

Avid Media Composer/NewsCutter/Symphony

Version Additions and Updates

Notes by Paul Sampson on the latest Media Composer 4 / NewsCutter 8 / Symphony 4 Releases

These notes are prepared to highlight the operational additions available in this updated software. Since I work in the Broadcast environment, I have not covered the film specific features (such as “*Modify Pulldown Phase*”) or Metadata features (such as *Open in Original Application*”) in this document.

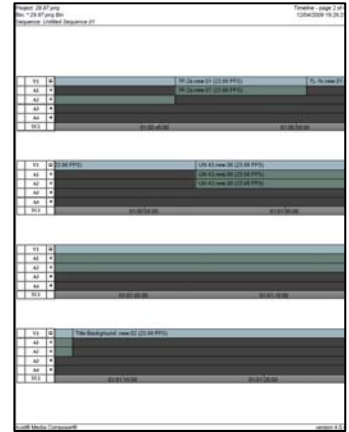
There are two sections: *The Little Stuff* deals with many smaller additions and updates. *The Big Stuff* covers this release’s major treat: support for multiple frame rates in the same project, and indeed in the same timeline.

The little stuff

1. Print the Timeline

This is an item in the FILE menu which only appears when you select the Timeline. FILE > PRINT TIMELINE. This prints the portion of the timeline visible in the timeline area – so set magnification to display the portion of the timeline you are interested in.

Turn ON Wraparound (in the timeline FAST menu) to get more of the timeline to print on each page.



2. Get Position Info

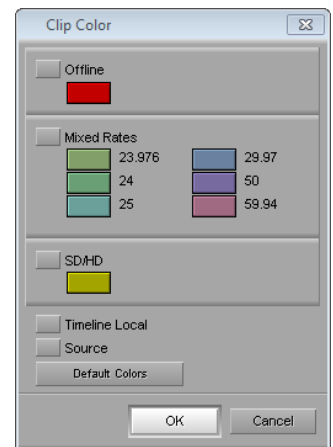
This option now appears in the FILE menu when you have selected the Timeline. It displays information about clips in the timeline at the position of the blue bar. You will find a report like this one in the Console after selecting this option::

Clip Name	Master Start	Master End	Duration	Source	Source Start	Source End	Drive	File
V1 Boston Scenics Bin.0	01:00:00:00	01:00:33:09	33:09	Boston 1	00:29:06:04	00:29:39:13	BOOT (C:)	
Boston 1V01.C60CB2649E73A2A.mxf								
A1 Filler	01:00:00:00	01:00:45:21	45:21	n/a			n/a	n/a
A2 Filler	01:00:00:00	01:00:33:09	33:09	n/a			n/a	n/a
A3 Filler	01:00:00:00	01:02:09:10	2:09:10	n/a			n/a	n/a
A4 Filler	01:00:00:00	01:02:09:10	2:09:10	n/a			n/a	n/a

3. Clip Colors

Clip colors are now chosen in the timeline with a dialogue box. As before, choose the timeline ‘fast menu’ and select CLIP COLOR.

Here you can turn different timeline clip colors on and off, and by clicking on the swatches you can select alternate colors for these indicators. To get back to the Avid default colors, click the “DEFAULT COLORS” button.



4. TOOLSET > FULL SCREEN PLAYBACK

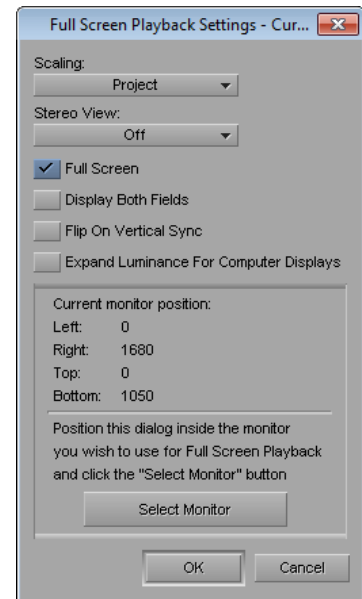
Full Screen Playback on your computer monitor is now accessible from three places:

- Menu `SPECIAL > FULL SCREEN PLAYBACK`
- Shortcut `SHIFT + CONTROL + F`
- Toolset `FULL SCREEN PLAYBACK`

Click on the monitor to return to your editing application. Pressing `ESCAPE` simply switches between the player and the recorder monitor, as it always has.

If this feature is not available, there could be several reasons. Full Screen playback generally requires an Avid specified Video card. On systems with a DNA / FIREWIRE selection capability, FIREWIRE (1394) must be selected.

Remember there are also *Settings* you can choose to control full screen playback.



5. Select Unrendered Titles

This is a new option in the `BIN` menu. In version 4.04 it actually could be called “`SELECT OFFLINE MEDIA`” because it finds and selects not just titles missing their media, but any clip which is missing media.

The intention is to allow you to find and recreate media for titles whose media is missing. Run this command to select the titles missing media, then go to the `CLIP` menu and choose `CREATE UNRENDERED TITLE MEDIA`. New media for the title is created and the titles will now appear online again.

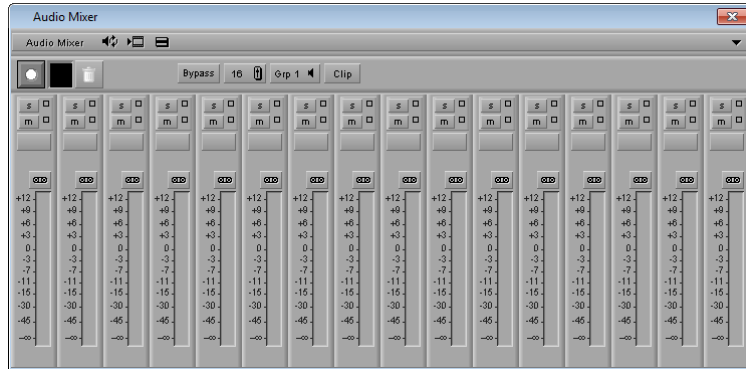
6. DNxHD CODEC CHANGES- potential incompatibility

The 1080i Interlaced DNxHD codec has been updated to be compatible with the SMPTE VC-3 specification (progressive DNxHD codecs not affected). This release can playback media encoded using the older codec, but older versions of the editing application will have difficulty playing back media captured in Version 4.0 and above! You may only see the top half of the image, with the bottom half being black or green.

To correct this situation, install the latest Codec pack (for 3.x and above, on your install CD) and it will update the older versions with the new codec support.

7. 16 Tracks of Audio in Mixer

You can now access up to 16 tracks at once in the mixer. Click the mixer button labelled “4” to toggle through to “8” and then ‘16’ tracks in the display.



8. Activate and Deactivate Client display

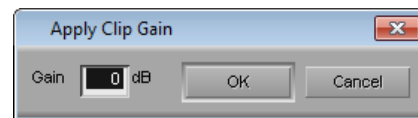
(Version 4.0.4) If you have hardware that allows you to display your output on an external Client Monitor, you can now enable and disable this output while you are editing to control when the client is seeing you work.



This is a new button in the timeline button bar which you click to toggle the Client Monitor ON or OFF. If there is no Client Monitor capability, the icon contains a Grey TV set and is inoperable.

9. Apply Gain adjustment to selected Clips

A new option is available in the CLIP menu- CLIP APPLY GAIN. This calls up this dialogue where you can type in and then apply a gain adjustment for the selected clips.



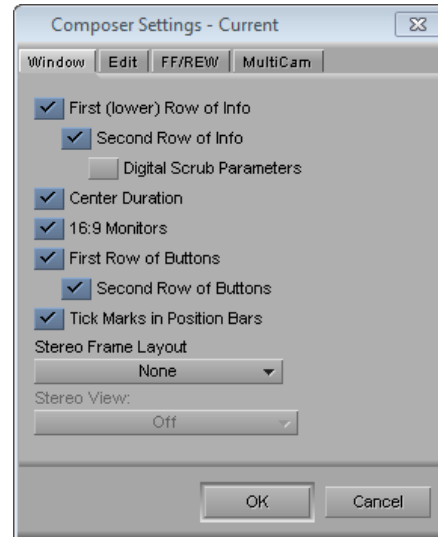
10. Support for Ikegami GFCAM

Avid AMA (Avid Media Access) now has the plugin for Ikegami GFCAM included. Information on editing with GFCam media is available at www.avid.com/ama

11. Stereoscopic Video Update

Stereo video use is growing. Several Video Games already play in 3D, and most major animation studios have said every new major release will be 3D (Disney, Pixar). Avid editing systems have been able to edit stereo *progressive* video (in a proxy mode) for several releases now, and that support increases in Version 4.0. There are four ways to view your stereo (as low resolution) content:

- 1 image, either eye full screen
- 1 image, Interlaced, each 'eye' in a different field
- 2 images, Horizontal split, left eye on top
- 2 images, Vertical split, left eye on the left



If you are screening using Full Screen Mode on your computer monitor select these options using the settings `FULL SCREEN PLAYBACK`. If you are editing with an outboard client monitor select these options using the `COMPOSER` settings. These viewing options are not available for SD projects or for HD *Interlaced* projects.

To view a stereo image on an external monitor, you need the appropriate output devices (DX box for example) and stereo monitoring (stereo capable display device). The Version 4 *What's New* guide contains some very good, basic information on acquiring stereo content, and setting up your system for monitoring and editing.

12. 100 UNDO'S

Instead of the previous 32 we now have 100 UNDO levels.

13. Commit Multicamera Edits option

A Multicam edit results in a timeline made of Group Clips which contain all the cameras in the group, although you only see one. To make the timeline smaller, increase performance and simplify the timeline you can discard the group clips and leave only the selected cameras in the timeline. You will no longer be able to Multicam edit after performing this step.

- Right Click on the sequence in the bin and choose "COMMIT MULTICAM EDITS"

You might like to perform this step on a duplicate of the original sequence!

14. Ancillary Data Handling in HD

Ancillary data (Closed Captioning, Program Description, Ancillary Time Code) are not in the pictures Vertical Interval for HD, but are a part of the HD-SDI data stream. To preserve this data in an original signal you need to meet certain hardware requirements, and also enter a console command to initiate preservation. This console command can also be used to specify which data is preserved. After entering the console command, the constraints on capturing and preserving ancillary data through the edit include:

- Video must be captured using Avid Nitris DX, Avid MOJO DxX, Avid Adrenaline *with* DNxCel, Avid Airspeed *with* DNExchange
- Ancillary data is only output through the HD-SDI port when playing back Video. It is not included in exported files.
- Ancillary Data is not output if you use Crossconvert or Downconvert on playback
- Ancillary data is preserved on the Video 1 track only

Ancillary data capture and configuration can be set in your MEDIA CREATION settings, or through the console.

MEDIA CREATION: Select the MEDIA CREATION Settings CAPTURE tab and if the appropriate hardware is connected you can set the ancillary data options here.

CONSOLE: Choose TOLLS > CONSOLE and type in Embeddnxccdefault.
This will initiate preservation with certain defaults for what is preserved.

Again, refer to the *What's New* document for details about this feature and the options you can program.

15. 1080p / 24 Project Downconvert

Avid now supports this format for all its playback options – specifically Downconvert and Crossconvert are now supported. You can now play this format back and insert 2:3 pulldown to make 1080i/59.94 and 30i NTSC copies.

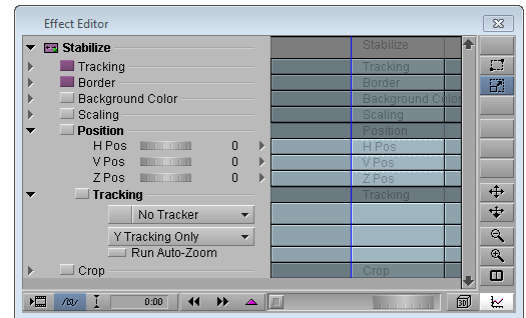
16. 1080p / 29.97 Project

Previously, this format was only available if you had DX hardware connected. This format is now supported in Software only mode. On an Adrenaline system, it will present a message and the disable the Adrenaline hardware, reverting to Software Only mode to support this project type.

17. Auto-Zoom for Motion Tracking and Stabilization

When an image is stabilized using the motion tracker (using the effect in the **IMAGE** category named **STABILIZE**) it may reveal black around the edges as the frame is constantly repositioned to eliminate any frame motion. You may now have the program remove this black by automatically increasing the scale of the frame just enough to hide the black edges.

- Apply the **STABILIZE** effect, enter **EFFECTS** mode and activate the **TRACKER 1** button
- In the tracking window select **FluidStabilizer** and click the **START TRACKING** button
- Promote the effect to **Advanced Keyframes**
- Open up the **POSITION** parameter pane, and find the little button named **RUN AUTO ZOOM**. Click it and the **Auto Zoom** happens instantly. There is no recalculation required.



18. AAF Edit Protocol support

This is a new AAF file Export setting option for an AAF file which is more complex- containing more information about edits, effects and possibly containing non-AAF embedded media. This is a smarter export – assuming the receiving system can read it correctly.

19. Keypad and Mouse support for Multicam

We can now use the Mouse to cut to a camera visible in the Quad split, or press a numeric keypad number to cut to a camera. During a multicam edit:

- Click with the mouse on an image in the quad or 9 split to cut to that camera
- Press a numberpad number key to cut to a camera – numbers 7 – 9 – 1 – 3 correspond to the upper left, upper right, lower left and lower right cameras. In a 9 split each number key matches the appropriate multicam source visible in the 9 split – for example 7 is the first, upper left camera while 3 is the last, lower right camera.
- To switch camera banks if you have more cameras than can be displayed at once, right click with the mouse or press the 0 or the . (period) key to cycle through the camera banks

20. Transition Preservation

There are a host of changes related to preserving transition effects at an edit point while you are editing.

SEGMENT MODE: Drag a segment in the timeline and the transition effects are left in the timeline at the original position. If the segment contains filler at its edge, the transition moves with the segment when it is moved around.

SPLICE AND OVERWRITE: If you attempt to make an edit which splits a transition – you will no longer receive an error message. The edit will be performed, and the transition will be preserved. This applies on both the Source monitor (when editing with a sequence loaded) and the Record monitor.

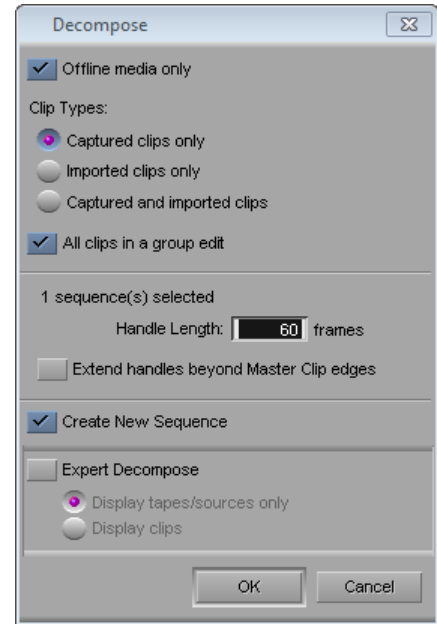
TRIM: A transition at a cut will no longer inhibit you from trimming into the effect. As you trim closer to the cut the transition duration will shorten to accommodate the trim. You can trim up to a cut with a transition, in which case the transition is removed.

LIFT and EXTRACT: Using LIFT or EXTRACT at an edit point will no longer remove a transition effect at that cut.

21. Decomposing

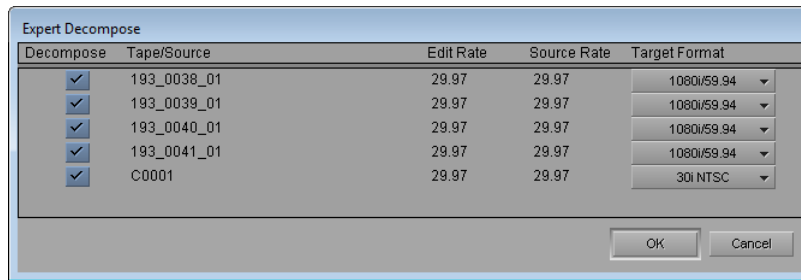
DECOMPOSE is a feature used to break a sequence down into the individual shots from which it is made. Each shot in the timeline becomes a new, separate clip. These clips will always be OFFLINE because they are not the original (online) shots at all – they are new, shorter clips which have not yet been captured. AMA clips cannot be used for a decompose.

This new dialogue box lets us decompose more intelligently. Instead of decomposing the entire sequence, we can decompose captured clips or imported clips only. Activate the **EXPERT DECOMPOSE** button to access the last two options.



EXPERT DECOMPOSE SOURCES

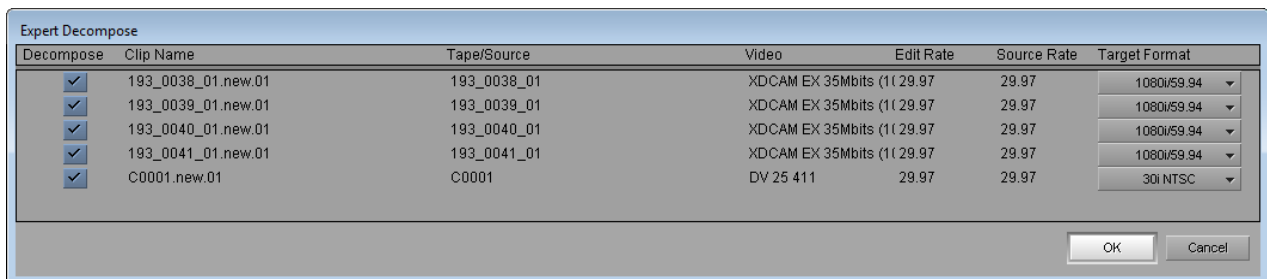
This allows you to choose the **SOURCES** (Tapes or Files) you want to decompose. Activate or deactivate the checkmark beside the individual sources to add / remove all the clips from that source from the decompose. Useful if a single tape was captured improperly or a file was mistakenly ingested at low resolution.



Decomposing by SOURCES only

EXPERT DECOMPOSE CLIPS

This creates a list of clips which meet the originally selected criteria. You can review the clips it wants to decompose and activate / deactivate the checkmarks to control which individual clips are decomposed.



Decomposing by individual CLIPS

22. Reference Sync Changes

Newer Nitris DX boxes contain two connectors, labelled REF 1 and REF 2. You can use these to connect both a Black Burst and a Tri Level sync source to the system at the same time. Using your Video Output settings, you can select REF 1 or REF 2 as the source to lock to. There is no termination required, and either input can accept either type of signal.

23. Cueing to Timecodes without a number Keypad

Click on a monitor and press the left CONTROL key twice (quickly) and you will be able to use the number keys on the main keyboard to type in timecodes for cueing the player or recorder. You can type in absolute timecodes or type in a number with a + or – sign for relative cueing and measuring durations.

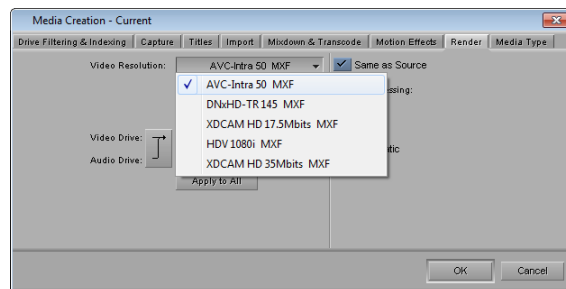
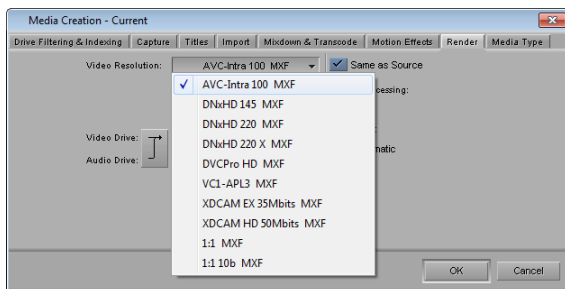
This is a feature designed to make number entry possible on a laptop computer.

24. GetLicenceInfo Utility

A new Utility in the Avid UTILITY folder. Run this file to see a display of the System ID and the serial number of the installed Avid software. It also shows the Avid Machine ID and MAC Address of the computer.

25. Full Support for Panasonic AVC-INTRA Codec

You may now Transcode, Render and Mixdown using the AVC-INTRA codec. You will see either the 50Mb/s or the 100 Mb/s codec depending on your RASTER settings in the format tab.



26. LOCATORS export maintains Timecode

I don't actually know when this change occurred, but I first noticed it in version 4.0. If you have locators, you can now export them with the Master Timecode as the reference (sequence Locators) or Source Timecode (Source Locators). Open the `TOOLS > LOCATOR` window and select `FILE > EXPORT` to save the locators.

```
Paul Sampson 03:39:11:19 V1 red
Paul Sampson 03:39:48:09 V1 red
Paul Sampson 03:40:15:18 V1 red
```

Above you see locators from the Source monitor.

In the Locator window you can use the fast menu to select between the display of Timecode, Frames or Footage (for Film). When you export, you get the 'units' which are currently selected, so choose Timecode / Frames / Footage first to make sure your exported locators are in the proper format.

The BIG stuff

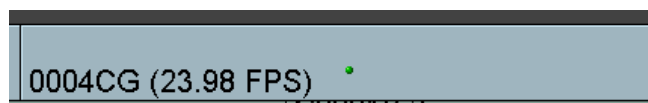
Video you edit with is often described by its frame size, scanning method and frame rate.

Avid has for some time been able to mix frame sizes (HD and SD) and scanning methods (Progressive and Interlaced) in the same project and the same timeline. With the release of this version we can now also mix frame rates. Any project (and any timeline) can now accommodate any combination of frame size, scanning method and frame rate. This means we can now mix PAL into an NTSC timeline, or incorporate 24 frame content directly into a 29.97 broadcast timeline.

MOTION ADAPTER EFFECT

Your Project (and timeline you create within it) still has a default frame rate as you selected at the time of creating the project. If you add material at another frame rate its speed is automatically adapted to fit the speed of the current project. This is accomplished by adding an effect – a Motion Adaptor – to each clip which is at a mismatched frame rate from the Project. These Motion Adapter effects are actually built upon the existing Timewarp features already in your Avid.

You do not apply a Motion Adapter effect – it is applied automatically. Normally you need do nothing to manage mixed frame rates- motion adapter effects are applied automatically when needed. Clips with this effect applied appear in your timeline with a small green dot on their video track. Also, beside the clip name the original FPS is indicated in brackets.



You cannot remove a Motion Adapter effect with the remove effect button. You can however modify it by entering Timewarp Effect mode and promoting it to a normal Timewarp effect.

Clips always play at the frame rate of the project in which they are viewed. The audio remains in sync with the picture, even though the images will be speeded up or slowed down as necessary. You can edit with these mixed rate clips without any special concerns or issues- they behave as a normal clip would when adding effects, trimming or performing any other editing operation.

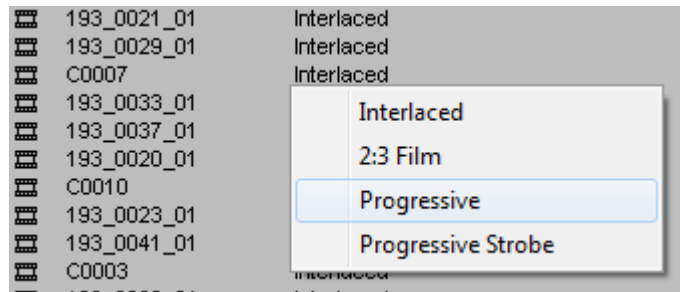
Working with CLIPS

How a clip with a Motion Adapter ‘behaves’ is determined by a column (parameter) called “Field Motion”. If this column is not visible in the bin use `BIN > BIN HEADINGS` to make it visible. Each individual clip and subclip can have a separate setting for this parameter, and the editing system may treat the clip differently depending on this setting. This parameter is initially set automatically by the editing system for you, but you can come here and override the default if you are looking for a different treatment for your footage. Any changes you make affect the look of that clip the next time it is edited into a timeline. Changes do not automatically alter the instance of the clip which has already been placed into a timeline.

The parameter describes the type of footage the clip or subclip is composed of. If you click on the parameter for a clip or subclip you could have as many as 4 options:

- INTERLACED- Interlaced video
- 2:3 FILM – 30fps clip containing 2:3 pulldown. This is generally video captured at 24fps but placed into a 30 frame recording through the addition of repeated fields. Film transferred to Video contains 2:3 pulldown.
- PROGRESSIVE- Full frame (non-interlaced) video
- PROGRESSIVE STROBE- A clip which contains repeated frames, similar to how repeated fields are present in 2:3 pulldown clips.

If you have a Motion Adapter affected clip and don’t like the results, you can try changing this setting to achieve different results. To change the setting, just click in the `FIELD MOTION` column opposite the clip or subclip you want to change to see a drop down menu for that clip or subclip. Select the option you want to use. Screen the Clip or Subclip in the Source monitor and observe on an external monitor to evaluate the results.



If you change a clips `FIELD MOTION` setting, it does not change in any timelines. To force an update in a timeline so it reads the new `FIELD MOTION` settings, you must “Refresh Motion Adaptors” in the timeline. Simply right click on a timeline in the bin and choose this option from the context menu which appears.

Working with SEQUENCES

While clips of different frame rates can be opened and played in a Project, the same is NOT true of Sequences.

If you attempt to load and play a sequence with a frame rate different from the Project frame rate you will be asked if you want to create a modified copy of the sequence to play at the current Projects frame rate.

You may also modify the sequence pre-emptively while it is in the Bin using the MODIFY command before opening it. You can do this modification in the original or the target project. Select the Sequence, choose `CLIP > MODIFY` and choose a different Format for the copied sequence.

Both procedures are non-destructive – the original sequence remains intact. The second method *must* be used if your timeline has imported matt keys in it- read the *What's New* notes for a full description of this limitation.

There are some things you need to know about a modified Sequence:

- Titles will appear unrendered as there is not title media at the new frame rate. Select the timeline and select `CLIP > RECREATE TITLE MEDIA` to recreate the missing title media
- Rendered effects will become unrendered as the original renders were at the wrong frame rate
- Group Clips will be 'flattened' and the final clip will appear in the timeline rather than the Group Clip
- A report is placed in the CONSOLE indicating changes which have been made. You can refer to this report to be sure you catch all the changes that were made.
- Keyframe positions may slip slightly as the framerate changes
- Shot lengths might vary by a frame or so. The overall duration of the timeline will be the very close to the same, but slight variations in individual clip lengths will occur. You might have very slight synchronization changes, or small offset between cuts on different tracks.