

1 Multi-format Delivery Workflows

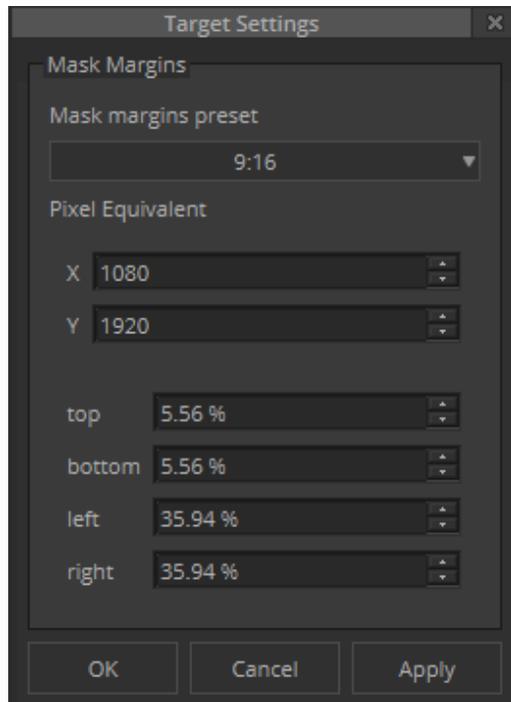
Delivering a program in multiple formats and rasters is common. There are a number of possible ways to do this - using masks, crops, pan and zoom, etc. - all eventually resulting in the desired outputs. The following workflows are what Avid suggests when creating a traditional (horizontal) program with a non-standard (vertical) derivative. One of these procedures relies on using FrameFlex to reframe and update your horizontal program to create a vertical version. If you are unfamiliar with FrameFlex, we recommend you search for “Reframing Your Media” in the Help to learn more. FrameFlex allows you to access the full resolution of your source material at all times during your edit, ensuring that you derive the highest quality images from your content. It also allows for better AAF exchange with other partner applications during the color grading or conform process.

Workflow 1

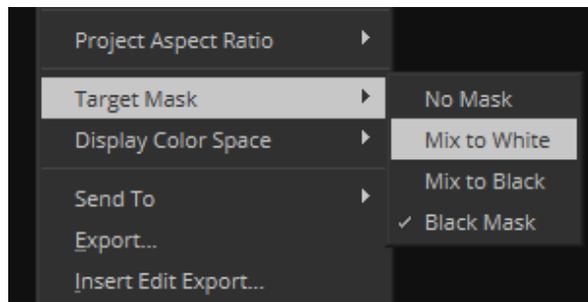
Use the following procedures to create horizontal and vertical masters. The vertical project is created based on using a vertical HD mask over the UHD horizontal sequence. Then perform another export step to extract the area to make a final 1080 x 1920 master.

To create horizontal and vertical masters:

1. Launch Media Composer.
2. In the Select Project window create a 16x9 UHD project (3840x2160) and edit the horizontal version as normal.
3. To edit the Vertical version, set the project to UHD (3840x2160) using the project's Format tab.
4. Apply a 9x16 Mask Margins to the project (you can also set the pixel equivalent directly to HD dimensions). You can find Mask Margins in the Format tab.

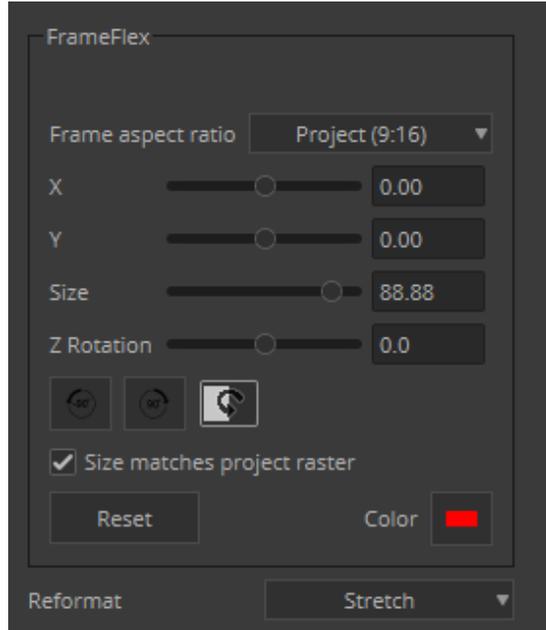


- Set the mask to Mix to White or Mix to Black so the image is visible underneath. This will allow you to see the rest of the image in case you want to reframe it. (Right-click on the record-side viewer to select.)



- Use FrameFlex or Resizes to animate any reframing of the image so that the area of interest is always within the vertical viewing space.
- Verify the position of titles and modify if necessary.
- When complete, if you are going to another application (like Resolve), export an AAF of the sequences; the resize and FrameFlex information will carry over in the AAF.
- To create the final delivery, export an MXF OP1a (settings below) of the horizontal sequence, then export either DPX files (settings below) or DNxUncompressed OP1a of the 9x16 vertical sequence. The vertical sequence is still 'inside' a horizontal sequence. The next steps will allow exporting without the black areas (truly vertical).
- Close the project and create a HD 1080 x 1920 project.
- Link back to the vertical sequence (DPX or DNxUncompressed files).
- In the bin, using the Reformat column, change from Stretch to Center Keep Size.

Alternatively, in the source settings, check “Size matches project raster”. The frame aspect ratio will be set to 9:16 and size of the frame will match vertical HD dimensions.

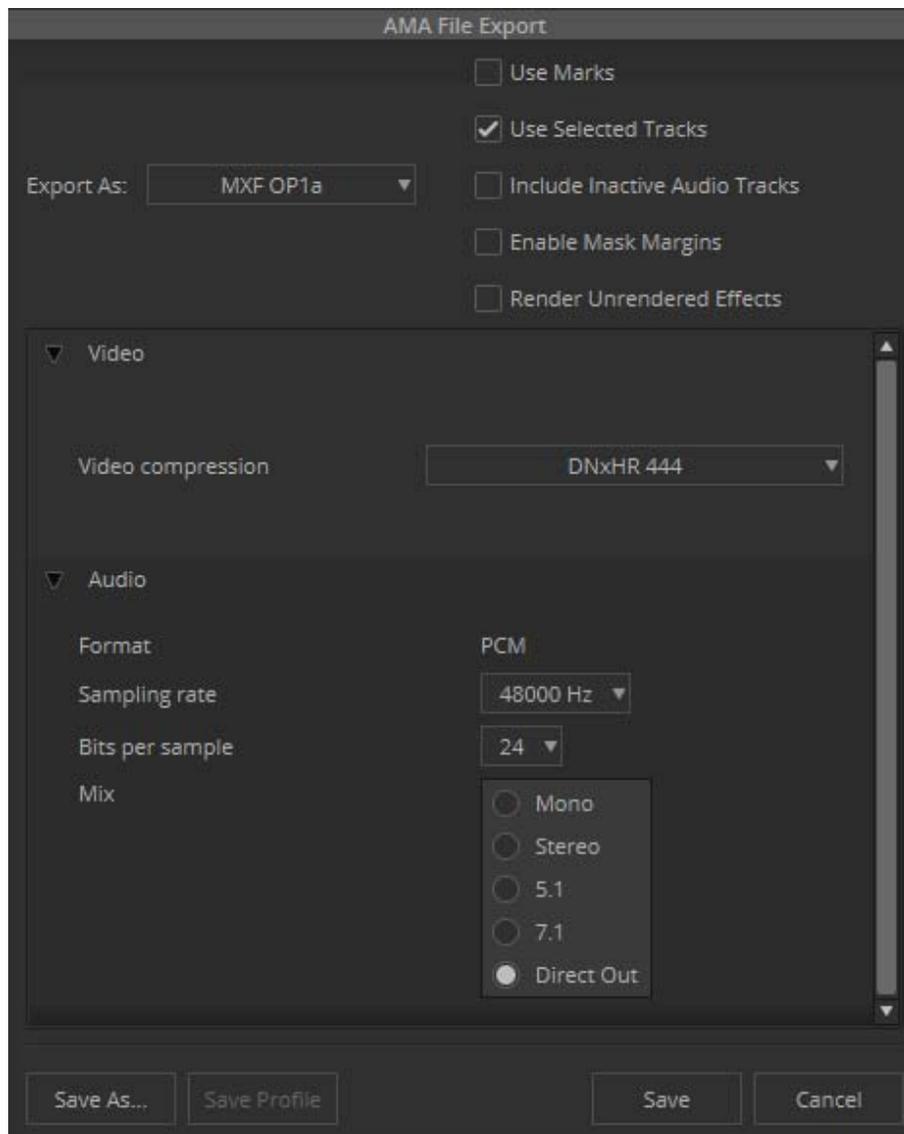


- Drop on new sequence and export an MXF OP1a (settings below) of the vertical sequence.



This setting is in Media Composer v2020.4. If you are working on an earlier version of Media Composer, you can create a custom mask margin with Left and Right set to 34.18%.

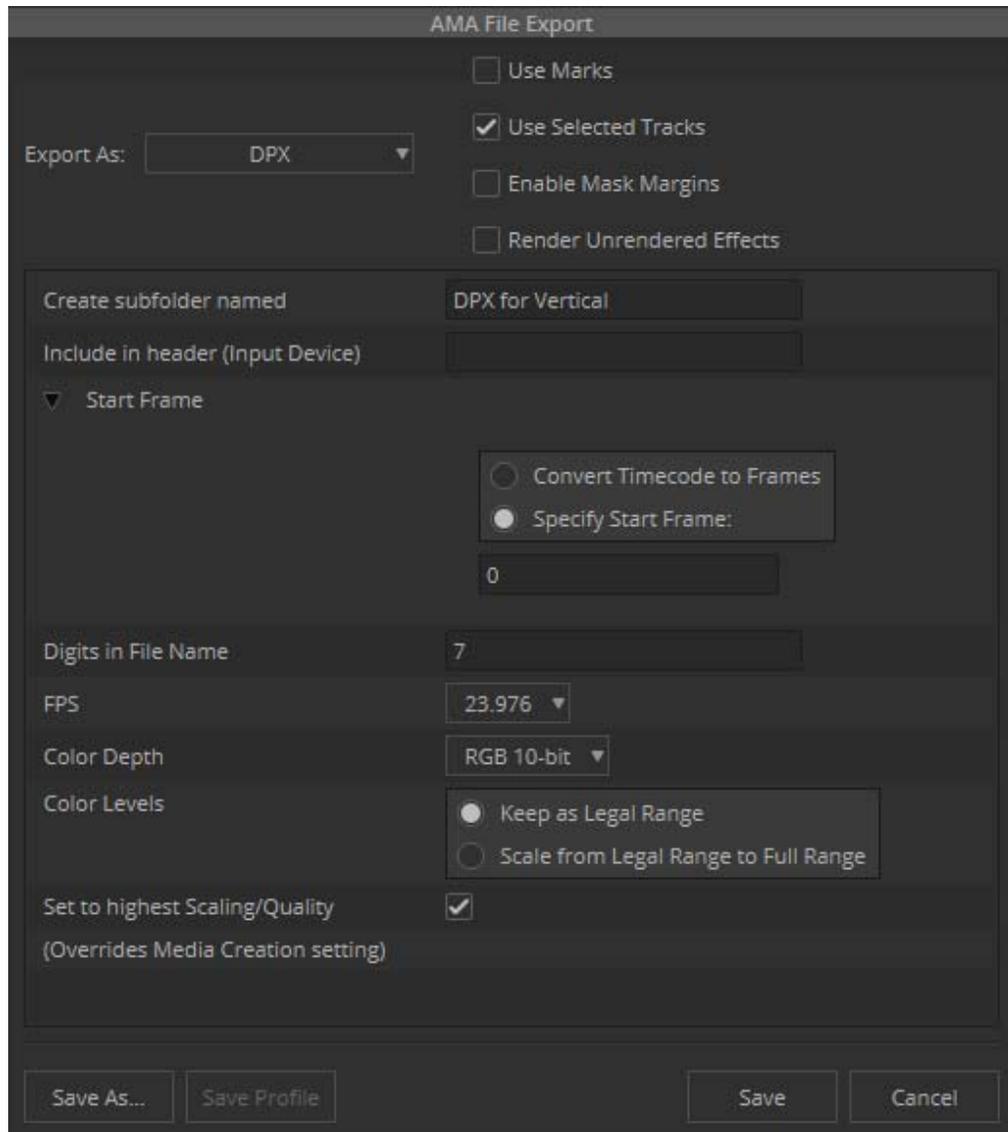
MXF OP1a Export Settings:



DPX Files Settings:



The Frame rate should match your project rate.

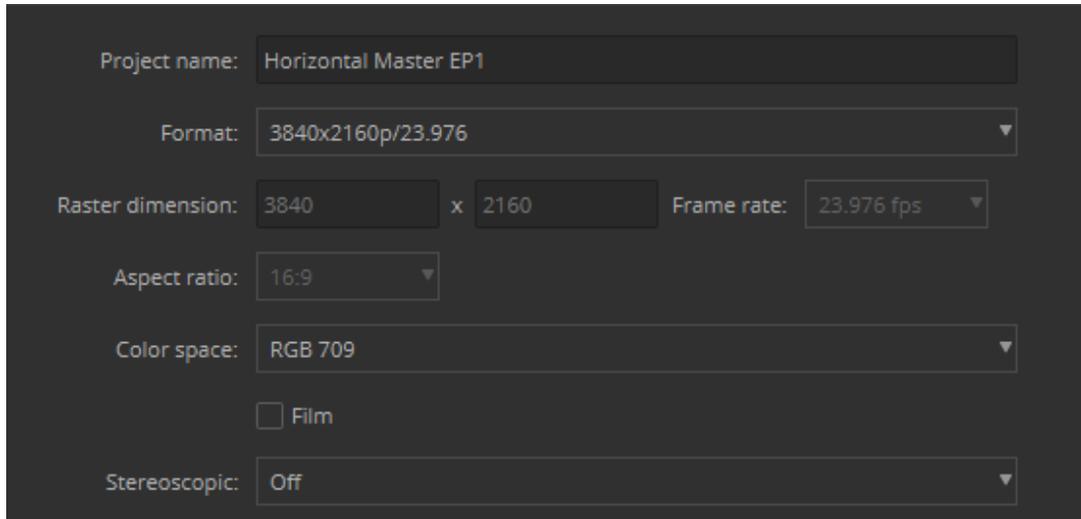


Workflow 2

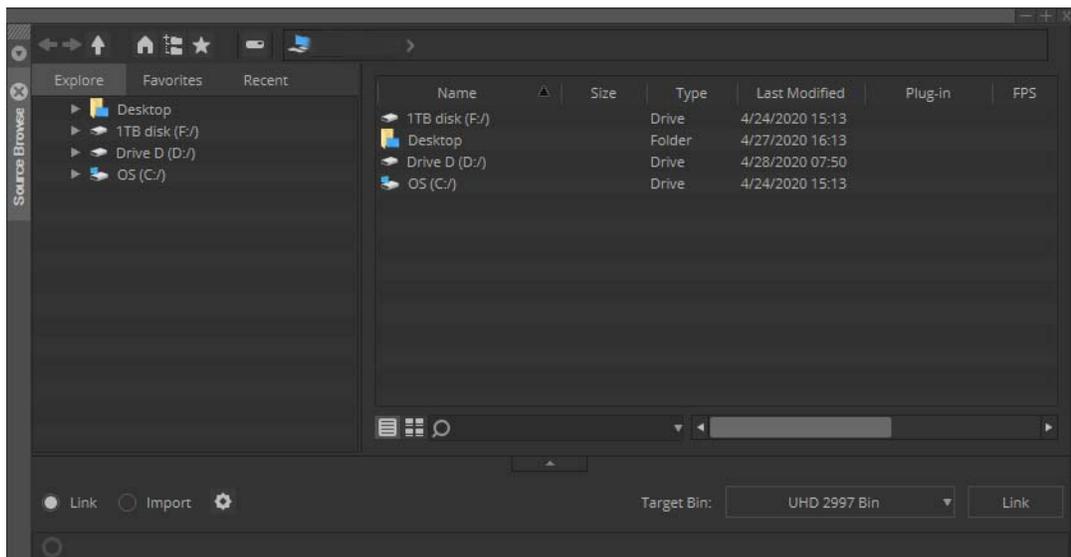
Use the following procedures to create horizontal and vertical masters. This workflow involves duplicating the horizontal sequence into a vertical project and changing the Frameflex to vertical.

To create a horizontal master:

1. Launch Media Composer.
2. In the Select Project window, click New Project.
3. Enter a name for your project in the Project Name field.
4. Select a UHD format.
5. Select RGB 709 Color Space.



6. Select Tools > Source Browser.



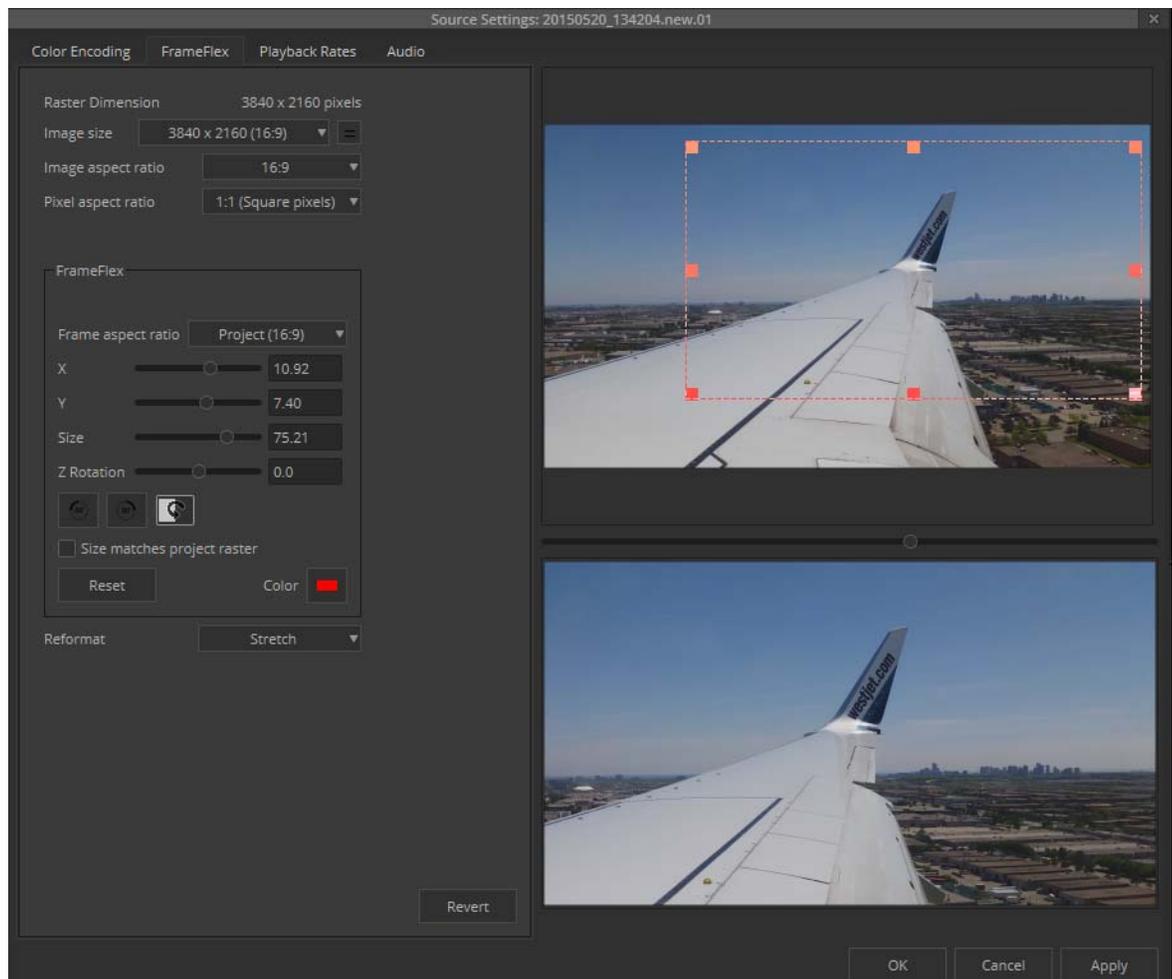
7. Make sure Link is selected.
8. Navigate to and select the files to which you want to link. Ctrl+click or Shift+click to select multiple files.
9. Click Link at the bottom right of the window.

The selected files will appear in the selected Target Bin.



You can also link clips by selecting the clips in the Source Browser window, right clicking and selecting Add to Bin.

10. Right click a clip in your bin and select Source Settings.
11. Click the FrameFlex tab.
12. Make sure the Aspect Ratio is set to 16:9.

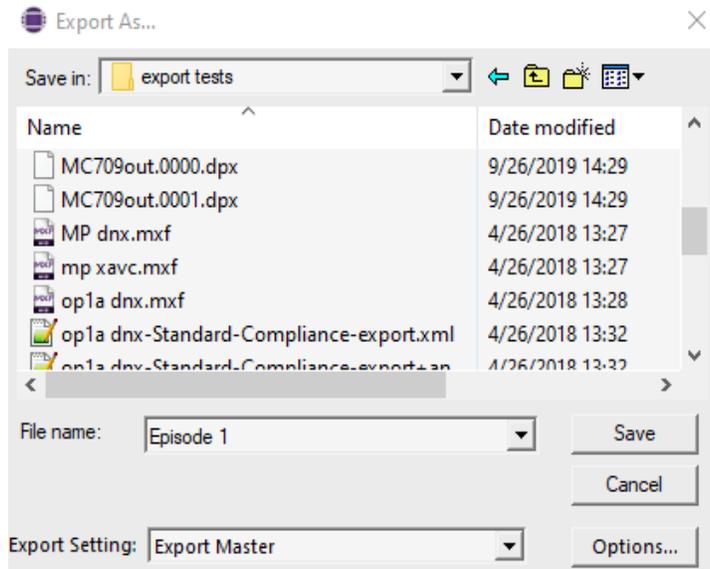


13. Continue making sure all the clips you use for your sequence are set to 16:9.

14. Drag your clips to the Timeline and edit your sequence.

For more information on editing your sequence, you can refer to the following topics in the Help. “Creating and Editing Sequences,” “Working with Trim Edits,” “Basics of Effect Editing,” and “Understanding Color Correction”

15. Right click the sequence in your bin and select Output > Export to File.



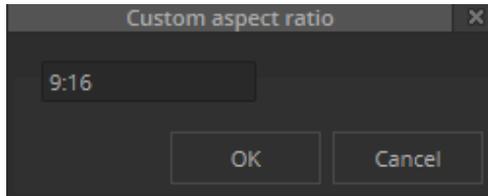
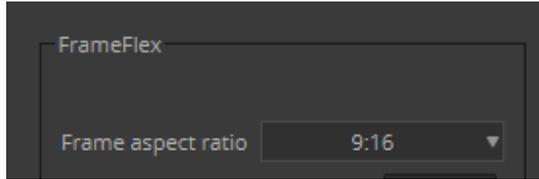
16. Set the path where you want the file saved.
 17. Name the file.
 18. Click the Options button.
- The AMA File Export dialog opens.
19. Select File Type MXF OP1a Export.
 20. (Option) Select the Use Marks, Use Selected Tracks, Include Inactive Audio Tracks, Enable Mask Margins options.
 21. Select DNxHR 444 Video compression.
 22. Click Save.

The MXF OP1a file is exported to the selected directory.

To create a vertical master based on the horizontal master:

1. Create a new 1080x1920 project, RGB 709 project.
2. Open the bin that contains the sequence and clips from the Horizontal project.
3. Open another bin. This will be the bin where the vertical master will reside.
4. Position or resize the bins so that you can see both of them at the same time.
5. In the bin containing the horizontal master, click the clips or sequences that you want to copy.
6. Press and hold the Alt key (Windows) or Option key (Macintosh) and drag the clips or sequences to the vertical master bin, and release the mouse button.
7. The copies appear in the vertical master bin.
8. Rename the sequence in the vertical master bin.
9. Right-click the sequence and choose Select -> Media Relatives.
10. Select the media relatives, right click and select Source Settings.
11. Click the FrameFlex tab and select Custom from the Frame aspect ratio pulldown menu.
12. Set the aspect ratio to 9:16.

This is the built-in choice in Media Composer v2020.4 and higher. For earlier versions, use custom and enter 9:16.



13. Open the renamed sequence. (The sequence will still have the horizontal framing.)
14. Right click the sequence and select Refresh Sequence(s) > Aspect Ratio and Reformatting Options.



If some adapters did not update, for example, if there were changes in the Timeline in the horizontal project, you can correct them by adjusting the framing to 9:16 in the Effect Editor.

15. Adjust FrameFlex in the sequence as desired:
 - a. In the Timeline, scrub over the clips you need to have the framing tweaked.
 - b. Select Tools > Effect Editor to edit the FrameFlex. (On the record monitor you see the source and the framing box. The result is on the left monitor.)
 - c. Adjust as necessary.
16. Adjust titles in Avid Titler+ if necessary.
17. Lock your video and audio tracks.
18. Right click the sequence in your bin and select Output > Export to File.
19. Set the path where you want the file saved.
20. Name the file.
21. Click the Options button.

The AMA File Export dialog opens.
22. Select File Type MXF OP1a Export.
23. (Option) Select the Use Marks, Use Selected Tracks, Include Inactive Audio Tracks, Enable Mask Margins options.
24. Select DNxHR 444 Video compression.
25. Click Save.

The MXF OP1a file is exported to the selected directory.

Monitoring Both Horizontal and Vertical Versions

(Optional) In the Horizontal Project, create a mixdown of the video and place it on the highest track. Then when you open the copied sequence in the vertical project, apply FrameFlex to this top track and reframe it so the entire shot is visible in the monitor. This will let you quickly switch to monitor the horizontal sequence while editing the vertical sequence.

Both masters can be put in a sequence with picture and picture to make sure both versions match the desired outcome.

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