



Upgrading to
Media Composer 7
and
NewsCutter 11



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Paul Sampson
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V4

INTRODUCTION

This is not an operations manual, but my outline of the new features in Media Composer 7 and NewsCutter 11. In this document I assume you are currently editing at good proficiency on some version of the software. This describes what the new features are, but does not necessarily outline the steps to using them. Remember to see the actual PDF files from AVID for more detail, or use the built in HELP for the application.

On the pages which follow is my take on the most useful features for operators using this release of software. It covers standalone features in the editing system, not the features specific to an Interplay server environment.

Media Composer 7 and NewsCutter 11 represent a big step forward for Avid video editors. There are the usual improvements in the User Interface – like better direct manipulation of audio in the timeline. But look deeper, and many of the new features make the exploration of new workflows and the streamlining of others possible. Significantly, this new release offers:

- Background processing (Consolidate / Transcode)
- Creation of DMF ('Watch Folders') for automatic file processing
- Improvements in linked file handling (AMA)
- The first support for media of a larger frame size than HD or SD

Acknowledgement

I would like to thank **Robert Russo** at Avid (Burlington, USA), who returns all my emails and guides me through my exploration of the new Avid versions. Many thanks Robert.

My appreciation also to "Beta" **Keith Gerrard** for allowing me to participate in the Beta program that allows me to get a head start on the new versions. These notes are current for 7.0.2 / 11.0.2.

Paul Sampson

I am an Avid Instructor (ACI) and Editor Avid Certified Support Representative (ACSR) living in Canada. I supply Workflow design, Curriculum Development, Course Delivery and on-site support for AVID and ADOBE products. I support the Media Composer, NewsCutter, Instinct, Access, Assist, Interplay Central, Sphere, Photoshop and After Effects. I work with Editors, Journalists and Web Developers at many companies in Canada and abroad.

WORKING WITH HIGH RESOLUTION MEDIA

FrameFlex

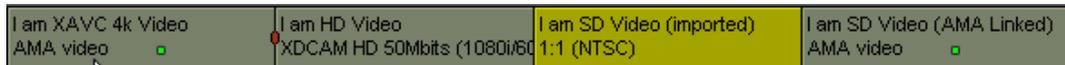
Avid Media Composer and NewsCutter editing systems are not yet Resolution Independent. They edit only in SD or HD frame sizes. But the Avid can access video of other frame sizes – either video which is mismatched to the Project format (SD in an HD Project) or video which is oversized (2k or 4k) such as RED or XAVC. For these ‘mismatched’ and oversized frames, we now have an effect called “FrameFlex” available to us.

FrameFlex allows us to resize and reposition video for clips:

- which don’t match the current project type (SD in HD or HD in SD project)
- which contain oversized (4k or 2k) AMA linked video

You don’t apply the FrameFlex effect, it does not appear in the Effects Palette. The effect will just be there when needed.

You can tell if FrameFlex has been applied to your clip when you look in the timeline. If you see a green dot in the middle of the video segment then FrameFlex is applied.



The green dot in the segments above indicate FrameFlex is active, and resizing / reframing of the shots is available in the Effect Editor.

FrameFlex not available

If FrameFlex is not available in the timeline (on a segment), you may be able to activate it.

- Select the clip in the bin
- Right click on the clip and choose SET SOURCE SETTINGS
- Choose the FrameFlex tab and make an adjustment, Click APPLY.
- If the clip has already been used in a sequence, load the Sequence and choose from the menus CLIP > REFRESH SEQUENCE > SOURCE SETTINGS to allow these clip changes to be updated in the sequence.
- The timeline segment will now have the green dot. You can open the Effect editor and customize its FrameFlex setting

Adjusting FrameFlex

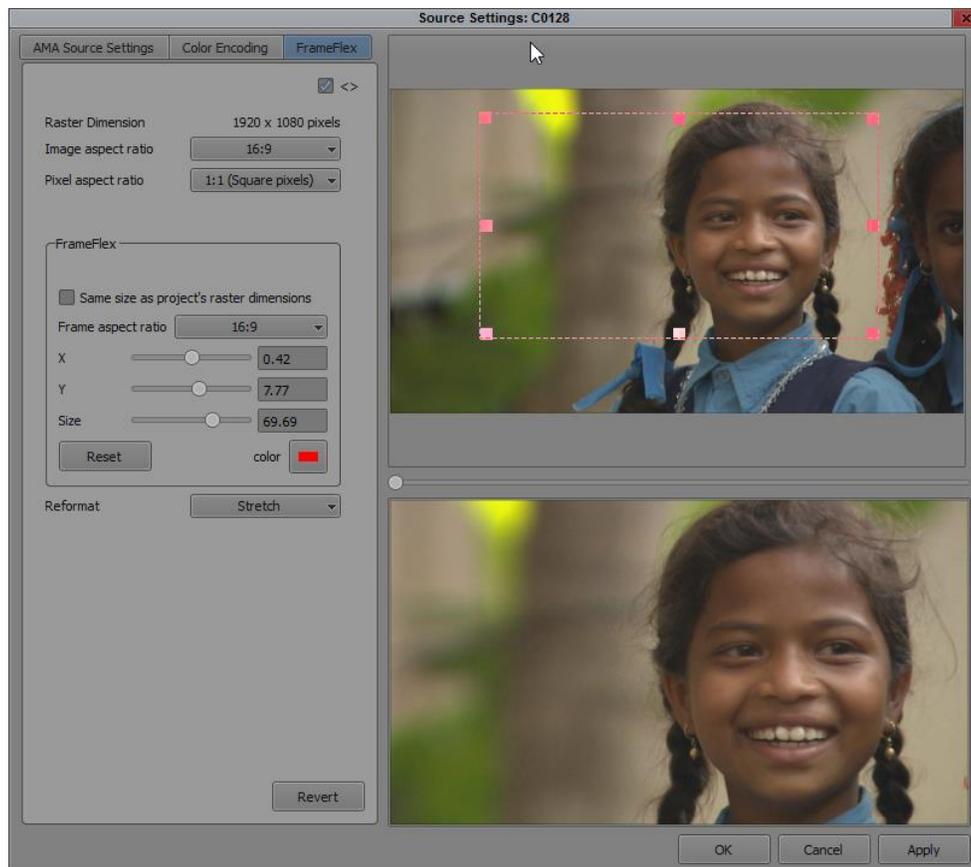
You can adjust position and scale on your image, in effect you have “pan and scan” available.

Note you can AMA link to many still image file formats (.jpg, TIFF, BMP, PSD, PNG) and use FrameFlex to perform non-destructive pan and zoom on the images, much like you can do now with *Avid Pan and Zoom* in the IMAGE effect category.

FrameFlex is adjusted in two different ways. As a CLIP or a SEGMENT effect.

Adjusting FrameFlex as a CLIP ATTRIBUTE

FrameFlex can be adjusted as a *clip attribute*, in which case every time the Clip is used you get the FrameFlex adjustment. Right click on an AMA clip in the bin and choose Set Source Settings to see this window:

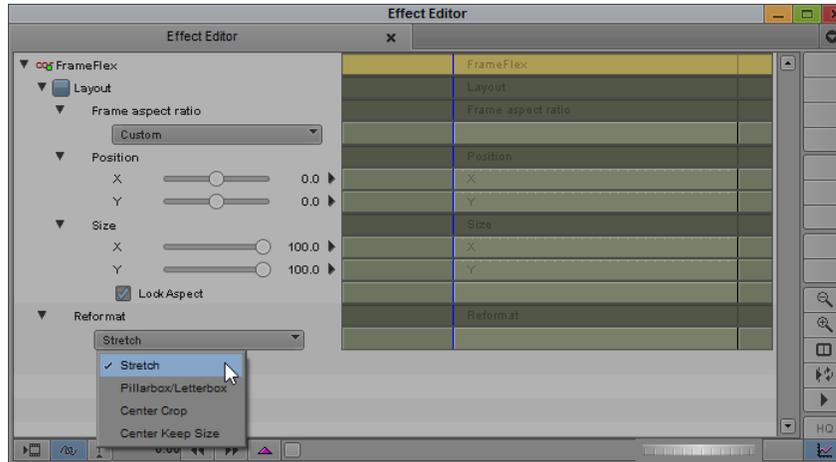


Notice FrameFlex is one of three tabs available at the top left of this *Set Source Settings* window. The upper image is the entire frame. The lower image shows reframed version of the image. This adjustment is not keyframeable.

Adjusting FrameFlex as a SEGMENT EFFECT

FrameFlex is not applied from the Effect Palette. If FrameFlex is already present on a clip, when you edit that clip into the timeline FrameFlex can be adjusted as a *Segment Effect* on that segment in the timeline. This allows you to adjust the framing of *individual instances* of shots in your timeline. From here you can also keyframe a FrameFlex move.

Park on the segment in the timeline which contains a 'green dot' and open the Effect Editor to make adjustments. Create and adjust keyframes if desired.



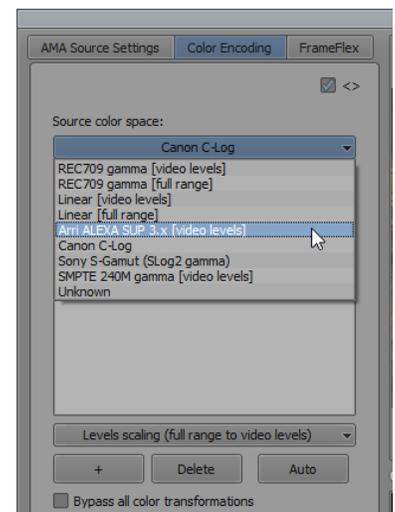
Effect Editor for a Segment in the Timeline which contains FrameFlex on it

Source Settings Color Control

An Avid HD project has a Color Space defined – either YCbCr 709 or RGB 709. This is the color space in which color calculations are performed.

When you AMA link to media from a particular camera, its Color encoding can be quite different- SMPTE 240M, Alexa SUP 3.x or Canon C-Log for example. For proper color management, we may need to identify for some source footage what the source color space is. SET SOURCE SETTINGS allows us to do this using a tab labeled Color Encoding.

Here we can identify the source color space (at the top), and if necessary apply levels conversion using a separate popup at the bottom of this dialogue – *Levels Scaling (Full range to video levels)*



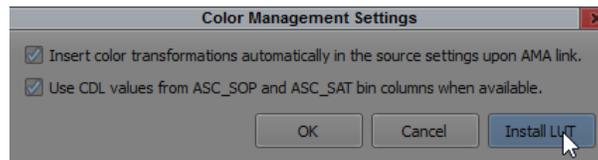
Custom Colorizing: LUTs

On the set, or at some point before the edit someone may have screened the footage and provided some measure of color adjustment or correction. This information can be stored in a file called a color LUT (lookup table). You might think of a LUT like a filter which can be applied over the footage.

A LUT can be created in many formats. You can IMPORT a LUT into your Avid, and then apply the LUT to footage as required.

IMPORTING A LUT

From your **SETTINGS** tab, choose the **COLOR MANAGEMENT** settings. Click on the **INSTALL LUT** button and navigate to and select the LUT you wish to import.



Lut's are supported from the following systems:

Avid DS	.lut
Autodesk	
IRIDAS	.itx and .cube
Kodak KDM	.3dl
LUTher	.txt
Mistika	.itx
Nucoda	.lut

Note RED has .RMD / RLX / RSX files which serve much the same purpose. These are applied through the Source Settings as well, but under the **AMA SOURCE SETTINGS** tab.

APPLYING A LUT

Right click on the clip in your bin to access the **SET SOURCE SETTINGS** for the clip. Choose the **COLOR ENCODING** tab, and choose the LUT you installed from the Color Encoding Tab, where it will now be visible.

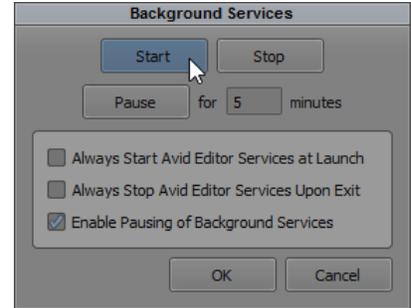
BACKGROUND FILE PROCESSING

Two Manifestations

There is now background processing available in the editing client. Not for rendering, but for Dynamic Media Folders (“DMF”, to be described in a moment) and for Consolidate and Transcode.

To support these two background operations there are some new Avid services which need to run in the background. Being processor intensive, you have the choice of turning these services ON or OFF as needed. They are OFF by default. To use these new features they should be ON.

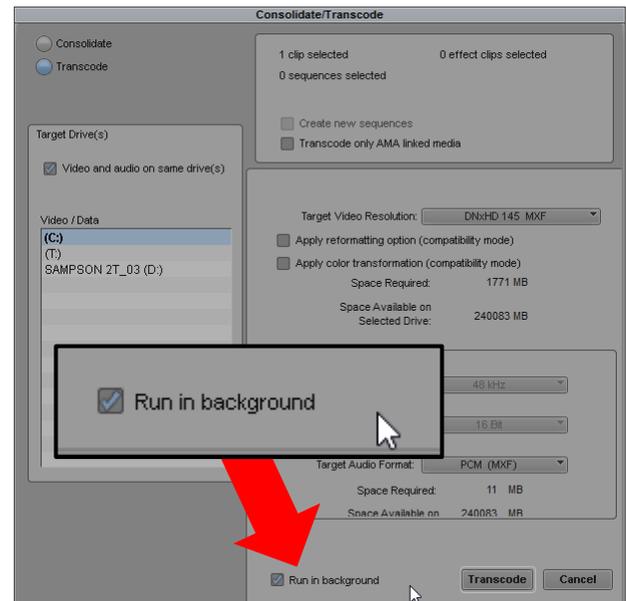
One way to turn them on is to go to **TOOLS > BACKGROUND SERVICES** and click **START**.



Background Consolidate / Transcode

You may have used the standard **CONSOLIDATE / TRANSCODE** dialogue. There is a new option at the very bottom of the dialogue which tells the application you want to do the Consolidate or Transcode in the background as you continue to edit.

If you select this option, all the new *clips* appear in your bin immediately as **OFFLINE**, and they come online one by one as the Consolidate or Transcode completes.



Dynamic Media Folders

Dynamic Media Folders are referred to as DMF folders. Essentially they are *watch folders*. You drop a file in the folder, and the background processes (if running) will process the file in accordance to the instructions of that folders Profile. The Editing system need not be running, it's only required that the Avid background Services mentioned earlier are running.

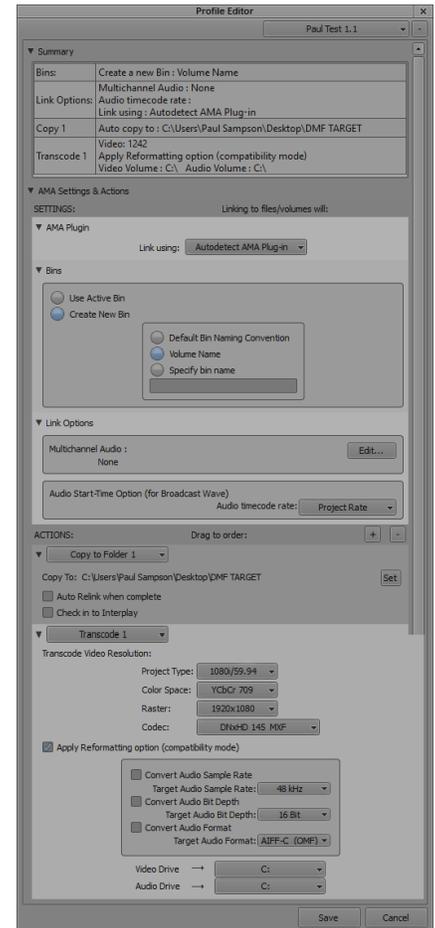
You create a folder and then use the editing application to designate it as a DMF. You tell it what to do with the files which are dropped into that folder. You can continue editing while the processing takes place. Each folder can process the file through multiple steps- you can Transcode, copy and checkin to Interplay as a single profile for example.

There are several steps:

- Create a folder
- Assign a profile to the folder
- Drop files into the folder
- Bring the processed files into your bin

The profile you create can direct the files to be processed by being:

- Copied
- Transcoded
- Consolidated
- Checked into Interplay
- AMA Linked into a bin



Profile Editor for simple DMF process

The steps are as follows:

1. CREATE A DMF FOLDER

Create a folder somewhere on your system to be used as your DMF folder.

2. CREATE A PROFILE FOR THE FOLDER

From the **TOOLS** menu, choose **DYNAMIC MEDIA FOLDERS**. The dialogue which appears is used to select the folder and assign the processing (create a profile) you wish to apply to the files placed there. Make sure the Avid Services mentioned earlier are running or you will not be able to access this.

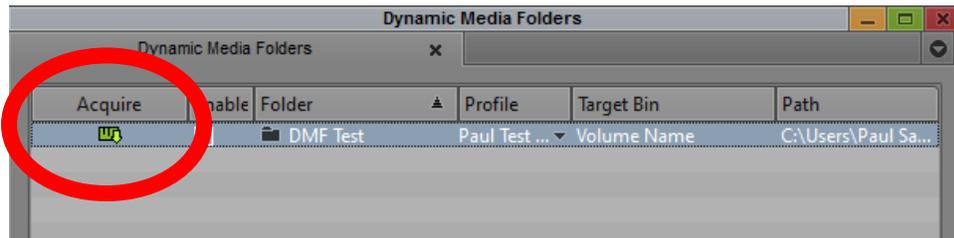
3. DROP FILES INTO THE FOLDER

Drop files you wish to process in this folder.

4. BRING THE PROCESSED FILES (CLIPS) INTO YOUR BIN

Processed files do not appear in a bin by themselves. The files may be needed in a different Project, or the processing could have been done with the Editing application turned off. To tell the application where you want the clips to appear, you open the appropriate project and ask for the clips to be placed there.

You do this by going to the menu item **TOOLS > DYNAMIC MEDIA FOLDERS**. At the top you see a list of DMF folders, and those which have processed files appear with an icon in the **ACQUIRE** column. Click on this icon to bring the clips into a bin in the current project. Which bin they appear in is specified as part of the Profile for that folder.

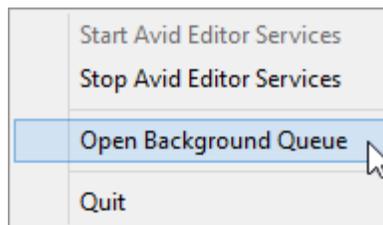
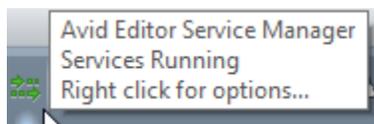
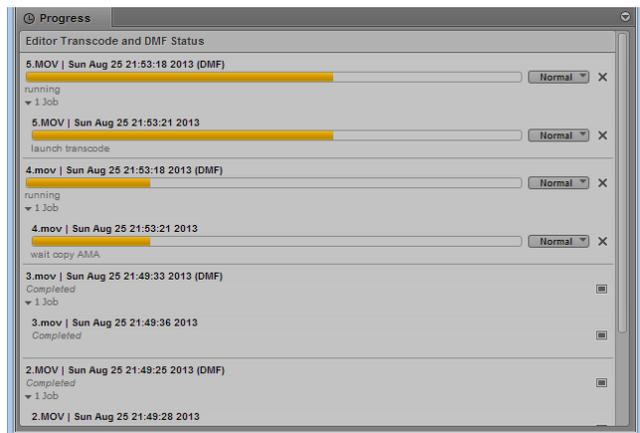


Monitoring Background Processing

There is a **BACKGROUND QUEUE** window which you can call up to monitor background processes, cancel them and change their priority.

From the editing application, choose **TOOLS > BACKGROUND QUEUE WINDOW**

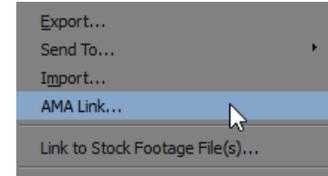
From outside the application, or if the application is not running, use the icon in the taskbar (Avid Editor Service Manager) to choose **OPEN BACKGROUND QUEUE** as show below.



AMA (FILE LINKING) CHANGES

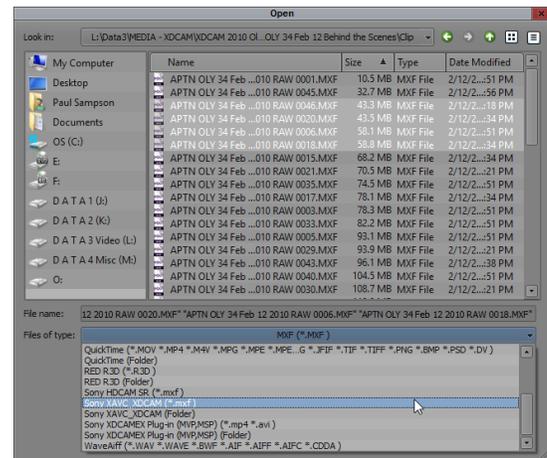
AMA Linking Dialogue Has Changed

Previous to this release, we could AMA link to a file or AMA link to a Volume, using two different menu items. We now have a single AMA link dialogue, and it is used for both situations.



The new dialogue allows you to navigate to a file or a volume folder. There are many plugins, and many formats available for some plugins. For example, .MXF files come in many flavors.

If you are having difficulty linking to a file, you may be able to help by selecting the plugin you wish to use with the “Files of Type” dropdown menu. While this has been available in previous releases, as the number of plugins grows this becomes more important as a problem solver.



DRAG and DROP AMA Linking

ALT + DRAG (Windows) OR OPTION + DRAG (Macintosh) the files to the bin. AMA clips will appear in the bin linked to this media.

AMA Files Are “Managed Media”

AMA Files Show up in Media Tool

AMA Files will now appear in the Media Tool.

When opening the Media Tool, you can select a project / drive combination, and you will see AMA linked media as well as the regular media which match the search criteria.

AMA media will be indicated by the ‘linked clip’ icon . 

In the initial release, you see *all the linked media for all selected drives*, even AMA linked clips from other projects.

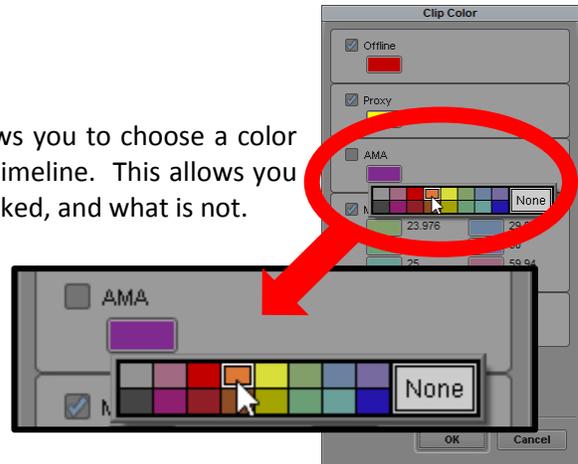
AMA Files can be checked into Interplay

When bins with AMA files in them checkin to Interplay, the AMA clips will checkin and appear in Interplay. This does not mean everyone will see the linked video- it could be on ISIS or a local drive, or be in a format requiring an AMA plugin than some systems might not have installed.

Checking in AMA clips means bins will checkin, whereas before they would not if there was a single AMA clip in them. It also means the checked in AMA clips will link to video when it is Consolidated / Transcoded onto ISIS.

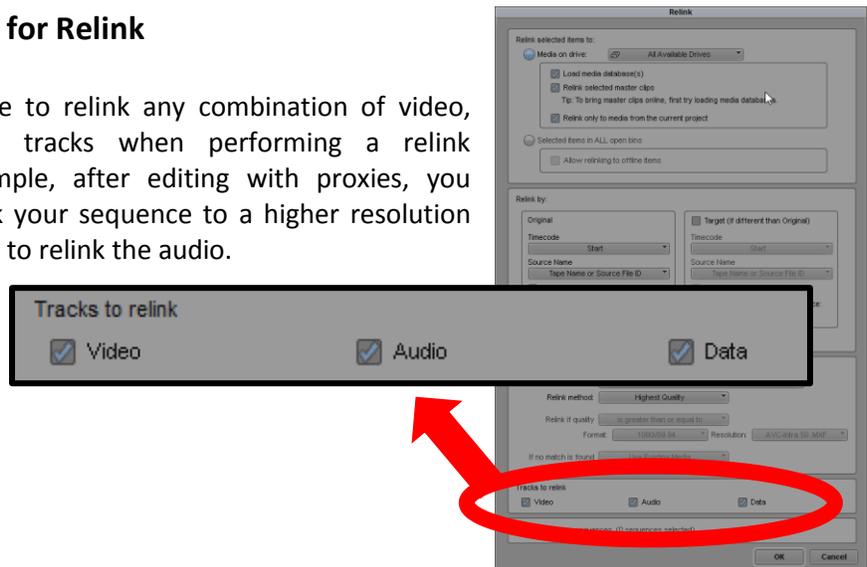
AMA Timeline Clip Color

The Timeline CLIP COLOR option now allows you to choose a color for AMA clips to be displayed with in the timeline. This allows you to scan a timeline and see what media is linked, and what is not.



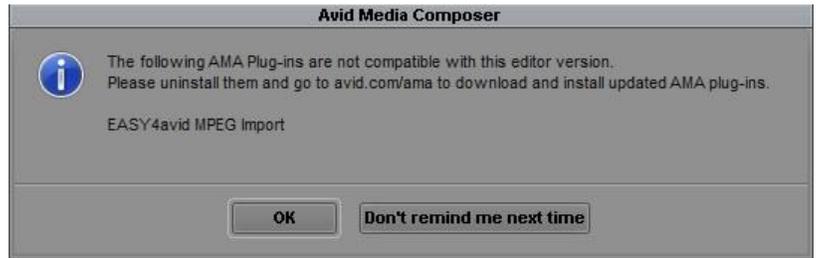
AMA Track Selection for Relink

You can now choose to relink any combination of video, audio and/or data tracks when performing a relink operation. For example, after editing with proxies, you might want to relink your sequence to a higher resolution video without having to relink the audio.



AMA Plugin version checking

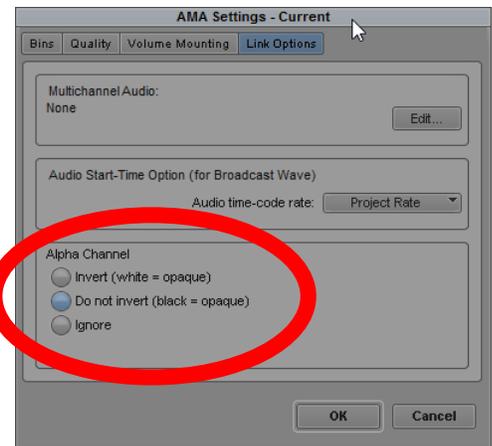
The application will now check your AMA Plugin versions, and warn you if an old or incompatible plugin is installed.



ALPHA Support with linked QuickTime

You may now perform an AMA link to a QuickTime movie with an Alpha channel. The file appears in your bin as a Matte Key effect.

The Alpha Channel options for linking are available in the AMA settings, in the last tab – LINK OPTIONS. (This was an addition in 7.0.1)

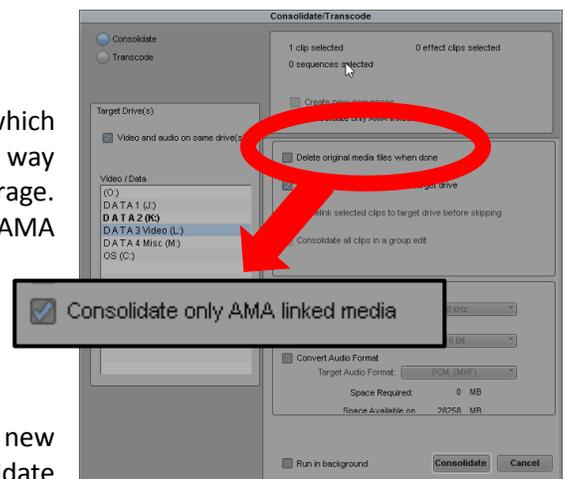


Consolidate / Transcode AMA Clips Only

When you have a bin full of clips, or a timeline which contain AMA linked clips, you often need a simple way to copy the linked media into local or shared storage. You need a method of Consolidating only the AMA media.

Also, you might be AMA linked to media which is in the wrong format for your story. You need a way to Transcode only the AMA linked media.

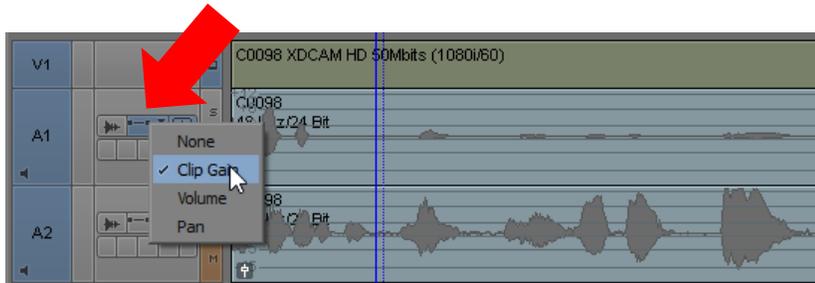
Both these situations are satisfied by this new checkmark which will be available for both Consolidate and Transcode.



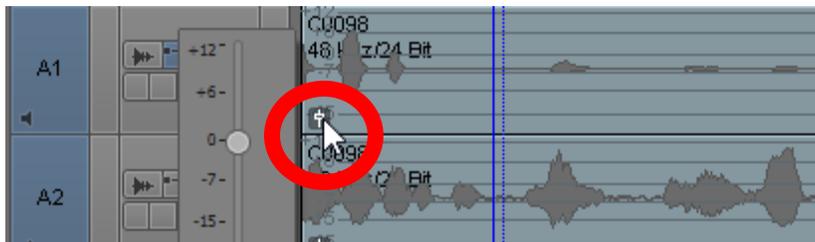
AUDIO

Adjust Clip Gain directly in the Timeline

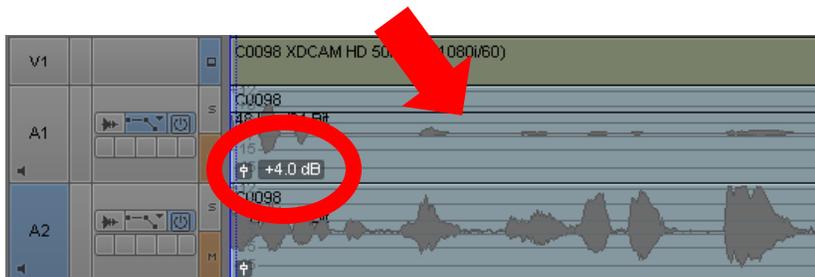
When you make a level adjustment using the audio mixer, you change the level of the entire clip. This is called adjusting the CLIP GAIN. You can see an indication as to whether adjustment has been made on a clip by turning on the CLIP GAIN option found in your timeline. There is now also a CLIP GAIN control.



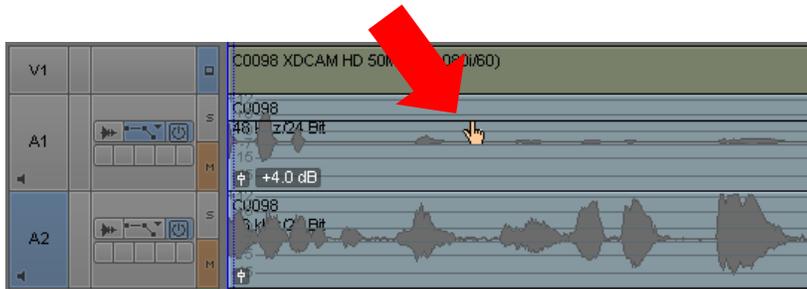
This drop down is one way to activate CLIP GAIN. This method allows setting Clip Gain track by track. Hold ALT / OPTION while selecting will activate for all tracks.



Click on the CLIP GAIN control which appears to see a slider you can drag to adjust the audio level for that clip.



When done, a new black line appears to indicate an audio clip adjustment has been made. The amount of the adjustment is displayed as text at the bottom of the track.



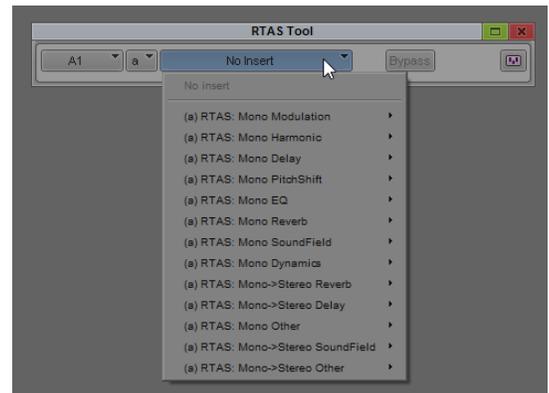
Once the black line appears, you can grab it directly and drag up and down to adjust the clip gain level.

- ALT / OPT click the slider to reset to 0
- When highlighted, the clip gain slider can be moved UP and DOWN in 1 dB increments using the UP and DOWN arrows
- When the gain slider is *not* highlighted, park on a clip with the audio track ON and press ALT/SHIFT (PC) or OPT/SHIFT (MAC) and use the UP and DOWN arrows to move the Clip Gain by 1 DB increments- no mouse required!

RTAS Window

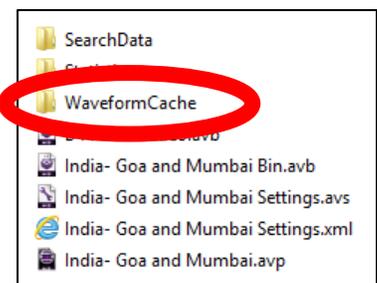
The RTAS (Real Time Audio Suite) window is now a tool you can call up from the TOOLS MENU– and leave up for easy access.

This tool can be used to assign, select and modify any RTAS plugins assigned to your audio tracks.



Waveform Redraw

When a waveform is initially drawn, it is saved as part of the project. This makes its display next time much faster. You will see a new folder in your project – WaveformCache – in which the waveforms are saved.



New MASTER FADER

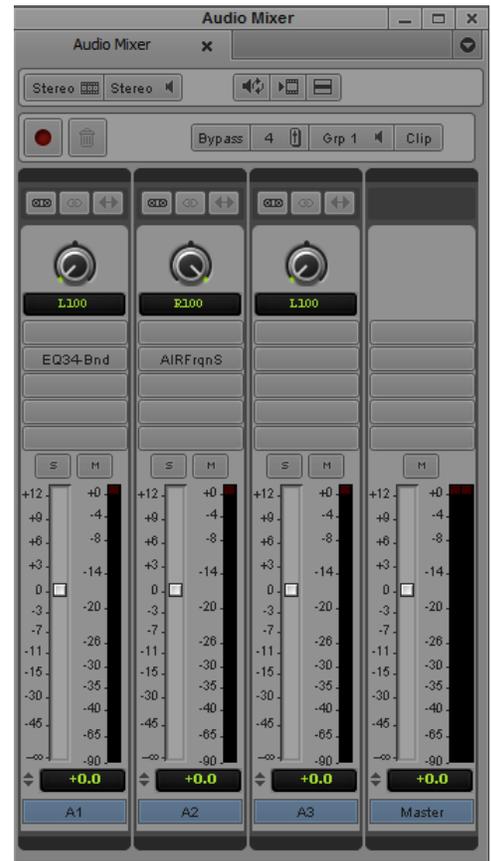
The audio mixer has a new, MASTER FADER which appears on the right in the audio mixer. This graphic shows 3 audio tracks, and the Master Fader. This fader adjusts the level of the entire mix, not just individual tracks.



PLUGINS can be applied in the Mixer

The new panels in the mixer contain 5 effect buttons per fader. By clicking on one of these buttons you can add a plugin or modify an existing plugin settings.

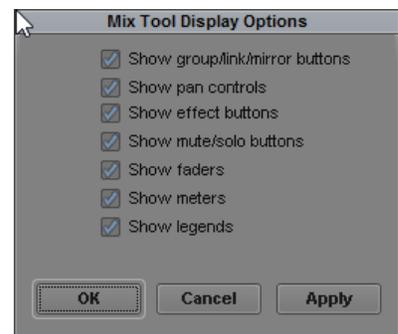
The new MASTER FADER will accept plugins, which will then affect the entire mix, not just a single track!



Audio Mixer display is Customizable

In some situations, the current audio mixer could take up too much screen space. A good example of this is field editing with a laptop. We can now customize the Audio Mixer display, and see only the parts of it we need to see.

This is a new AUDIO SETTING which allows 7 different panels in the mixer to be displayed or hidden. You can open this panel in your SETTINGS, or by right clicking within the mixer.



At the top of this page you see the full mixer. At the right for comparison you see the 'minimum' mixer, with all 7 panels hidden.



MISCELLANEOUS

Bin Views are now Buttons

These three new buttons at the bottom of the bin choose between TEXT, THUMBNAIL and SCRIPT views of the bin contents.



XAVC Supported

Sony XAVC HD Video format is supported for editing. You will be able to AMA link, render, consolidate and mixdown using the XAVC HD format. This is also sometimes referred to as *XAVC Intra 100*. Import requires the installation of the Sony XAVC/XDCAM plugin, minimum version 3.1 in this release.

Note XAVC HD is not the same as XAVC, which can be at either 2k or 4k frame size. XAVC video, typically from the Sony F5 or F55 (2K) or the F55 camera (4K) can technically be edited in the Avid but is automatically downsized to HD frame sizes. The editing performance will reflect the 2K / 4K frame size data rates which are being down sampled in real time. You may wish to transcode XAVC to an Avid codec for efficient editing.

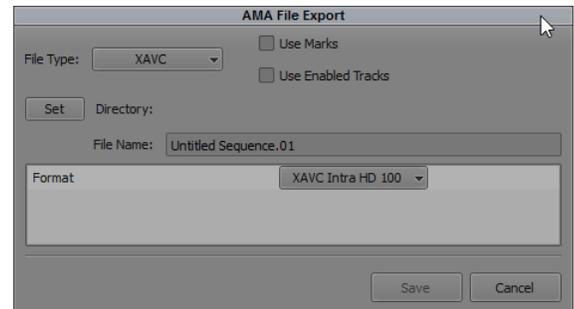


Sony F55 Camera

To take advantage of the 2K or 4K frame size, you can AMA link to XAVC footage (with the Sony AMA plugin installed) and use Avid's new FrameFlex feature to pan and scan on the original large format XAVC image. After FrameFlex has been applied, you may either edit or transcode and then edit the footage.

XAVC Export

XAVC INTRA 100 (HD) may be exported from your Avid editing system. After installing the Sony AMA plugin, minimum version 3.1, you can right click on a Sequence or a Clip and choose AMA FILE EXPORT. In this dialogue which appears, you choose XAVC as the export format. Choose a destination and click Save. An .mxf file will be exported in the XAVC HD format.



Mouse Scrolling in the Timeline

When the Timeline is active, you can roll your mouse wheel to scroll up and down through your tracks. Hold CONTROL to roll your mouse wheel and scroll forward and back one frame at a time.

When performing other operations, like lassoing tracks or dragging segments, the Timeline will scroll when you drag to the bottom or top of the current display.

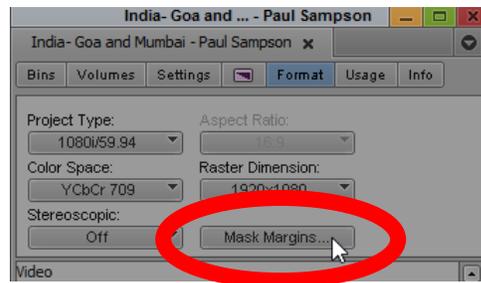
Viewing Masked Regions

This feature allows you to see a mask overlay on your output to preview what your output will look like in a different format. Below you see a full frame 16 x 9, and on the right you see the image with a mask indicating what portion of the frame will be visible with a 4x3 crop applied. This provides useful feedback during editing when you need to produce a master for multiple formats.

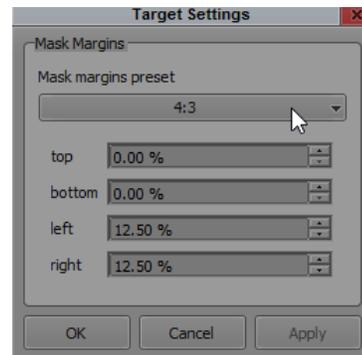


Choose the Mask type

If the PROJECT window, FORMAT Tab, click on the new MASK MARGINS button.

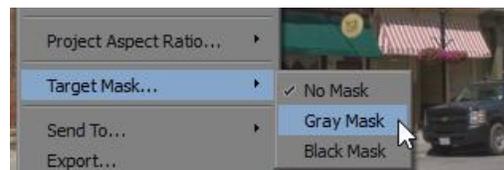


Select the mask size. There are many presets, such as 4:3, 1.85:1, 2:2, and there is the ability to define a custom mask size.



Turn the Mask ON / OFF

Right click on any of the monitors and select TARGET MASK to turn the mask ON and OFF, as either a gray overlay or complete black cover.



Spanned Markers

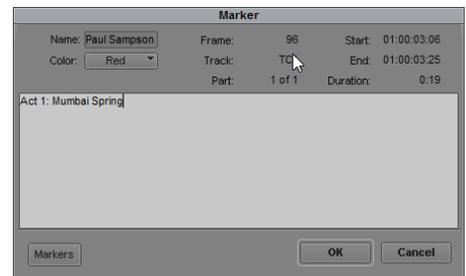
We have always seen Markers (previously called locators) as indicating a particular frame in a clip or Sequence. With this release, a Spanned Marker indicates not just a single frame, but a range of frames. Spanned Markers can indicate a portion of your program, not just a single frame.

While there are many in-suite uses of this feature, it also supports AS-11 output. Spanned markers can indicate the Acts of a program between the commercial breaks, and this information becomes part of the metadata for the AS-11 export.

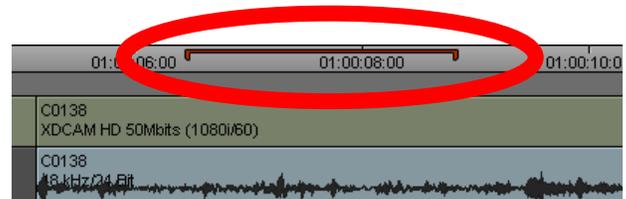
Add a Spanned Marker

This requires the use of an ADD MARKER button , which is not mapped to your keyboard or interface by default. You might need to map it for easy access.

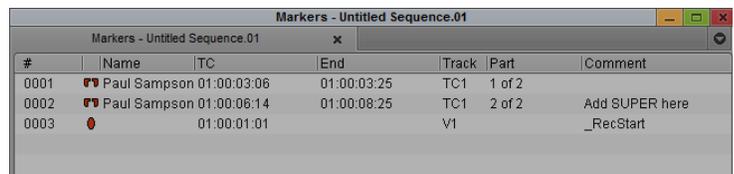
- Mark an IN and an OUT
- Hold ALT (PC) / OPTION (MAC) and click the ADD MARKER button. Clicking on the Add Marker button alone will make only a single marker. ALT (PC) / OPTION (MAC) clicking makes a spanned marker from the entered marks.
- The MARKER DIALOGUE box opens and you can change marker color and enter marker text.



In the Timecode tracks at the top and bottom of the timeline you will now see a Spanned Marker indication.



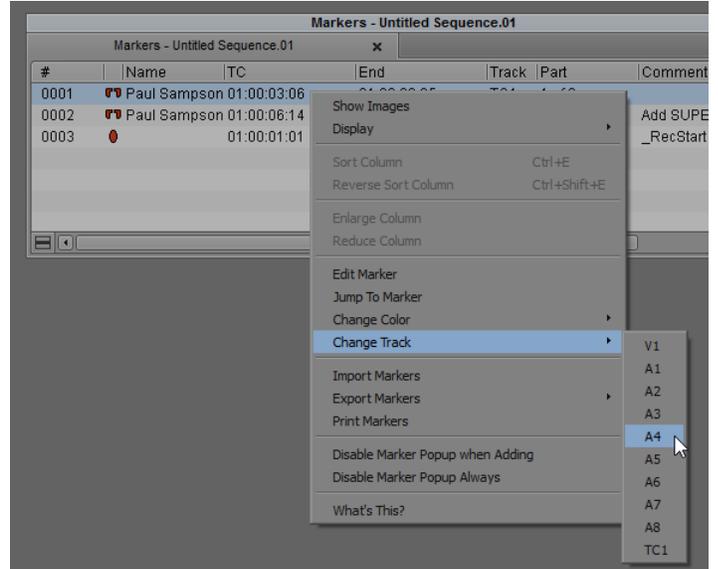
The MARKER TOOL contains a list of your markers, and has a special indication for the spanned markers in your clip or timeline.



#	Name	TC	End	Track	Part	Comment
0001	Paul Sampson	01:00:03:06	01:00:03:25	TC1	1 of 2	
0002	Paul Sampson	01:00:06:14	01:00:08:25	TC1	2 of 2	Add SUPER here
0003		01:00:01:01		V1		_RecStart

Move Markers between tracks

- Open the Marker Tool from the Tools Menu.
- Right click on a marker and choose CHANGE TRACK > (Track Number)



AS-11 Support

Advanced Media Workflow Association (AMWA) is an organization which sets recommendations and standards for program delivery. Many larger broadcasters request their shows be delivered not as QuickTime files or single MXF files, but as AS-02 'bundles' or AS-11 .mxf files.

Further description of the AMWA specifications are beyond the scope of this document. See my AMA MASTER GUIDE for a more complete explanation and description of exporting AS-02 bundles. It is at www.paul-sampson.ca. Also, consider visiting the AMWA web site at www.amwa.tv.

In this new release, the AS-11 .mxf files can use spanned markers to identify program blocks.

THIRD PARTY SOFTWARE

This release of Avid software comes with two new third-party plug-ins. iZotope Insight and NewBlue Titler and Effects.

If you don't see either of these plug-ins when you're editing, they may not have been installed on your system. Go to your Media Composer 7 or NewsCutter Avid installer package, and install the software from this folder:

MC 7.0\MediaComposer\Third Party

iZotope appears in your effects palette as a total of eight new RTAS audio plug-ins.

NewBlue creates two new categories in your effects palette. *NewBlue Titler Pro* contains a titling tool, and the *NewBlue Starter Pack* contains 13 new effects, a mix of transition and segment effects.

NewBlue TITLER

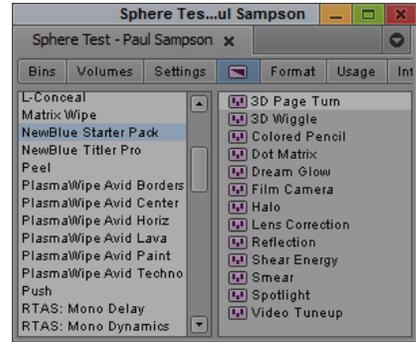


This is a new, fully featured 3D titler which comes with a scrollable timeline, key framing, textures and many presets for both fonts and shapes. The image above shows one of the presets which of course is entirely editable.

NewBlue STARTER PACK

This is a package of 13 new video effects, which are very different from anything Avid editing systems have offered in the past. There is a combination of transitions and segment effects.

These are well worth your explanation, and just three of them are shown below. Notice these are 'blue dot' effects, that is effects which require rendering.



SPOTLIGHT effect, DARK VIGNETTE preset



SHEAR ENERGY effect, APPARITION preset



REFLECTION effect, ANGLED LEFT preset

iZotope Insight

iZotope INSIGHT is a sophisticated audio monitoring tool. It is described by the manufacturer (iZotope) as:

“A comprehensive metering suite for post production and broadcast applications. Insight provides an extensive set of audio analysis and metering tools, perfect for visualizing changes made during mixing and mastering, troubleshooting problematic mixes, and ensuring compliance with broadcast loudness standards. Fully customizable and scalable, Insight allows you to visually monitor all relevant information from your mono, stereo or surround mix in a convenient floating window. Keep an eye as well as an ear on your mix at all times with Insight.”



This is a 30 day free trial which begins when you first place an iZotope plugin on your timeline. The list purchase price if you decide to continue to use it is somewhere around \$500 USD.

See www.iZotope.com for more information.