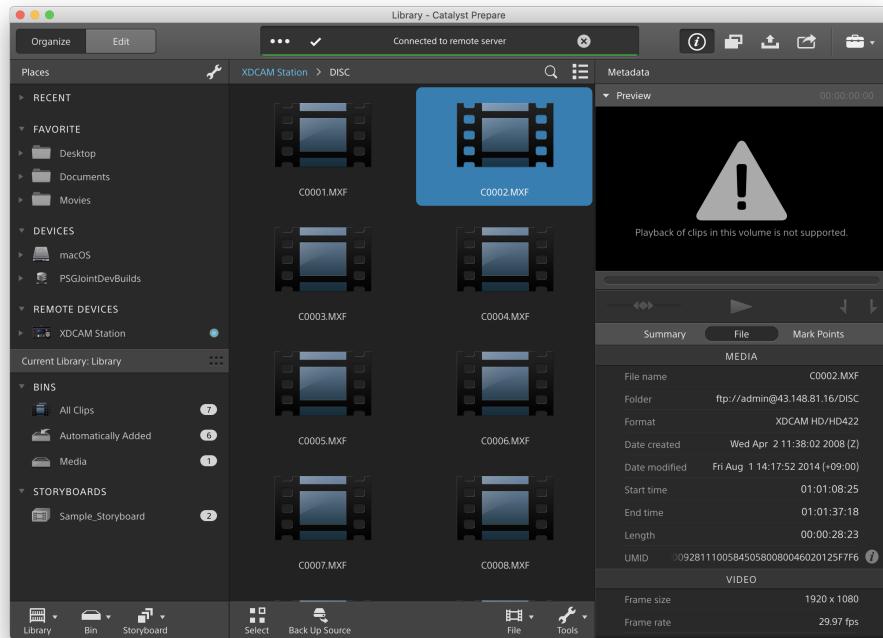
Working with clips from an FTP server is as simple as working with clips from your local computer or an external drive. After you connect to an FTP device, it will be displayed in a Remote Devices list in the Places pane, and you can browse it in the same way you browse other volumes.

1. Connect to the FTP device. For more information, see "Connect to an FTP device" on page 24.
2. In the Places pane, select your FTP device. The contents of the device are displayed in the center pane.



3. In the center pane, select the clip you want to copy to your library.

Audio and video preview are not available over FTP connections.



4. Click the **Copy** button  at the top of the Catalyst Prepare window.
5. Use the Copy pane to choose a destination for your files.

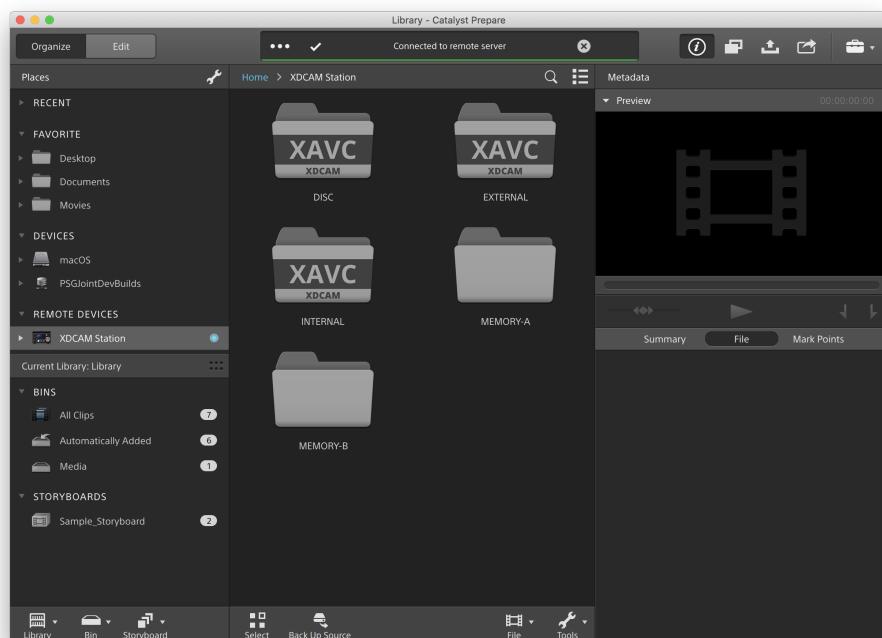
Select the **Copy clips to library** radio button to copy the selected clips to the current library, or select **Copy clips to custom destination** and click **Browse** to browse to another folder.

6. Use the copy pane to choose copy options, and then click the **Copy** button to start copying.

For more information about the controls in the Copy pane, please see "[Copying clips to a device](#)" on page 41.

## Copy clips to a Sony FTP device

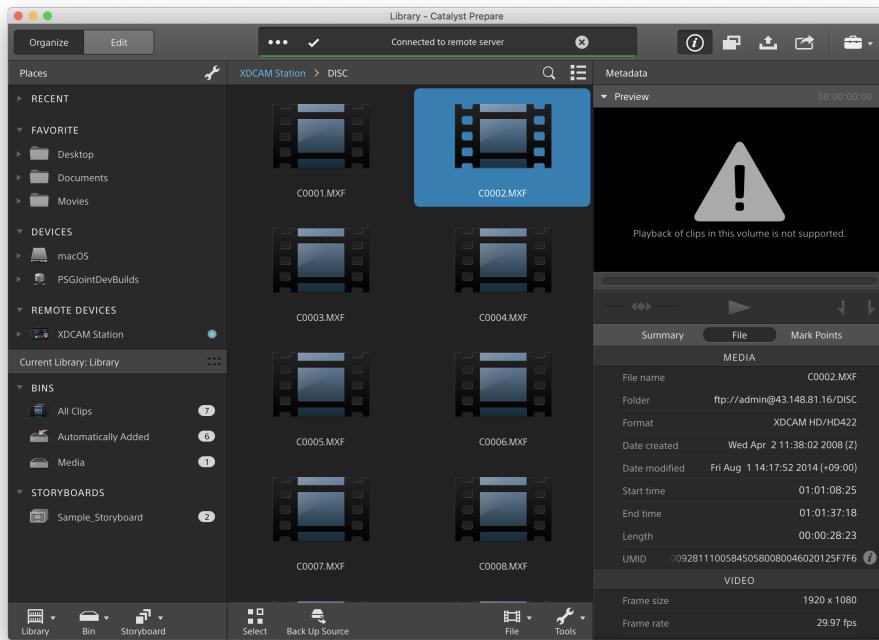
1. Connect to the FTP device where you want to copy the clips. If your source clips are also on an FTP device, also connect to the source FTP device. For more information, see "[Connect to an FTP device](#)" on page 24.
2. In the Places pane, select the source device from which you want to copy clips. The contents of the device are displayed in the center pane.



3. In the center pane, select the clip you want to copy to your library.



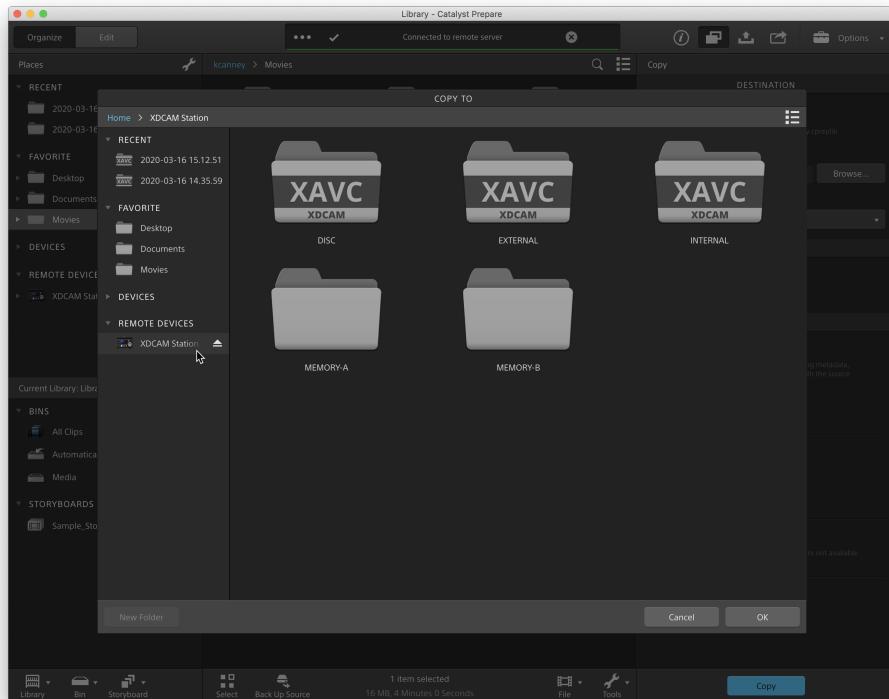
Audio and video preview are not available over FTP connections.



4. Click the **Copy** button at the top of the Catalyst Prepare window.

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

Select the **Copy clips to custom destination** radio button, click **Browse**, select your FTP device in the Copy To dialog, and then click **OK**.



6. Use the copy pane to choose copy options, and then click the **Copy** button to start copying.

For more information about the controls in the Copy pane, please see ["Copying clips to a device" on page 41](#).



#### Notes:

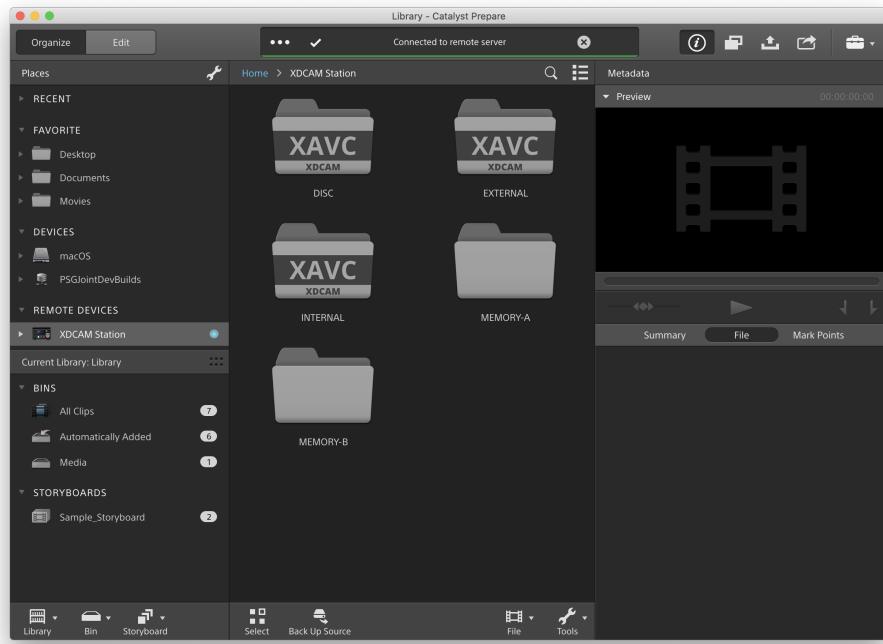
The **Create subfolder** check box is not available when copying to a known folder structure.

The **Copy clips only** check box is not available when copying to a Sony FTP device.

The **Use fast device-to-device copy** check box is not available when using FTPS protocol.

## Copy clips to a non-Sony FTP device

1. Connect to the FTP device where you want to copy the clips. If your source clips are also on an FTP device, also connect to the source FTP device. For more information, see ["Connect to an FTP device" on page 24](#).
2. In the Places pane, select the source device from which you want to copy clips. The contents of the device are displayed in the center pane.

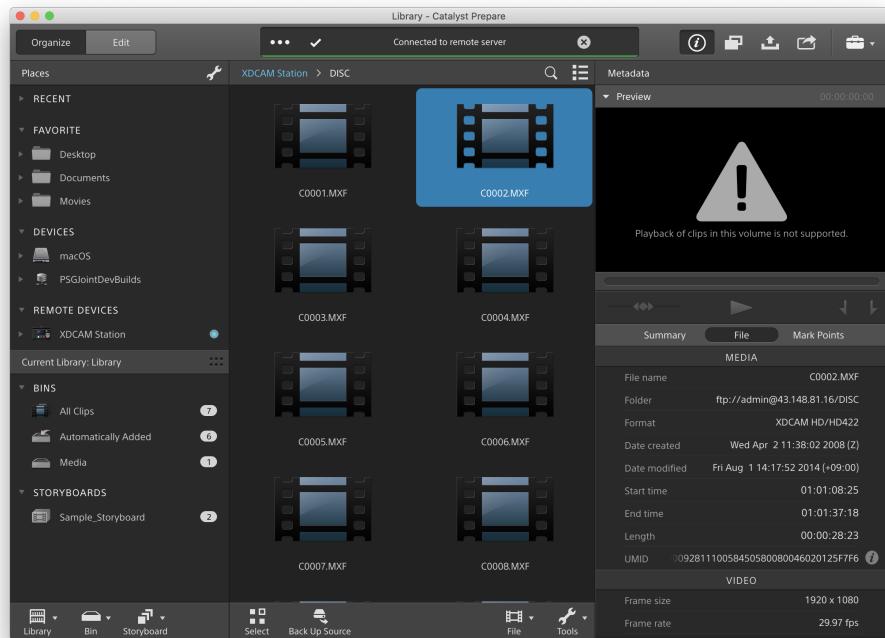


The source must be a Sony device.

3. In the center pane, select the clip you want to copy to your library.

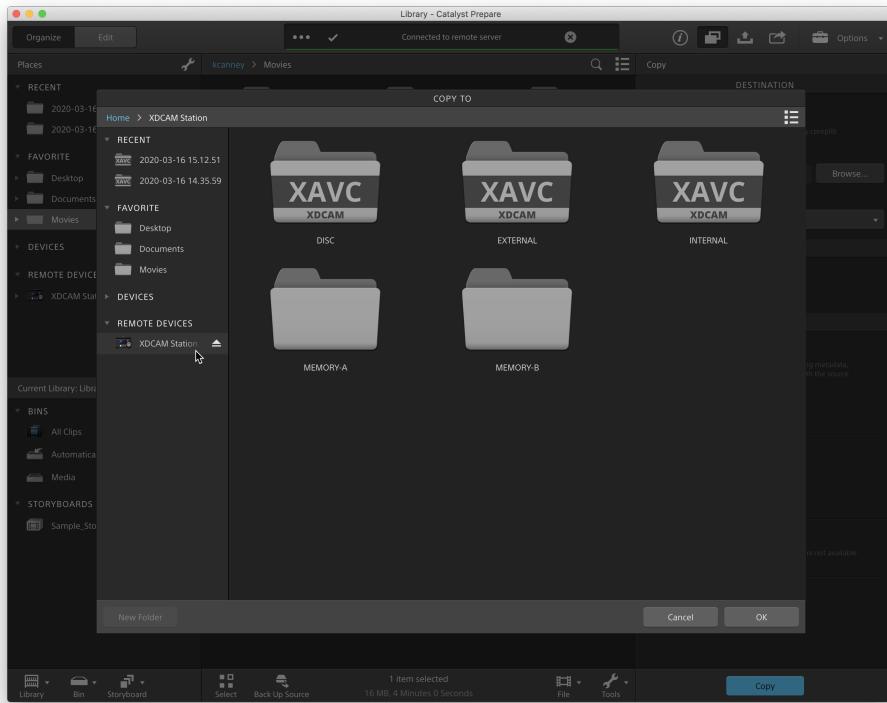


Audio and video preview are not available over FTP connections.



4. Click the **Copy** button at the top of the Catalyst Prepare window.
5. Use the Copy pane to choose a destination for your files.

Select the **Copy clips to custom destination** radio button, click **Browse**, select your FTP device in the Copy To dialog, and then click **OK**.



6. Use the copy pane to choose copy options, and then click the **Copy** button to start copying.

For more information about the controls in the Copy pane, please see ["Copying clips to a device" on page 41](#).



### Notes:

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

Only the **Copy clips only** option is available when copying from a Sony FTP device to a third-party FTP device.

The **Use fast device-to-device copy** check box is only available when copying from a Sony device using FTP protocol (FTPS protocol is not supported).

The **Preserve source UMID** check box is not available when copying to a third-party FTP device.

## 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 Organize or Edit mode.

The left pane allows you to navigate the folders in your library, 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.

 An  on a thumbnail indicates a clip that spans multiple files due to file-size limitations but is displayed in Catalyst Prepare as a single virtual clip. Spanned XDCAM EX clips can be transcoded directly, but AVCHD clips must be copied first.

To transcode spanned AVCHD clips, first copy them to a new folder. After the copy is complete, the  indicator is removed, and the clips are combined in a new clip that you can transcode. For more information, see "[Transcoding clips](#)" on page 34.

2. Click the **Export** button  at the top of the Catalyst Prepare window, and use the Export pane to choose a destination and format for your exported files.
  3. 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.
  4. 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.
5. The Source Metadata section shows you the file name, color space format, frame size, and frame rate of the selected clip.
-  Source metadata is not displayed when a storyboard or clip list is selected.
-  Click the **Reset** button  in the Source Metadata heading in the Inspector pane to reset the **Color Space** based on the clip's metadata or the selected SR Live metadata source. For more information, see "["SR Live for HDR settings" on page 162](#)".
6. Use the Transcode Settings section to choose the format for your exported files. If you need to reset the transcode settings to their default values, click the **Reset** button .
- a. If you want to use a transcode preset to choose the settings for your exported files, choose a setting from the **Transcode preset** drop-down list, and then click **Export**.  
If you want to choose custom transcoding settings, choose **Custom** from the **Transcode preset** drop-down list and continue to step b.  
For more information, see "["Transcoding presets" on page 49](#)".
-  When you select a video processing device other than your CPU in the application settings dialog, high-quality deinterlacing and upscaling are applied to convert SD and HD sources to modern progressive HD and UHD assets. For more information, see "["Choosing a video processing device" on page 157](#)".
- High-quality upscaling is applied during transcoding when you choose an HD or UHD render preset.
  - Please note that some systems with limited GPU memory are not supported.
- b. 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.  
You can choose **Same as preview** or **Same as external monitor** (if an external monitor is enabled) to match the output color space and color adjustments to your video preview or external monitor setting. For more information, see "["Editing Catalyst Prepare options" on page 157](#)".

 If the selected color space includes color adjustments, the color adjustments icon  is displayed in white and a ToolTip notifies you that color adjustments will be included. If the selected color space does not include color adjustments, the color adjustments icon  is displayed in gray and a ToolTip notifies you that color adjustments will be excluded.

If the selected output color space is not compatible with the source color space, a warning is displayed to notify you that the clip cannot be exported using the current settings.

SR Live settings are applied only when the **Output color space** drop-down is set to **Same as preview** or **Same as external monitor**. For more information, see "["SR Live for HDR settings" on page 162](#)".

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

 **Format** settings that are not supported by the selected **Output color space** will not be available.

 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 S-Gamut, RAW, or X-OCN sources when **Output color space** is set to **ACES**, **Rec.2020/Linear**, **S-Gamut/Linear** or **S-Gamut3/Linear**.

**ProRes** is available on macOS only.

- d. Choose a setting from the **Frame size** drop-down list to choose the dimensions of the rendered frame, or choose **Same as source** to match the selected clip.
- e. Choose a setting from the **Frame rate** drop-down list to choose the number of frames per second for the rendered clip, or choose **Same as source** to match the selected clip.
- f. Choose a setting from the **Render preset** drop-down list to choose the settings that will be used for the exported files.

 Choose the **Best match** preset if you want Catalyst Prepare to choose the most appropriate preset for each selected clip.

 **Render preset** settings that are not supported by the selected **Output color space** and **Format** will not be available.



Please note that the **XAVC Long 422 3840x2160 200 Mbps (Sony)** render presets require 16 GB or more RAM. If you're using a dedicated GPU, the presets also require 4 GB or more GPU memory.

- g. If you want to create a file with segmented body partitions from a single body partition, select the **Create Sony Professional Disc partitions** or **Create segmented body partitions** check box. When the check box is cleared, body partitions are not modified.



The **Create Sony Professional Disc partitions** check box is available only when **XDCAM** is selected in the **Format** drop-down list. **Create segmented body partitions** is available only when **XAVC Intra** or **XAVC Long** is selected in the **Format** drop-down list.



Files created with segmented body partitions may not be recognized properly by some Sony camcorders, decks, or servers.

7. Enable the **Use advanced settings** switch if you need to adjust additional transcoding settings.

- a. Choose a setting from the **Crop type** drop-down list to choose the aspect ratio for your transcoded file:
  - **None (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.
  - **Use masking ratio**: crops the frame to the masking ratio selected in the Clip Settings menu. For more information, see "[Playing media](#)" on page 94.
- b. Choose a setting from the **Encode mode** drop-down list to choose whether you want to optimize image quality or transcoding speed.
- c. Choose a setting from the **Audio channels** drop-down to choose how audio will be rendered in the output file.
  - **Same as source**: the rendered file will contain the same number of audio channels as the source clip.

- **Map audio channels:** you can choose how audio channels from the source clip will be mapped to audio channels in the rendered file.

Each channel in the rendered file will be displayed with a drop-down list so you can choose which source channel should be rendered to that channel.

- d. Select the **Stitch clips** check box if you want to combine the selected clips into a single continuous clip. The order of the clips in the new clip will match the order they are displayed in Organize or Edit mode.

If you want the new clip to include continuous timecode based on the source clips' timecode, select the **Use continuous timecode** check box. Clip order will be adjusted as needed, and black frames will be added between clips to ensure the timecode in the new clip is not interrupted. For more information, see "["Stitching clips" on page 117](#)".

- e. Select the **Add custom metadata** check box if you want to include custom metadata items for the exported files. For each item that you define, an edit box is displayed to allow you to type the desired value for that metadata item. Custom metadata is saved in a sidecar .json file.

 The **Add custom metadata** check box is only displayed if you have created a customMetadataExport.json file to define the items you want to export. For more information, see "["Exporting custom metadata" on page 101](#)".

- f. Select the **Burn in timecode** check box if you want to include timecode in the transcoded video.

Click the position control below the check box to indicate where timecode will be positioned in the frame.

The transcoded file will include the source clip's timecode. If you're transcoding a storyboard, each clip will display its source timecode.

- g. Select the **Burn in clip name** check box if you want to include the clip name in the transcoded video.

Click the position control below the check box to indicate where the clip name will be positioned in the frame.

If you rename a clip, the custom name will be displayed. For more information, see "["Renaming clips" on page 21](#)".

If you're transcoding a storyboard, each clip will display its source clip name.

- h. If the **Burn in timecode** and/or **Burn in clip name** check boxes are selected, you can select the **Allow burn in within letterbox/pillarbox area** check box if your output format will include letterboxing or pillarboxing and you want to allow the timecode/clip name to be placed in the letterbox/pillarbox area.

When the check box is cleared, the timecode/clip name will be limited to the source frame area.

- i. Select the **Add watermark** check box if you want to include a watermark image in the transcoded video.

Click **Browse** to choose a JPEG or PNG image file.

Drag the **Opacity** slider to set the transparency-opacity of the watermark image.

Click the position control below the **Opacity** slider to indicate where the watermark image will be positioned in the frame:

- If you need to render multiple frame sizes, create a full-frame transparent PNG using the dimensions of your largest target frame size, and the watermark image will be scaled as needed for the smaller frame sizes.
- If your watermark image is smaller than the target frame size, no scaling is applied and the image will be anchored at the selected position control.

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

For more information, see ["Playing media" on page 94](#).

- k. 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 118](#).

- l. 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 91](#).

- m. 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.

- n. Select the **Transcode using proxy source clip** check box if you want to use the proxy as the source clip when transcoding. When you're transcoding a lower-resolution clip,

using the proxy as your source media is faster.

- o. Select the **Override start timecode** check box and type a number in the edit box to specify the starting timecode for your transcoded clip. When the check box is cleared, the clip's timecode is used.

 The **Override start timecode** check box is available when transcoding MXF clips to DNxHD, SStP, XAVC-I, XAVC-L, and XDCAM formats.

 If you want to save your transcoding settings, click the **Transcode Tools** button  in the Transcode Settings heading and choose **Save transcode preset**.

For more information, see "[Transcoding presets](#)" on page 49.

#### 8. Click **Export**.

If multiple clips are selected, the **Export** button at the bottom of the Export pane is displayed as **Batch Export**.

Progress is displayed in the activity pane at the top of the Catalyst Prepare 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 to a device

Copying clips allows you to copy clips (or clip lists) from your library to another location. The original clip name and format are preserved if possible, and color correction is not applied to the copied clips.

 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 Organize or Edit mode.

The left pane allows you to navigate the folders in your library, 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.



An on a thumbnail indicates a clip that spans multiple files due to file-size limitations but is displayed in Catalyst Prepare as a single virtual clip. After you copy a spanned AVCHD clip, the indicator is removed, and the clips are combined in a new clip that you can transcode. For more information, see "Transcoding clips" on page 34.

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

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

a. Choose where you want to copy the selected files:

- Select the **Copy clip to library** radio button to copy the selected files to the current library.
- Select **Copy clip to custom destination** radio button to choose a 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.

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

- If you want to name the subfolder based on the date and time you copied the files, choose **Time stamped** from the drop-down list.
- If you want to name the subfolder yourself, choose **Custom folder name** from the drop-down list and type a name in the box.



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



For more information about working with FTP devices, please see "Working with FTP devices" on page 24.

b. Select the **Add to bin** check box and choose a bin from the drop-down list if you want to add the selected clips to a bin in your library.

For more information, see "Adding bins to a library" on page 17.

- 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).



When **SR Live metadata source** is set to **External file** in the Options pane, .srm files are not included with the copy operation. For more information, see "["SR Live for HDR settings" on page 162](#).



Only the **Copy all related media** option is available when the destination volume is a Sony device.



If you need to copy all files from a volume, you can use the **Back Up Source** command. For more information, please see "[Backing up a volume" on page 51.](#)

- e. Select the **Copy clips only** radio button if you want to copy only full-resolution clips.



Only the **Copy clips only** option is available when copying to a non-Sony device.

- f. 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 97](#).
- g. 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 91](#).
-  If you've logged mark in and out points, partial copying is not supported for some clip formats. Those clips will be transcoded using the **Default transcode format** setting in Options. For more information, see ["Marking in and out points for playback" on page 91](#) or ["Editing Catalyst Prepare options" on page 157](#).
-  **Copy only between mark points** is not available when copying to or from an FTP device.
- h. If you want to create a file with segmented body partitions from a single body partition, select the **Create Sony Professional Disc partitions** or **Create segmented body partitions** check box. When the check box is cleared, body partitions are not modified.
-  The **Create Sony Professional Disc partitions / Create segmented body partitions** check box is not available during FTP copy.
-  Files created with segmented body partitions may not be recognized properly by some Sony camcorders, decks, or servers.
- i. Select the **Use fast device-to-device copy** check box if you want to copy clips directly between devices via FTP (FTPS protocol is not supported).
- 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.
- j. Select the **Copy with verification** check box if you want to verify clips as they are copied.
-  The **Copy with verification** controls are not available when the source or destination volume is an FTP device or when the destination volume is a Professional Disc Drive unit.

- Choose a setting from the **Verification mode** drop-down list to choose whether you want to verify the write operation only or also verify reading the source file.

 **Verify read/write** is not available when the source volume is a Professional Disc Drive unit.

- Choose a setting from the **Hash type** drop-down list to choose the method (MD5, SHA1, CRC32, or xxHash64) that will be used to verify your copied clips.

- Select the **Override start timecode** check box and type a number in the edit box to specify the starting timecode for your transcoded clip. When the check box is cleared, the clip's timecode is used.

 The **Override start timecode** check box is available when copying MXF clips.

 The **Override start timecode** check box is not available when copying to/from an FTP device.

- Select the **Preserve source UMID** check box if you want to preserve a clip's UMID (Unique Material Identifier) when copying it to an FTP device. When the check box is cleared, the clip's UMID may be changed when it is copied to the device.

 The **Preserve source UMID** check box is available when copying from a local drive to a Sony FTP device.

- Click **Copy**.

Progress is displayed in the activity pane at the top of the Catalyst Prepare 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.

## Rendering a storyboard as separate files

You can convert a storyboard's clips to another format. A separate file is created for each clip, and the original clips are not affected (overwritten, deleted, or altered) during the exporting process.

- Click a storyboard in the Storyboards section of the left pane.
- Select the clips you want to export.
- Click the **Export** button  at the top of the Catalyst Prepare window.
- Select the **Render clips as separate files** radio button.

5. Use the controls in the Export pane to choose a destination and format for your exported files.  
For more information about the controls, please see "[Transcoding clips](#)" on page 34.
6. Click **Export**.

Progress is displayed in the activity pane at the top of the Catalyst Prepare 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.

## Rendering a storyboard as a single clip

In addition to exporting individual storyboard clips, you can convert a storyboard to a single media file. The original clips are not affected (overwritten, deleted, or altered) during the exporting process.

1. Click a storyboard in the Storyboards section of the left pane.
2. Click the **Export** button  at the top of the Catalyst Prepare window.
3. Select the **Render storyboard as single file** radio button.
4. Use the controls in the Export pane to choose a destination and format for your exported file.  
For more information about the controls, please see "[Transcoding clips](#)" on page 34.
5. Click **Export**.

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

## Exporting a storyboard to another editor

You can convert a storyboard to a project that you can edit in a video editor.

1. Click a storyboard in the Storyboards section of the left pane.
2. Click the **Export** button  at the top of the Catalyst Prepare window.
3. Select the **Export storyboard as project** radio button.
4. The **Export project to** box displays the path to the folder where the project will be exported. You can type a path in the box or click the **Browse** button to choose a folder.
5. Type a name in the **File name** box to set the file name that will be used for your exported project file.
6. Choose an export format from the **Project format** drop-down list:

- Apple Final Cut Pro X (\*.fcpxml)
- Adobe Premiere (\*.prproj)
- Avid Media Composer (\*.aaf)
- Vegas Pro EDL (\*.txt)

7. Choose transcoding options:

- If you want to link to the original clips in the original locations, clear the **Transcode media** check box.
- If you want to transcode the storyboard's media to another format when exporting, select the **Transcode media** check box and use the Transcode Settings controls to choose transcoding options.

For more information about the controls, please see "[Transcoding clips](#)" on page 34.

8. Click **Export**.

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

An HTML report file is created in the same folder as the exported project with details about the export. Any warnings or errors will be displayed in the report.

## Uploading files to Ci Workspace

1. Select the files you want to upload in Organize or Edit mode.
2. Click the **Share** button  at the top of the Catalyst Prepare window.
3. From the **Upload clip to** drop-down list, choose **Ci Workspace**.
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.

Choose a setting from the **Login method** drop-down list to choose whether you want to log in with a username/email or a Contributor Code.



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. For more information about the controls, please see "Transcoding clips" on page 34.
6. Click **Upload**.

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

## Uploading files to YouTube

1. Select the files you want to upload in Organize or Edit mode.
2. Click the **Share** button  at the top of the Catalyst Prepare window.
3. From the **Upload clip to** drop-down list, choose **YouTube**.
4. Use the Share pane to log on to your Google account and follow the on-screen instructions to upload the selected file.
  - a. Rename your uploads if needed:
    - When you're uploading a single clip, the **Title** box displays the file name of the selected clip. You can type a new title to identify your video.
    - When you're uploading multiple clips, select the **Rename files** check box.
      - 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.
  - b. For example, if you wanted to name clips using a convention such as **Commercial\_001\_Camera1**, you would type **Commercial\_** in the **Prefix** box, choose **3 digits** from the **Numbering** drop-down list, and type **\_Camera1** in the **Suffix** box.
  - b. Type a description of your movie in the **Description** box.

- c. Type keywords you want to associate with your movie in the **Tags** box. Use words that relate to your movie and describe its content. These tags will be used when searching YouTube. Use commas to separate multiple keywords.
  - d. From the **Privacy** drop-down list, choose a setting to set broadcast options for your movie. Public videos can be seen by any YouTube user; private videos can be seen only by members you specify; unlisted videos can be seen by anyone who has a link to the video, but they are not included in YouTube searches.
  - e. Choose a setting from the **Category** drop-down list. The category you choose is used to classify videos on the YouTube site.
  - f. Choose a setting from the **Frame size** drop-down list to choose the frame size of the video.
  - g. Choose a setting from the **Frame rate** drop-down list to the frame rate of the video.
  - h. Enable the **Use advanced settings** switch if you need to adjust additional transcoding settings. For more information about the controls, please see "[Transcoding clips](#)" on page 34.
5. Click **Upload**.

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

## Transcoding presets

Transcode presets make it easy to transcode multiple files with the same settings.

Presets are saved in the following folder:

- Windows: C:\Users\<user>\Documents\Sony\Catalyst\Transcode Presets\
- macOS: /Users/<user>/Documents/Sony/Catalyst/Transcode Presets/

## Importing transcode presets

If you're transferring preset files across computers, copy the .ctranscode files from the source computer to the destination computer. Presets are saved in the following folder:

- Windows: C:\Users\<user>\Documents\Sony\Catalyst\Transcode Presets\
- macOS: /Users/<user>/Documents/Sony/Catalyst/Transcode Presets/

Close and restart the application to load the new presets.

## Saving transcoding presets

Saving a preset allows you to reuse transcoding settings easily and transfer settings across computers.

1. Click the **Export** button  at the top of the Catalyst Prepare window.
2. Use the Transcode Settings section of the Export pane to adjust your settings as needed. For more information, see "[Exporting media from a library](#)" on page 24.
3. Click the **Transcode Tools** button  in the Transcode Settings.
4. Click **Save transcode preset** in the Transcode Tools menu.
5. Type name for your preset in the **File name** box and click **OK**.

 Preset files are saved in the following folder:

- Windows: C:\Users\<user>\Documents\Sony\Catalyst\Transcode Presets\
- macOS: /Users/<user>/Documents/Sony/Catalyst/Transcode Presets/

## Deleting transcoding presets

Deleting a preset removes it from your computer.

1. Click the **Export** button  at the top of the Catalyst Prepare window.
2. From the **Transcode preset** drop-down list, select the preset you want to delete.
3. Click the **Transcode Tools** button  in the Transcode Settings.
4. Click **Delete transcode preset** in the Transcode Tools menu.
5. When prompted to confirm deleting the preset, click **Delete**.

## Relinking library media

Relinking allows you to relink media files within a library when you move a library to a different drive or use media from an external drive.

1. Open a library. For more information, see "Creating or opening a library" on page 9.
2. In the Places pane, click the Library button  and choose Relink from the menu.
3. For each clip, the Relink Clips dialog displays the original clip and its linked clip.

Click a folder path and browse to a new location to choose a new location for your source clips.

Click **Locate Folder** or **Locate File** (if a clip is missing) or a clip's path and browse to a new file to choose a replacement file.

 Click the  button to display the full path.
4. Click **Relink**. The paths to the library clips are replaced, and your library is updated.

## Backing up a volume

Catalyst Prepare allows you to create verified backups of your discs and cards. A backup is an exact replica of the original storage media — with all files and volume structure — backed up for long-term safety and storage.

1. Click the **Organize** button at the top of the Catalyst Prepare window.

The **Places** pane on the left side of the Catalyst Prepare window displays a list of the available volumes.
2. Select a volume in the **Places** pane.
3. Click the **Back Up Source** button  at the bottom of the Places pane.
4. The **Destination folder** box displays the path to the parent folder where the backup will be created. You can type a path in the box or click the **Browse** button to choose a folder.
5. The **Subfolder** box displays the name of the folder where the backup will be created.
6. Choose a setting from the **Verification mode** drop-down list to choose the method (MD5, SHA1, CRC32, or xxHash64) that will be used to verify your backup file, or choose **None** to skip verification.
7. Click **OK** to start the backup.



# Chapter 3

## Finding media

Organize mode allows you to browse your computer for media files that you want to add to your media libraries, organize the clips in your media libraries, export clips to additional volumes or devices, and transcode files.

For more information, see "Adding media to a library" on page 10 or "Organizing media in a library" on page 15.



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 a clip that contains LUT metadata. For more information, see ["Editing Color Adjustments controls" on page 121](#).



An on a thumbnail indicates a clip that contains lens breathing metadata. For more information, see ["Correcting lens breathing."](#)



An on a thumbnail indicates a clip that contains stabilization metadata. For more information, see ["Stabilizing clips" on page 114](#).



The stabilize icon is not displayed for clips on FTP devices, XDCAM Station volumes via CIFS, XDCAM decks, XDCAM Drive units, or Optical Disc Archive volumes.



An on a thumbnail indicates a rotated clip. For more information, see ["Working with rotated clips."](#)



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 clip that spans multiple files due to file-size limitations but is displayed in Catalyst Prepare as a single virtual clip. Spanned XDCAM EX clips can be transcoded directly, but AVCHD clips must be copied first.

To transcode spanned AVCHD clips, first copy them to a new folder. After the copy is complete, the indicator is removed, and the clips are combined in a new clip that you can transcode. For more information, see ["Exporting media from a library" on page 24](#) or ["Exporting media from a library" on page 24](#).



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



Clip lists and spanned clips are not supported in Catalyst Prepare libraries.

## Connect to a device via FTP

You can use Catalyst Prepare to work with clips on a remote server using FTP/FTPS in much the same way you work with clips on your computer's drives.

For more information, see "[Working with FTP devices](#)" on page [24](#).

## Format a USB drive for PZW-4000

Select a USB drive in the Devices tab, click the **Tools** button , and choose **Format for PZW-4000** from the menu.

-  If the drive you want to format is not displayed in the Devices tab, you may need to format it using your computer's operating system first.

After formatting the drive, the drive will be treated as read-only media by the PZW-4000. Catalyst Prepare can write to the drive, and the PZW-4000 can import clips to its internal drive.

If you want to create the XDROOT folder on a formatted drive, select a USB drive in Organize mode, click the **Tools** button, and choose **Create XDROOT folder** from the menu.

## 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:

| Name  | Type | Format       | Date Created      | Date Modified           |
|---|------|--------------|-------------------|-------------------------|
|  807_0351_01.MP4 | MP4  | XDCAM EX MP4 | Wed Sep 9 14:5... | Wed Sep 9 13:59:00 2009 |
|  807_0352_01.MP4 | MP4  | XDCAM EX MP4 | Wed Sep 9 15:...  | Wed Sep 9 14:11:00 2009 |
|  807_0353_01.MP4 | MP4  | XDCAM EX MP4 | Wed Sep 9 15:1... | Wed Sep 9 14:18:28 2009 |
|  807_0354_01.MP4 | MP4  | XDCAM EX MP4 | Wed Sep 9 15:2... | Wed Sep 9 14:26:16 2009 |

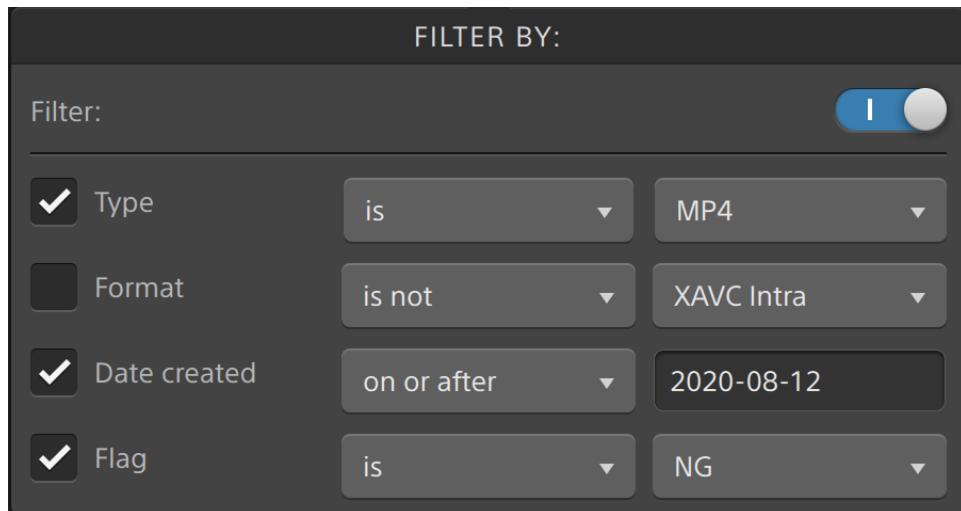
## Searching for clips

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.

## Filtering clips

You can use the **Filter** button  to filter the contents of the Media Browser. You can filter files by file type, file format, date created, or flag metadata.

1. Select the folder you want to view.
2. Click the **Filter** button  to display the Filter By menu at the top of the Media Browser.



3. Enable the **Filter** switch at the top of the menu to enable the filter.
4. Select the check box for each filter you want to apply.

For the **Type**, **Format**, and **Flag** filters, you can choose **is** or **is not** to indicate whether files that match the filter should be included or excluded from the Media Browser.

For the **Date Created** filter, you can choose to display files created on or before a date, on or after a date, or between two dates.

To turn off the filter and display all files in the Media Browser, turn off the **Filter** switch at the top of the menu.

 Using filtering, you can quickly find and select clips that you had tagged **OK** during shooting and copy or transcode the filtered clips. For more information, see "[Transcoding clips](#)" on page [34](#) or "[Copying clips to a device](#)" on page [41](#).

## Selecting files

- Click a file to select it.

 Growing MXF files are displayed with the following icon: 

Copying is not available when growing and nongrowing files are selected.

- 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.

## Showing source clips

1. Select a file.
2. Click the **File/Clip** 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 for reading

Catalyst Prepare 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 |

| Format        | Frame Size | Pixel Aspect Ratio | Frame Rate                           | Video Codec        | Bit Rate          |
|---------------|------------|--------------------|--------------------------------------|--------------------|-------------------|
| MPEG HD       | 1440x540   | 0.667              | 23.976p, 25p, 29.97p,<br>Over Crank  | MPEG-2 Long<br>GOP | 12.5 CBR          |
| MPEG HD       | 1440x540   | 0.667              | 23.976p, 25p, 29.97p,<br>Over Crank  | MPEG-2 Long<br>GOP | 17.5 CBR          |
| MPEG<br>HD422 | 1920x1080  | 1.0                | 23.976p, 25p, 29.97p,<br>50i, 59.94i | MPEG-2 Long<br>GOP | 35 CBR, 50<br>CBR |
| MPEG<br>HD422 | 1920x540   | 0.5                | 23.976p, 25p, 29.97p,<br>Over Crank  | MPEG-2 Long<br>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<br>(EX-HQ)       | 1280x720   | 1.0                | 23.976p, 25p,<br>29.97p, 50p,<br>59.94p | MPEG-2<br>Long<br>GOP | PCM, 48 kHz, 16 bit | 35 VBR              |          |
| MPEG HD<br>(EX-SP)       | 1440x1080  | 1.333              | 50i, 59.94i                             | MPEG-2<br>Long<br>GOP | PCM, 48 kHz, 16 bit | 25 CBR              |          |
| MPEG HD<br>(EX-HQ)       | 1440x1080  | 1.333              | 23.976p, 25p,<br>29.97p, 50i, 59.94i    | MPEG-2<br>Long<br>GOP | PCM, 48 kHz, 16 bit | 35 VBR              |          |
| MPEG<br>HD422<br>(EX-HQ) | 1920x1080  | 1.0                | 23.976p, 25p,<br>29.97p, 50i, 59.94i    | MPEG-2<br>Long<br>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,<br>23.976p, 25p,<br>29.97p                 | MPEG-4 AVC Intra | 8                                    | CBG 50   |
| XAVC Intra        | 1920x1080  | 1.0                | 50i, 59.94i,<br>23.976p, 25p,<br>29.97p, 50p,<br>59.94p | MPEG-4 AVC Intra | 8, 16                                | CBG 100  |
| XAVC Intra        | 1920x1080  | 1.0                | 50i, 59.94i,<br>23.976p, 25p,<br>29.97p, 50p,<br>59.94p | MPEG-4 AVC Intra | 8                                    | CBG 200  |
| XAVC Intra<br>HFR | 1920x1080  | 1.0                | 50p, 50i, 59.94p,<br>59.94i                             | MPEG-4 AVC Intra | 0                                    | CBG 100  |
| XAVC Intra        | 2048x1080  | 1.0                | 23.976p, 24p, 25p,<br>29.97p, 50p,<br>59.94p            | MPEG-4 AVC Intra | 8                                    | VBR      |
| XAVC Intra        | 2048x1080  | 1.0                | 23.976p, 24p, 25p,<br>29.97p, 50p,<br>59.94p            | MPEG-4 AVC Intra | 8, 16                                | CBG 100  |
| XAVC Intra        | 3840x2160  | 1.0                | 23.976p, 25p,<br>29.97p, 50p,<br>59.94p                 | MPEG-4 AVC Intra | 8                                    | VBR      |
| XAVC Intra        | 3840x2160  | 1.0                | 23.976p, 25p,<br>29.97p, 50p,<br>59.94p                 | MPEG-4 AVC Intra | 8, 16                                | CBG 300  |
| XAVC Intra        | 4096x2160  | 1.0                | 23.976p, 24p, 25p,<br>29.97p, 50p,<br>59.94p            | MPEG-4 AVC Intra | 8                                    | VBR      |
| XAVC Intra        | 4096x2160  | 1.0                | 23.976p, 24p, 25p,<br>29.97p, 50p,<br>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<br>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       | 1 or .5 Mbps  |
|                    |            |                    |  |                                   | MPEG-4 AAC, 6 (5.1) channels, 48 kHz, 640 kbps |               |
| XAVC Long<br>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       | 3 Mbps        |
|                    |            |                    |  |                                   | MPEG-4 AAC, 6 (5.1)                            |               |

| Format          | Frame Size | Pixel Aspect Ratio | Frame Rate                        | Video Codec                   | Audio  | Bit Rate |
|-----------------|------------|--------------------|-----------------------------------|-------------------------------|--|----------|
|                 |            |                    |                                   |                               | channels, 48 kHz, 640 kbps                     |          |
| 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       | 9 Mbps   |
|                 |            |                    |                                   |                               | MPEG-4 AAC, 6 (5.1) channels, 48 kHz, 640 kbps |          |

## 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, 48 kHz, 16 bit<br>4-channel PCM, 48 kHz, 24 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, 48 kHz, 16 bit<br>4-channel PCM, 48 kHz, 24 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, 48 kHz, 16 bit<br>4-channel PCM, 48 kHz, 24 bit | 80       |

| Format             | Frame Size | Pixel Aspect Ratio | Frame Rate                                 | Video Codec  | Audio  | Bit Rate |
|--------------------|------------|--------------------|--|--|--|----------|
| XAVC Long          | 1920x1080  | 1.0                | 23.976p,<br>25p,<br>29.97p,<br>50p, 59.94p | MPEG-4 AVC<br>Long, Main<br>Profile or High<br>Profile | 2-channel<br>PCM, 48 kHz,<br>16 bit<br><br>2/4-channel<br>PCM, 48 kHz,<br>24 bit | 80       |
| XAVC Long          | 1920x1080  | 1.0                | 100p,<br>119.88p                           | MPEG-4 AVC<br>Long, Main<br>Profile or High<br>Profile | 2-channel<br>PCM, 48 kHz,<br>16 bit<br><br>2/4-channel<br>PCM, 48 kHz,<br>24 bit | 150      |
| XAVC Long<br>Proxy | 1920x1080  | 1.0                | 23.976p,<br>25p,<br>29.97p,<br>50p, 59.94p | MPEG-4 AVC<br>Long, High<br>Profile                    | MPEG-4 AAC, 2 channels, 48 kHz, 256 kbps   | 25       |
| XAVC Long          | 3840x2160  | 1.0                | 23.976p,<br>25p, 29.97p                    | MPEG-4 AVC<br>Long, Main<br>Profile or High<br>Profile | 2-channel<br>PCM, 48 kHz,<br>16 bit<br><br>2/4-channel<br>PCM, 48 kHz,<br>24 bit | 188      |
| XAVC Long          | 3840x2160  | 1.0                | 50p, 59.94p                                | MPEG-4 AVC<br>Long, Main<br>Profile or High<br>Profile | 2-channel<br>PCM, 48 kHz,<br>16 bit<br><br>2/4-channel<br>PCM, 48 kHz,<br>24 bit | 200      |
| XAVC Long          | 3840x2160  | 1.0                | 100p,<br>119.88p                           | MPEG-4 AVC<br>Long, Main<br>Profile or High<br>Profile | 2-channel<br>PCM, 48 kHz,<br>16 bit<br><br>2/4-channel<br>PCM, 48 kHz,           | 200      |

| Format | Frame Size | Pixel<br>Aspect<br>Ratio | Frame Rate | Video Codec | Audio  | Bit<br>Rate |
|--------|------------|--------------------------|------------|-------------|--------|-------------|
|        |            |                          |            |             | 24 bit |             |

## XAVC HS

| Format        | Frame Size | Pixel Aspect Ratio | Frame Rate                                    | Video | Audio                                   | Bit Rate                           |
|---------------|------------|--------------------|---|-------|---|------------------------------------|
|               |            |                    |   | Codec |   |                                    |
| HEVC<br>Proxy | 1920x1080  | 1.0                | 23.976p, 30p,<br>50p, 59.94, 100p,<br>119,98p | HEVC  | 2-channel PCM,<br>Long, 10-bit, 4:2:0   | 16<br>48 kHz, 16 bit or<br>24 bit  |
|               |            |                    |   |       |   |                                    |
|               |            |                    |   |       |   |                                    |
| HEVC          | 3840x2160  | 1.0                | 23.976p                                       | HEVC  | 2/4-channel PCM,<br>Long, 10-bit, 4:2:0 | 30<br>48 kHz, 16 bit or<br>24 bit  |
| HEVC          | 3840x2160  | 1.0                | 50p   | HEVC  | 2/4-channel PCM,<br>Long, 10-bit, 4:2:0 | 45<br>48 kHz, 16 bit or<br>24 bit  |
| HEVC          | 3840x2160  | 1.0                | 59.94p  | HEVC  | 2/4-channel PCM,<br>Long, 10-bit, 4:2:0 | 78<br>48 kHz, 16 bit or<br>24 bit  |
| HEVC          | 3840x2160  | 1.0                | 100p  | HEVC  | 2/4-channel PCM,<br>Long, 10-bit, 4:2:0 | 200<br>48 kHz, 16 bit or<br>24 bit |
| HEVC          | 3840x2160  | 1.0                | 119.88p                                       | HEVC  | 2/4-channel PCM,<br>Long, 10-bit, 4:2:0 | 200<br>48 kHz, 16 bit or<br>24 bit |
| HEVC          | 3840x2160  | 1.0                | 23.976p                                       | HEVC  | 2/4-channel PCM,<br>Long, 10-bit, 4:2:2 | 60<br>48 kHz, 16 bit or<br>24 bit  |
| HEVC          | 3840x2160  | 1.0                | 50p   | HEVC  | 2/4-channel PCM,<br>Long, 10-bit, 4:2:2 | 200<br>48 kHz, 16 bit or<br>24 bit |
| HEVC          | 3840x2160  | 1.0                | 59.94p  | HEVC  | 2/4-channel PCM,<br>Long, 10-bit, 4:2:2 | 100<br>48 kHz, 16 bit or<br>24 bit |
| HEVC          | 3840x2160  | 1.0                | 100p  | HEVC  | 2/4-channel PCM,<br>Long, 10-bit, 4:2:2 | 280<br>48 kHz, 16 bit or<br>24 bit |
| HEVC          | 3840x2160  | 1.0                | 119.88p                                       | HEVC  | 2/4-channel PCM,                        | 280                                |

| Format | Frame Size | Pixel Aspect Ratio | Frame Rate              | Video Codec                 | Audio                                     | Bit Rate |
|--------|------------|--------------------|-------------------------|-----------------------------|---|----------|
|        |            |                    |                         | Long, 10-bit, 4:2:2         | 48 kHz, 16 bit or 24 bit                  |          |
| HEVC   | 7680x4320  | 1.0                | 23.976p, 25p,<br>29.97p | HEVC<br>Long, 10-bit, 4:2:0 | 2/4-channel PCM, 48 kHz, 16 bit or 24 bit | 204      |
| HEVC   | 7680x4320  | 1.0                | 23.976p, 25p,<br>29.97p | HEVC<br>Long, 10-bit, 4:2:2 | 2/4-channel PCM, 48 kHz, 16 bit or 24 bit | 260, 520 |

## XAVC Proxy

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

## X-OCN

| Format | Frame Size | Bits | Frame Rate  | Quality    |
|--------|------------|------|---|------------|
| X-OCN  | 2048x1080  | 16   | 23.976p, 24p, 25p, 29.97p, 50p, 59.94p, HFR (max. 240)  | LT, ST, XT |
| X-OCN  | 3840x2160  | 16   | 23.976p, 24p, 25p, 29.97p, 50p, 59.94p, HFR (max. 120p) | LT, ST, XT |
| X-OCN  | 4096x1716  | 16   | 23.976p, 24p, 25p, 29.97p                               | LT, ST, XT |
| X-OCN  | 4096x2160  | 16   | 23.976p, 24p, 25p, 29.97p, 50p, 59.94p, HFR (max. 120p) | LT, ST, XT |
| X-OCN  | 4096x3024  | 16   | 23.976p, 24p, 25p, 29.97p,                              | LT, ST, XT |

| Format | Frame Size | Bits | Frame Rate                | Quality    |
|--------|------------|------|---------------------------|------------|
| X-OCN  | 4096x3432  | 16   | 23.976p, 24p, 25p, 29.97p | LT, ST, XT |
| X-OCN  | 6048x2534  | 16   | 23.976p, 24p, 25p, 29.97p | LT, ST, XT |
| X-OCN  | 6054x3192  | 16   | 23.976p, 24p, 25p, 29.97p | LT, ST, XT |
| X-OCN  | 5674x3192  | 16   | 23.976p, 24p, 25p, 29.97p | LT, ST, XT |
| X-OCN  | 6054x3272  | 16   | 23.976p, 24p, 25p, 29.97p | LT, ST, XT |
| X-OCN  | 6048x4032  | 16   | 23.976p, 24p, 25p         | LT, ST, XT |

## RAW

| Format    | Frame Size | Bits | Frame Rate   | Compression |
|-----------|------------|------|--|-------------|
| F5/F55RAW | 2048x1080  | 16   | 23.976p, 24p, 25p, 29.97p, 50p, 59.94p,<br>HFR (max. 240)  | SQ          |
| F5/F55RAW | 3840x2160  | 16   | 23.976p, 24p, 25p, 29.97p, 50p, 59.94p,<br>HFR (max. 120p) | SQ          |
| F5/F55RAW | 4096x2160  | 16   | 23.976p, 24p, 25p, 29.97p, 50p, 59.94p,<br>HFR (max. 120p) | SQ          |
| F65RAW    | 4096x2160  | 16   | 23.976p, 24p, 25p, 29.97p, 50p, 59.94p,<br>HFR (max. 120)  | Lite, SQ    |
| FS700RAW  | 2048x1080  | 16   | 23.976p, 25p, 29.97p, 50p, 59.94p, HFR<br>(max. 240)       | SQ          |
| FS700RAW  | 4096x2160  | 16   | 23.976p, 25p, 29.97p, 50p, 59.94p, HFR<br>(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,<br>24p, 25p, 29.97p, 50p,<br>59.94p | Lite(220), SQ (440) |

| Format | Frame Size | Bits | Color Space | Pixel Aspect Ratio | Frame Rate  | Compression (Mbps)  |
|--------|------------|------|-------------|--------------------|---|---------------------|
| 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,<br>29.97p, 25p,<br>23.976p | H.264/MPEG-4 AVC | Dolby AC-3 or PCM<br>2 channels, 48 kHz, 16 bit | 28 Mbps       |
| AVCHD     | 1920x1080  | 1.0                | 59.94i, 50i                             | H.264/MPEG-4 AVC | Dolby AC-3 or PCM<br>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<br>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<br>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<br>2 channels, 48 kHz, 16 bit        | 9 Mbps        |
| MPEG-2 SD | 720x576    | 1.0926 or 1.4568   | 25p, 50i                                | MPEG-2           | Dolby AC-3<br>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,<br>8-bit, 4:2:0                            | AVC,        | Mono, 48kHz,<br>AAC<br>compression<br>w/ AGC |          |
| H.264/MPEG-4 AVC | 1920x1080  | 16:9                | 24p, 25p, 30p,<br>48p, 50p, 60p<br>8-bit, 4:2:0             | AVC,        | Mono, 48kHz,<br>AAC<br>compression<br>w/ AGC |          |
| H.264/MPEG-4 AVC | 1920x1440  | 4:3                 | 24p, 25p, 30p,<br>48p<br>8-bit, 4:2:0                       | AVC,        | Mono, 48kHz,<br>AAC<br>compression<br>w/ AGC |          |
| H.264/MPEG-4 AVC | 3840x2160  | 16:9                | 23.97p, 24p, 25p,<br>29.97p, 50p,<br>59.94p<br>8-bit, 4:2:0 | AVC,        | Mono, 48kHz,<br>AAC<br>compression<br>w/ AGC |          |
| H.264/MPEG-4 AVC | 4096x2160  | 17:9                | 12p<br>8-bit, 4:2:0   | AVC,        | Mono, 48kHz,<br>AAC<br>compression<br>w/ AGC |          |
| H.264/MPEG-4 AVC | 2704x1524  | 16:9                | 25p, 30p<br>8-bit, 4:2:0                                    | AVC,        | Mono, 48kHz,<br>AAC<br>compression<br>w/ AGC |          |
| H.264/MPEG-4 AVC | 2704x1440  | 17:9                | 24p<br>8-bit, 4:2:0   | AVC,        | Mono, 48kHz,<br>AAC<br>compression<br>w/ AGC |          |
| H.264/MPEG-4 AVC | 1280x960   | 4:3                 | 48p, 100p<br>8-bit, 4:2:0                                   | AVC,        | Mono, 48kHz,<br>AAC<br>compression<br>w/ AGC |          |

| Format           | Frame Size | Screen Aspect Ratio | Frame Rate              | Video Codec             | Audio Codec   | Bit Rate |
|------------------|------------|---------------------|-------------------------|-------------------------|---|----------|
| H.264/MPEG-4 AVC | 848x480    | 16:9                | 240p                    | AVC,<br>8-bit,<br>4:2:0 | Mono, 48kHz,<br>AAC<br>compression<br>w/ AGC        |          |
| H.264/MPEG-4 AVC | 640x480    | 4:3                 | 25p, 30p                | AVC,<br>8-bit,<br>4:2:0 | Mono, 48kHz,<br>AAC<br>compression<br>w/ AGC        |          |
| H.264/MPEG-4 AVC | 240x180    |                     | 25p, 29.97p             | AVC,<br>8-bit,<br>4:2:0 | 2 channels, 16<br>bit, AAC<br>compression<br>w/ AGC |          |
| H.264/MPEG-4 AVC | 320x180    |                     | 25p, 29.97p             | AVC,<br>8-bit,<br>4:2:0 | 2 channels, 16<br>bit, AAC<br>compression<br>w/ AGC |          |
| H.264/MPEG-4 AVC | 320x240    |                     | 25p, 29.97p             | AVC,<br>8-bit,<br>4:2:0 | 2 channels, 16<br>bit, AAC<br>compression<br>w/ AGC |          |
| H.264/MPEG-4 AVC | 480x270    |                     | 25p, 29.97p             | AVC,<br>8-bit,<br>4:2:0 | 2 channels, 16<br>bit, AAC<br>compression<br>w/ AGC |          |
| H.264/MPEG-4 AVC | 640x480    |                     | 25p, 29.97p             | AVC,<br>8-bit,<br>4:2:0 | 2 channels, 16<br>bit, AAC<br>compression<br>w/ AGC |          |
| H.264/MPEG-4 AVC | 1280x720   |                     | 50p, 60p,<br>100p, 120p | AVC,<br>8-bit,<br>4:2:0 | 2 channels, 16<br>bit, AAC<br>compression<br>w/ AGC |          |
| H.264/MPEG-4 AVC | 1280x960   |                     | 48p, 100p, 120p         | AVC,<br>8-bit,          | 2 channels, 16<br>bit, AAC                          |          |

| Format                 | Frame Size | Screen Aspect Ratio | Frame Rate                            | Video Codec       | Audio Codec                                | Bit Rate |
|------------------------|------------|---------------------|---------------------------------------|-------------------|--|----------|
|                        |            |                     |                                       | 4:2:0             | compression w/ AGC                         |          |
| H.264/MPEG-4 AVC       | 1920x1080  |                     | 24p, 25p, 29.97p, 48p, 50p, 60p       | AVC, 8-bit, 4:2:0 | 2 channels, 16 bit, AAC compression w/ AGC |          |
| H.264/MPEG-4 AVC       | 1920x1440  |                     | 24p, 25p, 29.97p, 48p                 | AVC, 8-bit, 4:2:0 | 2 channels, 16 bit, AAC compression w/ AGC |          |
| H.264/MPEG-4 AVC       | 2704x1524  |                     | 24p, 25p, 29.97p                      | AVC, 8-bit, 4:2:0 | 2 channels, 16 bit, AAC compression w/ AGC |          |
| H.264/MPEG-4 AVC       | 3840x2160  |                     | 23.97p, 24p, 25p, 29.97p, 50p, 59.94p | AVC, 8-bit, 4:2:0 | 2 channels, 16 bit, AAC compression w/ AGC |          |
| H.264/MPEG-4 AVC       | 4096x2160  |                     | 12p                                   | AVC, 8-bit, 4:2:0 | 2 channels, 16 bit, AAC compression w/ AGC |          |
| H.264/MPEG-4 AVC (HVO) | 720x480    |                     | 59.94i                                | AVC, 8-bit, 4:2:0 | 2 channels, 16 bit, AAC compression w/ AGC |          |
| H.264/MPEG-4 AVC (HVO) | 720x576    |                     | 50i                                   | AVC, 8-bit, 4:2:0 | 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: MOV or 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<br>(subsampled<br>to 1440x1080) | 4:2:2 8 bit      | 59.94i @ 145 Mbps, 50i @ 120 Mbps   |
| 1920x1080  | Avid DNxHD® 100<br>(subsampled<br>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  |

| Frame Size | Family Name                                      | Color Space/Bits | Frame Rate/Maximum Bit Rate  |
|------------|--|------------------|--|
| 1280x720   | Avid DNxHD®<br>145                               | 4:2:2 8 bit      | 59.94p @ 145 Mbps, 50p @ 115 Mbps, 29.97p @ 75<br>Mbps, 25p @ 60 Mbps, 23.976p @ 60 Mbps |
| 1280x720   | Avid DNxHD®<br>100<br>(subsampled<br>to 960x720) | 4:2:2 8 bit      | 59.94p @ 100 Mbps, 50p @ 85 Mbps, 29.97p @ 50<br>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,<br>23.976p                             | 422 (proxy), 422 (LT), 422, 422 (HQ),<br>4444, 4444 XQ (Windows only) |
| ProRes | 720x576    | 50i, 25p   | 422 (proxy), 422 (LT), 422, 422 (HQ),<br>4444, 4444 XQ (Windows only) |
| ProRes | 960x720    | 60p, 59.94p, 50p, 30p, 29.97p,<br>24p, 23.976p                   | 422 (proxy), 422 (LT), 422, 422 (HQ),<br>4444, 4444 XQ (Windows only) |
| ProRes | 1280x720   | 60p, 59.94p, 50p, 30p, 29.97p,<br>24p, 23.976p                   | 422 (proxy), 422 (LT), 422, 422 (HQ),<br>4444, 4444 XQ (Windows only) |
| ProRes | 1280x1080  | 59.94i, 30p, 29.97p, 24p,<br>23.976p                             | 422 (proxy), 422 (LT), 422, 422 (HQ),<br>4444, 4444 XQ (Windows only) |
| ProRes | 1440x1080  | 59.94i, 50i, 30p, 29.97p, 25p,<br>24p, 23.976p                   | 422 (proxy), 422 (LT), 422, 422 (HQ),<br>4444, 4444 XQ (Windows only) |
| ProRes | 1920x1080  | 60p, 59.94p, 50p, 59.94i, 50i,<br>30p, 29.97p, 25p, 24p, 23.976p | 422 (proxy), 422 (LT), 422, 422 (HQ),<br>4444, 4444 XQ (Windows only) |
| ProRes | 2048x1080  | 60p, 59.94p, 50p, 30p, 29.97p,<br>25p, 24p, 23.976p              | 422 (proxy), 422 (LT), 422, 422 (HQ),<br>4444, 4444 XQ (Windows only) |
| ProRes | 2048x1556  | 60p, 59.94p, 50p, 30p, 29.97p,<br>25p, 24p, 23.976p              | 422 (proxy), 422 (LT), 422, 422 (HQ),<br>4444, 4444 XQ (Windows only) |
| ProRes | 3840x2160  | 60p, 59.94p, 50p, 30p, 29.97p,<br>25p, 24p, 23.976p              | 422 (proxy), 422 (LT), 422, 422 (HQ),<br>4444, 4444 XQ (Windows only) |
| ProRes | 4096x2160  | 60p, 59.94p, 50p, 30p, 29.97p,<br>25p, 24p, 23.976p              | 422 (proxy), 422 (LT), 422, 422 (HQ),<br>4444, 4444 XQ (Windows only) |
| ProRes | 5120x2160  | 60p, 59.94p, 50p, 30p, 29.97p,<br>25p, 24p, 23.976p              | 422 (proxy), 422 (LT), 422, 422 (HQ),<br>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 |

## DPX

| Format         | Frame Size | Frame Rate |
|----------------|------------|------------|
| Image Sequence | Any        | Any        |

## OpenEXR

| Format         | Frame Size | Frame Rate |
|----------------|------------|------------|
| Image Sequence | Any        | Any        |

## Supported video devices

Catalyst Prepare supports the following video volumes and devices:

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



# Chapter 4

## Playing media

When you double-click a file in Organize mode, the file is loaded in Edit mode, where you can preview the file, log mark in and mark out points, and apply color correction. For more information about using Organize mode, please see ["Organizing media in a library" on page 15](#).



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 Organize mode, the file is loaded in Edit mode, where you can preview the file, log mark in and mark out points, and apply color correction. For more information about using Organize mode, please see ["Organizing media in a library" on page 15](#).

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 Prepare options" on page 157](#).



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.



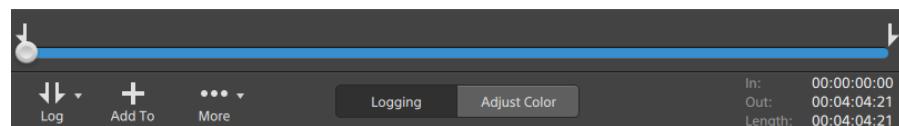
An on a thumbnail indicates that a clip spans multiple discs on an Optical Disc Archive volume. When you play a clip that spans discs, an indicator is displayed in the timeline to identify the point where the clip switches discs:



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 Prepare options" on page 157](#).

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:



You can use the shuttle control on the transport toolbar to seek forward or backward or adjust the playback speed. For more information, see ["Playing media" on page 90](#).

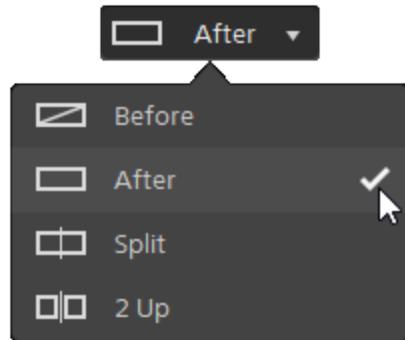


For information about flipping and rotating video, enabling anamorphic desqueezing, and displaying safe zone and mask guides, please see ["Playing media" on page 94](#).

## Changing the preview mode

When you're adjusting color correction, you can change the preview mode to allow you to compare adjusted clips to the original source. For more information, see ["Editing Color Adjustments controls" on page 121](#).

Click the **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.



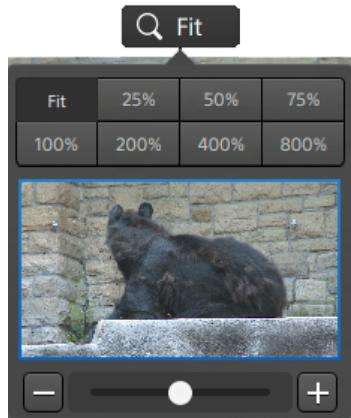
- **Before**: full-frame video is displayed in its original state.
- **After**: full-frame video is displayed in its color-corrected state.
- **Split**: a single frame is displayed in a split-screen view with the original video on the left and the color-corrected video on the right.
  - 💡 If you want to move the split location, hover over the preview frame. When the split point is displayed, you can drag the handles at the top or 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.

## 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.



When using a device other than your CPU, high-quality deinterlacing and upscaling are applied to convert SD and HD sources to modern progressive HD and UHD assets.

- High-quality deinterlacing is applied to interlaced source media when playback is paused, during transcoding, and during playback when the **Playback Settings Speed/Quality** setting is set to **Quality**.
- Please note that some systems with limited GPU memory are not supported.

### 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.



If XAVC S and XAVC HS playback is not smooth, we recommend using the **All Frames** playback setting.

- 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 <b>Mark In</b> 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 <b>Mark Out</b> position or the end of the file. |
| Next Frame     | Moves the playback position indicator one frame or field to the right.   |

| Button          | Description   |
|-----------------|---|
| ▶ Go to End     | Moves the playback position indicator to the <b>Mark Out</b> position. Click again to move to the end of the selected file.   |
| ◀ Loop Playback | Plays only the area between the <b>Mark In</b> and <b>Mark Out</b> points in a continuous mode.<br><br>For more information, see "Marking in and out points for playback" on page 91. |

## 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

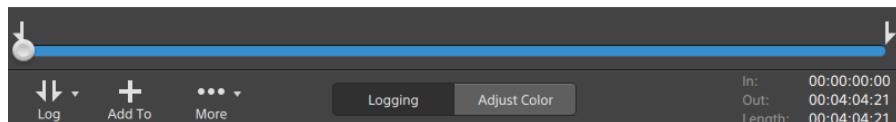
If you want to play only a portion of a video, you can use the **Mark In** and **Mark Out** buttons to select the portion of the video you want to play.

 If mark in and out points have been set in an MXF clip, Catalyst Prepare will read the mark in/out points from metadata. After you add a clip to the library, you can choose whether to synchronize mark in/out points with the source clip:

- If you want to save mark in and mark out points with the library, clear the **Synchronize mark points with file** check box on the Summary tab in the Inspector. For more information, see ["Viewing and editing metadata" on page 97](#).
- When the **Synchronize mark points with file** check box is cleared, mark in and mark out points for MXF clips are saved back to the source media when you edit them in Catalyst Prepare, and your library will be updated if the mark in and out points are edited on disk.

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

 You can also use the Preview pane in Organize mode to adjust mark points.
3. Click the **Logging** button at the bottom of the Catalyst Prepare 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.

 The **Mark In** and **Mark Out** buttons are displayed under a **Log** button when the Catalyst Prepare window is too narrow to display the full toolbar.
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 Prepare 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 97.

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 97.

When browsing your library, an indicator is displayed to represent a clip's mark in/out points:

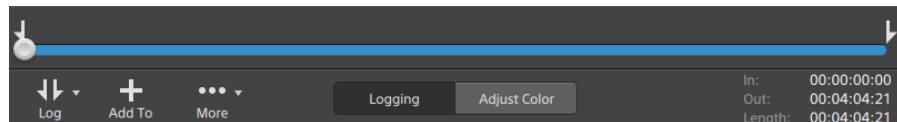


## Creating a snapshot of a frame

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



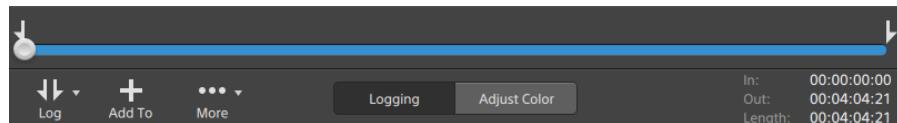
4. Click the **More** button and choose **Copy snapshot to clipboard**.

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 "[Playing media](#)" on page 85.

## Saving a frame to a file

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

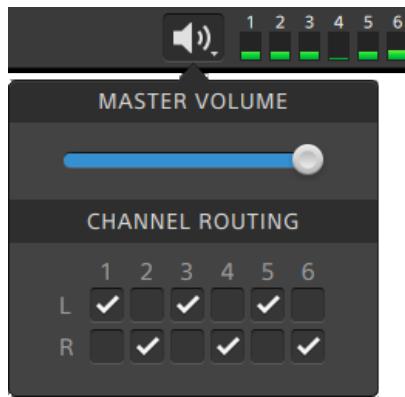
The current frame is saved at its current resolution. For example, if you want to save a full-resolution frame, set your zoom level to 100%.

You can change the size of the image using the magnifying glass button above the video preview. For more information, see "[Playing media](#)" on page 85.

You can save the location and format used for saving the file in Options. For more information, see "[Editing Catalyst Prepare options](#)" on page 157.

## Adjusting and monitoring audio levels

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



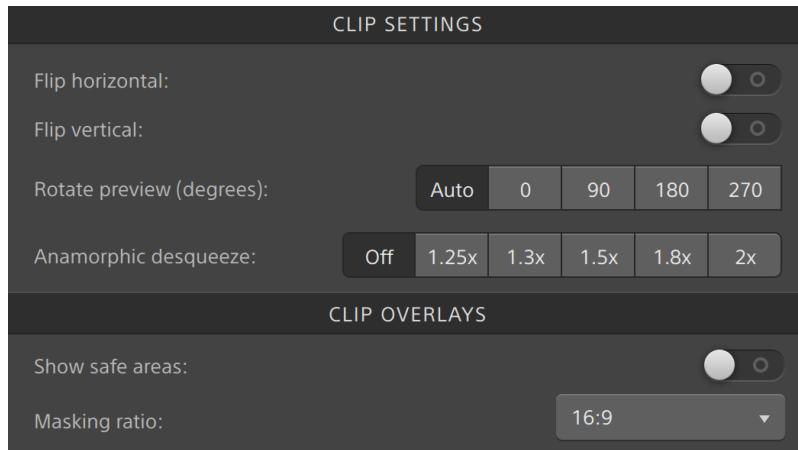
Drag the **Master Volume** fader to increase or decrease audio levels. During preview, the meters allow you to monitor the level of each audio channel.

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 Prepare supports only stereo output devices.

## Editing clip settings

Click the button above the video preview to edit clip playback settings.





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

For more information, see "[Exporting media from a library](#)" on page 24.

| Item                                      | Description  |
|---|--|
| <b>Flip horizontal</b>                    | Click the <b>Flip horizontal</b> or <b>Flip vertical</b> switch to flip the left-to-right or top-to-bottom orientation of the video frame.   |
| <b>Flip vertical</b>                      |  |
| <b>Rotate preview</b><br><b>(degrees)</b> | Select a button to rotate the video preview image.<br>Select <b>Auto</b> to use the clip-rotation metadata setting if available, or select <b>0, 90, 180, or 270</b> to specify the desired clip rotation.   |
| <b>Anamorphic desqueeze</b>               | Select a desqueeze button to apply anamorphic stretching to widescreen video, or click <b>Off</b> to turn off stretching.  |
| <b>Show safe areas</b>                    | Click the switch to enable safe area guides and a center point in the video preview.<br><br>When <b>Show safe areas</b> is enabled, Catalyst Prepare displays rectangles marking 90% (action safe area) and 80% (title safe area) of the frame to serve as guidelines for framing.<br><br> Overlays are not displayed when using full-screen preview.   |
| <b>Masking ratio</b>                      | Choose a setting from the drop-down list to enable shading in the video preview to indicate how your content will appear.<br><br> Overlays are not displayed when using full-screen preview.<br><br>Aspect markers from Sony cameras are supported and preserved even when the clip is rotated.<br><br>Select <b>Use masking ratio</b> from the <b>Crop type</b> drop-down list in the Export pane if you want to preserve the selected masking ratio when transcoding.<br><br>For more information, see " <a href="#">Exporting media from a library</a> " on page 24. |



# Chapter 5

## Working with clips

Catalyst Prepare gives you control over your individual media clips.

### Viewing and editing metadata

When you're in Organize or Edit 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 or configure audio channels.

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

 When a file contains GPS metadata, you can click the **Latitude** and **Longitude** values to display a map using the map service selected in the **Open GPS links with** drop-down list in the Options menu. Links are not available when multiple clips are selected.

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 Catalyst creates new non-realtime (NRT) metadata during MXF copy operations, metadata for discontinuous timecode and essence marks is created.



New non-realtime metadata is not created when the source clip contains NRT metadata.

### Setting the frame rate for a DPX or OpenEXR image sequence

1. Select a DPX or OpenEXR image sequence in the Media Browser.
2. Click the Summary tab.
3. Choose a value from the **Frame rate** drop-down list boxes to set the frame rate for playing the selected image sequence.

## 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 91.



If you want to save mark in and mark out points with the library, clear the **Synchronize mark points with file** check box.

When the **Synchronize mark points with file** check box is cleared, mark in and mark out points for MXF clips are saved back to the source media when you edit them in Catalyst Prepare, and your library will be updated if the mark in and out points are edited on disk.

## Editing summary metadata

1. Click the Summary tab.

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

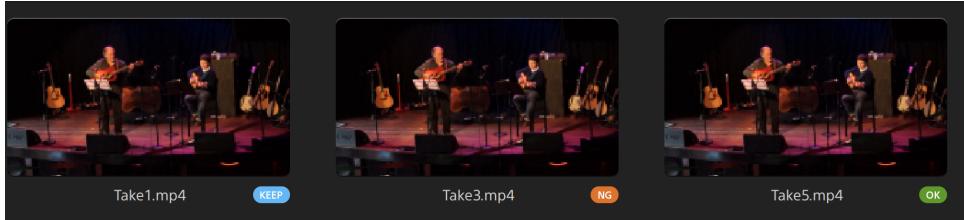
2. In the Logging section of the Summary tab, edit the **Flag**, **Title**, **Creator**, and **Description** settings as needed.

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.

 When a clip has **Flag** metadata, an **OK**, **NG** (no good), or **Keep** indicator is displayed in Organize mode:



|         | Date Modified               | Size   | Start Time  | Length      | Frame Size  | Frame Rate | Flag |
|---------|-----------------------------|--------|-------------|-------------|-------------|------------|------|
| 201...  | Mon May 20 06:54:18 201...  | 133 MB | 00:00:00:00 | 00:04:01:04 | 1920 x 1080 | 23.976p    | KEEP |
| 2019... | Mon May 20 07:02:14 2019... | 140 MB | 00:00:00:00 | 00:04:00:04 | 1920 x 1080 | 23.976p    | NG   |
| 201...  | Mon May 20 21:00:29 201...  | 180 MB | 00:00:00:00 | 00:04:00:04 | 1920 x 1080 | 23.976p    | OK   |

 You can also use **Flag** metadata to filter the contents of the Media Browser. For more information, see "[Filtering clips](#)" on page 57.

## Assigning audio channels

Assigning audio channels allows you to set up your clips for use in Catalyst Edit.

 The Channel Assignment controls are not editable when multiple files with differing channel counts are selected.

Channel Assignment controls are not available when no library is opened. For more information, see "[Working with libraries](#)" on page 9.

Channel Assignment controls are not available when a spanned clip  is selected.

Channel Assignment controls are not available when editing a storyboard.

Click the speaker icon to turn a channel on  or off .

Click the **Mono/Stereo** button to indicate whether a channel is a mono channel or part of a stereo pair. Enabling **Stereo** will pair the channel with the next channel in the list.

Type a name in the edit box to identify the channel. For example, you might type **Lav1** to identify audio from a lavalier microphone.



If you want to save the current channel configuration as a preset, click the **Channel Tools** icon and choose **Save preset** from the menu.

If you want to apply a preset channel configuration to the selected file, as a preset, click the **Channel Tools** icon and choose **Load preset** from the menu.

If you want to copy channel assignments between files, select the source file, click the **Channel Tools** icon , and choose **Copy** from the menu. Next, select the destination files, click the **Channel Tools** icon , and choose **Paste** from the menu.

If you want to set all of a clip's channels at once, click the **Channel Tools** button and choose **Set all to mono**, **Set all to stereo**, or **Reset**.

## 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 clips with non-realtime (NRT) metadata and requires write access to the volume.

Editing essence marks is not available when FTP-based clips are selected.

## 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.



Adding and editing essence marks is supported only for clips with non-realtime (NRT) metadata and requires write access to the volume.

## 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  , and then choose **Delete** to delete the selected mark point, or choose **Delete All** to delete all mark points.



The **Delete** command is not available when FTP-based clips are selected.

## Exporting custom metadata

Catalyst Prepare allows you to include custom metadata when exporting clips.

### Defining the metadata you want to export

To enable custom metadata export, you'll create a configuration file named `customMetadataExport.json` in the following folder:

1. Close Catalyst Prepare.
2. Using a text editor, create your configuration file. The file should be structured like the following example to include the key, value pairs that you want to make available as custom metadata. The key is the metadata item, and the value will be used as the default value:

```
{  
  "Slug": "Election",  
  "Type": "News",  
  "Source": "",  
  "Shot Date": ""  
}
```

3. Save the file in the following folder:

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

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

4. Start Catalyst Prepare. The application will detect the `customMetadataExport.json` file during startup and enable custom metadata export.

## Exporting custom metadata

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

The left pane allows you to navigate the folders in your library, 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 **Export** button  at the top of the Catalyst Prepare window.
3. Enable the **Use advanced settings** switch in the Export pane.
4. Select the **Add custom metadata** check box. An edit box is displayed for each metadata item you defined in your customMetadataExport.json file.

Type the desired value for each metadata item that you want to include for the rendered file. Custom metadata is saved in a sidecar .json file.

Use the controls in the Export pane to choose a destination and format for your exported file. For more information about the controls, please see "[Exporting media from a library](#)" on page [24](#).

 If the customMetadataExport.json file is empty or incorrectly formatted, the **Add custom metadata** check box is unavailable. Please see "[Defining the metadata you want to export](#)" on page [101](#).

## 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.

If you need to create a project for other media types and don't need to write back to a camera or device, you can create a storyboard. For more information, see "[Working with storyboards](#)" on page 106.

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

 Clip lists and spanned clips are not supported in Catalyst Prepare libraries.

## Creating a clip list

1. Click the **Organize** button at the top of the Catalyst Prepare 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 Prepare 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 Prepare window and choose **New empty clip list** from the menu.
5. Type a name for the new clip list and click **OK**.
6. Catalyst Prepare loads your new clip list in View mode.

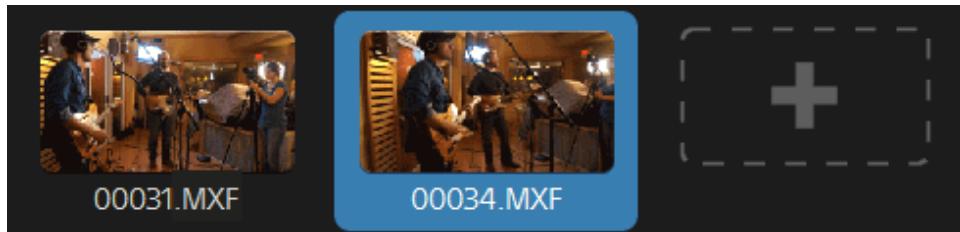
## Opening a clip list

1. Click the **Organize** button at the top of the Catalyst Prepare 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 Prepare 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.

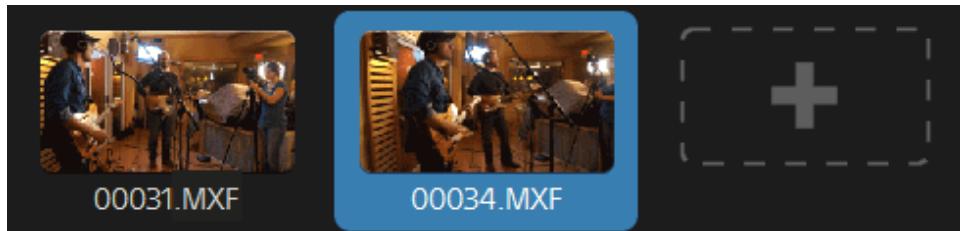


## Adding clips

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 Prepare window to switch to Clip List mode.

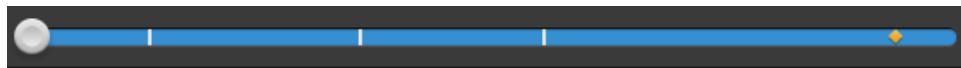
You can only add clips from the folder where the clip list (.smi) file is saved.

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 Prepare 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 Prepare window to switch to Clip List mode.

Select a clip and click the **Remove** button  at the bottom of the Catalyst Prepare 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 Prepare 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 91.

## Viewing metadata for clip lists

When you're in Organize or Edit 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 97.

## Writing a clip list back to a device

Select a clip list in Organize mode and click the **Copy** button  at the top of the Catalyst Prepare window to write a clip list back to a device. For more information, see "Exporting media from a library" on page 24.

## Working with storyboards

You can create and edit storyboards to create a video project that is comprised of multiple, shorter video clips.

-  Storyboards are saved with the current media library.
-  When no library is opened, storyboard support is not available. For more information, see "[Creating or opening a library](#)" on page 9.

If you need to create a project that can be written back to a camera or device, you can create a PD-EDL clip list. For more information, see "[Working with clip lists](#)" on page 102.

### Creating a storyboard

1. Click the **Organize** button at the top of the Catalyst Prepare window.
2. Navigate to the folder 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 **Storyboard** button  at the bottom of the Catalyst Prepare window and choose **Create from selection** from the menu.
  -  The **Create from selection** command is not available when a clip list, spanned clip () , or an FTP-based clip is selected.
  -  If you want create a storyboard list without choosing clips, click the **Storyboard** button at the bottom of the Catalyst Prepare window and choose **Create empty** from the menu.
5. Type a name for the storyboard and click **OK**.

### Opening a storyboard

1. Click the **Organize** button at the top of the Catalyst Prepare window.
2. Click a storyboard in the Storyboards section of the left pane. The storyboard's clips are displayed in the center pane.
3. Click the **Edit** button to load your storyboard in Edit mode.



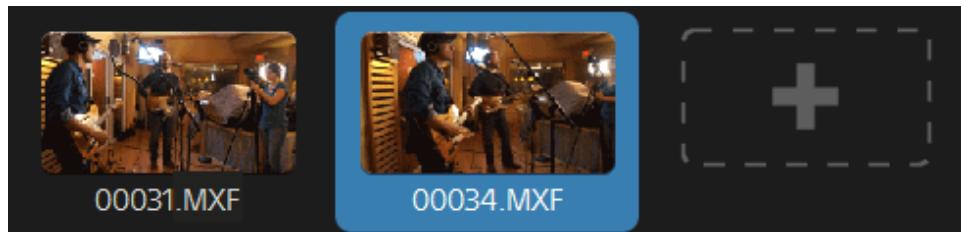
When viewing a storyboard, indicates spanned clips from the same volume, and indicates spanned clips from different volumes.



## Rearranging clips

In Edit mode, you can add, remove, and arrange clips.

You can drag clips within the storyboard to rearrange them. Drag a clip and drop it to a new position to move it.



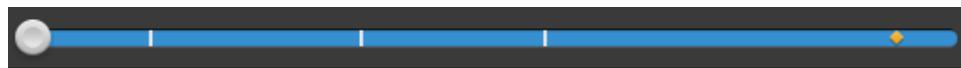
## Adding clips

1. Click the **Organize** button at the top of the Catalyst Prepare window.
2. Click a storyboard in the Storyboards section of the left pane. The storyboard's clips are displayed in the center pane.



When the **Add To** button at the bottom of the Catalyst Prepare window is selected, you can quickly add a clip to the selected storyboard by selecting it and clicking the **Add** button (or pressing Enter). Use the **Add clip to storyboard** drop-down list to select a storyboard.

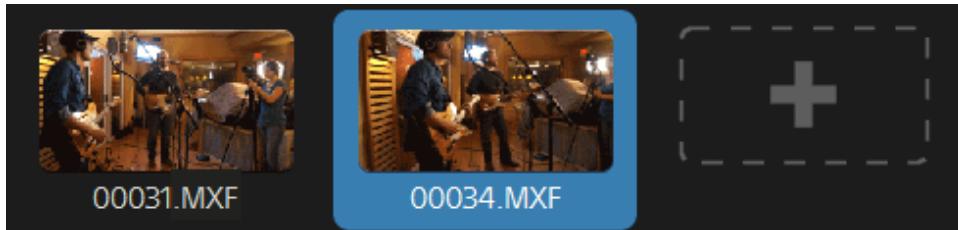
When you add a clip, a vertical line is added to the timeline to indicate where each clip begins:



You can also drag clips from the Organize pane to a bin or storyboard in the Places pane.

3. Click the **Edit** button to load your storyboard in Edit mode.
4. Click the add button at the end of the clip list or the **Add** button at the bottom of the Catalyst Prepare window to display a media browser, where you can select additional clips for your

storyboard.



## Removing clips

1. Click the **Organize** button at the top of the Catalyst Prepare window.
2. Click a storyboard in the Storyboards section of the left pane. The storyboard's clips are displayed in the center pane.
3. Click the Edit button to load your storyboard in Edit mode.

Select a clip and click the **Remove** button  at the bottom of the Catalyst Prepare 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 or Adjust Color mode. Use Storyboard mode for clip list editing.

1. Click the **Organize** button at the top of the Catalyst Prepare window.
2. Click a storyboard in the Storyboards section of the left pane. The storyboard's clips are displayed in the center pane.
3. Click the Edit button to load your storyboard in Edit mode.
4. Click the **Clip** button at the bottom of the Catalyst Prepare window to switch to Clip mode.

 You can also double-click a clip in Storyboard mode to switch to Clip mode.

5. Select the clip you want to edit.
6. 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 91.



Editing a storyboard clip's mark in and out points does not affect other storyboards that use the same clip.

## Adjusting color correction for clips

In Adjust Color mode, you can adjust color correction settings for each clip in a storyboard.



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

1. Click the **Organize** button at the top of the Catalyst Prepare window.
2. Click a storyboard in the Storyboards section of the left pane. The storyboard's clips are displayed in the center pane.
3. Click the **Edit** button to load your storyboard in Edit mode.
4. Click the **Adjust Color** button at the bottom of the Catalyst Prepare window to switch to Adjust Color mode. In this mode, Catalyst Prepare displays a waveform/histogram/vectorscope monitor, a video preview, and color controls that you can use to adjust the appearance of your video.
5. Select the clip you want to edit.
6. Click the **Inspector** button  in the toolbar to display the Inspector pane if it isn't already visible. In the Adjust Color workspace, the Inspector pane provides controls that you will use to adjust color-grading settings.

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 Adjustments controls" on page 121](#).

## Previewing storyboards

When you double-click a storyboard in Organize mode, the storyboard is loaded in Edit mode, where you can preview the file in the same way you preview other clips. For more information, see ["Playing media" on page 85](#).

You can select a clip to set the starting point for playback, and the clip selection will follow the cursor during playback.

## Exporting storyboards

When you select a storyboard in Organize mode, you can export the storyboard in one of three ways:

- You can render each of the storyboard's clips to a new format.
- You can render the storyboard as a single media file.
- You can export the storyboard as a project for use in another video editor.

For more information, see ["Exporting media from a library" on page 24](#), ["Exporting media from a library" on page 24](#), or ["Exporting media from a library" on page 24](#).

## Using Catalyst Prepare storyboards in Catalyst Edit

Catalyst Edit provides native support for Catalyst Prepare storyboards:

1. In the Catalyst Edit Media Browser, double-click a .cpreplib file (). When you open a Catalyst Prepare library, the Media Browser displays all the media contained in that library sorted in bins.  
 The default location for .cpreplib files is C:\Users\<username>\Videos\ on Windows and /Users/<username>/Movies/ on macOS.
2. Drag a storyboard bin to the Catalyst Edit timeline to add it.

## Viewing metadata for storyboards

Click the **Inspector** button  in the toolbar to display metadata in the Inspector pane. The Inspector pane displays information about the selected subclip.

For more information, see ["Viewing and editing metadata" on page 97](#).

## Renaming a storyboard

1. Click the **Organize** button at the top of the Catalyst Prepare window.
2. Click a storyboard in the Storyboards section of the left pane. The storyboard's clips are displayed in the center pane.
3. Click the **Storyboard** button  at the bottom of the Catalyst Prepare window and choose **Rename** from the menu.
4. Type a name for the storyboard and click **OK**.

## Deleting a storyboard

1. Click the **Organize** button at the top of the Catalyst Prepare window.
2. Click a storyboard in the Storyboards section of the left pane. The storyboard's clips are displayed in the center pane.
3. Click the **Storyboard** button  at the bottom of the Catalyst Prepare window and choose **Delete** from the menu.

## Working with EDLs

You can use Catalyst Prepare to import an EDL.

### Importing an EDL

1. Click the **Tools** button  at the bottom of the Catalyst Prepare 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**.

## Catalog export

Catalyst Prepare can export a PDF or CSV (comma-separated value) list of clips in a folder.



The **Generate PDF catalog** and **Generate CSV catalog** commands are not available for clips on FTP devices, XDCAM Station volumes via CIFS, XDCAM decks, XDCAM Drive units, or Optical Disc Archive volumes.

### Generating a PDF catalog

1. Click the **Organize** button at the top of the Catalyst Prepare window to view the Media Browser.
2. Select the folder or clips you want to catalog.
3. Perform either of the following actions to generate a catalog from the selected folder:
  - Click the **Tools** button at the bottom of the Catalyst Prepare window and choose **Generate PDF catalog** from the menu.
  - Right-click the folder and choose **Generate PDF catalog** from the shortcut menu.

The Export Catalog dialog is displayed.

4. In the **Title** box, type a title to identify your catalog. This title will be displayed at the top of the generated catalog.
5. In the **Description** box, type a description of the catalog. The description will be displayed below the title in the generated catalog and can help you identify the clips in the catalog.

6. In the **Export PDF to** box, type the path to the folder where you want to save the generated catalog, or click **Browse** to choose a folder.
  7. Select a **Layout** radio button to choose the appearance of the catalog:
    - **Text with 1 thumbnail:** Displays metadata text with a thumbnail of the first frame.
    - **Text with 3 thumbnails:** Displays metadata text with thumbnails of the first, middle and end frames.The space below the radio buttons displays a sample of the selected layout.
8. In the **Metadata** list, select the check boxes for the metadata values you want to include in the catalog.

Click the **Tools** button  at the top of the Metadata list and choose **Reset to default** or **Clear all** to clear the current selection.
  9. Click **Export** to generate the catalog with the selected content.

## Generating a CSV catalog

1. Click the **Organize** button at the top of the Catalyst Prepare window to view the Media Browser.
2. Select the folder or clips you want to catalog.
3. Perform either of the following actions to generate a catalog from the selected folder:
  - Click the **Tools** button  at the bottom of the Catalyst Prepare window and choose **Generate CSV catalog** from the menu.
  - Right-click the folder and choose **Generate CSV catalog** from the shortcut menu.The Export Catalog dialog is displayed.
4. Navigate to the folder where you want to save the CSV file and type a file name in the **File name** box.
5. Click **OK** to generate the catalog with the selected content.

## Combining relay clips

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

A relay clip is a continuous recording that spans multiple media cards.

 Before combining relay clips, copy them to a single folder. For more information, see "["Exporting media from a library" on page 24](#).

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 Prepare window and choose **Combine relay clips**. The Combine Relay Clips dialog is displayed.



The **Combine relay clips** command is not available when FTP-based clips are selected.

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 Prepare to synchronize audio in 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 Prepare streamlines the process of editing multicamera video in a nonlinear editor.

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

Progress is displayed while the clips are analyzed and synchronized.



The **Synchronize multicam clips** command is not available when FTP-based clips are selected.

## Stabilizing clips

Catalyst Prepare allows you to use metadata from clips to stabilize the image.

1. Click the **Organize** button at the top of the Catalyst Prepare window to view the Media Browser.
  2. Select the clip you want to stabilize. An on a thumbnail indicates a clip that contains stabilization metadata.
- 
- The stabilize icon is not displayed for clips on FTP devices, XDCAM Station volumes via CIFS, XDCAM decks, XDCAM Drive units, or Optical Disc Archive volumes.



For information about camera settings for enabling stabilization using metadata, please see [Information on Software Applications](#).

Clip stabilization is not supported when changing camera settings or detaching the lens during clip recording.

3. Perform any of the following actions to display the Correct clip workspace:

- Click the **Stabilize** button  at the bottom of the Catalyst Prepare window.
- Right-click the clip in the **Organize** pane and choose **Stabilize clip** from the shortcut menu.



The **Stabilize** button  is not available when multiple clips are selected.

When the Catalyst Prepare window is resized, the **Adjust color** , **Lens breathing compensation** , and **Stabilize clip**  buttons are available in the **Adjustments** menu .

4. Use the Correct clip workspace to preview and adjust stabilization settings for the selected clip:

- a. Set the Mark In/Out points to indicate the portion of the clip you want to correct. For more information, see ["Marking in and out points for playback" on page 91](#).
- b. Choose a **Stabilization mode** setting:

- Select the **Auto** button in the Inspector to adjust stabilization automatically.

| Item  | Description  |
|---|--|
| <b>Minimum cropping ratio</b>   | Drag the slider to set the amount of cropping that can be applied to stabilize a clip.<br><br>This setting is persisted when changing the selected clip or exiting the Correct clip workspace.   |
|   |  When stabilizing a clip using a <b>Minimum crop resolution</b> setting that is too large, clips with significant camera shake may exhibit a black border around the frame. We recommend using a setting that is close to the default cropping ratio value in manual mode. To check the default manual cropping ratio, click the <b>Manual</b> button and double-click the <b>Cropping ratio</b> slider handle to reset the setting to its default. |
| <b>Corrected crop resolution</b>  | Displays the dimensions of the stabilized frame after cropping is applied.   |
| <b>Minimum crop resolution</b>  | Displays the minimum dimensions of the stabilized frame based on the <b>Minimum cropping ratio</b> setting.  |
| ◦ Select the <b>Manual</b> button if you want to adjust stabilization settings: |  |
| Item  | Description  |
| <b>Cropping ratio</b>   | Drag the slider to set the maximum amount of cropping that can be applied to stabilize a clip.<br><br>This setting is persisted when changing the selected clip.   |
|   |  When stabilizing a clip using a <b>Cropping ratio</b> setting larger than the default value, clips with significant camera shake may exhibit a black border around the frame. We recommend using a <b>Cropping ratio</b> setting that is close to the default value. You can double-click the slider handle to reset the setting to its default.   |
| <b>Corrected crop resolution</b>  | Displays the dimensions of the stabilized frame after cropping is applied.   |

1. Click the **Analyze** button to analyze the selected clip and update the preview to show the stabilized clip.

After analysis, the Output summary section of the Info panel displays the corrected crop resolution.



If you change the selected clip, the preview will indicate that the clip has not been analyzed.

Click the **Analyze** button at the bottom of the workspace to analyze the selected clip and update the preview to show the corrected clip.

2. Click the **Before/After** button at the top of the video preview to choose a preview mode so you can compare your original and stabilized video before applying the changes, and then use the transport controls below the timeline to preview the clip.

- **Before**: the clip is displayed in its original state.
- **After**: the cropped and stabilized clip is displayed.
- **2 Up**: two full frames are displayed in a split-screen view with the original video on the left and the stabilized video on the right.

3. To save a clip with the stabilization settings, click the **Export** button at the top of the Catalyst Prepare window, and use the Export pane to choose a destination and format for your exported files. Click the **Export** button at the bottom of the Export pane to start exporting the selected clip.

If multiple clips are selected, the **Export** button at the bottom of the Export pane is displayed as **Batch Export**. Click to display a confirmation dialog that lists all selected clips. You can select or clear check boxes to add or remove clips from the selection. Click **OK** to begin exporting the selected clips using the current settings.

For more information about the controls, please see "[Exporting media from a library](#)" on page 24.

## Stitching clips

Catalyst Prepare allows you to use combine several clips to create a single clip.

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

The left pane allows you to navigate the folders in your library, 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 **Export** button  at the top of the Catalyst Prepare window.
3. Enable the **Use advanced settings** switch in the Export pane.
4. Select the **Stitch clips** check box to combine the selected clips into a single continuous clip. The order of the clips in the new clip will match the order they are displayed in Organize or Edit mode.

If you want the new clip to include continuous timecode based on the source clips' timecode, select the **Use continuous timecode** check box. Clip order will be adjusted as needed, and black frames will be added between clips to ensure the timecode in the new clip is not interrupted.



**Use continuous timecode** is not available if the selected clips contain overlapping timecode, if interlaced and progressive clips are selected, if clips with mixed frame sizes or frame rates are selected, or if clips with drop and non-drop timecode are selected.

**Use continuous timecode** can change the order of the selected clips. For example, assume you selected the following three clips:

- 1.mxf 00:00:10:00 - 00:00:20:00
- 2.mxf 00:00:40:00 - 00:00:50:00
- 3.mxf 00:00:30:00 - 00:00:40:00

When **Use continuous timecode** is not selected, the clips would be rendered in the following order: 1.mxf, 2.mxf, 3.mxf.

When **Use continuous timecode** is selected, the clips would be rendered in the following order: 1.mxf, 10 seconds of black frames, 3.mxf, 2.mxf.

Use the controls in the Export pane to choose a destination and format for your exported file. For more information about the controls, please see "Exporting media from a library" on page 24.

## Repairing flash bands

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

Catalyst Prepare can detect and remove flash bands.

1. Click the **Organize** button at the top of the Catalyst Prepare 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 Prepare 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 91.
  - 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.

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



# Chapter 6

## 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 stored with each clip in the library and do not affect your source media.

 When no library is opened, color adjustments are applied globally to all clips for previewing. If you want to save your color-correction settings, you can transcode clips to create new files. For more information, see "[Exporting media from a library](#)" on page 24.

Color adjustments to clip lists or spanned clips are not available when a library is open. For more information, see "[Working with libraries](#)" on page 9.

### Editing Color Adjustments controls

You can use the Color Adjustments controls in the Inspector  to perform color grading for individual clips in your library.

 After you edit a clip's color adjustments, those settings will be loaded each time you load the clip.

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

1. Click the **Organize** button at the top of the Catalyst Prepare window to view the Media Browser.
2. Perform any of the following actions to display the Adjust color workspace:

■ Select a clip in the **Organize** pane, and click the **Adjust color** button  at the bottom of the Catalyst Prepare window.

 When the Catalyst Prepare window is resized, the **Adjust color** , **Correct lens breathing** , and **Stabilize clip**  buttons are available in the **Adjustments** menu .

- Right-click the image in the **Organize** pane and choose **Adjust color** from the shortcut menu.
- Double-click a clip in the Media Browser to load the clip in Edit mode. When you load a clip, the color adjustments saved with the clip are loaded. Click the **Adjust Color** button at the bottom of the Catalyst Prepare window.

In the Adjust Color workspace, Catalyst Prepare displays a waveform/histogram/vectorscope monitor, a video preview, and color controls that you can use to adjust the appearance of your video.

3. The waveform/histogram/vectorscope monitor and video preview window allow you to monitor your adjustments as you edit color values.

The **Preview color space** setting in Options is also applied to the waveform, histogram, and vectorscope so you can check your video using scopes. For more information, see ["Editing Catalyst Prepare options" on page 157](#).

- 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 menu. You can use the Waveform Settings menu to change the scale of the waveform monitor and enable AIR matching when grading HDR clips.



The **Settings** button is available only when the **Working color space** drop-down is set to **Rec-2020/S-Log3 (HDR)** and the **Preview color space** drop-down is set to **Rec.2020/S-Log3, Rec.2020/HLG, Rec.2020/HLG AIR Matching, Rec.2020/HLG (bypass OOTF), Rec.2020/PQ, Rec.2020/PQ AIR Matching, or Rec.2020/PQ (bypass OOTF)**.

For more information, see "Color management settings" on page 159 or "Editing Catalyst Prepare options" on page 157.

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



When the **Preview color space** is set to **Rec.2020/HLG, Rec.2020/HLG AIR Matching, or Rec.2020/HLG (bypass OOTF)**, the **Nits** value is calculated for a peak luminance of  $1000 \text{ cd/m}^2$ .

When the **Preview 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 **Preview 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 to 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.

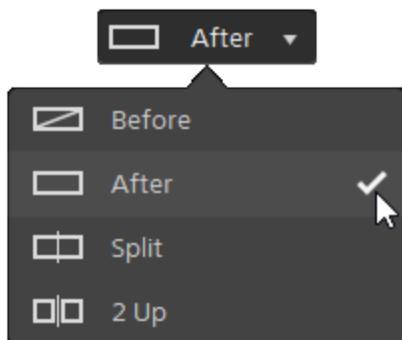
Click the **Settings** button  to open the Vectorscope Settings menu.

The Vectorscope Settings menu 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 your source media uses 75% color bars, or use the **100%** setting when your source media uses 100% color bars.

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

Click the **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 or 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 Prepare window provides color wheels for Lift, Gamma, and Gain. The wheels provide a visual representation of the current adjustments 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 adjustments.

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.

You can also adjust color wheels with a Tangent control. For more information, see "Using a Tangent control" on page 135.



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 if it isn't already visible. 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.

 If the selected color space is not compatible with the source color space and cannot be exported, a warning is displayed to notify you.

### Choosing a source color space

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.

 Click the **Reset** button  at the bottom of the Inspector pane to reset the **Source** color space based on the clip's metadata or the selected SR Live metadata source. For more information, see "["SR Live for HDR settings" on page 162](#)".

### Converting between HDR/wide color gamut color spaces

When an HDR or wide color gamut color space is selected in the **Source** drop-down list, you can choose a different HDR/WCG color space from the **Convert to** drop-down list to apply grading in the selected color space or apply a look profile that is available in the selected color space.

You can also convert HDR/WCG clips to Rec.709 by choosing **Convert to > 709(800)**. The 709 (800) setting applies a 1D curve. If you want to use a 3D LUT to convert HDR/WCG clips, you can apply a look profile.

 The **Convert to** drop-down is available only when the **Working color space** setting is **Rec.709, Log, or ACES** and you're working with S-Gamut, RAW, and X-OCN source media.

For more information, see "["Applying a look profile" on page 130](#), "["Grading with hypergamma conversion" on page 138](#), or "["Applying color correction" on page 141](#)".

### Viewing the working color space

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

### Viewing the color space for the video preview

The **Preview** box displays the color space that will be used for the Catalyst Prepare video preview window. Click the **Options**  button and choose a setting from the **Preview color space** drop-down list to change the setting.

### Viewing the color space for the external monitor

If an external monitor is enabled, the **External monitor** box displays the color space that will be used for the external monitor. Click the **Options**  button and choose a setting from the **External monitor color space** drop-down list to change the setting.

If a second external monitor is connected, it will use the Preview color space.

## Adjusting exposure, temperature, and tint

Click the **Inspector** button  in the toolbar to display the Inspector pane if it isn't already visible. In the Adjust Color workspace, the Source Settings section in the Inspector pane provides the **Exposure**, **Temperature**, and **Tint** sliders to adjust the color content of your clip.



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

### Exposure Index (EI)

When clip with a supported source color space is selected, the **EI mode** controls are displayed. Click an **EI mode** button to choose how you want to apply exposure index settings:



Files that include EI metadata display the EI on the File tab of the Inspector pane.

| Mode     | Description  |
|----------|--|
| Metadata | <p>Choose <b>Metadata</b> to automatically apply exposure metadata based on camera settings. The <b>Exposure</b> bar (1) and <b>EI</b> indicator (2) display the EI value.</p> <p>This mode is selected by default when you choose a clip with EI metadata.</p>  <p>The screenshot shows the Catalyst Prepare interface with the 'Exposure' tab selected. At the top, it says 'ISO 800'. Below that is a slider labeled 'Exposure' with a value of '800'. To the right of the slider is a digital dial with a value of '0' at the top and '800' at the bottom. A blue circle labeled '1' is around the slider, and another blue circle labeled '2' is around the digital dial. The text 'EI' is next to the dial.</p>  |
| Manual   | <p>Choose <b>Manual</b> to adjust exposure manually.</p> <p>This mode is selected by default when you choose an HDR clip that does not include supported EI metadata.</p> <p>The <b>Exposure</b> slider (1) will show the EI metadata value of the current frame as a black line, and an <b>EI</b> indicator (2) is displayed below the current value.</p> <p>Drag the slider to adjust the overall brightness of your video (a fixed value is applied to all frames).</p>  <p>The screenshot shows the Catalyst Prepare interface with the 'Exposure' tab selected. At the top, it says 'ISO 800'. Below that is a slider labeled 'Exposure' with a value of '800'. To the right of the slider is a digital dial with a value of '0' at the top and '800' at the bottom. A blue circle labeled '1' is around the slider, and another blue circle labeled '2' is around the digital dial. The text 'EI' is next to the dial. In this mode, the slider itself shows a black line indicating the current EI value.</p> |
| Off      | Choose <b>Off</b> to turn off exposure adjustment. The adjustment slider and exposure values are not displayed, and the original sensitivity is used.  |

### Temperature

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.



If your camera does not store color temperature metadata, Catalyst Prepare will use a default setting of 3200K.

## Tint

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.

-  Double-click a control to reset its value.

## Applying a look profile

You can use the **Look** controls to apply a look profile/LUT to an HDR clip when the **Working color space** setting is **Rec.709** or **Log**.

Click the **Inspector** button  in the toolbar to display the Inspector pane if it isn't already visible. In the Adjust Color workspace, the Look section in the Inspector pane contains controls to apply a LUT automatically based on metadata, manually, or to turn off LUT processing.

For information about adding custom look profiles, see **Manual mode** in the following table.

Click a **LUT mode** button to choose how you want to apply a look:

| Mode     | Description  |
|----------|--|
| Metadata | <p>Choose <b>Metadata</b> to automatically apply LUT metadata based on camera settings. The <b>Embedded LUT</b> box displays the LUT metadata.</p> <p>This mode is only available for clips with supported embedded metadata and is selected by default when you choose a clip with LUT metadata.</p> <p> Files that include LUT metadata display a  badge in the Organize pane and display the LUT on the File tab of the Inspector pane.</p> |
| Manual   | <p>Choose <b>Manual</b> to choose LUT settings manually:</p> <ul style="list-style-type: none"><li>■ <b>Convert to:</b> Choose a setting from the drop-down list to convert the clip to a different color space.</li><li>■ <b>Look profile:</b> When <b>Convert to</b> is set to an HDR color space — such as <b>S-Gamut3.Cine/S-Log3</b>, <b>S-Gamut3/S-Log3</b>, <b>Rec.2020/S-Log3</b>, <b>Rec.2020/HLG</b>, <b>Rec.2020/PQ</b>, or <b>Rec.709/HLG</b> — you can choose the look profile you want to apply.</li></ul>   |

| Mode | Description   |
|------|---|
|      | <p> To add look profiles (including .cube files) to Catalyst Prepare, save them in the following folder and then close and restart the application:</p> <p>Windows:<br/>C:\Users\&lt;user&gt;\Documents\Sony\Catalyst\Color\Looks\</p> <p>macOS:<br/>/Users/&lt;user&gt;/Documents/Sony/Catalyst/Color/Looks/</p> <ul style="list-style-type: none"> <li>◦ The <b>sgamut-slog2</b> subfolder is used for S-Gamut/S-Log2 sources.</li> <li>◦ The <b>sgamut3cine-slog3</b> subfolder is used for S-Gamut3.Cine/S-Log3 sources or <b>Convert to</b> choices.</li> <li>◦ The <b>sgamut3-slog3</b> subfolder is used for S-Gamut3/S-Log3 sources or <b>Convert to</b> choices.</li> <li>◦ The <b>rec709-hlg</b> subfolder is used for Rec.709/HLG sources.</li> <li>◦ The <b>rec2020-hlg</b> subfolder is used for Rec.2020/HLG sources.</li> <li>◦ The <b>rec2020-pq</b> subfolder is used for Rec.2020/PQ sources.</li> <li>◦ The <b>rec2020-slog3</b> subfolder is used for Rec.2020/S-Log3 sources.</li> </ul> <p> If you want to set a default look profile to be applied when no look profile is specified in a clip's metadata, click the <b>Manual</b> button, choose a setting from the <b>Look profile</b> drop-down list, click the <b>Look Tools</b> button  in the LOOK heading, and choose <b>Make default</b>.</p> <p>To replace the clip's current look profile with the default, click the <b>Manual</b> button, click the <b>Look Tools</b> button , and choose <b>Reset to default</b>.</p> |
| Off  | Choose Off to turn off Look settings.   |

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

## Adjusting the tone curve

Click the **Inspector** button  in the toolbar to display the Inspector pane if it isn't already visible. 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 adjustments.

- 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 adjustments. 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 if it isn't already visible. 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 video levels. As you adjust the controls, the waveform/histogram/vectorscope monitor and video preview will update in real time to allow you to check your adjustments.

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) while dragging 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 Prepare window and choose **Save preset** from the menu to preserve **Brightness** and **Contrast** settings.

For more information, see "Exporting color-correction settings" on page 150 and "Applying color correction" on page 133.

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 Prepare window to load color presets or ASC-CDL (American Society of Cinematographers Color Decision List) files to exchange color-grading information.

## Applying a color preset

Color presets include the source settings (exposure, temperature, and tint), look profile, tone curve, and ASC-CDL settings. For more information, see "Editing Color Adjustments controls" on page 121.

1. Click the **Organize** button at the top of the Catalyst Prepare window to view the Media Browser.
2. Double-click a clip in the Media Browser to load the clip you want to edit. When you load a clip, the color-correction settings saved with the clip are loaded.



If you want to apply color correction to multiple clips, select the clips, click the **Tools** button at the bottom-left of the Catalyst Prepare window, and choose **Apply color preset** from the menu.

 The **Apply color preset** command is not available when a clip list or spanned clip () is selected.

3. Click the **Adjust Color** button at the bottom of the Catalyst Prepare window.
4. Click the **Inspector** button  in the toolbar to display the Inspector pane if it isn't already visible.
5. Click the **Tools** button  at the bottom of the Catalyst Prepare 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 the current clip.

## Applying an ASC-CDL file

1. Click the **Organize** button at the top of the Catalyst Prepare window to view the Media Browser.
2. Double-click a clip in the Media Browser to load the clip you want to edit. When you load a clip, the color-correction settings saved with the clip are loaded.
  -  If you want to apply color correction to multiple clips, select the clips, click the **Tools** button  at the bottom-left of the Catalyst Prepare window, and choose **Apply ASC-CDL** from the menu.
  -  The **Apply ASC-CDL** command is not available when a clip list or spanned clip () is selected.
3. Click the **Adjust Color** button at the bottom of the Catalyst Prepare window.
4. Click the **Inspector** button  in the toolbar to display the Inspector pane if it isn't already visible.
5. Click the **Tools** button  at the bottom of the Catalyst Prepare 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 the current clip.

## 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 Prepare 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.

### Grading with Rec.709 gamma

1. Click the **Organize** button at the top of the Catalyst Prepare window to view the Media Browser.
2. Double-click a clip in the Media Browser to load the clip you want to edit. When you load a clip, the color-correction settings saved with the clip are loaded.

 Color correction is available only in Edit mode.

3. Click the **Adjust Color** button at the bottom of the Catalyst Prepare window. In this mode, Catalyst Prepare 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 Adjustments controls" on page 121](#).

4. Click the **Inspector** button  in the toolbar to display the Inspector pane if it isn't already visible. 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 **Working** box displays the color space that should be applied to color grading adjustments. Click the **Options**  button and choose **Rec.709** from the **Working color space** 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**, **S-Gamut3/S-Log3**, **Rec.2020/S-Log3**, **Rec.2020/HLG**, or **Rec.2020/PQ**, you can use the Source Settings controls to

adjust the **Exposure**, **Temperature**, and **Tint** of your clip. For more information, see ["Editing Color Adjustments controls" on page 121](#).

8. You can use the **Look** controls to convert an HDR clip to Rec.709 (full). For more information, see ["Applying a look profile" on page 130](#).
9. Use the color wheels and controls in the Inspector pane to adjust your colors as needed. For more information, see ["Editing Color Adjustments controls" on page 121](#).
10. Click the **Tools** button  at the bottom of the Catalyst Prepare 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 **Organize** button at the top of the Catalyst Prepare window to view the Media Browser.
2. Double-click a clip in the Media Browser to load the clip you want to edit. When you load a clip, the color-correction settings saved with the clip are loaded.



Color correction is available only in Edit mode.

3. Click the **Adjust Color** button at the bottom of the Catalyst Prepare window. In this mode, Catalyst Prepare 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 Adjustments controls" on page 121](#).

4. Click the **Inspector** button in the toolbar to display the Inspector pane if it isn't already visible. 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 **Working** box displays the color space that should be applied to color grading adjustments. Click the **Options** button and choose **Rec.709** from the **Working color space** drop-down list to change the setting if necessary.
7. You can use the **Look** controls to choose conversion settings to **709(800)**, **HG8009G33**, or **HG8009G40**. For more information, see ["Applying a look profile" on page 130](#).
8. If your source video is set to **S-Gamut/S-Log2**, **S-Gamut3.Cine/S-Log3**, **S-Gamut3/S-Log3**, **Rec.2020/S-Log3**, **Rec.2020/HLG**, or **Rec.2020/PQ**, you can use the Source Settings controls to

adjust the **Exposure**, **Temperature**, and **Tint** of your clip. For more information, see ["Editing Color Adjustments controls" on page 121](#).

9. Use the color wheels and controls in the Inspector pane to adjust your colors as needed. For more information, see ["Editing Color Adjustments controls" on page 121](#).
10. Click the **Tools** button  at the bottom of the Catalyst Prepare window and choose **Export color settings** from the menu if you want to export your settings as a 3D LUT file. For more information, see ["Exporting color-correction settings" on page 150](#).

## Log (cinematic) color grading

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

1. Click the **Organize** button at the top of the Catalyst Prepare window to view the Media Browser.
2. Double-click a clip in the Media Browser to load the clip you want to edit. When you load a clip, the color-correction settings saved with the clip are loaded.

 Color correction is available only in Edit mode.
3. Click the **Adjust Color** button at the bottom of the Catalyst Prepare window. In this mode, Catalyst Prepare 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 Adjustments controls" on page 121](#).
4. Click the **Inspector** button  in the toolbar to display the Inspector pane if it isn't already visible. 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  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 **Working** box displays the color space that should be applied to color grading adjustments. Click the **Options**  button and choose **Log** from the **Working color space** 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**, **Temperature**, and **Tint** of your clip. For more information, see "[Editing Color Adjustments controls](#)" on page 121.
  8. Use the color wheels and controls in the Inspector pane to adjust your colors as needed. For more information, see "[Editing Color Adjustments controls](#)" on page 121.
  9. You can use the **Look** controls to convert an HDR clip to Rec.709 (full). For more information, see "[Applying a look profile](#)" on page 130.
  10. Click the **Tools** button  at the bottom of the Catalyst Prepare window and choose **Export color settings** from the menu if you want to export your settings as a 3D LUT file. For more information, see "[Exporting color-correction settings](#)" on page 150.

## Advanced cinematic (ACES) color grading

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

1. Click the **Organize** button at the top of the Catalyst Prepare window to view the Media Browser.
2. Double-click a clip in the Media Browser to load the clip you want to edit. When you load a clip, the color-correction settings saved with the clip are loaded.  
 Color correction is available only in Edit mode.
3. Click the **Adjust Color** button at the bottom of the Catalyst Prepare window. In this mode, Catalyst Prepare 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 Adjustments controls](#)" on page 121.

4. Click the **Inspector** button  in the toolbar to display the Inspector pane if it isn't already visible.  
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 **Working** box displays the color space that should be applied to color grading adjustments.  
Click the **Options**  button and choose **ACES** from the **Working color space** 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**, **Temperature**, and **Tint** of your clip. For more information, see "[Editing Color Adjustments controls](#)" on page 121.
8. Use the color wheels and controls in the Inspector pane to adjust your colors as needed. For more information, see "[Editing Color Adjustments controls](#)" on page 121.
9. Click the **Tools** button  at the bottom of the Catalyst Prepare 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).  
For more information, see "[Exporting color-correction settings](#)" on page 150.

## 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.

1. Adjust Catalyst Prepare options for HDR color grading:
  - a. Click the **Options** button .
  - b. From the **Working color space** drop-down list, choose **Rec.2020/S-Log3 (HDR)**.

When you choose **Rec.2020/S-Log3** from the **Working color space** drop-down list, the SR Live for HDR controls are displayed to allow you to convert between standard- and high-dynamic-range content:

#### SR Live metadata source

Choose a setting from the **SR Live metadata source** drop-down list to choose how SR Live metedata processing is performed:

- When **SR Live metadata source** is set to **None** and **Adjust SR Live settings manually** is off, no SR Live processing is performed.
- When **SR Live metadata source** is set to **None** and **Adjust SR Live settings manually** is on, SR Live processing is performed only for the visible controls.
- When **SR Live metadata source** is set to **Clip** and **Adjust SR Live settings manually** is off, metadata settings from the current clip are used when converting between standard- and high-dynamic-range content.
- When **SR Live metadata source** is set to **Clip** and **Adjust SR Live settings manually** is on, metadata settings from the current clip and manual control settings are used when converting between standard- and high-dynamic-range content. For more information, see "["Adjust SR Live settings manually" on page 143](#)".
- When **SR Live metadata source** is set to **External file** and **Adjust SR Live settings manually** is off, metadata settings from an external .srm file are used when converting between standard- and high-dynamic-range content.
- When **SR Live metadata source** is set to **External file** and **Adjust SR Live settings manually** is on, metadata settings from an external .srm file and manual control settings are used when converting between standard- and high-dynamic-range content. For more information, see "["Adjust SR Live settings manually" on page 143](#)".



When **SR Live metadata source** is set to **Clip** or **External file**, Catalyst Prepare uses recommended SR Live values for clips generated by Sony devices even if SR Live metadata values are not present in the clip.

When **SR Live metadata source** is set to **External file**, the selected file's values are used as SR Live default values.

### Adjust SR Live settings manually

Enable the **Adjust SR Live settings manually** switch to enable the **SDR gain**, **SDR knee**, and **Black adjustment** switches to manually control settings for converting between standard- and high-dynamic-range content.

When **SR Live metadata source** is set to **Clip** or **External file** and **Adjust SR Live settings manually** is on, clip metadata and manual control settings are used for conversion.

Click the **Load** button to load settings from the selected clip and set the **SDR gain**, **SDR knee**, and **Black adjustment** controls to match the clip settings. You can then fine-tune the settings manually, and the manual adjustments will be used for conversion.



You can double-click a control to reset it to the default value. When **SR Live metadata source** is set to **External file**, the selected file's values are used as SR Live default values.

SR Live settings are applied in the following cases:

- When exporting Rec.2020/S-Log3, S-Gamut3/S-Log3, S-Gamut3.Cine/S-Log3, or Sony RAW/X-OCN source clips to Rec.2020/S-Log3, Rec.2020/HLG, Rec.2020/PQ, or SDR formats when the **Output color space** drop-down is set to **Same as preview** or **Same as external monitor**.
- When exporting Rec.2020/HLG clips to Rec.2020/HLG or SDR formats when the **Output color space** drop-down is set to **Same as preview** or **Same as external monitor**.
- When exporting Rec.2020/PQ clips to Rec.2020/PQ or SDR formats when the **Output color space** drop-down is set to **Same as preview** or **Same as external monitor**.
- When exporting SDR clips to Rec.2020/S-Log3, Rec.2020/HLG, Rec.2020/PQ, or SDR formats when the **Output color space** drop-down is set to **Same as preview** or **Same as external monitor**.



When **Use SR Live metadata** is off and **Adjust SR Live settings manually** is off, color management uses default settings, and no SR Live processing is performed.

When **Output color space** is set to **Rec.2020/HLG AIR Matching**, **Rec.2020/HLG (bypass OOTF)**, **Rec.2020/PQ AIR Matching**, or **Rec.2020/PQ (bypass OOTF)** in Options, no SR Live processing is performed.

## Conversion mode

When **External file** is selected in the **SR Live metadata source** drop-down list, the Conversion mode section displays conversion settings for the selected external .srm file:

- **Conversion mode** displays the file's HDR/SDR conversion mode.
- **HDR look** displays the file's look setting for source HDR content.
- **HDR black compression** indicates whether black compression is enabled to improve the appearance of low-luminance levels.

## SDR gain

When the switch is enabled, you can drag the **Gain** slider to choose the gain that is applied when reading SDR content or when exporting to an SDR format or displaying on an SDR display.

For example, if you set the slider to -6.0 dB, a linear gain of +6.0 dB (2.0x) is applied when reading SDR content, and a linear gain of -6.0 dB (0.5x) is applied when exporting to an SDR format or displaying on an SDR display.

## Black adjustment

Enable the **Black adjustment** switch to adjust black levels:

- Drag the **Master black** slider to adjust the master black level.
- Drag the **HDR black offset** slider to apply an offset to the **Master black** value for HDR content.

 The **Master black** and **HDR black offset** values should match the settings on the HDRC-4000 HDR Production Converter Unit.

On the HDRC-4000, the **SETTING MODE** should be set to **SONY SYSTEM CAMERA**, and the **ABS mode** should be set to **enabled**.

## Gamma settings

When **External file** is selected in the **SR Live metadata source** drop-down list, the Gamma section displays gamma settings for the selected external .srm file:

- **Table** displays the file's gamma table.

When a hypergamma value is selected, you must adjust the **SDR gain** value manually:

- **Hyper 1:** Increase **SDR gain** by 5.0 dB. For example, if your clip's original SDR gain value is -6.0 dB, you will need to increase SDR gain by 5.0 dB for an SDR gain value of -1.0 dB.
- **Hyper 2:** Increase **SDR gain** by 8.0 dB. For example, if your clip's original SDR gain value is -6.0 dB, you will need to increase SDR gain by 8.0 dB for an SDR gain value of 2.0 dB.
- **Hyper 3:** Increase **SDR gain** by 3.0 dB. For example, if your clip's original SDR gain value is -6.0 dB, you will need to increase SDR gain by 3.0 dB for an SDR gain value of -3.0 dB.
- **Hyper 4:** Increase **SDR gain** by 6.0 dB. For example, if your clip's original SDR gain value is -6.0 dB, you will need to increase SDR gain by 6.0 dB for an SDR gain value of 0.0 dB.
- **Step** indicates the gamma strength in steps (0.35 to 0.90).
- **Level** indicates the gamma strength in analog values from -100 to 100.

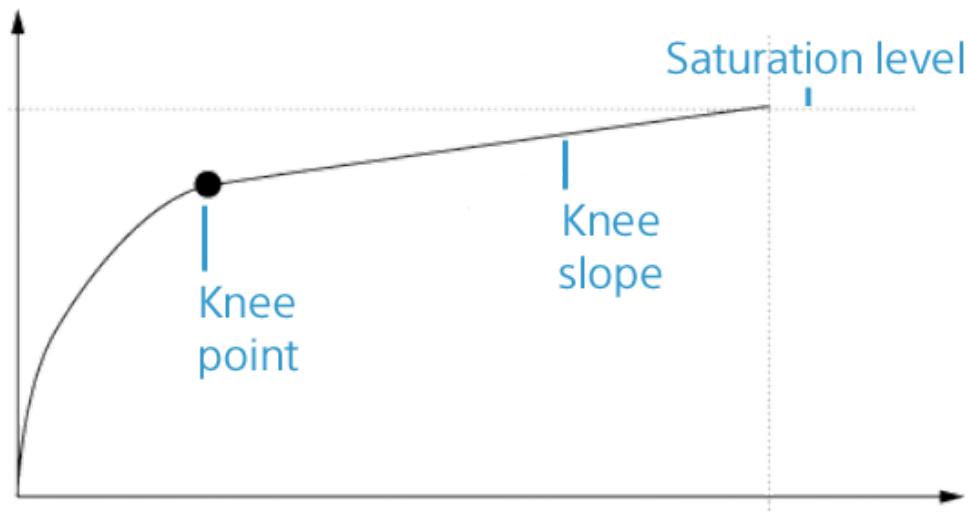
### SDR knee

Select the **SDR knee** switch to apply a knee curve to the RGB output gain when exporting HDR content to an SDR format or displaying on an SDR display. While the **SDR gain** setting applies a linear gain, a knee curve can help preserve midrange colors and highlights.



When using knee parameters on the Sony HDRC-4000 HDR Production Converter Unit, please enable ABS mode and confirm the R, G, B values in the HDRC-4000. Adjust the values in Catalyst Prepare to match. Using different R, G, B values is not supported.

- Drag the **Point** slider to adjust the position of the knee point in the curve.
- Drag the **Slope** slider to adjust the slope of the curve above the knee point.
- To adjust the color intensity in the output image, select the **SDR knee saturation** switch and drag the **Level** slider. Increasing the saturation can help compensate for decreased saturation around the knee curve.



### White clip

When **External file** is selected in the **SR Live metadata source** drop-down list, the White clip section displays the white clip settings for the selected external .srm file:

**White clip** indicates whether the white clip level is used when exporting HDR content to an SDR format or displaying on an SDR display.

**Level** indicates the white clip level: 0 is the default setting; lower settings decrease the white clip level, and higher settings increase the clip level.

 The File tab in the Inspector displays the **SDR White Clip** and **SDR White Clip Level** settings for the selected clip.

### HDR knee

When **External file** is selected in the **SR Live metadata source** drop-down list, the HDR knee section displays information about the HDR knee curve for the selected external .srm file. The HDR knee curve is applied to the luminance (Y) when exporting HDR content to an SDR format or displaying on an SDR display. The HDR knee value adjusts brightness to conform to SDR output.

 When using knee parameters on the Sony HDRC-4000 HDR Production Converter Unit, please enable ABS mode and confirm the R, G, B values in the HDRC-4000. Adjust the values in Catalyst Prepare to match. Using different R, G, B values is not supported.

- **Point** indicates the position of the knee point in the curve.
- **Slope** indicates the slope of the curve above the knee point.

- c. From the **Preview color space** drop-down list, choose the color space for the Catalyst Prepare 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 adjustments and configuring the waveform, histogram, and vectorscope monitors](#)" on page [121](#).

- d. From the **External monitor color space** drop-down list, 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) or bypass OOTF settings to achieve a consistent look between external-monitor previews and rendered clips.

### Using AIR Matching to monitor using the S-Log3 (Live HDR) EOTF

Sony BVM-X300 version 2.0 monitor settings:

- Color Space: ITU-R BT.2020
- EOTF: S-Log3 (Live HDR)
- Transfer Matrix: ITU-R BT.2020
- In the Catalyst Prepare Options menu, choose **Rec.2020/S-Log3** from the **External monitor 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.

### Using bypass OOTF to monitor using the S-Log3 (HDR) EOTF

Sony BVM-X300 version 2.0 monitor settings:

- Color Space: ITU-R BT.2020
- EOTF: S-Log3 (HDR)
- Transfer Matrix: ITU-R BT.2020
- In the Catalyst Prepare Options menu, choose **Rec.2020/S-Log3** from the **External monitor color space** drop-down list.

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

### Converting HDR media to SDR color spaces

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 **Working color space** to **Rec.2020/S-Log3 (HDR)**.
- In Options, enable the **SDR gain** and **SDR knee** switches and adjust the controls to choose the gain and knee curve that will be applied when exporting to an SDR format or displaying on an SDR display.
- In Options, set the **Preview color space** for 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 **Working color space** to **Rec.709**.
  - In the Inspector, set the **Convert to** color space to **709(800), HG8009G33, or HG8009G40**.
- e. 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.
  - f. From the **Monitor resolution** drop-down list, choose the appropriate resolution for your external monitor.
2. Click the **Organize** button at the top of the Catalyst Prepare window to view the Media Browser.
  3. Double-click a clip in the Media Browser to load the clip you want to edit. When you load a clip, the color-correction settings saved with the clip are loaded.
- 
- Color correction is available only in Edit mode.
4. Click the **Adjust Color** button at the bottom of the Catalyst Prepare window. In this mode, Catalyst Prepare 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 Adjustments controls" on page 121](#).
5. Click the **Inspector** button  in the toolbar to display the Inspector pane if it isn't already visible. 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 Adjustments controls" on page 121](#).

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

For more information, see "Exporting color-correction settings" on page 150.

## Exporting color-correction settings

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

### Saving a color preset

Color presets include the source settings (exposure, temperature, and tint), look profile, tone curve, and ASC-CDL settings. For more information, see "Editing Color Adjustments controls" on page 121.

1. Click the **Organize** button at the top of the Catalyst Prepare window to view the Media Browser.
2. Double-click a clip in the Media Browser to load the clip you want to edit. When you load a clip, the color-correction settings saved with the clip are loaded.



Color correction is available only in Edit mode.

3. Click the **Adjust Color** button at the bottom of the Catalyst Prepare window.
4. Click the **Inspector** button  in the toolbar to display the Inspector pane if it isn't already visible.
5. Click the **Tools** button  at the bottom of the Catalyst Prepare 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 **Organize** button at the top of the Catalyst Prepare window to view the Media Browser.
2. Double-click a clip in the Media Browser to load the clip you want to edit. When you load a clip, the color-correction settings saved with the clip are loaded.



Color correction is available only in Edit mode.

3. Click the **Adjust Color** button at the bottom of the Catalyst Prepare window. In this mode, Catalyst Prepare 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 if it isn't already visible and adjust your color settings as needed. For more information, see ["Editing Color Adjustments controls" on page 121](#).



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 Prepare window and choose **Save preset** from the menu to preserve **Brightness** and **Contrast** settings.

For more information, see ["Exporting color-correction settings" on page 150](#) and ["Applying color correction" on page 133](#).

5. Click the **Tools** button at the bottom of the Catalyst Prepare 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

When the **Working color space** in Options is set to **Rec.2020/S-Log3 (HDR)**, you can export a 3D LUT (look-up table) to capture your color settings — including the application of SR Live metadata — that can be applied in nonlinear editing software or a hardware LUT box.

1. Click the **Organize** button at the top of the Catalyst Prepare window to view the Media Browser.
2. Double-click a clip in the Media Browser to load the clip you want to edit. When you load a clip, the color-correction settings saved with the clip are loaded.

 Color correction is available only in Edit mode.
3. Click the **Adjust Color** button at the bottom of the Catalyst Prepare window. In this mode, Catalyst Prepare 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 if it isn't already visible and adjust your color settings as needed. For more information, see "[Editing Color Adjustments controls](#)" on page 121.
5. Click the **Tools** button  at the bottom of the Catalyst Prepare 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 use to save your 3D LUT.

 When **SR Live metadata source** is set to **External file** in Options, the base name of the selected SRM file is provided by default. For more information, see "[SR Live for HDR settings](#)" on page 162.
  - c. Choose a setting from the **Format** drop-down list to choose the type of 3D LUT you want to create:
    - Choose **3D LUT (NLE .cube)** to create a 3D LUT you can use with an NLE such as Blackmagic Design DaVinci Resolve or Adobe Premiere Pro.  
For more information, see "[Applying a 3D LUT in Adobe Premiere Pro](#)" on page 156 or "[Applying a 3D LUT in Blackmagic Design DaVinci Resolve](#)" on page 155.

- Choose **3D LUT (SDI/SMPTE .cube)** to create a 3D LUT you can use with a hardware LUT box.
- d. If the input color space is S-Log2 or S-Log3 and the **Format** is set to **3D LUT (NLE .cube)**, you can select the **Extended S-Log input range** check box and choose a setting from the **Type** drop-down list to specify an extended input range.
  - Choose **IRIDAS/Adobe** to create a 3D LUT you can use with Adobe Premiere Pro.
  - Choose **DaVinci Resolve** to create a 3D LUT you can use with DaVinci Resolve.
-  The **Extended S-Log input range** check box is used to correct for cases where an NLE treats files that use full range (such as S-Log3) as legal range. If the NLE has an input range setting, such as newer versions of Resolve, you do not need to select the **Extended S-Log input range** check box.
- e. Choose a setting from the **Input color space** drop-down list to specify the color space that will be used as the input of the LUT.
- f. 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 **Working color space** is set to **Rec.2020/S-Log3 (HDR)**. For more information, see "["Applying color correction" on page 141](#)".
- g. Choose a setting from the **Precision** drop-down list box to choose a standard (33x33x33) or high-precision (65x65x65) LUT.
- h. Select the **Source settings** check box if you want to include exposure, temperature, and tint settings with your LUT.
- i. Select the **Convert to setting** check box if you want to export your LUT using the Hypergamma setting selected in the **Convert to** drop-down list in the Inspector.
  -  The **Convert to setting** check box is available only when the **Working color space** in Options is set to **Rec.709** and the **Convert to** drop-down in the Inspector pane is set to a Hypergamma conversion choice, such as **709(800)** or **HG8009G33**.
- j. Select the **Look profile** check box if you want to include the selected look profile from the Inspector in your LUT.



The **Look profile** check box is displayed below the **Convert to** drop-down list when the **Working color space** in Options is set to **Rec.709** and the **Convert to** drop-down in the Inspector pane is not set to a Hypergamma conversion choice.

The **Look profile** check box is displayed below the **Color correction** check box when the **Working color space** in Options is set to **Log**.

- k. Select the **Tone curve** check box if you want to include the tone curve from the Inspector in your LUT.
  - l. Select the **Color correction** check box if you want to include the color correction adjustments from the Inspector in your LUT.
7. Click **Export**. The LUT file will be saved in the folder you selected in step 6a.

## Applying a 3D LUT in Blackmagic Design DaVinci Resolve

1. Follow the instructions in "[Exporting a 3D LUT](#)" on page 152 to save your 3D LUT file in 3D LUT (NLE .cube) format.
2. Save the 3D LUT file in the following folder:
  - Windows: C:\ProgramData\Blackmagic Design\DaVinci Resolve\Support\LUT\Sony
  - macOS: /macOS/Library/Application Support/Blackmagic Design/DaVinci Resolve/LUT/Sony

 Tips:

- To locate the LUT folder, choose **File > Project Settings** in Resolve, and then click the **Open LUT Folder** button on the Color Management tab.
  - Use the **3D Lookup Table Interpolation** drop-down list to set 3D LUT interpolation to be **Trilinear** or **Tetrahedral**.
3. Ensure your project is set to use the intended output color space (typically Rec.709) on the timeline:
    - a. In Resolve, choose **File > Project Settings**.
    - b. Click the Color Management tab.
    - c. From the **Color science** drop-down list, choose **DaVinci YRGB**.
    - d. From the **Timeline color space** drop-down list, choose a Rec.709 color space, such as **Rec.709 (Scene)**.
    - e. Click **Save**.
  4. To apply the LUT to a clip, right-click the media thumbnail, choose **LUT** from the shortcut menu, choose **Sony**, and then choose the 3D LUT you want to use:

If the source media color space uses Legal range (such as HLG XAVC), no further actions are required.

If the source media color space uses Full range (such as S-Log3, for example), you must tell Resolve not to stretch the media range: right-click the media thumbnail, choose **Clip Attributes**, and then change **Data Levels** to **Full**.

## Applying a 3D LUT in Adobe Premiere Pro

1. Follow the instructions in "[Exporting a 3D LUT](#) on page 152 to save your 3D LUT file in 3D LUT (NLE .cube) format.
2. Ensure your sequence is set to use the intended output color space (typically Rec.709) as its working color space.
  - a. In Premiere Pro, choose **Sequence > Sequence Settings**.
  - b. From the **Working Color Space** drop-down list, choose **Rec.709**.
  - c. Click **OK**.
3. Right-click the media in the Premiere Pro media window, choose **Modify** from the shortcut menu, and then choose **Interpret Footage**.

 When working with S-Log3 and/or HLG files containing SR Live metadata in Premiere Pro 2022, you can skip steps 3-6 if you want to convert from S-Log3/HLG to Rec.709. If you want to use a specific 3D LUT in Premiere Pro 2022, please perform steps 3-6 and refer to the Premiere Pro documentation for specific usage information.
4. In the Color Management section, open the **Input LUT** selector.
5. Select the 3D LUT file you want to use:
  - To use an existing 3D LUT, choose it from the selector.
  - To add a new 3D LUT, choose **Add LUTs** and browse to the folder where you've saved the 3D LUT you want to use.
6. Set the **Color Space Override** selector to match the output color space of the LUT (typically Rec.709).

# Chapter 7

## Editing Catalyst Prepare options

Click the Options  button to edit your application options.

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

### Application settings

#### 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.

 When using a device other than your CPU, high-quality deinterlacing and upscaling are applied to convert SD and HD sources to modern progressive HD and UHD assets. Please note that some systems with limited GPU memory are not supported.

- High-quality deinterlacing is applied to interlaced source media when playback is paused, during transcoding, and during playback when the **Playback Settings Speed/Quality** setting is set to **Quality**.
- High-quality upscaling is applied during transcoding when you choose an HD or UHD render preset.

#### Enabling OpenCL/OpenGL interoperability

OpenCL/OpenGL interoperability allows OpenCL and OpenGL to share rendered frames and can improve playback performance, but it can cause instability with some hardware and drivers.

- Select **Performance** to enable OpenCL and OpenGL interoperability. We recommend using this setting in most cases for optimum playback performance.
- Select **Compatibility** to turn off interoperability if you notice artifacts or corruption in rendered frames.

 After changing the **OpenCL/OpenGL interoperability** setting, please restart Catalyst Prepare for the change to take effect.

#### Choosing a default transcoding format

Choose a setting from the **Default transcode format** drop-down list to choose the format that will be used when copying partial clips that cannot be copied in their source format or when uploading to Ci.

For more information, see "[Exporting media from a library](#)" on page 24 or "[Organizing media in a library](#)" on page 15.

#### Choosing a map service for GPS links

Choose a setting from the **Open GPS links with** drop-down list to choose the map service that will be used to display maps when you click GPS links in a clip's metadata.

For more information, see "[Viewing and editing metadata](#)" on page 97.

#### Enabling the secondary window

Enable the **Secondary preview 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.

#### 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.

#### Automatically rotate thumbnail frames

Enable the **Automatically rotate thumbnails** switch to detect clip rotation and adjust thumbnail images in Organize mode.

For more information, see "[Working with rotated clips](#)."

#### 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 92.

### Color management settings

#### Working color space

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

For more information, see "[Applying color correction](#)" on page 121.

When you choose **Rec.2020/S-Log3** from the **Working color space** drop-down list, the SR Live for HDR controls are displayed to allow you to convert between standard- and high-dynamic-range content. For more information, see "[SR Live for HDR settings](#)" on page 162.

#### Video preview color space

From the **Preview color space** drop-down list, choose the color space for the Catalyst Prepare 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 adjustments and configuring the waveform, histogram, and vectorscope monitors](#)" on page 121.

For more information, see "[Applying color correction](#)" on page 121.

### External monitor color space

Choose a setting from the **External monitor 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:

| External monitor color space in Catalyst Prepare                             | Color Space      | EOTF  | Transfer Matrix  |
|--|------------------|---|------------------|
| Rec.709  | ITU-R<br>BT.709  | i.e. 2.4                                      | ITU-R<br>BT.709  |
| Rec.2020   | ITU-R<br>BT.2020 | i.e. 2.4                                      | ITU-R<br>BT.2020 |
| Rec.2020/S-Log-3   | ITU-R<br>BT.2020 | S-Log3(Live HDR) or S-Log3(HDR)               | ITU-R<br>BT.2020 |
| Rec.2020/HLG,<br>Rec.2020/HLG AIR Matching, or<br>Rec.2020/HLG (bypass OOTF) | ITU-R<br>BT.2020 | HLG SG Variable(HDR), HLG<br>System Gamma 1.2 | ITU-R<br>BT.2020 |
| Rec.2020/PQ,<br>Rec.2020/PQ AIR Matching, or<br>Rec.2020/PQ (bypass OOTF)    | ITU-R<br>BT.2020 | SMPTE ST 2084(HDR)                            | ITU-R<br>BT.2020 |



When **Rec.2020/S-Log3 (HDR)** is selected from the **Working color space** drop-down list, you can use the AIR Matching (Artistic Intent Rendering) or bypass OOTF settings to achieve a consistent look between external-monitor previews and rendered clips.

#### Using AIR Matching to monitor using the S-Log3 (Live HDR) EOTF

Sony BVM-X300 version 2.0 monitor settings:

- Color Space: ITU-R BT.2020
- EOTF: S-Log3 (Live HDR)
- Transfer Matrix: ITU-R BT.2020
- In the Catalyst Prepare Options menu, choose **Rec.2020/S-Log3** from the **External monitor 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.

#### Using bypass OOTF to monitor using the S-Log3 (HDR) EOTF

Sony BVM-X300 version 2.0 monitor settings:

- Color Space: ITU-R BT.2020
- EOTF: S-Log3 (HDR)
- Transfer Matrix: ITU-R BT.2020
- In the Catalyst Prepare Options menu, choose **Rec.2020/S-Log3** from the **External monitor color space** drop-down list.

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

#### Converting HDR media to SDR color spaces

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 **Working color space** to **Rec.2020/S-Log3 (HDR)**.
- In Options, enable the **SDR gain** switch and adjust the **Gain** slider to choose the gain that will be applied when exporting to an SDR format or displaying on an SDR display.
- In Options, set the **Preview color space** 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 **Working color space** to **Rec.709**.
- In the Inspector, set the **Convert to** color space to **709(800), HG8009G33, or HG8009G40**.

For more information, see "[Applying color correction](#)" on page 141.

## SR Live for HDR settings

When you choose **Rec.2020/S-Log3** from the **Working color space** drop-down list, the SR Live for HDR controls are displayed to allow you to convert between standard- and high-dynamic-range content:

### SR Live metadata source

Choose a setting from the **SR Live metadata source** drop-down list to choose how SR Live metedata processing is performed:

- When **SR Live metadata source** is set to **None** and **Adjust SR Live settings manually** is off, no SR Live processing is performed.
- When **SR Live metadata source** is set to **None** and **Adjust SR Live settings manually** is on, SR Live processing is performed only for the visible controls.
- When **SR Live metadata source** is set to **Clip** and **Adjust SR Live settings manually** is off, metadata settings from the current clip are used when converting between standard- and high-dynamic-range content.
- When **SR Live metadata source** is set to **Clip** and **Adjust SR Live settings manually** is on, metadata settings from the current clip and manual control settings are used when converting between standard- and high-dynamic-range content. For more information, see "[Adjust SR Live settings manually](#)" on page 163.
- When **SR Live metadata source** is set to **External file** and **Adjust SR Live settings manually** is off, metadata settings from an external .srm file are used when converting between standard- and high-dynamic-range content.
- When **SR Live metadata source** is set to **External file** and **Adjust SR Live settings manually** is on, metadata settings from an external .srm file and manual control settings are used when converting between standard- and high-dynamic-range content. For more information, see "[Adjust SR Live settings manually](#)" on page 163.



When **SR Live metadata source** is set to **Clip** or **External file**, Catalyst Prepare uses recommended SR Live values for clips generated by Sony devices even if SR Live metadata values are not present in the clip.

When **SR Live metadata source** is set to **External file**, the selected file's values are used as SR Live default values.

#### Adjust SR Live settings manually

Enable the **Adjust SR Live settings manually** switch to enable the **SDR gain**, **SDR knee**, and **Black adjustment** switches to manually control settings for converting between standard- and high-dynamic-range content.

When **SR Live metadata source** is set to **Clip** or **External file** and **Adjust SR Live settings manually** is on, clip metadata and manual control settings are used for conversion.

Click the **Load** button to load settings from the selected clip and set the **SDR gain**, **SDR knee**, and **Black adjustment** controls to match the clip settings. You can then fine-tune the settings manually, and the manual adjustments will be used for conversion.



You can double-click a control to reset it to the default value. When **SR Live metadata source** is set to **External file**, the selected file's values are used as SR Live default values.

SR Live settings are applied in the following cases:

- When exporting Rec.2020/S-Log3, S-Gamut3/S-Log3, S-Gamut3.Cine/S-Log3, or Sony RAW/X-OCN source clips to Rec.2020/S-Log3, Rec.2020/HLG, Rec.2020/PQ, or SDR formats when the **Output color space** drop-down is set to **Same as preview** or **Same as external monitor**.
- When exporting Rec.2020/HLG clips to Rec.2020/HLG or SDR formats when the **Output color space** drop-down is set to **Same as preview** or **Same as external monitor**.
- When exporting Rec.2020/PQ clips to Rec.2020/PQ or SDR formats when the **Output color space** drop-down is set to **Same as preview** or **Same as external monitor**.
- When exporting SDR clips to Rec.2020/S-Log3, Rec.2020/HLG, Rec.2020/PQ, or SDR formats when the **Output color space** drop-down is set to **Same as preview** or **Same as external monitor**.



When **Use SR Live metadata** is off and **Adjust SR Live settings manually** is off, color management uses default settings, and no SR Live processing is performed.

When **Output color space** is set to **Rec.2020/HLG AIR Matching**, **Rec.2020/HLG (bypass OOTF)**, **Rec.2020/PQ AIR Matching**, or **Rec.2020/PQ (bypass OOTF)** in Options, no SR Live processing is performed.

## Conversion mode

When **External file** is selected in the **SR Live metadata source** drop-down list, the Conversion mode section displays conversion settings for the selected external .srm file:

- **Conversion mode** displays the file's HDR/SDR conversion mode.
- **HDR look** displays the file's look setting for source HDR content.
- **HDR black compression** indicates whether black compression is enabled to improve the appearance of low-luminance levels.

## SDR gain

When the switch is enabled, you can drag the **Gain** slider to choose the gain that is applied when reading SDR content or when exporting to an SDR format or displaying on an SDR display.

For example, if you set the slider to -6.0 dB, a linear gain of +6.0 dB (2.0x) is applied when reading SDR content, and a linear gain of -6.0 dB (0.5x) is applied when exporting to an SDR format or displaying on an SDR display.

## Black adjustment

Enable the **Black adjustment** switch to adjust black levels:

- Drag the **Master black** slider to adjust the master black level.
  - Drag the **HDR black offset** slider to apply an offset to the **Master black** value for HDR content.
-  The **Master black** and **HDR black offset** values should match the settings on the HDRC-4000 HDR Production Converter Unit.

On the HDRC-4000, the **SETTING MODE** should be set to **SONY SYSTEM CAMERA**, and the **ABS mode** should be set to **enabled**.

## Gamma settings

When **External file** is selected in the **SR Live metadata source** drop-down list, the Gamma section displays gamma settings for the selected external .srm file:

- **Table** displays the file's gamma table.

When a hypergamma value is selected, you must adjust the **SDR gain** value manually:

- **Hyper 1:** Increase SDR gain by 5.0 dB. For example, if your clip's original SDR gain value is -6.0 dB, you will need to increase SDR gain by 5.0 dB for an SDR gain value of -1.0 dB.
  - **Hyper 2:** Increase SDR gain by 8.0 dB. For example, if your clip's original SDR gain value is -6.0 dB, you will need to increase SDR gain by 8.0 dB for an SDR gain value of 2.0 dB.
  - **Hyper 3:** Increase SDR gain by 3.0 dB. For example, if your clip's original SDR gain value is -6.0 dB, you will need to increase SDR gain by 3.0 dB for an SDR gain value of -3.0 dB.
  - **Hyper 4:** Increase SDR gain by 6.0 dB. For example, if your clip's original SDR gain value is -6.0 dB, you will need to increase SDR gain by 6.0 dB for an SDR gain value of 0.0 dB.
- **Step** indicates the gamma strength in steps (0.35 to 0.90).
- **Level** indicates the gamma strength in analog values from -100 to 100.

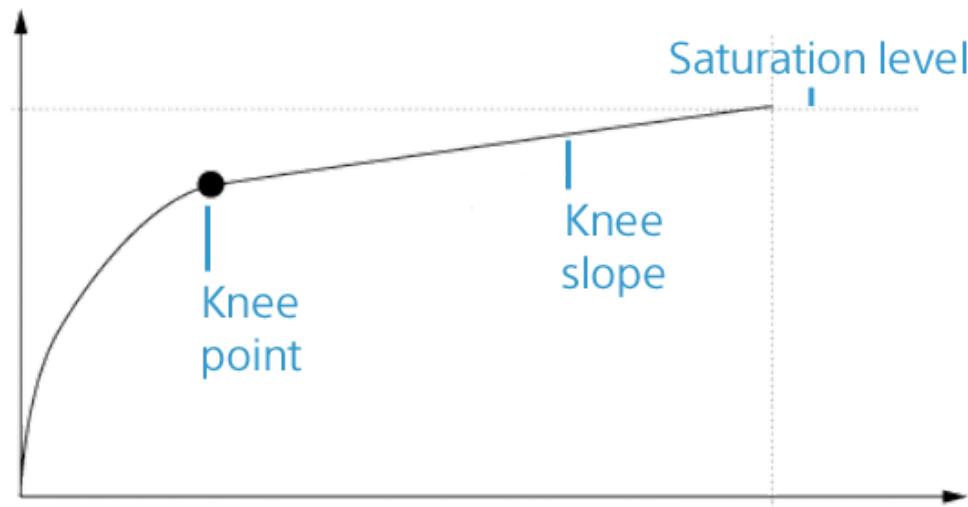
### SDR knee

Select the **SDR knee** switch to apply a knee curve to the RGB output gain when exporting HDR content to an SDR format or displaying on an SDR display. While the **SDR gain** setting applies a linear gain, a knee curve can help preserve midrange colors and highlights.



When using knee parameters on the Sony HDRC-4000 HDR Production Converter Unit, please enable ABS mode and confirm the R, G, B values in the HDRC-4000. Adjust the values in Catalyst Prepare to match. Using different R, G, B values is not supported.

- Drag the **Point** slider to adjust the position of the knee point in the curve.
- Drag the **Slope** slider to adjust the slope of the curve above the knee point.
- To adjust the color intensity in the output image, select the **SDR knee saturation** switch and drag the **Level** slider. Increasing the saturation can help compensate for decreased saturation around the knee curve.



## White clip

When **External file** is selected in the **SR Live metadata source** drop-down list, the White clip section displays the white clip settings for the selected external .srm file:

**White clip** indicates whether the white clip level is used when exporting HDR content to an SDR format or displaying on an SDR display.

**Level** indicates the white clip level: 0 is the default setting; lower settings decrease the white clip level, and higher settings increase the clip level.



The File tab in the Inspector displays the **SDR White Clip** and **SDR White Clip Level** settings for the selected clip.

## HDR knee

When **External file** is selected in the **SR Live metadata source** drop-down list, the HDR knee section displays information about the HDR knee curve for the selected external .srm file. The HDR knee curve is applied to the luminance (Y) when exporting HDR content to an SDR format or displaying on an SDR display. The HDR knee value adjusts brightness to conform to SDR output.



When using knee parameters on the Sony HDRC-4000 HDR Production Converter Unit, please enable ABS mode and confirm the R, G, B values in the HDRC-4000. Adjust the values in Catalyst Prepare to match. Using different R, G, B values is not supported.

- **Point** indicates the position of the knee point in the curve.
- **Slope** indicates the slope of the curve above the knee point.

## Choosing an external video monitor device and resolution

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.



If you have a Blackmagic Design device that supports multiple displays (or have multiple Blackmagic Design devices), you can enable two external monitors, allowing you to monitor SDR and HDR output simultaneously.

- You can set the display resolution for each display independently.
- The first external monitor will use the **External monitor color space** setting, and the second external monitor will use the **Preview color space** setting.



# Chapter 8

## Keyboard shortcuts

Shortcut keys can help streamline your work with Catalyst Prepare 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<br>Shortcut | macOS<br>Shortcut  |
|--|---------------------|--|
| Enter full-screen preview/playback             | F11 or Ctrl+F       | ⌘ -F or Control-<br>⌘ -F   |
| Exit full-screen preview/playback              | Esc, F11, or Ctrl+F | Esc, ⌘ -F, or<br>Control-⌘ -F  |
| Switch between Organize/Edit workspaces        | Alt+W               | Option-W   |
| Show/hide the Inspector/Copy/Export/Share pane | Ctrl+I              | ⌘ -I   |
| 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<br>Use all F1, F2,<br>etc. keys as<br>standard<br>function keys<br>setting is selected) |

## Media Browser

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

| Command                            | Windows<br>Shortcut            | macOS<br>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   |
| 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<br>End                    | Home<br>End  |
| Move selection up/down one page    | Page Up<br>Page Down           | Page Up<br>Page Down   |
| Rename                             | F2                             | Fn-F2 (F2 if the <b>Use all F1, F2, etc. keys as standard function keys</b> setting is selected) |
| Open library                       | Ctrl+O                         | ⌘ -O   |
| New library                        | Ctrl+N                         | ⌘ -N   |

## Editing

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

| Command  | Windows<br>Shortcut | macOS<br>Shortcut |
|--|---------------------|-------------------|
| Switch Logging/Storyboard/Clip/Adjust Colors                               | `<br>~              | `<br>~            |
| Load previous/next file in Edit mode.                                      | [ ]                 | [ ]               |
| Go to previous/next clip in Storyboard mode.                               |                     |                   |
| 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              |
| Create subclip from selection in Logging mode.                             | S                   | S                 |
| Add clip to selected storyboard (when the Add To bar is visible).          | Enter               | Return            |
| Undo color correction  | Ctrl+Z              | ⌘ -Z              |
| Redo color correction  | Ctrl+Shift+Z        | Shift-⌘ -Z        |
|  | Ctrl+Y              |                   |

## Playback and preview

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

| Command                | Windows<br>Shortcut | macOS<br>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   |
| Start/stop playback    | Enter               | Return   |
| Shuttle playback       | J/K/L               | <p>Press J or L once for 1x playback.<br/>Press J or L twice for 1.5x playback.<br/>Press J or L three times for 2x playback.<br/>Press J or L four times for 4x playback.<br/>Press K to pause playback.</p> <p>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.</p> |
| Toggle looped playback | Q                   | Q  |
|                        | Ctrl+L              | ⌘ -L   |

| Command   | Windows<br>Shortcut | macOS<br>Shortcut |
|---|---------------------|-------------------|
| Set Mark In point                               | I                   | I                 |
| Set Mark Out point                              | O                   | O                 |
| Add mark point                                  | E                   | E                 |
| Go to Mark In point                             | Shift+I             | Shift-I           |
|   | Home                | Home              |
| Go to Mark Out point                            | Shift+O             | Shift-O           |
|   | End                 | 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                 | ⌘ -F              |
|   | Ctrl+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+-              | ⌘ --              |



# 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)  | Scrolls the list vertically.    |
| Two-finger drag (trackpad)     |                                 |
| One-finger flick (touchscreen) | Scrolls the list with inertia.  |
| Two-finger flick (trackpad)    |                                 |

### Video pane

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

# Index

- .
- .ccolor files 133, 150
- .cube files 131
- .smi files 102, 106
- 1**
  - 1D LUT export 150
- 3**
  - 3D LUT export 150
- 5**
  - 50p half-step timecode 158
- 6**
  - 60p half-step timecode 158
- A**
  - Add custom metadata 102
  - Add custom metadata | Default.Prolog | [61] 39
  - add existing folder 11, 17
  - add padding to clips 40
  - Add to bin 12, 42
  - Add to Favorites 15
  - add watermark 40
  - adding clips 104, 107
  - adding clips to bins 17
  - adding media to library 10
  - adding shot marks 100
  - address/port (FTP) 24
  - Adjust SR Live settings manually 143, 163
  - Adobe Premiere 47
  - AIR matching 148, 161
- B**
  - backing up volumes 51
  - batch export 41, 117
  - bin export 18
  - bin location 11
  - bins 17
  - browse remote server 25, 55
  - burn in clip name 39
  - burn in timecode 39
  - BVM-X300 149
  - bypass OOTF 148, 161
- C**
  - card backup 51
  - catalog export 112
  - channel assignment 99
  - channel routing 94
  - Ci Workspace 47
  - CinemaScope overlay 95
  - cleaning bins 18
  - clip settings 94

- clip list from selection 103  
 clip lists 102  
 clip name 39  
 Clip rotation 95, 159  
 clip stitching 39, 118  
 clip stitching | Default.Pro-  
     log.Default.Hidden.Default.Browser |  
     [230] 117  
 Clips  
     rotation 95, 159  
 close growing MXF files 13  
 closing the library 9  
 color correction 121  
     exporting 150  
     loading 133  
 color curves 131  
 color presets 133, 150  
 color sliders 132  
 color space 127  
 color temperature slider 128  
 color wheels 125  
 combine clips 117  
 combining relay clips 113  
 consolidating library media 22  
 continuous playback 86, 92  
 continuous timecode 39, 118  
 Converting HDR to SDR color spaces 148, 161  
 Copy all related media 43  
 copy channel assignments 100  
 Copy clips only 13, 43  
 copy clips to a device 41  
 Copy only between mark points 44  
 copy snapshot to clipboard 93  
 copy to bin 42  
 copy to FTP 44  
 Copy with verification 13, 44  
 Create subfolder 12, 42  
 Create XDROOT folder 55  
 creating a library 9, 11, 14-15  
 creating clip lists 103  
 creating storyboards 106  
 creating subclips 23  
 cropping ratio 116  
 CSV export 112  
 curves 131  
 custom metadata export 39, 101
- D**
- default look profile 131  
 default transcode format 158  
 deinterlacing 36, 89, 157  
 delete files 21  
 delete items older than X days 18  
 delete items that can no longer be found 18  
 delete transcoding preset 50  
 deleting shot marks 101  
 deleting subclips 24  
 desqueeze 40, 95  
 device copy 44  
 disc backup 51  
 disconnect FTP 25  
 discontinuous timecode 91, 97  
 display CinemaScope overlay 95  
 Display color space (external monitor) 160  
 Display color space (video preview) 159  
 display mode 56-57  
 display secondary window 158  
 DPX frame rate 97
- E**
- Edit remote server 25  
 editing clips 22  
 editing essence marks 100  
 editing summary metadata 98  
 EDL  
     importing 111  
     linking clips 111  
     replacing clips 112  
     unlinking clips 111  
 embed NRT metadata 13  
 essence marks 92, 97  
 export bins as folders 18

export bins to Final Cut Pro X 20  
export bins to Premiere 19  
exporting clips 24  
exporting metadata 101  
exporting storyboards 46, 110  
exposure slider 128  
External file for SR Live metadata 142, 162  
external monitor color space 160  
external monitor device 166  
external monitor resolution 166

## F

fast copy 44  
Favorite Folders 15  
file formats 58, 83  
file information 97  
filter by date created 57  
filter by flag 57  
filter by format 57  
filter by type 57  
filtering clips 57  
Final Cut Pro X 47  
finalizing Professional Disc volumes 58  
finding media 53  
fit 88  
flash bands 40, 118  
flip horizontal 95  
flip vertical 95  
folder (FTP) 24  
formatting for PZW-4000 55  
formatting Professional Disc volumes 58  
formatting SxS 58  
frame rate 97  
FTP 24, 55  
FTP copy 44  
FTP devices  
    browsing 25  
    connecting 24  
    disconnecting 25  
    reconnecting 25  
    removing 25

SxS media 26  
USB storage 26  
FTP protocol 24  
FTP server settings 25  
FTPS protocol 24  
full-frame-rate playback 88  
full-screen preview 88

## G

gestures 175  
Go to End 90  
Go to Start 89  
GPS information 97  
GPS links 97, 158  
GPU acceleration 157  
grade in 159  
grading color space 127, 159  
graticule 124  
growing MXF files 11, 14, 58  
growing MXF files, closing 13  
gyroscope 114

## H

half-step timecode display 158  
HDR knee 146, 166  
HDR Knee point 146, 166  
HDR Knee slope 146, 166  
histogram monitor 123

## I

Import only between in/out points 13  
import transcode preset 49  
importing a LUT 130  
importing an EDL 111  
interoperability 157

## J

JKL shuttle 90

## K

Kelvin temperature 128  
keyboard shortcuts 169

## L

library  
add existing folder 11, 17  
adding clips to bins 17  
adding folders 17  
adding media 10  
cleaning bins 18  
closing 9  
consolidating 22  
creating 9  
creating subclips 23  
deleting subclips 24  
new folder 17  
opening 9  
organizing 15  
removing clips 21  
removing folders 17  
renaming bins 18  
renaming clips 21  
save as 22  
library indicator 11  
linking clips in an EDL 111  
list view 56  
Load settings from current clip 143, 163  
Load SR Live settings 143, 163  
load transcode preset 49  
loading a library 9  
logging 91  
logging metadata 98  
look profile 130-131  
look, default 131  
loop playback 92  
Loop Playback 90  
LTC 91, 97  
LUT export 150  
LUT import 130

## M

magnifying glass 88  
Make default look profile 131  
map metadata 97, 158  
mark in 91, 98  
mark out 91, 98  
Mask options 95  
Masking ratio 95  
master volume 94  
Media Browser pane 53  
merge clips 117  
metadata 97  
metadata export 101  
metadata for proxy clips 44  
metadata, stabilization 114  
meters 94  
minimum cropping ratio 116  
minimum stabilized crop resolution 116  
missing media 51  
monitor color space 160  
monitor resolution 166  
mono channel 99  
move clip to bin 17, 21  
moving clips between library folders 20  
multicam, synchronizing audio 114  
multicamera clips, synchronizing 114

## N

navigating the timeline 90  
new clip list from selection 103  
new empty clip list 103  
new empty storyboard 106  
New Folder 17  
new library 11, 14-15, 18-20  
Next Frame 89  
NRT metadata 13  
numbering 12, 35, 43, 48

## O

offline media 51  
open clip list 103  
open GPS links with 97, 158  
open MXF files 11, 14, 58  
open MXF files, closing 13  
open storyboard 106  
OpenCL/OpenGL interoperability 157  
OpenEXR frame rate 97  
opening a library 9  
options 157  
ordering clips 104, 107  
Organize 15  
override source timecode 41, 45

## P

partial copy 13, 19-20, 44  
password 25  
paste channel assignment 100  
PD-EDL clip lists 102, 106, 111  
PDF export 112  
perserve source UMID 45  
Play 89  
play all frames 89  
play in real time 89  
playing media 85  
prefix 12, 35, 43, 48  
Premiere Pro CS6 47  
Preview color space 159  
preview proxy clips 158  
previewing storyboards 110  
Previous Frame 89  
Professional Disc format 58  
protocol 24  
proxy editing 51  
proxy metadata 44  
proxy preview 158  
PZW-4000 26, 55

## R

real time playback 89  
Rec.2020 160  
Rec.709 160  
reconnect FTP 25  
relay clips, combining 113  
relinking library media 51  
remote server 55  
remove clips 21  
Remove remote server 25  
removing clips 105, 108  
Rename files 12, 35, 43, 48  
renaming clips 21  
renaming folders 18  
rendering storyboards 45  
reordering clips 104, 107  
repairing flash bands 40, 118  
replace source media 112  
Reset mark in/out points 92  
reset options 157  
Reset to default look profile 131  
reset transcoding settings 41  
Rotate preview (degrees) 95  
rotated clips 95, 159

## S

safe areas 95  
saturation slider 132  
save settings, transcoding 41  
save snapshot 93  
save snapshots to 159  
save transcode preset 50  
save transcoding settings 41  
scrub control 90  
SDR gain 143, 163  
SDR knee 145, 165  
SDR Knee point 145, 165  
SDR Knee slope 145, 165  
searching for clips 57  
secondary window 158

- select files 58  
sequential playback 86  
server name (FTP) 24  
sharing files with Ci Workspace 47  
sharing files with YouTube 48  
shortcuts 169  
shot mark 100  
Show in Explorer 22, 58  
Show in Finder 22, 58  
show safe areas 95  
show secondary window 158  
shuttle control 90  
sliders 128  
snapshot image format 159  
Sony BVM-X300 149  
source color space 127  
source UMID 45  
split-screen preview 87, 124  
SR Live metadata source 142, 162  
clip 142, 162  
external file 142, 162  
stabilization mode 115  
stabilize clips 114  
stabilized crop resolution 116  
starting frame index 37  
stereo pair 99  
stitch clips 39, 118  
stitch clips | Default.Pro-  
log.Default.Hidden,Default.Browser |  
[230] 117  
stitching clips 117  
storyboards 106  
creating empty 106  
creating from selection 106  
deleting 111  
editing clips 108  
editing color correction 109  
exporting 46, 110  
previewing 110  
renaming 111  
rendering 45  
subclips 23
- suffix 12, 35, 43, 48  
supported formats 58, 83  
SxS format 58  
SxS media 26  
synchronizing multicamera clips 114

## T

- Tangent element 135  
temperature slider 128  
thumbnail frames 159  
thumbnail view 56  
timecode 39  
timecode break 91, 97  
tint slider 128  
tone curve 131  
touchscreen navigation 175  
trackpad navigation 175  
transcode clips before upload 47  
Transcode preset 36  
transcode presets 49  
transcode using proxy source clip 40  
transcoding clips 34  
transcoding settings, saving 41  
transferring clips via FTP 24  
transport controls 89

## U

- UMID (Unique Material Identifier) 45  
unlinking clips in an EDL 111  
upload original clips 47  
uploading to Ci 22, 58  
uploading to Ci Workspace 47  
uploading to YouTube 48  
upscaling 36, 89, 157  
use anamorphic setting 40, 95  
Use fast device-to-device copy 44  
use flip and desqueeze settings 95  
Use flip, rotate, and desqueeze settings 40  
use mark in/out points 40  
user name 25

## V

vectorscope monitor 123  
Vegas Pro EDL 47  
verification mode 14, 45  
Video pane 85  
video preview 124  
video processing device 157  
VTR-style playback 86

## W

watermark 40  
waveform monitor 122  
wheels 125  
working color space 159

## X

XDCAm EDL 102  
XDCAm Professional Disc format 58  
XDROOT folder 55

## Y

YouTube 48