

Features & Benefits

# Nucoda

Version 2013.1 Release 3

Doc Rev 1

## Changes to the GUI

### Dragging + dropping notes inside notes folder

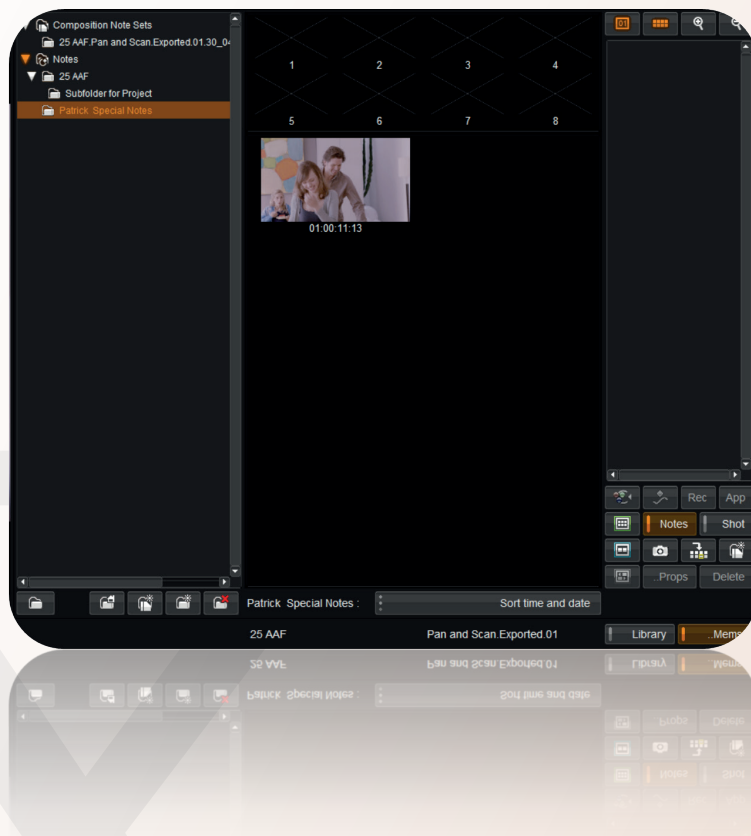
After creating a note in the current projects note folder, it is possible to drag and drop this note into any other folder.

It is now possible for a user to create a new folder in the root directory this could be their favourites folder. Make sure to double click the root folder to create folders in the root.

To support this feature we have changed the drag and drop behaviour slightly.

Notes moved to sub-folders of the current project folder will be moved.

Notes moved to other folders are copied.



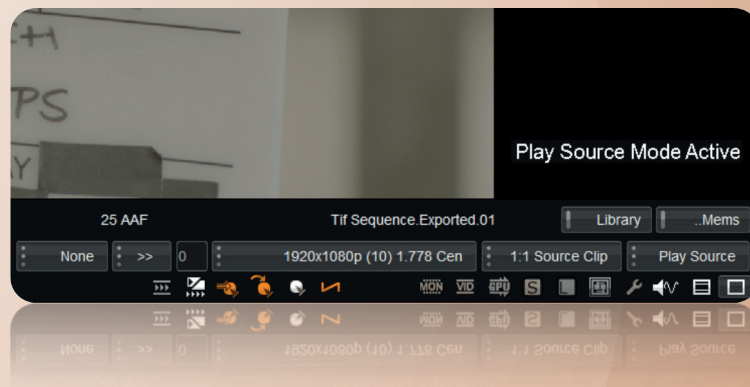
## When not viewing output, force an overlay to remind the user

Users often get confused when they switch to a different playback mode like “Play Source” and they forget that they have done this.

When applying an effect or grade it has no effect and this causes some mild alarm

To alert people about this we have added an overlay to the image screen that will remind you that you are not in “Output” mode after a certain amount of time.

This warning will show for any viewing mode apart from “Output”



Controlled via a new Preference called “Enable view output warnings” in the Monitoring/Video IO tab, the default setting is for 10 seconds.



## Avid workflow enhancements \*Advanced Codecs required

### Support for AAF effects - Pan & Scan and Resize in a Mix-Down workflow

New functionality to allow for the import of the following AAF effects:

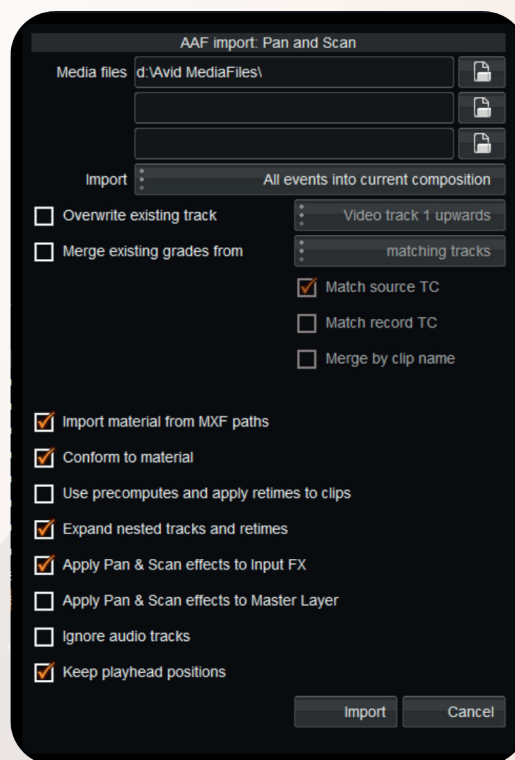
3D Warp  
Picture In Picture  
Resize

The following parameters are supported for these effects:

Scale X, Y  
Rotation Z  
Position X,Y

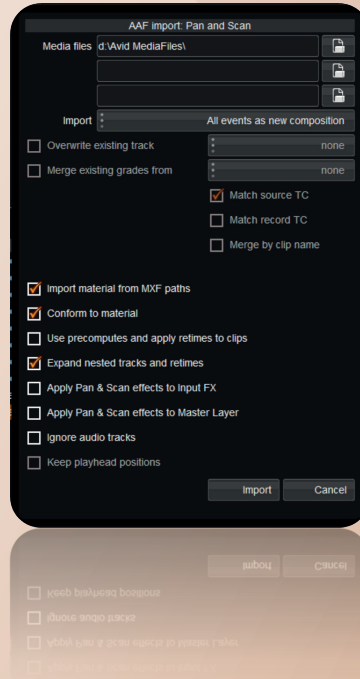
Keyframes are also supported.

The current implementation does not support the AAF round trip workflow. Upon importing the AAF, there are 2 new check boxes in the AAF dialog, they will allow the user to decide whether the effects are applied to Pan & Scan in the Input FX Layer or the Master Layer - only one option can be selected at a time.



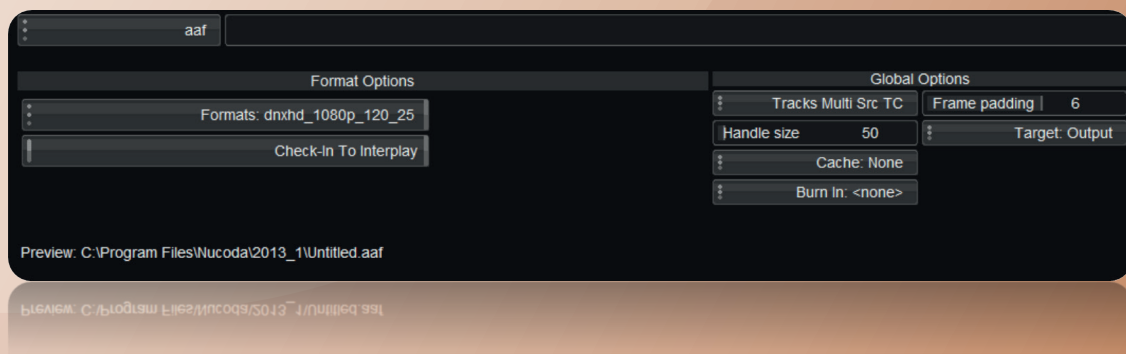
## Changes to AAF import dialog

Some changes have been made to the wording in the AAF import box to make the options a bit clearer.



## Option to add handles to MXF files created when using AAF round trip

When exporting MXF files for round tripping to Avid it is now possible to specify a handles duration to be added to the exported shot



Features & Benefits

# Nucoda

Version 2013.1 Release 2

Doc Rev 2

## Changes to the GUI

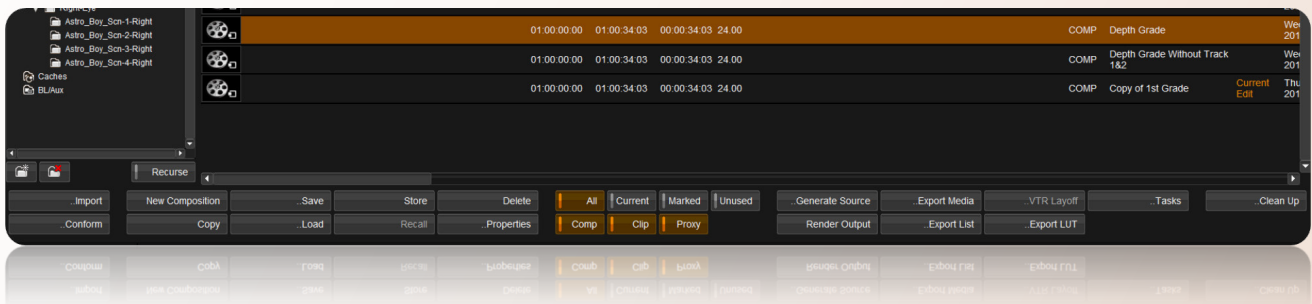
### Composition and Media - Load / Save / Copy

It is now possible to export a Composition from the library.

This composition can then be loaded into another project (perhaps on another system). The saved composition will replicate library and folder structures when imported into a new project, and also import the links to the required media files. All media properties will be copied to the new project. Cache links will not be retained when moving a composition to a new project.

This feature also enables saving and moving of just media - ie 10 Arri Clips with revised metadata settings can be saved and loaded into another Project.

Clips already in the library can also be copied to create a 2nd instance of a clip with difference settings.



To accommodate the new features the layout of the buttons in the library have been revised. They now follow a more logical layout with clearer “Import” and “Export” groupings.

List Capture” has been renamed to “Conform”, “List output” has been changed to “VTR Layoff”

The Project name and Composition name now appears next to the Library button

### Command Line options for this feature:

--save-composition  
--load-composition

Use:

```
nucoda_film_master.exe --project [project name] --composition [composition name]  
--save-composition [filename]  
nucoda_film_master.exe --project [project name] --load-composition [filename]
```



## Splice or Overwrite a composition with new Track locking functionality

It is now possible to splice/overwrite a composition into the current composition.

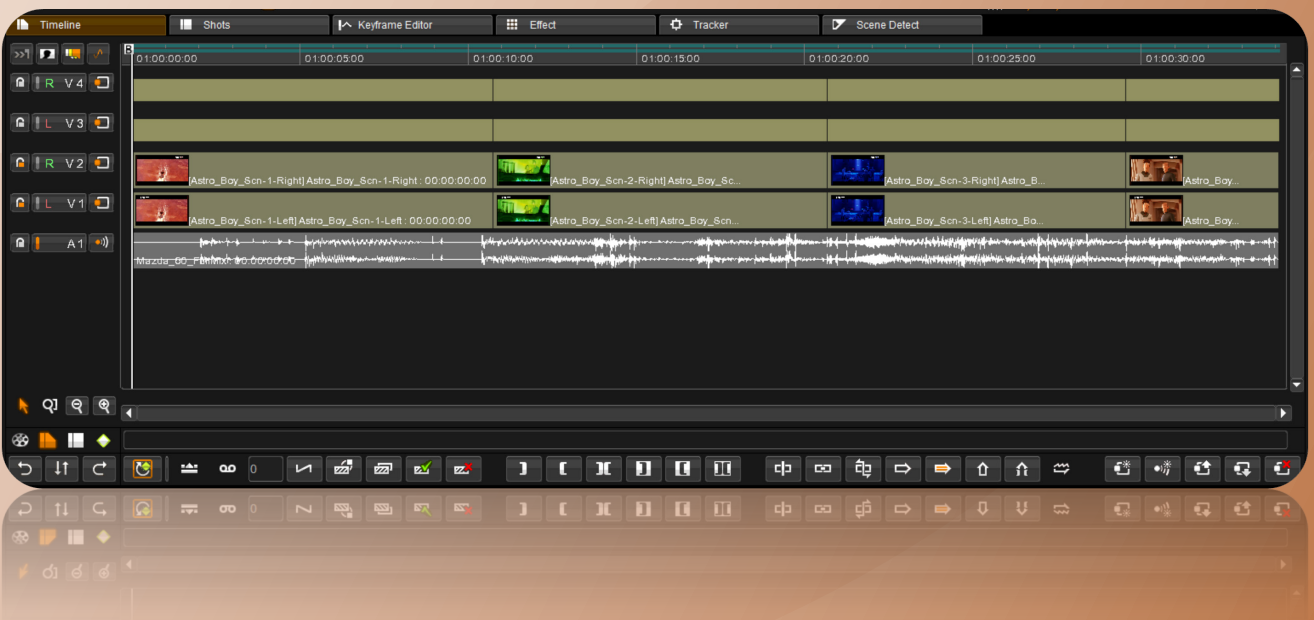
(Very useful with the feature above to provide a collaborative workflow with an assist station.)

Using the track locking feature you can protect tracks in the current composition from being overwritten or altered.

This feature supports both Video and Audio tracks



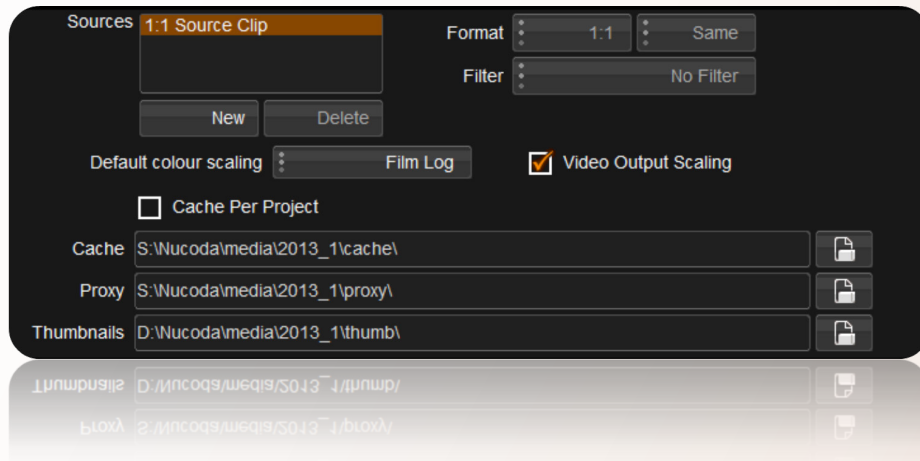
These images show the composition before (top) , and after (below) a splice operation in a stereo project. Notice that a adjustment track and audio tracks were added.





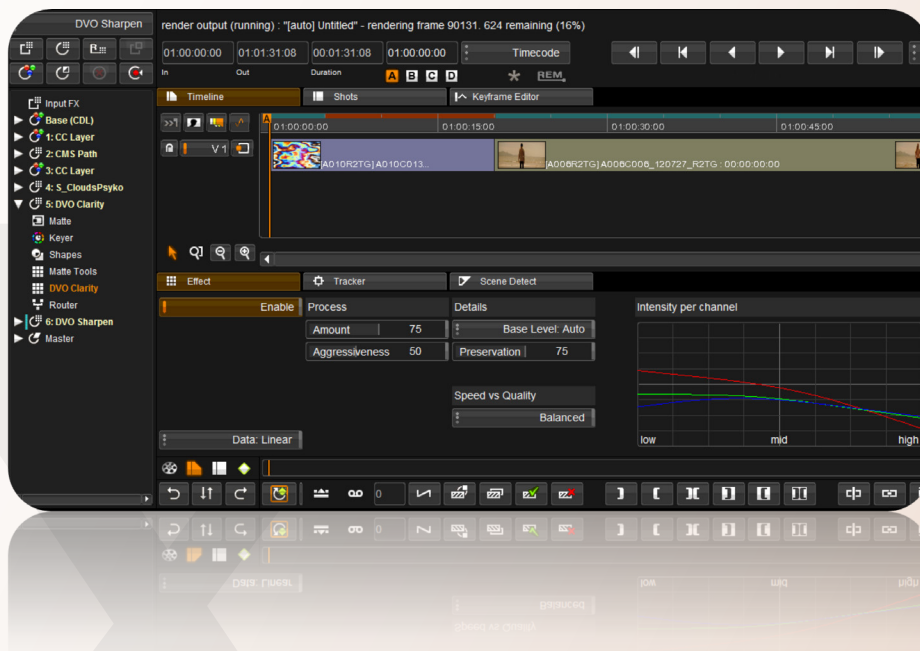
## Video output scaling option in projects other than CGR

It is now possible to scale the video output of the system (ie for film log projects)



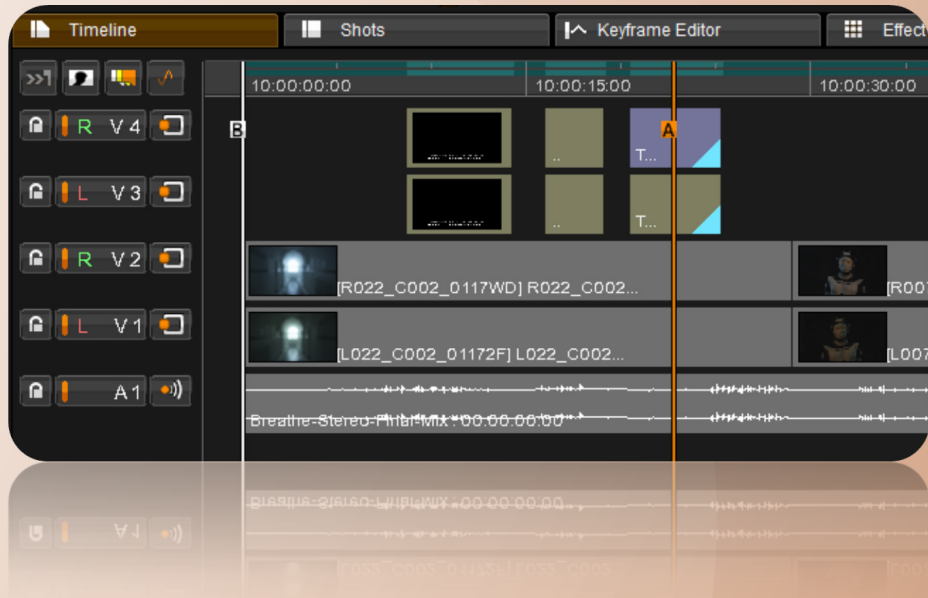
## FX layers have same name as the applied effect

When FX Layers are created they are now automatically named after the name of the tool in the layer, thus making it much easier to find these tools.

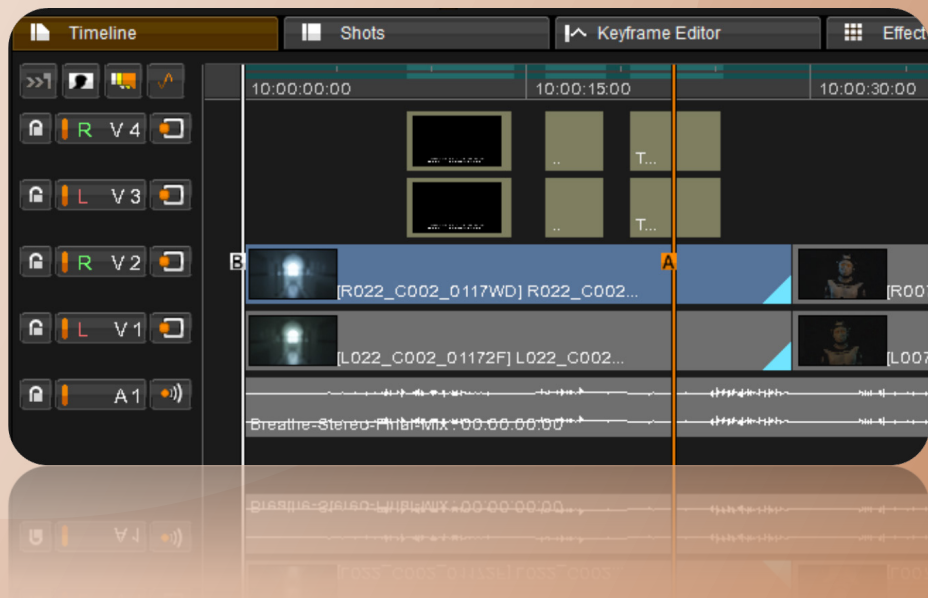


## Stereo - Multitrack grading does not follow track focus selection

When there are multiple R&L eye tracks in a Stereo project, the Stereo Multitrack feature will now correctly follow the focus of the current clip.



Above - Focus on the top tracks - Below - Focus on the bottom tracks



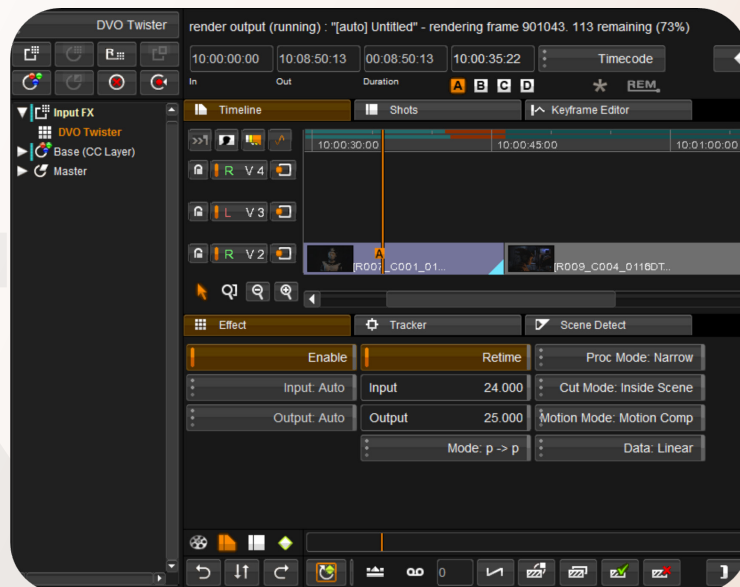
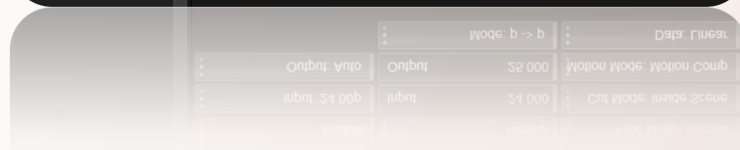
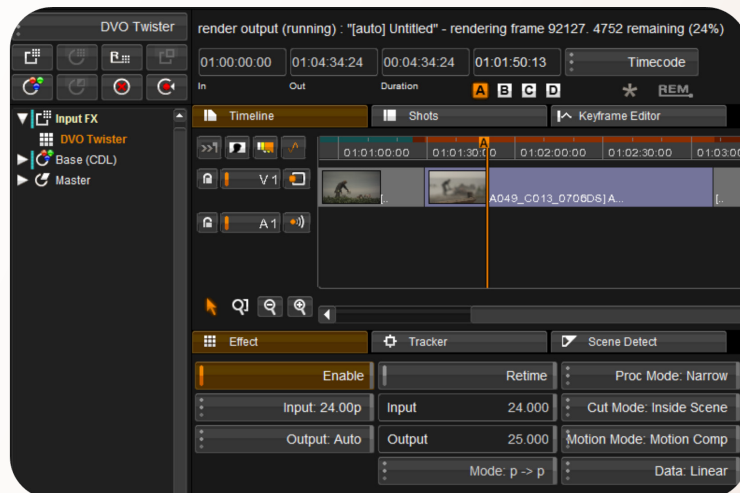
## GUI Focus inconsistencies

Many GUI focus inconsistencies have been removed - when the cursor enters certain areas, the focus should automatically update and allow for scrolling with the wheel or with Ctrl +Aux Ring (on Precision) - This includes the Library, Events View, Notes, Timeline, Viewer and Effects stack.

Also, while naming an clip of effect layer, auto-save should no longer interrupt and take focus from the user input.

## New Twister GUI to support any frame rate

A revised GUI has been added to the Twister tool, this allows for automatic conversion (from clip frame rate to output frame rate) or using manual settings to a predetermined frame rate, or re-timing via a numeric entry tool.

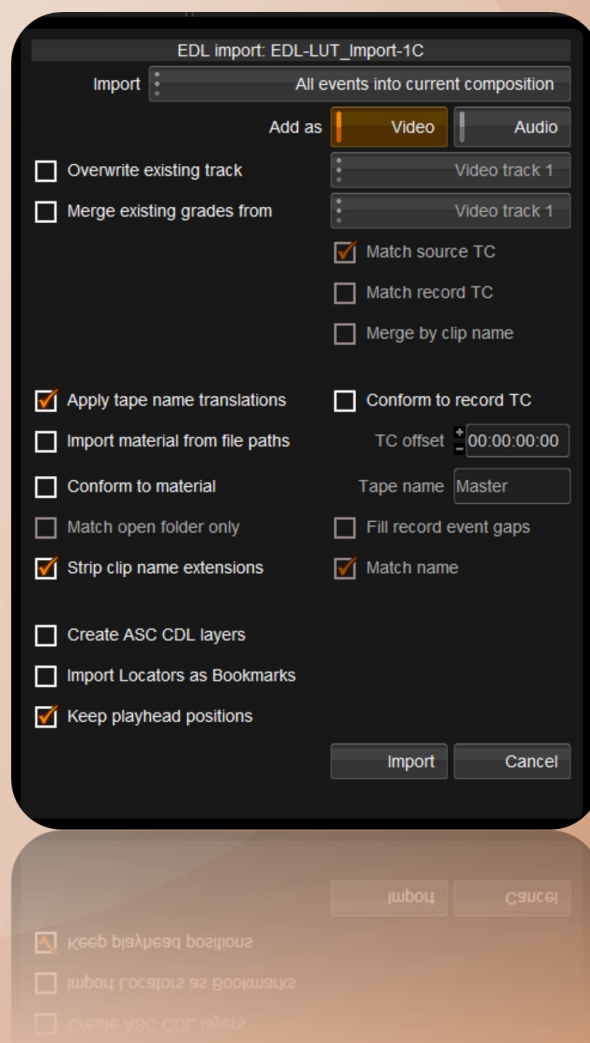


## Warper Overlays now obey the 'P' key (alternate colours)

When using the new Warp 9 and Warp 4 tools the overlay colour can be changed (like shapes) using the "P" hotkey

## Add new default selections to the EDL import dialogue

The "Apply tape name translations" and "Strip Clip name extensions" are now selected by default in the EDL Import Tool



## Note recall from Scene cut media

When using scene cut media, Notes that have been saved either side of a keyframe will now recall correctly.

## I/O operations

### Still Ref Image export feature

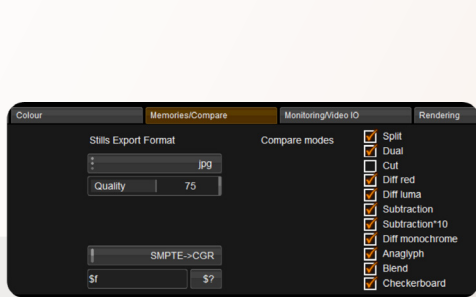
It is now possible to export a reference image (DPX, JPG, TGA, TIF) of the current frame to a predetermined location (defined in the General Prefs). Images can be converted from SMPTE range to CGR. The configuration for the frame export can be done in the Preferences, this includes the automatic naming of exported frames using the same variables as those in the Export Media options.

Please note that the exported frames will not have any HUD information, even if the HUD was on at the time.

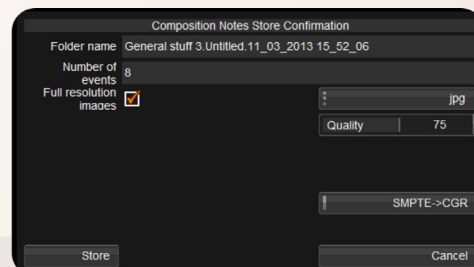
A new button has been added to the GUI, in Notes view to capture the reference frame. On the Precision panel you can export a reference frame with a “Press and hold” of the Save button.

The exporting of composition note sets can now be done from the Notes menu, where there is now a duplicate icon of the one found in the folder view of the notes view. These note sets can also now be exported in different formats.

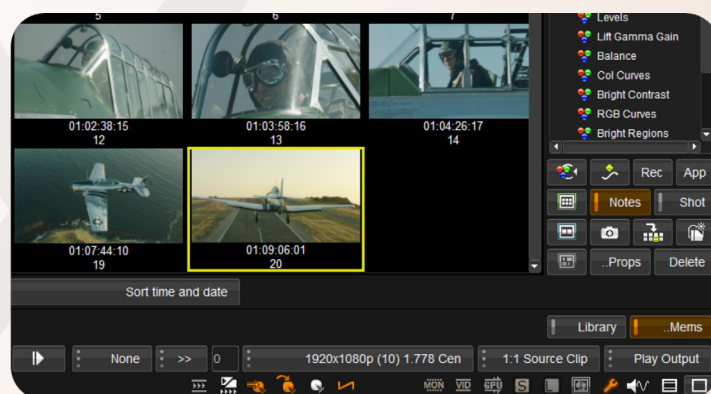
The save note button has also been changed to an icon.



Reference Frame export settings

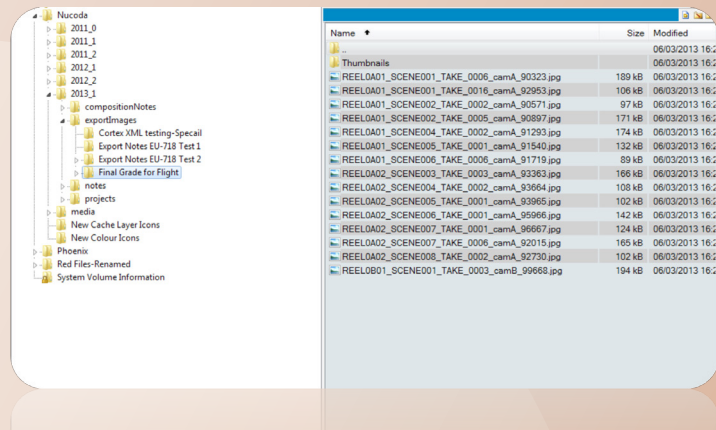


Composition note export settings



Reference export icon (camera), save note icon, composition note export icon

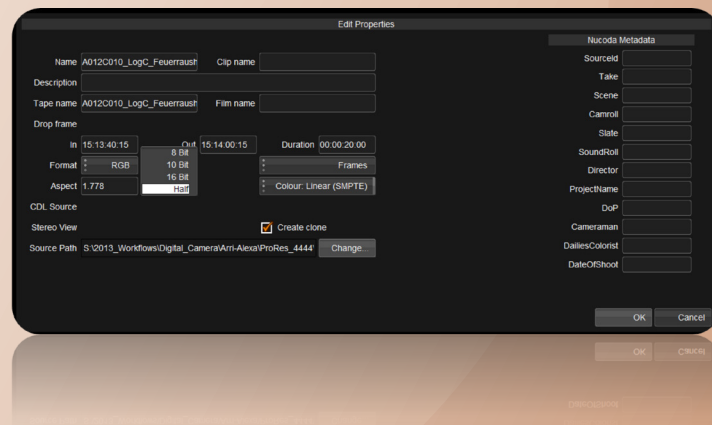




This is the windows view of the export folder.

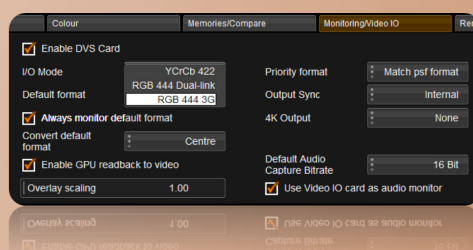
## ProRes files can be set to “half” in float projects

When working in a CGR project it is now possible to set Prores files to “Half” to allow for unclipped CGR floating point input to the colour tools. This can be changed manually in the library or automatically by change the settings in the Clip Input specifier file.



## Support for 3.0 Gbps on the Atomix LT card

RGB 4:4:4 on a single SDI link via 3.0 Gbps support has been added for the Atomix LT card



## EDL Enhancements

### Support for new ASC Input & Output EDL comments supported

A new ASC feature has been added to complement the current ASC-CDL workflow.

The 2 new ASC EDL comments are;

ASC\_Inp - Input descriptor

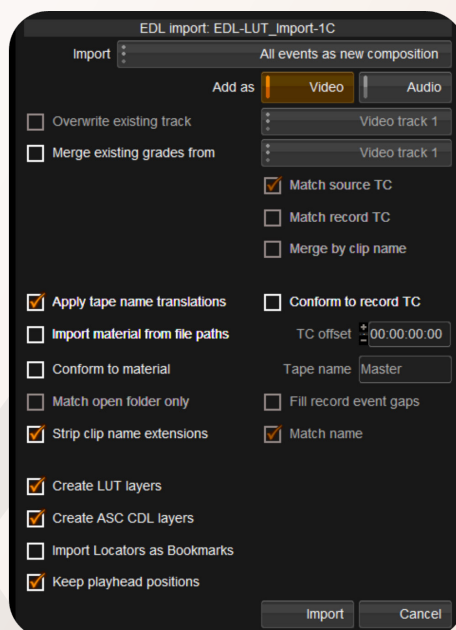
ASC\_Out - Output descriptor

This allows a LUT to be specified for import - a new option has been added to the EDL import dialogue allowing the creation of LUT Layers (this is independent of CDL Layers).

When activated a CMS tool will be added to the front/end of the Base Layer colour stack. The LUT's described in the EDL must be stored in a location determined in the General Prefs file. The default path created is called "Imported-LUTs"

When loaded the LUT's are added in a new "CMS Path" tool - this allows you to manually load any Nucoda.cms or Cortex XML LUT from any location.

As an additional safeguard for both the original CMS, and the new CMS Path tool, if a project is opened or an EDL loaded and the specified LUT cannot be found we will load a Grey warning screen on the video output monitor.





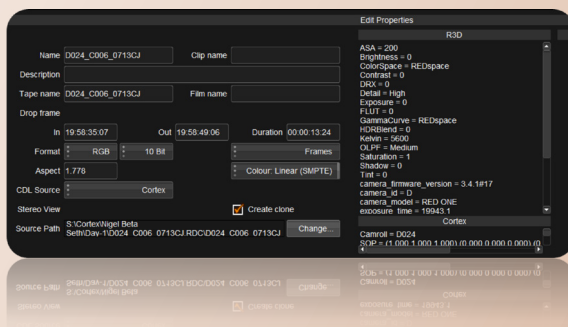
## 3rd Party Integration - MTI Cortex

### Cortex XML LUT support.

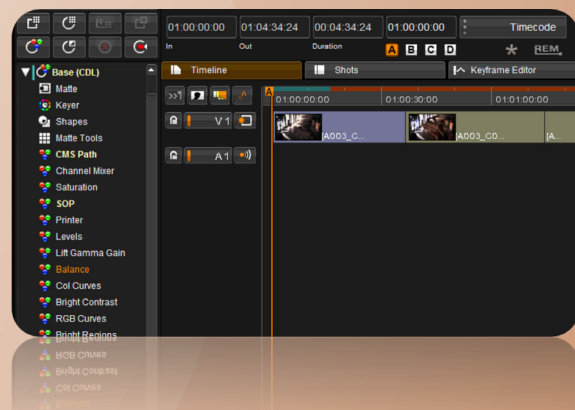
Integration with the Cortex dailies product has been further enhanced with the ability to read Cortex XML LUT files. These files are referenced by the Cortex XML Meta-data file (support for which was already in place)

Cortex XML LUT files can be loaded manually, via the new ASC comments support, or via Cortex XML.

The Cortex XML LUT file is created whenever a LUT (any format, ie .3dl or .cub ) is loaded into any Cortex product including the free Cortex Capture product.



Cortex XML in file properties



Cortex CMS applied in the layer

## OFX Support

### Support for Sapphire Version 7

This build has been tested with the soon to be released Sapphire 7 - Once that is released it will be the recommended version to use with this release.

Features & Benefits

# Nucoda

Version 2013.1

Doc Rev 3

## Video Output Support

### 4K monitoring support

This is only available with the Atomix HDMI video card.  
Supported outputs are:

- 4 x HDMI
- 4 x HD-SDI (Using additional DVS breakout box)
- 1 x HDMI 1.4a (Untested)

UHDTV 3840x2160p 23.98, 24, 25, 29.97, 30 FPS

4K 4096x2160p 23.98, 24

### 3G monitoring support

### Atomix HDMI card updates

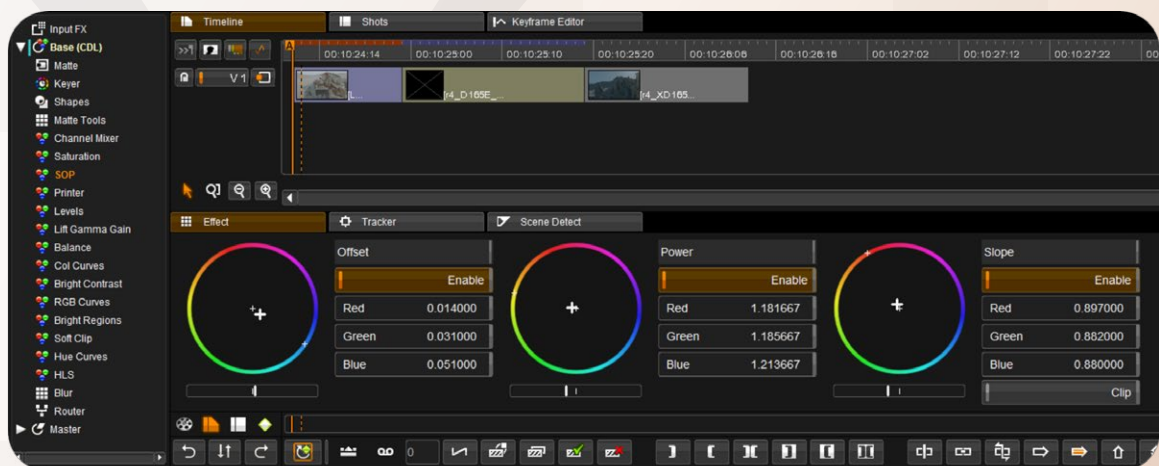
Support for 3.0 Gbps on the Atomix card.

This should enable RGB 4:4:4 on a single SDI link, and RGB 4K

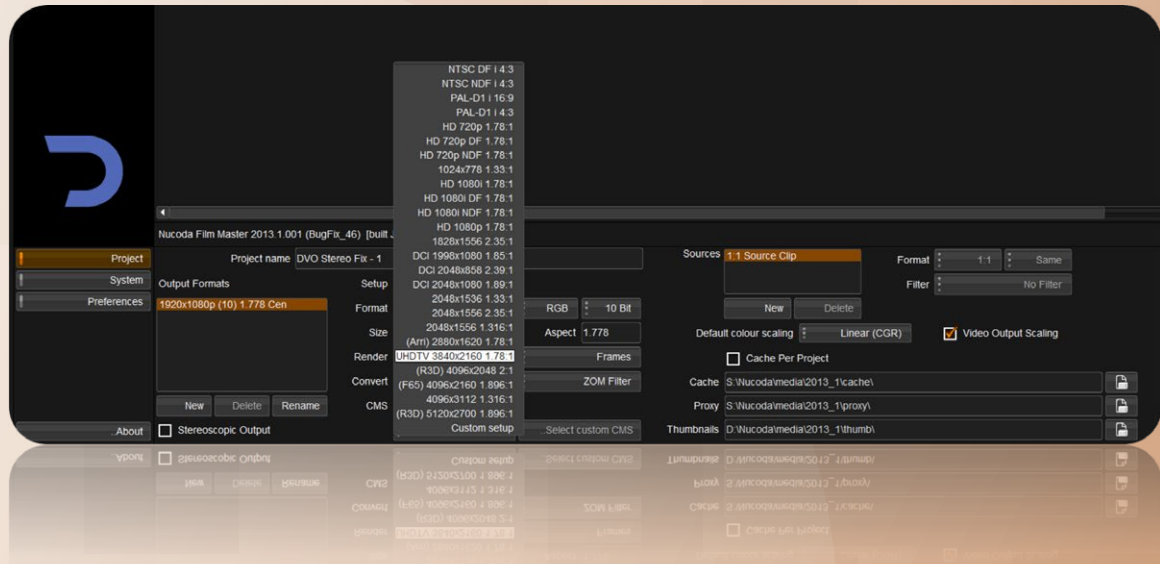
## GUI Updates

### New GUI timeline colour to show un-conformed media

After loading an EDL the timeline will indicate unconformed media by displaying this purple strip on the timeline



## User specification of Output Formats



A configuration file has been added for the output formats menu pull down list - this is the list in the project screen you use to create single or multiple output formats.

This has been done to make it easier to add new formats and allow customers to add there own.

This configuration controls the width, height, aspect, fps, drop frame and field settings for each format in the pull down list. It also lets you set the name that appears in the pull down.

The file is called defaultOutputFormats.prefs and will be installed to the root directory. In addition there is an optional file, userOutputFormats.prefs which will allow users to customise the output format list .

As with the effects list configuration, the idea is that we will control the defaultOutputFormats .prefs and overwrite it on install, but the user can add their own special formats, which we will not overwrite.

In the new default file that ships with this 2013 build we have already added the following new outputs:

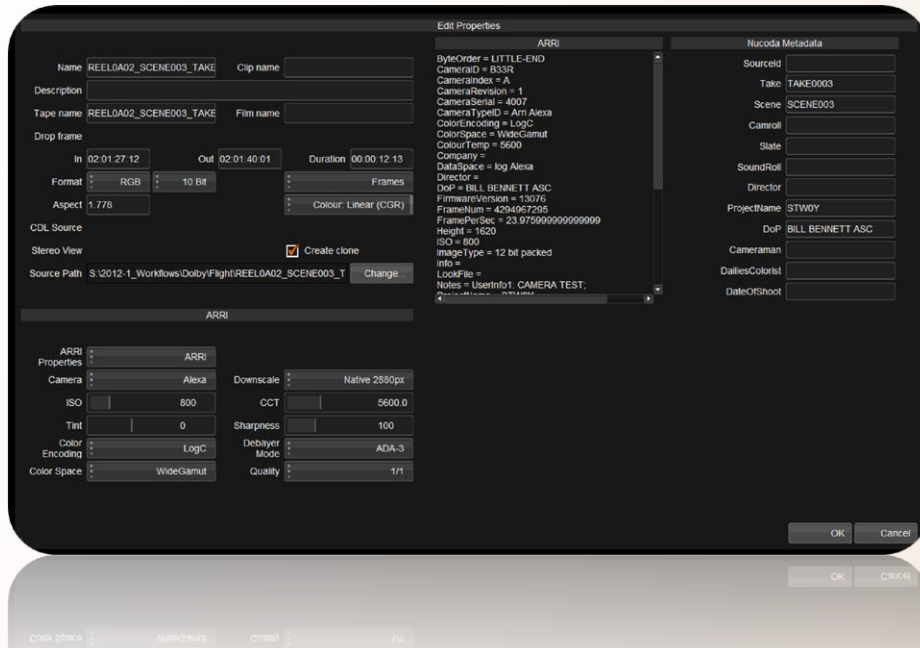
DCI 1.85 1998x1080  
UHDTV1 3840x2160  
F65 4096x2160 1.896

## Updated Deform tracker

Users are now able to offset the tracked shape position using the shape X and Y position.

## Format Support

### Arri Alexa Raw Updates



Support has been added for GPU debayering of the Arri Alexa, using the GPU will give a significant increase in performance over the previous CPU debayer.

SDK updated to 4.4.0b4

In the next ALEXA camera software SUP 7.0 (Release Date Nov 26th, 2012) ARRI will introduce an additional output format: ProRes 2K.

Due to a more advantageous ratio between input and output image, the base for the 2K image is a sensor readout of 2868 pixels instead of 2880 pixels in width and of 1614 instead of 1620 pixels of height in 16:9 format or 2152 instead of 2160 pixels of height in 4:3 format.

Therefore we offer in the newest SDK the additional option, to debayer this 2868 photosites wide sensor area instead of the 2880 photosites as before. This smaller area is used due to a special downscale filter which we now use in the camera.

In the case of a parallel shoot of ARRIRAW and ProRes 2K, the ARRIRAW image processing should be based on the smaller image area (2868x1614 or 2868x2150 pixels) to match the image geometry and of course the used frameline in the camera.

Please note, that the transported image via T-Link remains 2880 pixels wide, only the ProRes 2K is based on 2868 pixels.



## R3D Support Updates

The original Red values for Color Space and Gamma Curve have been added to the R3D metadata column. This will enable the user to see what the original settings were and also by adjusting the properties switch to these values as well.

## P2 Multi-file clip support / Avid spanned MXF support

There is now support for MXF files that were created from formats that record content by splitting the image files and creating "spanned" eg P2. Nucoda will now correctly link to all the files required and the clip will be displayed as a single continuous file in Nucoda.

## Tools

### Copy/Paste Keyframes

It is now possible to copy the current selected keyframe and then paste it - either elsewhere in the shot - or to another shot. The copy function is for a single tool at a time, and when copied to another shot will be placed in the same Layer and same tool as it came from. It will work for Keys and Shapes as well.

This can be done from the GUI via 2 new icons in the Keyframe toolbar, or from Precision by using the Save and Recall buttons when the "Keyframe" button is active.

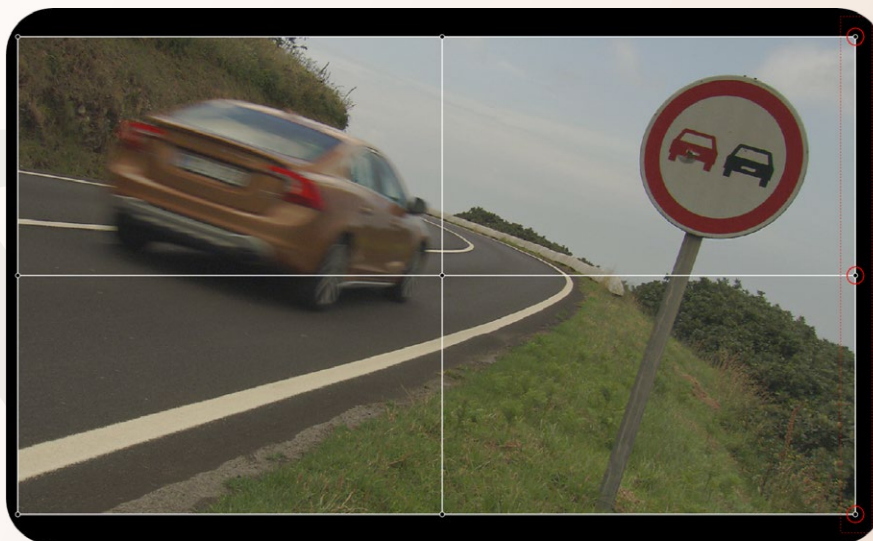


## Warp 9

A 9 point warper, (Centre, Corners and centre of edges) - This tool is very useful for very fine precision fixing of stereo images after using the the DVO Stereo Fix tool.

There are two areas where a 9 point warper tool is valuable for stereo footage. The first is geo correction where the distortion between lenses or the mirror from the stereo rig creates a non uniformed vertical mismatch between the left and right eye images. By correcting to the centre of the image the 9 point warper can then adjust each quadrant of the image adjusting the points in Y while leaving the centre point unaffected. This provides a much more accurate geo match result.

Secondly the warper tool can be used to bend the image forward or back in depth. This is done by moving the points in x only. By moving selected areas you can help minimise frame violation where objects are too forward in space limiting the effect on the rest of the image.



The Warp 9 Interface



## Warp 4

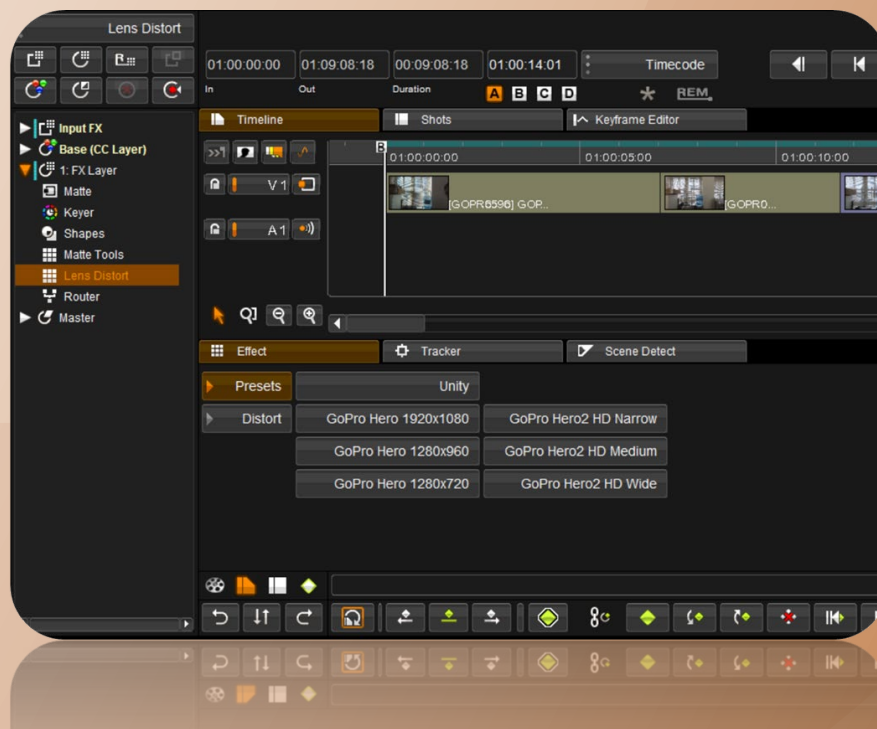
A classic 4 corner warper which is very useful for loads of things !

## Lens Distort

Polynomial modelled distortion - or in simple terms a Go-Pro fixer! Very useful as a super quick way of fixing the extreme fish eye distortion created by the very popular Go-Pro camera. This tool defaults to using parameters which will exactly undo the distortion found in all Go-Pro footage.



No one likes bendy buildings....



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## CLI

CLI: New command line option to allow the user to specify the folder imported clips appear in the library.

New Option:

--folder "folder\_name"

Image Systems AB (HQ)  
Ågatan 40  
SE-582 22 Linköping  
Sweden  
Tel:+46 (0)13 200 100  
Fax:+46 (0)13 200 150

Digital Vision  
Telefonvägen 30  
126 26 Hägersten  
Sweden  
Tel:+46 (0)8 546 18200  
Fax:+46 (0)8 546 18209

Digital Vision (UK)  
11 Wardour Mews  
London, W1F 8AN  
United Kingdom  
Tel:+44(0)20 7734 8282  
Fax:+44(0)20 7292 6969

Digital Vision Systems Inc.  
6464 Sunset Blvd  
Suite 830  
Hollywood  
CA 90028USA  
Tel:+1 818 769 8111  
Fax:+1 818 769 1888

**DigitalVision**  
[www.digitalvision.tv](http://www.digitalvision.tv)