



What's New for Avid® Media Composer® v6.5 Avid Symphony™ v6.5 Avid NewsCutter® v10.5

New Features

The following lists what's new for the current editor release.

Feature	Description	For More Info
Remote Editing	Avid Interplay Sphere introduces support for Windows® based, NewsCutter and Media Composer remote editing systems connected to an Interplay environment using a high-bandwidth communications link. This allows you to access and edit assets hosted at the facility from the field in real time. You can efficiently send assets from the field back to the facility.	See the <i>Interplay Sphere Remote News Editing Workflow Guide</i> .
Audio Keyframe Enhancements	You can now select multiple audio keyframes on the Timeline and copy them to a different area of the same clip or to different clips.	See “Audio Keyframe Enhancements” on page 3 .
Relink of QuickTime AMA files	Previously, if you wanted to relink to multiple files, the system prompted you for the location of each file, one at a time. With this release, if you point to the folder location where the file(s) you want to relink to exist, the system will relink to the files in the new folder.	See “Relinking to QuickTime AMA Files” on page 7 .
Activating and Deactivating I/O Hardware	This feature allows you to enable and disable Avid Nitris DX and Mojo DX hardware and 3rd party Open I/O hardware.	See “Activating and Deactivating I/O Hardware” on page 7 .

Feature	Description	For More Info
Audio Punch-In Changes	This release includes Audio Punch-In support for Open I/O devices.	See “Audio Punch-In Changes” on page 8.
Dragging Nonadjacent Segments	You can now drag nonadjacent clips in the Timeline.	See “Dragging Nonadjacent Segments” on page 10.
64 Voices	The editing application now supports 64 voices.	See “Support for 64 Voices” on page 11.
Edit Titles in Timeline	You can revise an existing title in the Timeline without having to go into Effects mode.	See “Revising a Title in a Sequence” on page 11.
Dynamic Relink to AMA Clips	Avid editing systems running in an Interplay Sphere environment now have dynamic relink available for AMA clips. With dynamic relink enabled, the editing system will automatically relink AMA clips to managed media when it becomes available on an indexed Interplay storage. Managed media is always chosen over linked AMA media.	For more info, refer to “Interplay Sphere and Dynamic Relink” in the Help.
AS-02 Support	The Avid editing application supports the AS-02 specification. This release also includes AS-02 support for DNxHD.	See “Working with Export Volumes” on page 12.
DNxHD 100	With this release of the Media Composer family of products, Avid supports DNxHD 100.	See “Resolution Specifications: HD” on page 17.
JPEG 2000	With this release of the Media Composer family of products, Avid supports the JPEG 2000 (J2K) resolution.	See “Resolution Specifications: HD” on page 17. See “Resolution Specifications SD: J2K” on page 24.
Adding the Active Format Description (AFD) to the data track.	With this release, you can add the Active Format Description metadata for a sequence to the data track.	See “Adding the Active Format Description to the Data Track” on page 24.
Removed VC1 Support	Support for VC1 has been removed.	
SearchData folder location option	When creating a new project, you can choose the location for the SearchData folder.	See “Setting the Location of the SearchData folder” on page 27.

Feature	Description	For More Info
Stop Indexing	An option has been added to the Find window that allows you to stop the indexing process.	See “Stop Indexing” on page 28 . See Searching for a Clip or Sequence with Text Find or Using PhraseFind .
Relink Updates	Changes have been made to the Relink dialog.	See “Relink Updates” on page 29 .
AMA Settings Update	The option “Automatically AMA-link to volumes” has been added to the Volume Mounting tab of the AMA Settings. This setting is selected by default.	See “AMA Volume Management” on page 33 .
QuickTime 7.7.2 Support	The editing application supports QuickTime v7.7.2.	

Audio Keyframe Enhancements

Enhancements have been made that affect how you select, cut, copy, paste and move audio keyframes. You can select audio keyframes in the Timeline and copy them to a different area of the same clip or to different clips. You can also choose to copy either just Automation Pan or Automation Gain keyframes.

Creating a New Keyframe

A new keyframe can be created with a keyboard shortcut and clicking in the Timeline.

To create a new keyframe:



1. Click the Clip Volume/Pan button in the Track Control panel, and select the Volume or Pan.



2. Enable the Keyframe Selection button.

3. Click in the Timeline in the area where you want to create a keyframe or click on an already existing keyframe curve/line in the Timeline.

4. Press Ctrl+Shift (Windows) or Command+Shift (Macintosh) and click on the track.

A keyframe is created.

Copy and Pasting Audio Keyframes

You can easily copy and paste audio keyframes in the Timeline.

Copy and Paste Individual Keyframes

To copy and paste individual keyframes:

1. Click on the keyframe to select it.
The keyframe highlights pink.
2. Shift+click to select multiple keyframes.
3. Press Ctrl+C (Windows) or Command+C (Macintosh) to copy the audio keyframes to the clipboard.
4. Either Mark IN or Mark OUT or move the blue bar to the area in the audio track where you want to paste the audio keyframes. You can also select another audio track where you want to paste the keyframes.
5. Press Ctrl+V (Windows) or Command+V (Macintosh) to paste the individual keyframes.



Pressing Shift+click on an already selected keyframe, deselects the keyframe. Clicking anywhere else in the Timeline deselects the keyframe(s) if the Smart Tool is enabled. Clicking the Timecode ruler in the Timeline does not affect selection unless “Clicking the TC Track or Ruler Disables Smart Tools” is checked in the Timeline Settings.

Copy and Paste by Lassoing an Area of Audio Keyframes

To copy and paste by lassoing an area of audio keyframes:

1. Lasso the area that contains the keyframes you want to copy.



If a keyframe is already selected, Shift + lasso only selects more keyframes even if a whole segment or transition is within the lasso.



Shift+lasso deselects any currently selected keyframes.

2. Press Ctrl+C (Windows) or Command+C (Macintosh) to copy the audio keyframes to the clipboard.
3. Either Mark IN or Mark OUT or move the blue bar to the area in the audio track where you want to paste the audio keyframes. You can also select another audio track where you want to paste the keyframes.
4. Press Ctrl+V (Windows) or Command+V (Macintosh) to paste the keyframes.
The keyframes are pasted in the Timeline.

Copy and Paste a Whole Region or Marked Region of Audio Keyframes

To copy and paste audio keyframes:

1. Do one of the following:
 - ▶ Select an entire audio segment.
 - ▶ Select the audio region with Mark IN and Mark Out
2. Press Ctrl+C (Windows) or Command+C (Macintosh) to copy the clip and audio keyframes to the clipboard.
3. Either Mark IN or Mark OUT or move the blue bar to the area in the audio track where you want to paste the audio keyframes. You can also select another audio track where you want to paste the keyframes.
4. From the Edit Menu select Paste Audio Keyframes or use the shortcut Shift+Ctrl+V (Windows) or Shift+Command+V (Macintosh).

A dialog opens asking you to choose the type of keyframes to paste.



5. Select either Automation Gain or Automation Pan. Or choose both.
6. Click OK.

The keyframes are pasted in the Timeline.

Moving Keyframes in the Timeline

A number of enhancements have been made that make it easier to move audio keyframes. You can now move a range of audio keyframes up and down in volume. You can nudge individual keyframes and you can horizontally drag individual keyframes or a group of keyframes.

To nudge individual keyframes:

1. Select the keyframe you want to move.
2. Press Shift+Command (Macintosh) or Ctrl+Shift (Windows) + up or down arrow keys to move the keyframe in 1dB increments.

3. Press Shift+Command (Macintosh) or Ctrl+Shift (Windows) + left or right arrow keys to move the keyframe left or right in one frame increments.

To move a range of keyframes up and down in volume:

1. Either lasso the range of keyframes or Shift+click the range of keyframes you want to move.
2. Click on any single keyframe in the range and move up and down. The entire range moves.

To move a range of keyframes in time:

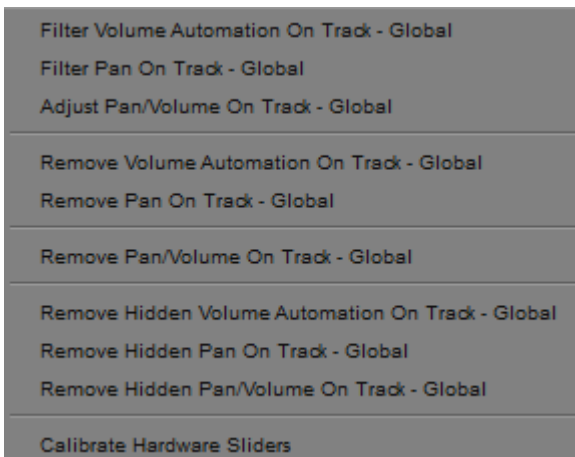
1. Lasso the range of keyframes or Shift+click the range of keyframes you want to move.
2. Press Option+drag (Macintosh) or Alt+drag (Windows) to move the entire group of keyframes horizontally in the Timeline.

Removing Hidden Keyframes

When you edit or trim an audio track that contains keyframes, there may be keyframes that are hidden to the left or right of the remaining part of the clip. You can easily remove hidden keyframes.

To remove hidden keyframes:

1. Mark the area that contains the keyframes you want to remove. (If you do not select a marked area, all hidden keyframes will be removed.)
2. Open the Audio Mixer Tool. Ensure you are in Auto Mode.
3. Select the Audio Mixer Tool Fast menu (hamburger menu).



4. Select one of the following:

- ▶ Remove Hidden Volume Automation On Track to remove all the volume automation keyframes
- ▶ Remove Hidden Pan On Track to remove all the Pan keyframes
- ▶ Remove Hidden Pan/Volume on Track to remove all the Pan and Volume keyframes

You can also right+click at the transition and choose Delete Hidden Left, or Delete Hidden Right to remove the hidden keyframes to the left or the right of the transition.

Relinking to QuickTime AMA Files

This feature is helpful when you have a group of linked clips that were moved to a different folder or drive. You can relink the clips to the new location.

To relink to AMA QuickTime file(s):

1. Select the file(s) you want to relink by doing one of the following:
 - ▶ Click a single file
 - ▶ Shift+click to select multiple adjacent files
 - ▶ Ctrl+click (Windows) or Command+click (Macintosh) to select multiple nonadjacent files
2. Right-click and select Relink to AMA File(s).

The Select file(s) to relink AMA clip dialog box opens asking you to locate the new file(s).

3. Locate the folder where the files exist.
4. Click OK.

The clips appear linked in the bin. If all the clips you wanted to relink to do not reside in the selected folder, you will receive a dialog indicating how many files were not relinked. Open the Console window to see the name of the file or files that were not relinked.



If the new file is not compatible with the clip in the bin (it does not have the same duration, edit rate or number of tracks), the clip in the bin retains its original link.

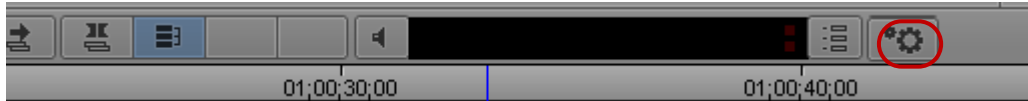
Activating and Deactivating I/O Hardware

The editing application includes a hardware toggle button in the Timeline. This allows you to switch between hardware and software editing modes. The hardware toggle button appears in the Timeline if I/O hardware is attached when you launch the editing application. This includes Avid Nitris DX and Mojo DX hardware and 3rd party Open I/O hardware.

This feature allows you to enable and disable the hardware for use with other software, for example After Effects. This also allows you to access certain software only features such as Full Screen Play.



The editing application will automatically release the hardware if you switch to another application. It will be reactivated when you switch back to the editing application.



Activating and Deactivating I/O Hardware

If the Toggle Hardware button is enabled, the I/O hardware is active. If the Toggle Hardware button is disabled, the I/O hardware is inactive.

To activate the I/O hardware:

- ▶ Click the Toggle Hardware button until it is active. The button is gray when hardware is active. This puts the editing application in Hardware mode.

To deactivate the I/O hardware:



- ▶ Click the Toggle button until it is inactive. The button has a red circle and line through it when inactive. This puts the editing application in Software mode.

Certain settings and buttons in the editing application change depending upon which mode you are in. For example, the Toggle Client Monitor button is disabled when the editing application is in Software mode. And you have access to additional Audio Project Output, Video Input and Video Output options when the editing application is in Hardware mode.



The I/O third party vendors are working on updating their plugins to work with the Toggle Hardware feature. Your current third party plugins will work properly with this version of the editing application, but if you try and use the Toggle Hardware button without updated plugins, you might need to reboot the system to reacquire your hardware.

Audio Punch-In Changes

This release incorporates the following Audio Punch-In changes:

- Audio Punch-In support for Open I/O devices
- Host audio input for Audio Punch-In

Audio Punch-In Support for Open I/O Devices

If your Open I/O device allows you to record and play simultaneously, you can perform an Audio Punch-In. If your Open I/O device does not support simultaneous record and play, you can use Host audio input for Audio Punch-In. Check with your 3rd party vendor to see if they support simultaneous record and play.

By clicking on the Punch-In monitoring button in the Audio Punch In tool, you can choose the following monitoring options:



- On - allows for IN to OUT audio monitoring during audio punch-in.
- Off - turns off IN to OUT audio monitoring during audio punch-in. When monitoring is off, the icon in the Punch-In tool changes to indicate punch in monitoring is off. For example, this mode is useful when you want to use another device such as the Mbox to provide local passthrough.
- Automatic - Allows the editing application to detect if monitoring should be On or Off due to detected latency. Monitoring is **not** disabled if latency <100ms. If the editing application detects latency >100ms, monitoring is turned off. Note: You can choose to override this by setting the monitoring to On.



In some hardware configurations, audio monitoring during Punch-In will not be allowed at all because the hardware does not support it. In this case, the Punch-In tool indicates the monitoring is Off and you cannot override it.

Host Audio Input for Audio Punch-In

In previous releases, you could not select Host audio input for your audio Punch-In. With this release, you can now use Host Audio input for punch-in.

To select the Host Audio for Audio Punch-In:

1. Open the Audio Punch In tool and set the Input Source to your host audio. Note: You can choose the Input Source in either the Punch-In tool, the Audio Project Settings Input menu, or in the Capture Tool.
 - On a Macintosh system, the individual host input choices will appear in the Punch-In tool Input Source menu.
 - On a Windows system, for example, you can choose Windows Mixer from the Audio Punch-in tool Input Source menu and then select the specific device in the Control Panel > Sound >Recording window.
2. Perform your audio punch-in. For details on performing a punch-in, see “Recording Voice-Over Narration Using Audio Punch-In” in the Help.

Audio Tool Icon Change



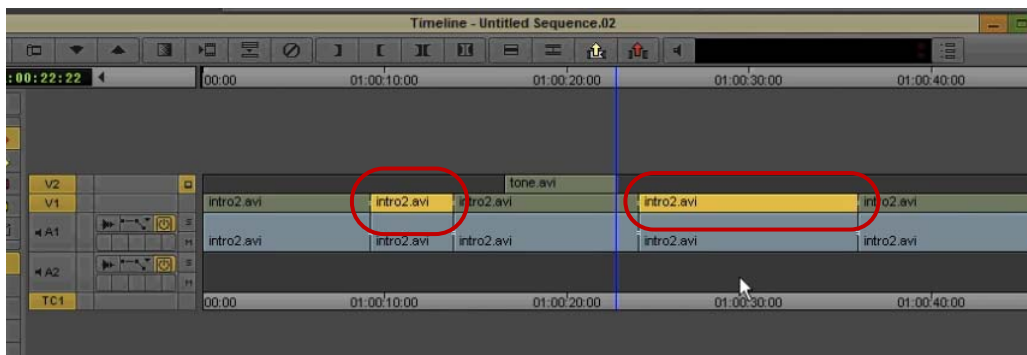
The icon to open the Audio Tool from within the Capture tool and the Audio Punch-In tool has been updated. The new icon to open the Audio Tool resemble audio meters..

Dragging Nonadjacent Segments

In previous releases of the editing application, you could not drag nonadjacent segments in the Timeline. The editing application would beep if you tried to move them. With this release you can drag nonadjacent segments in the Timeline. You must be in Overwrite mode to drag the segments.

To drag nonadjacent segments:

1. Make sure you are in Lift/Overwrite mode by selecting the Lift/Overwrite button in the Smart Tool.
2. Select the nonadjacent segments that you want to move.



3. Move the segments to the desired location.

Support for 64 Voices

The editing application supports 64 voices. Previously you could monitor up to 16 voices. A voice is a discrete audio stream that you send from an audio track to physical audio outputs, such as speakers or output channels. Typically, any audio channel for a track in your sequence uses a single voice. Mono audio clips use a single voice. A stereo clip uses two voices, and a 5.1 or 7.1 surround clip uses six or eight voices. Allowing for 64 voices is useful when working with multichannel tracks.

Revising a Title in a Sequence

If you want to revise a title after you edit it into a sequence, you can choose to edit the title from the sequence.

To change a title in a sequence:

1. Place your cursor over the Title in the sequence that you want to edit.
2. Right-click and select Edit Title.

If the title is a Title Tool title, a dialog box opens, asking if you want to promote the title to Marquee. If you do not want to promote to Marquee, click no.



You cannot edit titles that you promote to or create in Marquee with the Title tool. For information on Marquee titles and the Marquee Title tool, see the Avid Marquee Title Tool User's Guide or the Avid Marquee Title Tool Help.

The Title tool or Marquee application will open and display the title.

3. Revise the title.

4. Save the title.

Working with Export Volumes

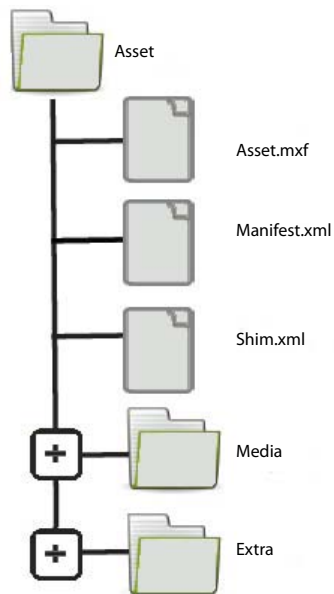
The Avid editing application supports the creation of AS-02 Export Volumes. AS-02 is a specification for grouping multiple versions of program content into one single bundle. These bundles provide an efficient approach for working in a file-based environment.

For example, if you have a sequence with an English audio mix and a sequence with the same video but with a Spanish audio mix, creating an AS-02 Export Volume allows you to have all the program elements contained in a bundle without redundancy. The same video essence file can be the source for the both the English and the Spanish versions. This is useful if you want to save time on export and reduce used disk space.

The basic workflow is to create a new Export Volume Bin, copy the sequence or sequences you want to the Volume Bin, commit the assets in the Export Volume Bin, and then archive the AS-02 bundle folder. You can also link to an existing AS-02 bundle.

The bundle folder structure is shown below. This is for reference only. These elements will be automatically created for you when you commit an Export Volume Bin.

- The *Asset.mxf* file is the sequence (version).
- The *Manifest.xml* file lists the creator information, creation date, version information and a list of all the files and folders in the bundle.
- The *Shim.xml* file is used as a template or settings file that constrains the rules for a specific facility.
- The *Media* folder contains all the media files included in the bundle.
- The *Extra* folder contains a copy of the unflattened sequence (AAF composition only). The Extra folder can also contain any other files you want to keep with the bundle, such as scripts, graphics, etc.



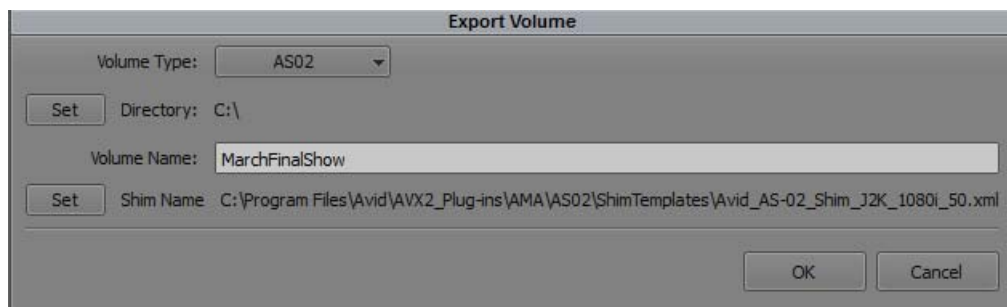
Creating an Export Volume

You can create an export volume to place all program elements into a bundle.

To create a new export volume:

1. Select File > New Export Volume.

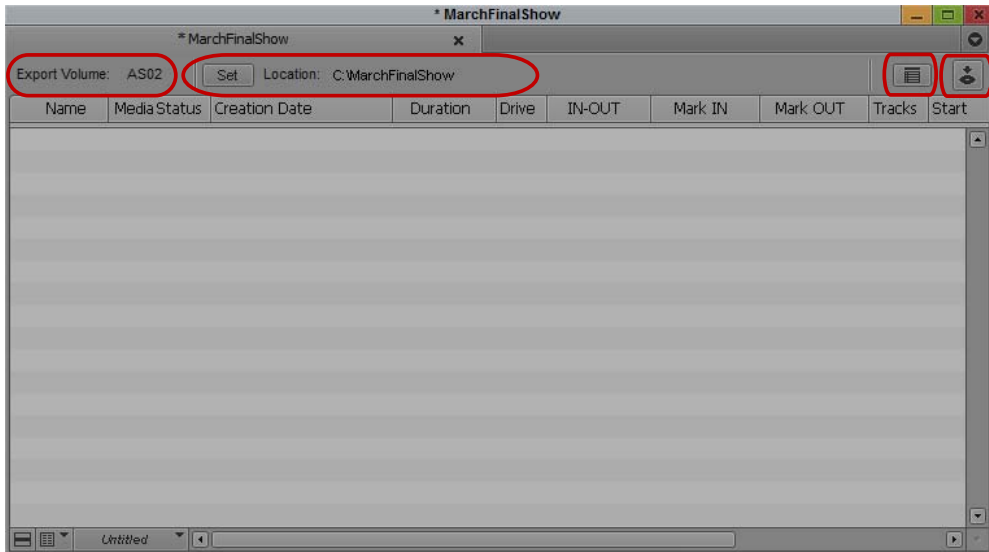
The Export Volume dialog box opens.



2. Select a Volume Type, for example AS-02.
3. Click Set to select the path where you want the Export Volume to reside.
4. Enter a name for the volume.

5. Click Set to select the path to the shim template you want to use.
 - AS-02 supports J2K, Uncompressed 10b RGB, DNxHD, AVCI, IMX and Uncompressed 8b for SD.
 - All DNxHD templates are tuned to the DNxHD 220x family. That means depending on the project type, selecting a DNxHD template will export to a DNxHD 10b codec.
 - AS-02 Shim templates for all supported resolutions are located in the Supporting Files folder.
 - You can choose any one of these templates depending on the desired output codec/format.
 - You can also create a folder named Default at the root of the AS-02 Templates folder where you can place custom templates. For example, you can duplicate the AS-02_Shim_DNxHD_1080i_59.94.xml found in the DNxHD folder, modify it (to a different audio sample rate or DNxHD resolution) and place the duplicate in the Default folder. This duplicated template will now be the default template for 1080i59 projects.
 - DNxHD resolutions are supported except DNxHD 100 and DNxHD 36.
6. Click OK.

The Export Volume bin opens.



Left to right: Export Volume Type, Path to Asset folder, Properties button, Commit button

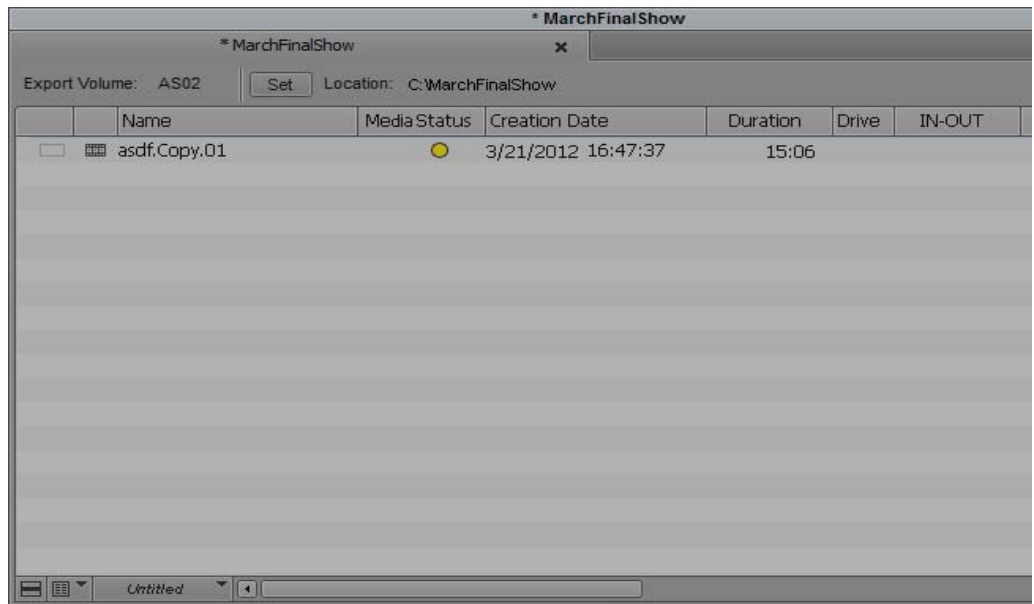
Moving Assets to an Export Volume

You can move the desired assets to the Export Volume.

To move assets to the Export Volume:

1. Open the bin that contains the sequence or sequences you want to write to the Export Volume.
2. Select and drag the sequence(s) to the Export Volume.

A copy of the sequence(s) appears in the Export Volume.



You can only drag sequences to an AS-02 Export Volume Bin. If you try to drag master clips, effects, titles, etc, you will receive a message indicating that some assets that you selected could not be dragged to the Volume Bin. If you receive this message, open the Console Tool to see the list of items that were not written.

Committing Assets to an Export Volume

Once you commit the assets, the sequence is flattened to the OP1b format, the video is encoded to the J2K codec and audio saved as PCM.

To commit the assets to the Export Volume:



1. Open the Export Volume that contains the sequence(s) to commit.
2. Click the Commit button to commit the assets to the AS-02 bundle.

The sequence along with its associated media files populate the Export Volume.

Note the Media Status column indicates the committed status of each asset in the volume. Green indicates the asset is committed. Yellow indicates the asset is not committed. Red indicates the asset is offline.

The screenshot shows a software window titled "MarchFinalShow" with a sub-header "MarchFinalShow" and a close button. Below the header, it displays "Export Volume: AS02" and a "Set" button, followed by "Location: C:\MarchFinalShow". The main area contains a table with the following columns: Name, Media Status, Creation Date, Duration, and Drive.

	Name	Media Status	Creation Date	Duration	Drive
<input type="checkbox"/>	asdf.Copy.01	●	3/21/2012 16:47:37	15:06	
<input type="checkbox"/>	asdf.Copy.01.media_A2	●	3/21/2012 12:37:50	15:06	OS (C:)
<input type="checkbox"/>	asdf.Copy.01.media_A1	●	3/21/2012 12:37:50	15:06	OS (C:)
<input type="checkbox"/>	asdf.Copy.01.media_V1	●	3/21/2012 12:37:50	15:06	OS (C:)

Once the assets are committed, the following are written to the bundle folder:

- The sequence (version)
- The essence files
- The manifest (a file listing the creation date, creator, version information and a list of all the files and folders in the bundle.)
- The shim file (used as a template or settings file that constrains the rules for the specific facility)
- An AAF copy of the unflattened sequences(s) in the Extras folder

Archiving the AS-02 Bundle

Once you have committed the assets to the Export Volume, you can archive the AS-02 bundle.

To archive the Assets Folder.

1. Locate the AS-02 bundle folder by accessing the path you set in step 4 of [Creating an Export Volume](#).
2. Copy the AS-02 bundle folder to your archive server.

Linking to an existing AS-02 Bundle

You can open an existing AS-02 bundle.

To link to an existing AS-02 Volume:

1. Select File > Link to Volume for Export.
2. Select the folder where the AS-02 bundle resides.
3. Click OK.
4. A new volume bin opens with the AS-02 assets.

You can also choose to Link to AMA Volume if you want to open the assets as Read-only in a classic bin.

Resolution Specifications: HD

Your Avid editing application supports the capture, editing, and output of high-definition (HD) media in Avid DNxHD™, Avid DNxHD444, DVCPRO HD, (for Macintosh only) Apple® ProRes 422 and Apple ProRes 4444 resolutions. For information on support for 1:1 (uncompressed) HD media, see “Support for Uncompressed HD Media” in the Help.

Avid DNxHD encoding technology delivers mastering-quality 8-bit or 10-bit HD media at standard-definition (SD) data rates and file sizes.

Avid editing applications support editing and playback of J2K media. You can import, playback, transcode, and consolidate these resolutions. All J2K resolutions are encoded with variable bit-rate (VBR) encoding to meet a target, average bit-rate. Depending upon video content, the actual average rate will vary. The range of the bit-rate can be from 120 to 250.

The following table provides information about HD resolutions for interlaced and progressive media. HD resolutions are available only in MXF format. Unless otherwise specified in the resolution name, all resolutions are in the YCbCr color space. Avid DNxHD444 resolutions only appear when the HD project's Color Space is set to RGB 709 (1080p projects only).

Resolution	Bits	Project Format	Frame Size	Frames/sec	Megabits per second (Mb/sec)
1:1 10-bit HD	10	720p/23.976	1280 x 720	23.976	442
1:1 HD	8				354
DNxHD 90 X	10				90
DNxHD 90	8				90
DNxHD 60	8				60
DNxHD 40	8				40
DVCPRO HD	8				100
XDCAM HD 50	8				50
AVC-Intra 100	10				100
Apple ProRes 422 MXF	10				59
Apple ProRes 422 HQ MXF	10				88
Apple ProRes 422 LT MXF	10				41
Apple ProRes 422 Proxy MXF	10				18
Apple ProRes 4444	10				132
J2K 720p	10				60
AVC-Intra 50	10		960 x 720		50
1:1 10-bit HD	10	720p/25	1280 x 720	25.00	440
1:1 HD	8				352
DNxHD 90 X	10				90
DNxHD 90	8				90
DNxHD 60	8				60
DNxHD 45	8				45
DVCPRO HD	8				55
XDCAM HD 50	8				50
AVC-Intra 100	10				100
Apple ProRes 422 MXF	10				61
Apple ProRes 422 HQ MXF	10				92
Apple ProRes 422 LT MXF	10				42
Apple ProRes 422 Proxy MXF	10				19
Apple ProRes 4444	10				138
J2K 720p	10				65
AVC-Intra 50	10		960x720		50

Resolution	Bits	Project Format	Frame Size	Frames/sec	Megabits per second (Mb/sec)
1:1 10-bit HD	10	720p/29.97	1280 x 720	29.97	527
1:1 HD	8				422
DNxHD 110 X	10				110
DNxHD 110	8				110
DNxHD 70	8				70
DNxHD 50	8				50
DVCPro HD	8				55
XDCAM HD 50	8				50
AVC-Intra 100	10				100
Apple ProRes 422 MXF	10				73
Apple ProRes 422 HQ MXF	10				110
Apple ProRes 422 LT MXF	10				51
Apple ProRes 422 Proxy MXF	10				23
Apple ProRes 4444	10				165
J2K 720p	10				75
1:1 10-bit HD	10	720p/50	1280 x 720	50	879
1:1 HD	8				704
DNxHD 185 X	10				175
DNxHD 185	8				175
DNxHD 120	8				115
DNxHD 85	8				85
DVCPro HD	8				110
XDCAM HD 50	8				50
ACV-Intra 100	10				100
Apple ProRes 422 MXF	10				122
Apple ProRes 422 HQ MXF	10				184
Apple ProRes 422 LT MXF	10				84
Apple ProRes 422 Proxy MXF	10				38
Apple ProRes 4444	10				275
J2K 720p	10				125
AVC-Intra 50	10		960 x 720		50

Resolution	Bits	Project Format	Frame Size	Frames/sec	Megabits per second (Mb/sec)
1:1 10-bit HD	10	720p/59.94	1280 x 720	59.94	1105
1:1 HD	8				884
DNxHD 220 X	10				220
DNxHD 220	8				220
DNxHD 145	8				145
DNxHD 100	8				100
DVCPRO HD	8				100
XDCAM HD 50	8				50
AVC-Intra 100	10				100
Apple ProRes 422 MXF	10				147
Apple ProRes 422 HQ MXF	10				220
Apple ProRes 422 LT MXF	10				101
Apple ProRes 422 Proxy MXF	10				45
Apple ProRes 4444	10				330
J2K 720p	10				150
AVC-Intra 50	10				50
1:1 10-bit RGB HD	10	1080p/23.976	1920 x 1080	23.976	1591
1:1 10-bit HD	10				994
1:1 HD	8				795
DNxHD 175 X	10				175
DNxHD 175	8				175
DNxHD 115	8				115
DNxHD 80	8				80
DNxHD 36	8				36
DNxHD444 350 X	10				350
AVC-Intra 100	10				100
Apple ProRes 422 MXF	10				117
Apple ProRes 422 HQ MXF	10				176
Apple ProRes 422 LT MXF	10				82
Apple ProRes 422 Proxy MXF	10				36
Apple ProRes 4444	10				264
J2K 1080p	10				120
AVC-Intra 50	10		1440x1080		50

Resolution	Bits	Project Format	Frame Size	Frames/sec	Megabits per second (Mb/sec)
1:1 10-bit RGB HD	10	1080p/24	1920 x 1080	24.00	1593
1:1 10-bit HD	10				995
1:1 HD	8				796
DNxHD 175 X	10				175
DNxHD 175	8				175
DNxHD 115	8				115
DNxHD 80	8				80
DNxHD 36	8				36
DNxHD444 350 X	10				350
Apple ProRes 422 MXF	10				117
Apple ProRes 422 HQ MXF	10				176
Apple ProRes 422 LT MXF	10				82
Apple ProRes 422 Proxy MXF	10				36
Apple ProRes 4444	10				264
J2K 1080p	10				120
1:1 10-bit RGB HD	10	1080p/25	1920 x 1080	25.00	1659
1:1 10-bit HD	10				1037
1:1 HD	8				829
DNxHD 185 X	10				185
DNxHD 185	8				185
DNxHD 120	8				125
DNxHD 85	8				85
DNxHD 36	8				36
DNxHD444 365 X	10				365
AVC-Intra 100	10				100
Apple ProRes 422 MXF	10				122
Apple ProRes 422 HQ MXF	10				184
Apple ProRes 422 LT MXF	10				85
Apple ProRes 422 Proxy MXF	10				38
Apple ProRes 4444	10				275
J2K 1080p	10				125

Resolution	Bits	Project Format	Frame Size	Frames/sec	Megabits per second (Mb/sec)	
1:1 10-bit RGB HD	10	1080p/29.97	1920 x 1080	29.97	1989	
1:1 10-bit HD	10				1243	
1:1 HD	8				994	
DNxHD 220 X	10				220	
DNxHD 220	8				220	
DNxHD 145	8				145	
DNxHD 100	8				100	
DNxHD 45	8				45	
DVCPRO HD	8				100	
XDCAM HD 50	8				50	
DNxHD444 440 X	10				440	
Apple ProRes 422 MXF	10				147	
Apple ProRes 422 HQ MXF	10				220	
Apple ProRes 422 LT MXF	10				102	
Apple ProRes 422 Proxy MXF	10				45	
Apple ProRes 4444	10				330	
J2K 1080p	10				150	
1:1 10-bit RGB HD	10	1080i/50	1920 x 1080	25.00	1659	
1:1 10-bit HD	10				1037	
1:1 HD	8				829	
DNxHD 185 X	10				185	
DNxHD 185	8				185	
DNxHD 120	8				120	
DNxHD 85	8				85	
DVCPRO HD	8				100	
XDCAM HD 50	8				50	
AVC-Intra 100	10				100	
Apple ProRes 422 MXF	10				122	
Apple ProRes 422 HQ MXF	10				184	
Apple ProRes 422 LT MXF	10				85	
Apple ProRes 422 Proxy MXF	10				38	
Apple ProRes 4444	10				275	
J2K 1080i	10				125	
AVC-Intra 50	10				1440x1080	50
DNxHD TR-120	8					120

Resolution	Bits	Project Format	Frame Size	Frames/sec	Megabits per second (Mb/sec)
1:1 10-bit RGB HD	10	1080i/59.94	1920 x 1080	29.970	1989
1:1 10-bit HD	10				1243
1:1 HD	8				994
DNxHD 220 X	10				220
DNxHD 220	8				220
DNxHD 145	8				145
DNxHD 100	8				100
DVCPRO HD	8				100
XDCAM HD 50	8				50
AVC-Intra 100	10				100
Apple ProRes 422 MXF	10				147
Apple ProRes 422 HQ MXF	10				220
Apple ProRes 422 LT MXF	10				102
Apple ProRes 422 Proxy MXF	10				45
Apple ProRes 4444	10				330
J2K 1080i	10				150
AVC-Intra 50	10		1440x1080		50
DNxHD TR-145	8				145

The data rate (bandwidth) for Avid DNxHD resolutions is calculated per second for each frame rate. For example, DNxHD 220 has a compressed data rate of 220 Mb/sec at 29.97 fps. DNxHD 185, which is an equivalent resolution, has a compressed data rate of 185 Mb/sec at 25 fps.

A good guideline for selecting a resolution is to use the Avid DNxHD resolution that matches the megabit data rate of the acquisition format. For HDCAM-originated material, for example, select DNxHD 145, which closely matches the data rate of HDCAM but provides better mastering results and uses significantly less storage. The following table compares Avid HD formats to the HDCAM format.

	Avid DNxHD 36	Avid DNxHD 145	Avid DNxHD 220	Sony HDCAM
Bit Depth	8-bit	8-bit	8-bit and 10-bit	8-bit
Sampling	4:2:2	4:2:2	4:2:2	3:1:1
Bandwidth	36 Mb/sec	145 Mb/sec	220 Mb/sec	135 Mb/sec

Resolution Specifications SD: J2K

Avid editing applications support editing and playback of J2K media. You can import, playback, transcode, and consolidate these resolutions. All J2K resolutions are encoded with variable bit-rate (VBR) encoding to meet a target, average bit-rate. Depending upon video content, the actual average rate will vary. The range of the bit-rate can be from 120 to 250.

The following table provides J2K specifications by project type.

Resolution	Bits	Project Format	Frame Size	Frames/sec	Megabits per second (Mb/sec)
J2K NTSCi	10	30i	720 x 486	30	50
J2K PALi	10	25i	720 x 592	25	50
J2K NTSCp	10	30p	720 x 486	30	50

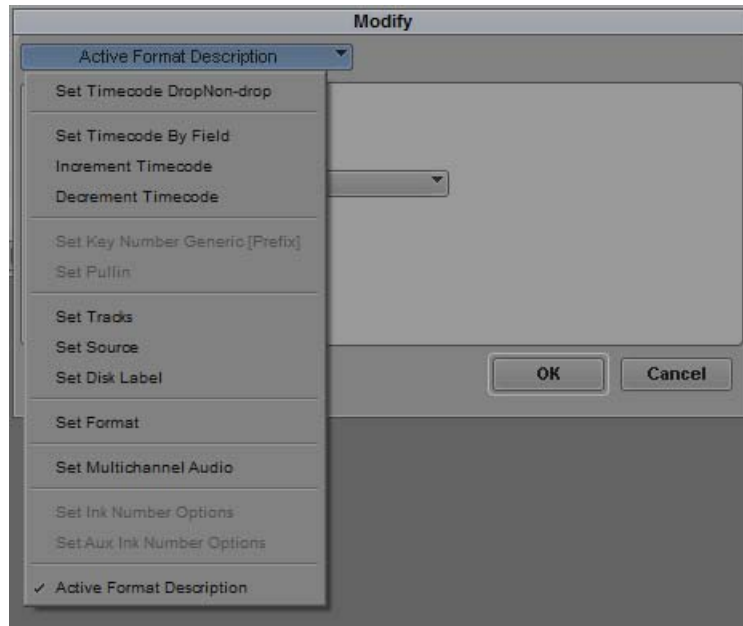
Adding the Active Format Description to the Data Track

Active Format Description (AFD) is a standard set of codes that can be sent in the video stream that carries information about the aspect ratio and the active picture characteristics. AFD information allows you to display the video of one aspect ratio on a display with another aspect ratio. When in an HD project, you can choose to add the AFD information to the data track.

To add the AFD to the Data Track:

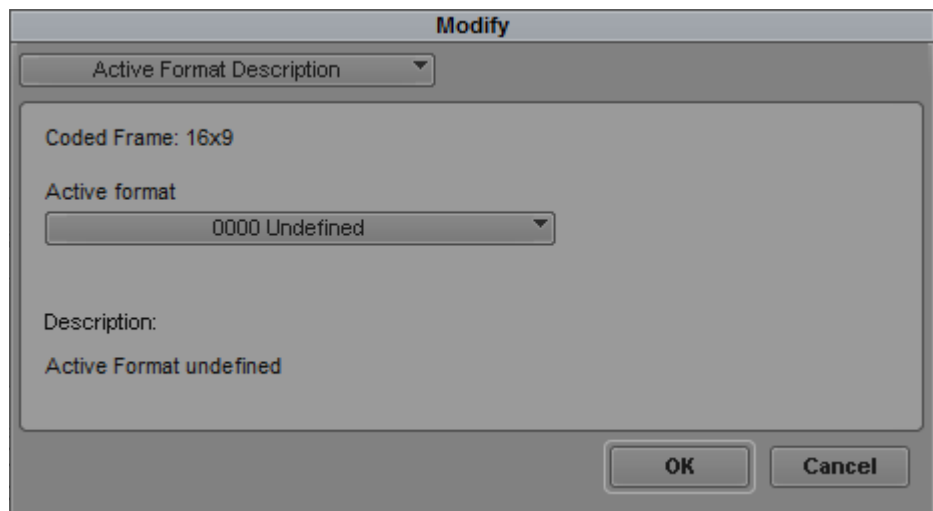
1. Right-click the sequence to which you want to add the AFD and select Modify.

The Modify window opens.

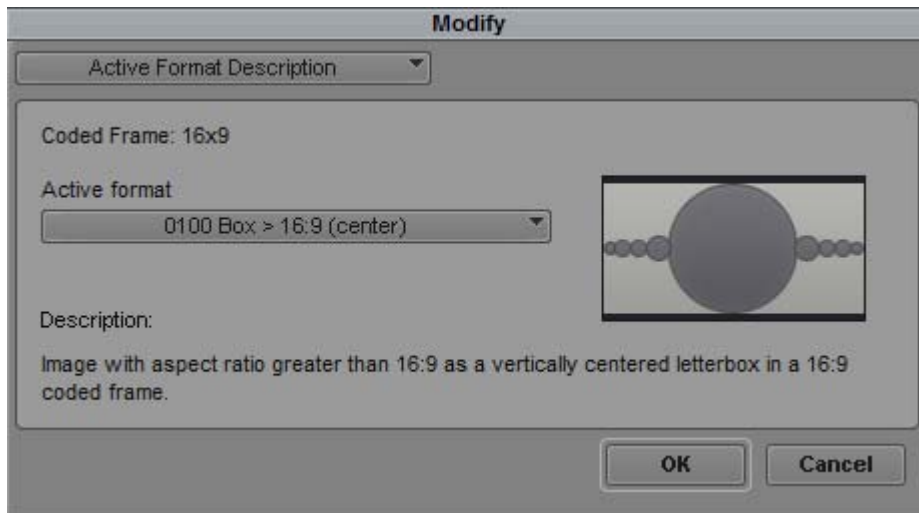


2. Select Active Format Description.

The Modify window displays the Active Format Description options.



3. Select the Active format information you want to include with the data track. The active format options change depending upon the selected Coded Frame. A graphical representation of the active format is displayed in the Modify window to show you how the active format area will be displayed.



The table below shows the selectable active format options.

Option	Description
Active Format	<ul style="list-style-type: none"> • 0000 Undefined • 0100 Box >16:9 (center) • 1000 Center • 1001 4:3 (center) • 1010 16:9 (with complete 16:9 image protected) • 1011 14:9 (center) • 1101 4:3 (with alternative 14:9 center) • 1110 16:9 (with alternative 14:9 center) • 1111 16:9 (with alternative 4:3 center)

4. Click OK.

A new data track will be created if one is not already present in the sequence. You will receive a dialog indicating that a data track will be created. The data track appears empty. This data track must be present and monitored during output in order for the AFD value to be inserted. If you delete this data track, the AFD value is also deleted.

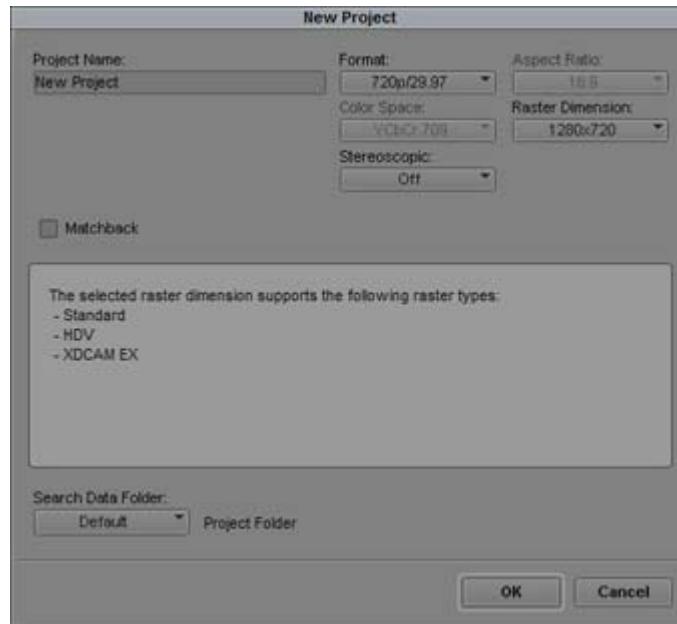
Setting the Location of the SearchData folder

In previous releases, you could not change the location of the SearchData folder. When you created a new project, the SearchData folder defaulted to your Projects folder. When you were in an ISIS environment the default was the Project client (computer name) folder. With this release, when creating a new project you can choose the location of the SearchData folder.

To choose the location of the SearchData folder:

1. Start the editing application.
2. In the project window, select New Project.

The New Project dialog opens.



3. Select the Search Data Folder menu. Select either Default, Local Default, or Other. To change the location from the Default options, select Other.
4. Choose the folder where you want the SearchData folder to reside.

5. Click OK.

A subfolder with the project name is created in the folder you selected in step 4.



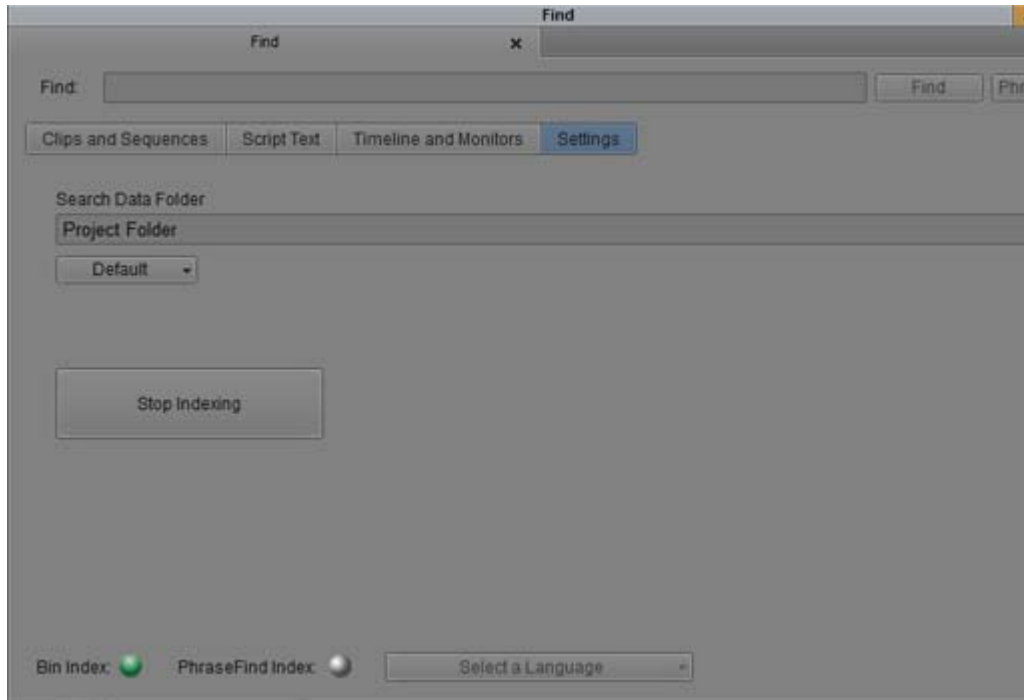
You can also set the SearchData folder in the Settings tab of the Find Window.

Stop Indexing

If during a Find or PhraseFind search you decide that you want to stop the indexing process, an additional option has been added to the Find window to allow you to stop this process.

To stop the indexing process:

1. During the search, the Find window is open. Select the Settings tab.



2. Click the Stop Indexing button.

The indexing stops and the button changes to Start Indexing. The indexing remains off until you click Start Indexing.

Relink Updates

The Relink dialog has been updated to include more options by which you can Relink. You can relink based on any column in a bin. These column names can be used as the source name for the relink.

Relink

Relink selected items to:

☐ Media on drive: All Available Drives

☐ Load media database(s)

☐ Relink selected master clips

Tip: To bring master clips online, first try loading media databases.

☐ Relink only to media from the current project

☒ Selected items in ALL open bins

☐ Allow relinking to offline items

Relink by:

Original

Timecode: Start

Source Name: Tape Name or Source File ID

☐ Ignore extension

Ignore characters after last occurrence:

☐ Target (if different than Original)

Timecode: Start

Source Name: Tape Name or Source File ID

☐ Ignore extension

Ignore characters after last occurrence:

☒ Match case when comparing source names

Video Parameters

Relink to: Video format of current project only (720p/29.97)

Relink method: Highest Quality

Relink if quality: is greater than or equal to

Format: 720p/29.97 Resolution: AVC Intra 50: MFX

If no match is found: Use Existing Media

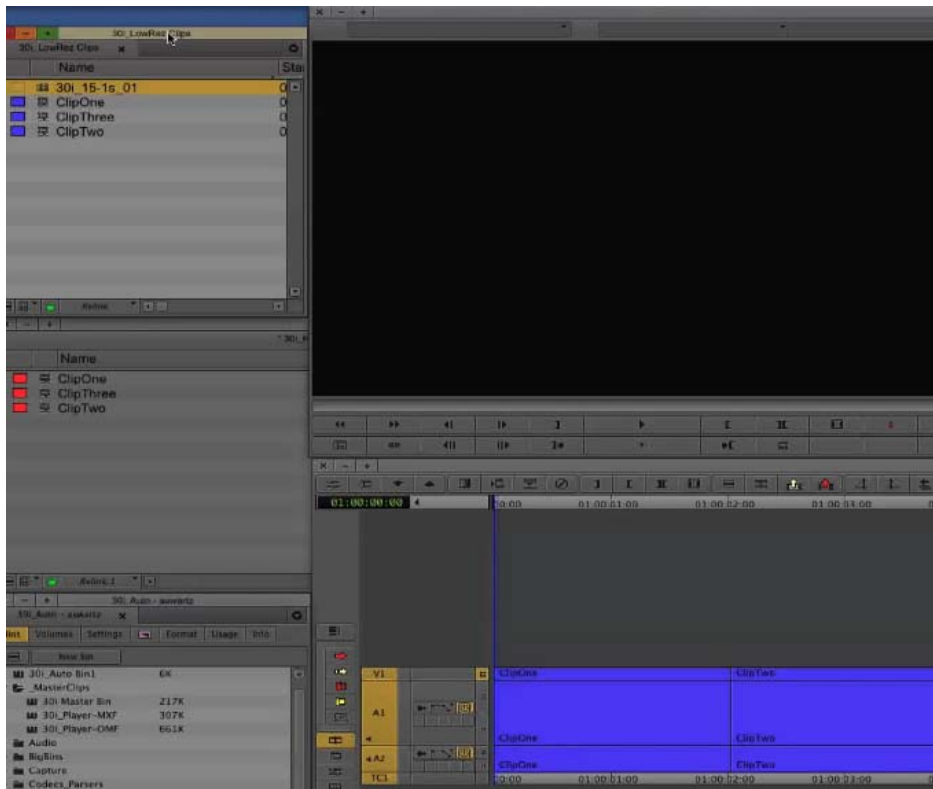
☒ Create new sequence (1 sequence selected)

OK Cancel

Option	Description
Relink by:	
Timecode	Allows you to relink to Start, Aux TC1-TC5, or Sound Timecode.
Source Name	Allows you to relink to a number of relink options:Tape Name or a Source File ID, Tape Name or Source File Name, Keynumber, Name, Camroll, Labroll, Disk Label, More. Click the More option to see the list of additional column name options.
Ignore extension	If selected, the system compares names and ignores extensions (for example, File1.jpeg can be relinked to File1.png)
Ignore characters after last occurrence	Select this option to have the system ignore the characters in the name after the last occurrence of the text you enter.
Match case when comparing tape and source file names	Makes tape name and source file name search case sensitive.
Target (if Different from Original)	Select this option if you want to set different Relink by options than were set for the original relink. allow you to set different source information to the target you are trying to link to. For example, if a source tape name has been encoded into a different column name by a third party application, you can set the target relink option accordingly.

Sample Relinking

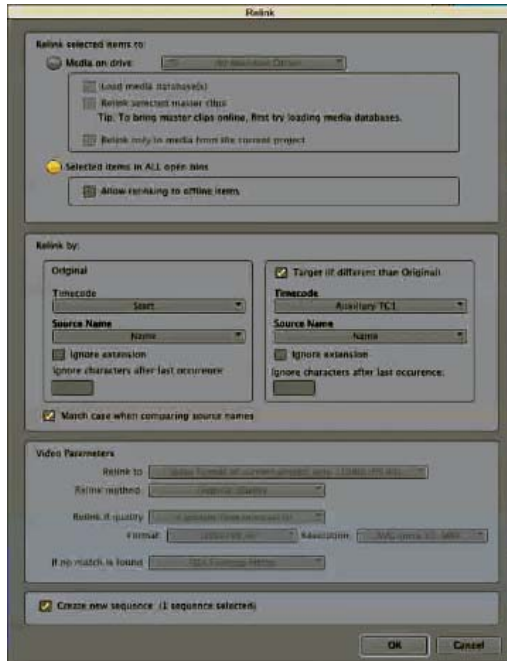
The following is an example of using the updated Relink options. In the example relink steps below, the original clips are highlighted blue in the bin and Timeline and target clips are highlighted in red. The clips in each bin share a common name. And the Start timecode for the original clips matches the Auxiliary timecode to the clips in the other bin. The relink is done by choosing the Start timecode of the original clips and the Auxiliary timecode of the target clips.



To Relink by:

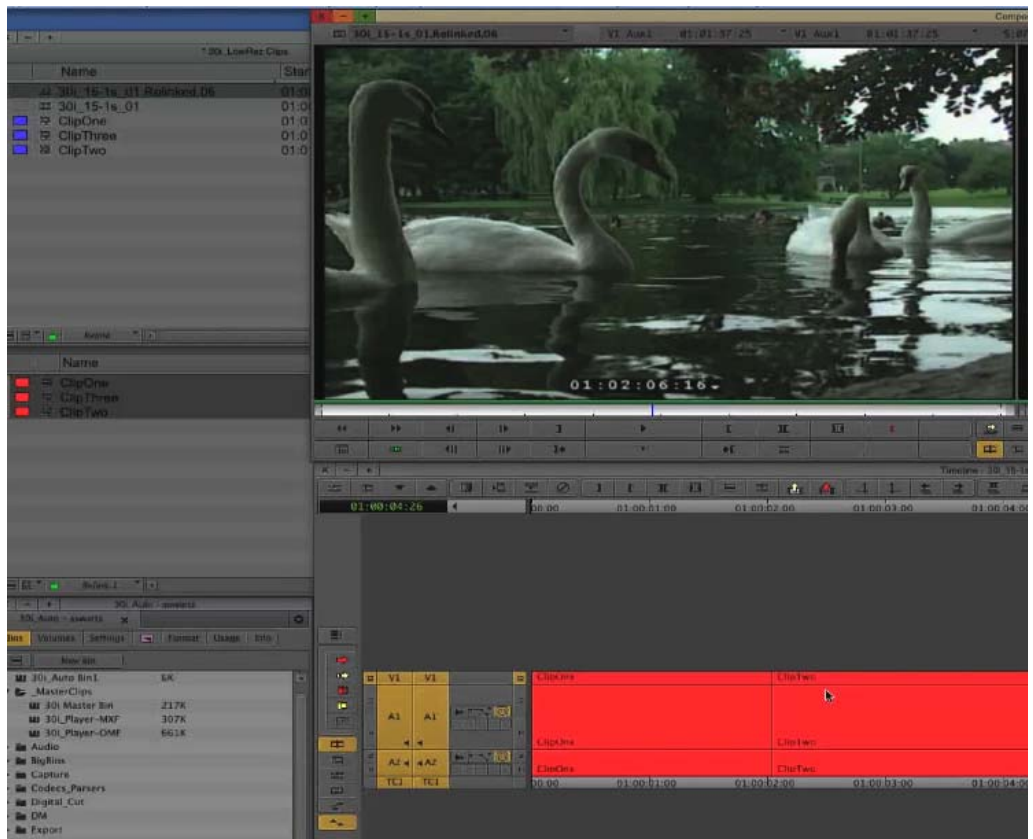
1. Select the clips in the bin to which you want to relink. (The clips highlighted in red in this example.)
2. Select the sequence you to which you want to relink the clips.
3. Select Clip > Relink.

The Relink dialog opens.



4. Click Selected items in ALL open bins.
5. Set the Original Timecode to Start.
6. Click Target (if different than Original).
7. Set the Target Timecode to Auxillary TC1.
8. Set Original Source Name to Name and Target Source Name to Name.
9. Click OK.

A new sequence with the relinked media appears in the bin.



AMA Volume Management

AMA Volume Management is now enabled full time. This means that AMA is always on. Therefore, the option “Enable AMA Volume Management” has been removed from the AMA Settings.

This setting was originally implemented to help preserve the non-AMA XDCam and P2 workflows. While these workflows are still available, this setting is no longer needed. To enable the non-AMA P2 and XDCAM workflows for importing media, click “Enable Legacy (pre-AMA) P2 and XDCAM” in the AMA Settings.

In addition, there is a new option to allow or prevent volumes/disks from being automatically mounted. In previous releases, when you inserted media into a device it would automatically populate a bin. Now, you have the option to enable this functionality under the Volume Mounting tab of AMA settings. With “Automatically Link to AMA Volumes” disabled, you can load media without the clips appearing in a bin.



You should not mix workflows. Either use the AMA method or use the traditional import/batch import method.

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