



Exporting Timelines to Other Applications

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Exporting Timelines to Other Applications

Once you've completed editing and grading a program, you may need to export your final graded timeline as EDL, AAF or XML files in order to send it to another application for further finishing, effects work, or to complete a round trip from an NLE.

To send a graded project to another application, you need to render the graded clips first using the controls on the Deliver page to render the Timeline as individual source clips. In this mode, the reel name and timecode metadata of each rendered clip is mirrored by the exported project file, to maintain the correlation between exported EDL, XML, or AAF data and the rendered media. For detailed information about rendering in the Deliver page, see Chapter 35, "Rendering Media."

If you render using the Easy Setups that correspond to Final Cut Pro XML or Avid AAF round trips, then an XML or AAF will be exported to the same directory you've rendered to. However, you can still export an XML, AAF, or EDL file separately should the need arise.

Alternately, if you've edited a project from scratch in DaVinci Resolve and need to move a timeline to another application, you can export any timeline to any format for purposes of project exchange, without the need to render new media (depending on your workflow).

Even in situations where you've imported a timeline from another application, the robust project compatibility of DaVinci Resolve makes it possible to import one type of project exchange file, such as XML, and then export a completely different kind, such as AAF or EDL. This lets you use DaVinci Resolve as a project exchange utility.

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Exporting to AAF/XML

Whether you've edited your project from scratch inside of Resolve, or you're doing a round trip with an application that uses AAF, Final Cut Pro 7 XML, or Final Cut X XML project exchange formats, you can export any Resolve timeline in the Edit page to any project format Resolve supports. Whatever your workflow, keep the following in mind:

- **Timelines are automatically exported when you render a timeline in the Deliver page:** When you use the "Final Cut Pro Round-Trip" or "Avid AAF Round-Trip" render setting presets, or a preset created from one of them, a corresponding XML or AAF file is automatically exported along with the media you render.
- Even if you've imported a project from another application, you can re-edit imported **projects before export:** If necessary, you can freely re-edit projects you're planning to export. When you export an AAF or XML file, the Timeline will be sent back to the originating NLE, or onward to the finishing application of choice.
- **Unsupported effects are sometimes preserved in Round Trip workflows:** If there were effects or clip constructs in the original sequence that were not compatible with DaVinci Resolve, how those effects will be handled depends on the project format you're exporting to, and whether or not you've edited the project. For XML projects, unsupported effects are saved internally by Resolve, and are exported with the XML file that you output no matter what. Consequently, they should reappear when you reopen the exported file in the originating NLE. For AAF projects, you can export unsupported effects as long as you don't re-edit the project. However, if you do re-edit the project, then you can only export an AAF file that's been stripped of all unsupported effects.
- **Project formats can be converted to other formats:** Using DaVinci's Export commands, compatible project formats can be converted from one format to another. For example, an imported EDL can be output as Final Cut Pro X XML. For that matter, Final Cut Pro 7 XML can be imported and then exported as Final Cut X XML. Or, an AAF file from Media Composer can be imported and then exported as a Final Cut Pro XML file to be opened in any NLE or finishing application compatible with that format, such as Premiere Pro or Smoke.

To export an AAF or XML file after you've rendered the graded clips:

- 1 Do one of the following:
 - To export the current Timeline, choose File > Export AAF, XML, or press Shift-Command-O.
 - Open the Edit page, right-click the Timeline you want to export in the Media Pool, and choose Timelines > Export > AAF/XML.
- 2 When the Export XML dialog appears, type a name for the file and choose a location for the exported XML file, then click Save.

An XML version of that timeline is saved, complete with references to the graded media you rendered, and is ready for import into an NLE or finishing application.

More About Exporting to AAF

When you export to AAF, there are actually two options that are available to you, depending on whether you made editorial changes to the Timeline in the Edit page:

- **If you didn't make any editing changes to the Timeline you imported:** You can choose File > Export AAF, XML, and choose "AAF Files" from the Format pop-up menu. This exports all audio and effects using data from the original AAF file that was exported from Media Composer, regardless of whether or not they're supported in Resolve. When you export an unedited AAF, DaVinci Resolve uses the Avid AAF file that you originally imported to create an updated one; make sure it's still in the same location as it was when you first imported it into Resolve.
- **If you made editing changes to the Timeline you imported, or you're exporting a project that wasn't AAF to begin with:** Then you need to right-click the Timeline you want to export in the Media Pool and choose Timelines > Export > Generate New AAF. This option creates a brand new AAF file, but audio and effects that are not supported in DaVinci Resolve in an AAF import are discarded.

Exporting an EDL

DaVinci Resolve is also capable of exporting EDLs that can be reimported into other applications. For more information about EDL workflows, see Chapter 22, "Importing Projects and Relinking Media" and Chapter 11, "Ingesting From Tape."

To export an EDL:

- 1 Open the Edit page and select the Timeline you want to export an EDL from in the Media Pool.
- 2 Exported EDLs only have a single video track. For timelines with multiple tracks, only the events on the video track with the destination control assigned to it will be exported (the destination control is the first control at the left in the track header). If you want to export a track other than Video 1, you can assign the destination control to the specific track you need to export.
- 3 Right-click the Timeline in the Media Pool, and choose Timelines > Export > AAF/XML/EDL from the contextual menu.
- 4 When the Export Timeline dialog appears, type a name, choose a location for the exported EDL, and choose EDL Files from the pop-up menu at the bottom, then click Save. An EDL is exported.

Exporting a Missing Clips EDL

This command lets you export a quick report listing all clips that are offline in the currently selected track of the Timeline in the Edit page. This report is in EDL format, with one event for each clip that's offline, which describes the reel number and source timecode of the missing media, as well as the record timecode of the missing media's position on the Timeline.

Here's an example of an exported Missing Clips EDL:

```
TITLE: ( no title )  
1  A001_C002_0820GA_001  V  C  10:28:27:03  10:28:28:00  01:00:00:00  01:00:00:21  
2  A004_C012_0820MC_001  V  C  14:07:31:21  14:07:35:13  01:00:12:13  01:00:16:05  
3  A017_C001_0820CV_001  V  C  21:16:14:22  21:16:15:00  01:00:16:05  01:00:16:07
```

Once you've exported this information, you can hand it off to whomever can help you track down the missing media.

To export a Missing Clips EDL:

- 1 Open the Edit page and open the Timeline you want to export a Missing Clips EDL for in the Timeline browser.
- 2 For timelines with multiple tracks, only the events on the video track with the destination control assigned to it will be examined for missing clips. If you want to examine a track other than Video 1, you can assign the destination control to the specific track you need to examine for missing clips.
- 3 Right-click the Timeline in the Media Pool, and choose Timelines > Export > Missing Clips EDL from the contextual menu.
- 4 When the Save Missing Clips EDL dialog appears, type a name and choose a location for the exported EDL, then click Save.

Exporting Timeline Markers to EDL

If you keep notes about a project within the notes field of Timeline markers, found in the Timeline ruler, then it's possible to export those notes as an EDL.

To export timeline markers as an EDL:

- 1 Right-click that timeline in the Media Pool, and choose Timelines > Export > Timeline Markers to EDL.
- 2 Choose a location and export format from the Export Edit Index dialog, and click Save. Each Timeline marker is listed in the resulting EDL, with any notes included along with a duration, where applicable.

Exporting to CDL

DaVinci Resolve can export and import basic grading data to and from other applications via a Color Decision List (CDL). CDLs are an industry-standard file format originally developed by the American Society of Cinematographers' technology committee. Resolve supports the 1.2 CDL standard that defines the slope, offset, and power for each of the red, green, and blue channels, as well as the overall saturation of each clip in a program.

CDL files are formatted similarly to EDLs, with SOP (Slope/Offset/Power), and SAT (Saturation) values embedded as metadata in much the same way as comments are in a more typical EDL. Here's an example of a single CDL event:

```
020 001 V C 03:02:49:13 03:02:53:00 01:01:28:11 01:01:31:22
*ASC_SOP (1.109563 1.717648 0.866061) (-0.238880 -0.390357 0.353743)
(0.672948 1.384022 0.889876)
*ASC_SAT 1.000000
```

Because the CDL definition of a grade is so narrow, projects you're planning to export to other applications via a CDL must be constrained to only those operations the CDL mathematically defines. Here are some things to keep in mind:

- Only primary corrections in the first node of each clip are exported.
- Restrict yourself to using the Lift/Gamma/Gain, Offset, and Saturation controls.
- Keyframes are never exported. If keyframes are present in a grade, only the parameter values at the first frame of the clip are used.
- The track grade and group grades are completely ignored.
- If there is an HSL Qualifier or a Power Window in the first node, it is ignored and the corrections in that node are exported as if it were a primary correction.
- Do not make Y' only adjustments; they're not compatible with CDLs. To ensure that your exported CDL is accurate, set the Lum Mix parameter in the Primary Controls palette for each grade to 0. For workflows involving frequent CDL export, you can turn on the "Luminance Mixer defaults to zero" option in the Color panel of the Project Settings window to make sure this parameter is always set to 0.

If your timeline conforms to all of these restrictions, then you're ready to export a CDL.

To export a CDL:

- 1 Open the Edit page, right-click the Timeline you want to export in the Media Pool, and choose Timelines > Export > CDL from the contextual menu.
- 2 Enter a name for the CDL, choose a location to save it to, and click OK.

For more information on importing a CDL to add grades to your project, see Chapter 32, "Copying Grades Between Timelines Using ColorTrace." Exporting the Edit Index as a CSV or TXT File

Exporting the Edit Index as a CSV or TXT File

You can export the current contents of the Edit Index, in the Edit page, as a self-contained file to use for reference in a variety of ways.

To export the Edit Index:

- 1 Open the Edit Index, and choose one of the Edit Index filters from the Edit Index option menu, if necessary. For example, you could filter the edit index by Offline Clips Only if you wanted to export a list of all offline clips in the current timeline.
- 2 Right-click that timeline in the Media Pool, and choose Timelines > Export > Edit Index, then choose a location and export format from the Export Edit Index dialog, and click Save.

Exporting to ALE

DaVinci Resolve is also capable of exporting ALE (Avid Log Exchange) files. ALE is a tab-delimited, ASCII text-based clip logging list format that enables the exchange of clip metadata that can't be embedded inside MXF files. ALE files are designed to let you export a log of all clips that are used in a particular timeline with all of the metadata that's associated with those clips in Resolve, so this metadata can be imported into and associated with clips inside Media Composer or Symphony.

ALE files are divided into three sections, labeled Heading, Column, and Data:

- The Heading provides information about the clips being logged, including the picture and audio format, and the frame rate.
- The Column line defines each of the columns of metadata being exported in the list. There's an automatic minimum of metadata columns that are automatically included, regardless of whether they're populated or not. However, additional metadata columns are automatically added to this list by Resolve when any corresponding metadata field in the Metadata Editor is populated. For example, if you enter information into the Camera, Keyword, and Shot fields of the Metadata Editor, then those columns will be added to the exported ALE. There are no user settings that control this.
- The Data section contains multiple lines, one for each event being referenced in the list, that contain all the data corresponding to that clip.

If you're exporting stereoscopic clips from stereoscopic timelines, the following additional columns of metadata are automatically included in the two ALE files that are generated:

- Pan (relative to timeline resolution)
- Tilt (relative to timeline resolution)
- Zoom
- Rotate
- Convergence (relative to timeline resolution)
- HFlip (0 or 1)
- VFlip (0 or 1)

Here's an example of a short ALE export:

Heading

```
FIELD_DELIM      TABS
VIDEO_FORMAT     1080
AUDIO_FORMAT     48khz
FPS              23.976
```

Column

```
Name, Tracks, Start, End, Take, Tape, UNC, FPS, Reel, Scene,
Shoot, date, Manufacturer, Source Resolution, Source, Bit
Depth, DESCRIPT, Comments, Audio SR, Audio Bit Depth,
Auxiliary TC1, KN Start, Source File Path, Display Name
```

Data

```
A001_C002_V01.CBF6A4FD139AD.mxf, V, 10:28:27:03, 10:28:28:00,  
A001_C002_V01.CBF6A4FD139AD  
/Volumes/Disk_1/Avid MediaFiles/MXF/1/A001_C002_V01.  
CBF6A4FD139AD.mxf  
23.98, DaVinci Resolve, 1920x1080, 10  
/Volumes/Disk_1/Avid MediaFiles/MXF/1/A001_C002_V01.  
CBF6A4FD139AD.mxf  
A001_C002_V01.CBF6A4FD139AD  
  
A016_C008_V01.CBF6A4FD13ABD.mxf,V, 23:35:56:03, 23:36:00:11,  
A016_C008_V01.CBF6A4FD13ABD  
/Volumes/Disk_1/Avid MediaFiles/MXF/1/A016_C008_V01.  
CBF6A4FD13ABD.mxf  
23.98, DaVinci Resolve, 1920x1080, 10  
/Volumes/Disk_1/Avid MediaFiles/MXF/1/A016_C008_V01.  
CBF6A4FD13ABD.mxf  
A016_C008_V01.CBF6A4FD13ABD  
  
A004_C012_V01.CBF6A4FD1438E.mxf, V, 14:07:31:21, 14:07:35:15,  
A004_C012_V01.CBF6A4FD1438E  
/Volumes/Disk_1/Avid MediaFiles/MXF/1/A004_C012_V01.  
CBF6A4FD1438E.mxf  
23.98, DaVinci Resolve, 1920x1080, 10  
/Volumes/Disk_1/Avid MediaFiles/MXF/1/A004_C012_V01.  
CBF6A4FD1438E.mxf  
A004_C012_V01.CBF6A4FD1438E
```

NOTE: The commas shown above are not normally in the ALE but shown here for field clarity

To export an ALE file:

- 1 Open the Edit page, right-click the Timeline you want to export in the Media Pool, and choose Timelines > Export > ALE from the contextual menu.
- 2 Enter a name for the ALE, choose a location to save it to, and click OK.

Exporting to ALE with CDL

Avid Media Composer and Symphony also support the import of ALE files with additional CDL metadata columns with which to associate SOP (Slope/Offset/Power) and SAT (Saturation) adjustment metadata to each clip that's logged in the ALE.

When you import an ALE with CDL file into Media Composer, the SOP and SAT data populate metadata columns for preservation and export in various Avid workflows. Here's an example of the Heading, Column, and Data sections of a sample ALE with CDL, with one line of clip and CDL data.

To export an ALE with CDL file:

- 1 Open the Edit page, right-click the Timeline you want to export in the Media Pool, and choose Timelines > Export > ALE and CDL from the contextual menu.
- 2 Enter a name for the ALE file, choose a location to save it to, and click OK.

The ALE file is saved, and a dialog appears reminding you of the file path to which it was saved (click OK to dismiss it).

Here's an example of a short ALE with CDL export:

Heading

```
FIELD_DELIM      TABS
VIDEO_FORMAT     1080
AUDIO_FORMAT     -
FPS              24
```

Column

```
Name, Tracks, Start, End, Take, Tape, UNC, FPS, Reel, Scene,
Shoot date, Manufacturer, Source Resolution, Source Bit
Depth, DESCRIPT, Comments, Audio SR, Audio Bit Depth,
Auxiliary TC1, KN Start, Source File Path, Display Name
KeyKode, ASC_SOP, ASC_SAT, RESOLVE_SIZING
```

Data

```
A001_C002_V01.CBF6A4FD139AD.mxf, V, 10:28:27:03, 10:28:28:00,
A001_C002_V01.CBF6A4FD139AD
/Volumes/Disk_1/Avid MediaFiles/MXF/1/A001_C002_V01.
CBF6A4FD139AD.mxf
23.98, DaVinci Resolve, 1920x1080, 10
/Volumes/Disk_1/Avid MediaFiles/MXF/1/A001_C002_V01.
CBF6A4FD139AD.mxf
A001_C002_V01.CBF6A4FD139AD
(1.0260 1.0260 1.0260)(-0.0260 -0.0260 -0.0260)(0.8237
0.8237 0.8237)
(0.0000 0.0000 1.0000 0.0000 0.0000 0 0)
```

NOTE: The commas shown above are not normally in the ALE but shown here for field clarity

Exporting Timeline Markers to EDL

This command lets you export a quick report listing the text of all markers that have been added to the Timeline as notes in an EDL. Clip markers are ignored. This report is in EDL format, with one event for each Timeline marker, with a placeholder reel number (001 by default), and source and record timecodes that correspond to each marker's position in the Timeline (with a duration of one frame). An EDL note for each event lists the Marker note, if there is one. There is no note available for the color of the markers

Here's an example of an exported Timeline Marker EDL:

```
TITLE: ( no title )
001    001    V    C    01:00:09:09 01:00:09:10 01:00:09:09 01:00:09:10
Replace with another car door sound effect
002    001    V    C    01:00:20:12 01:00:20:13 01:00:20:12 01:00:20:13
Trim this clip shorter
003    001    V    C    01:00:30:12 01:00:30:13 01:00:30:12 01:00:30:13
Find another stock footage clip of the bridge
004    001    V    C    01:00:30:13 01:00:30:14 01:00:30:13 01:00:30:14
Trim this montage three seconds shorter
Exporting and Importing Media
Pool Metadata
```

Exporting and Importing Media Pool Metadata

DaVinci Resolve makes it possible to export metadata from the Media Pool of one project for import into the clips of another project, for instances where you need to move metadata around. This process exports all metadata from the Media Pool as a .csv file.

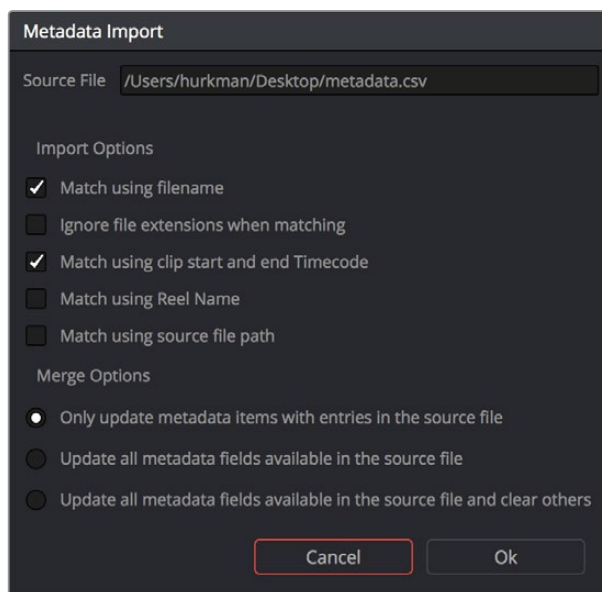
For example, a DIT might have entered a lot of metadata to the DaVinci Resolve project used for generating dailies, but then an impatient editor might have created a separate project to begin editing those dailies. Instead of requiring the editor to enter each clip's metadata all over again, you can export the metadata from the DIT's project and import it into the editor's new project, automatically matching the relevant metadata to each corresponding clip.

To export Media Pool metadata:

- 1 Open a project containing Media Pool metadata you want to export.
- 2 Optionally, select which clips in the Media Pool you want to export metadata for.
- 3 Choose File > Export Metadata From > Media Pool to export metadata from every clip in the Media Pool, or choose File > Export Metadata From > Selected Clips to only export metadata from clips you selected in step 2.
- 4 When the Export Metadata dialog appears, enter a name and choose a location for the file to be written, then click Save. All metadata is exported into a .csv file that can be viewed and/or edited in any spreadsheet application.

To import Media Pool metadata:

- 1 Open a project containing clips you want to populate with imported metadata.
- 2 Optionally, select which clips in the Media Pool you want to import metadata to.
- 3 Choose File > Import Metadata To > Media Pool to import metadata to potentially every clip in the Media Pool, or choose File > Import Metadata To > Selected Clips to only import metadata to clips you selected in step 2.
- 4 When the Import Metadata dialog appears, choose a metadata .csv file to import, and click Open.
- 5 When the Metadata Import dialog appears, choose the Import Options you want to use to match the .csv file's metadata to the correct clips in the currently open project. By default, Resolve tries to use "Match using filename" and "Match using clip start and end Timecode" to match each line of metadata in the .csv file with a clip in the Media Pool, but there are other options you can use such as ignoring file extensions, using Reel Name, and using source file paths.
- 6 Next, choose which Merge Option you want to use in the Metadata Import dialog. There are three options:
 - **Only update metadata items with entries in the source file:** The default setting. Only updates a clip's metadata if there's a valid entry in the imported .csv file. Other clip metadata fields are left as they were before the import.
 - **Update all metadata fields available in the source file:** For each clip that corresponds to a line of metadata in the imported .csv file, every single metadata field referenced by the .csv file is overwritten, regardless of whether or not there's a valid entry for that field.
 - **Update all metadata fields available in the source file and clear others:** For each clip that corresponds to a line of metadata in the imported .csv file, every single metadata field referenced by the .csv file is overwritten, regardless of whether or not there's a valid entry for that field. Furthermore, metadata fields that aren't referenced by the imported .csv file are cleared of whatever metadata was there before.



The Metadata Import dialog that lets you choose options for how to match and merge imported metadata

- 7 When you're finished choosing options, click Ok and all available metadata from the source .csv file will be imported.