md Shaders

The Manual - Work in Progress

PostmanVfx

3rd Edition

website link

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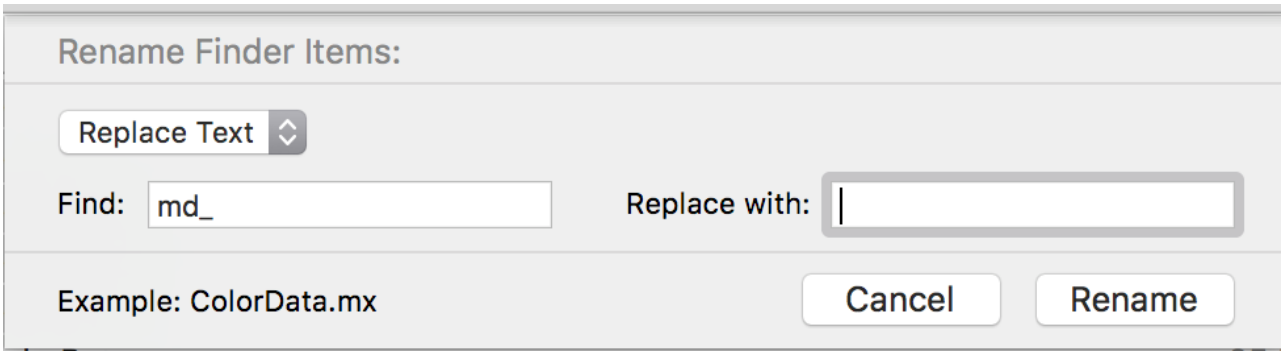
Matchbox shaders

Introduction

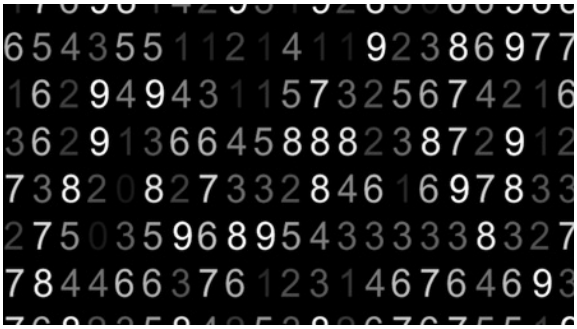
Matchbox shaders are made of glsl code, consisting of an xml file to set up the interface and a glsl file to process the image, pixel by pixel from input to output. If you are keen, you can do multi-pass shaders like blur, which would do the x blur in one pass and the y blur on a second pass.

As is the standard, md represents my initials. All shaders start with md so they stay together in your collection of shaders. You can batch rename them on a mac to remove the md if it makes them easier for you to search.



md_Ascii

Generates random text characters



Using a choice of fonts, you can make an image of random characters. Option for using input video to determine the character choice.

Size = pixel width of character

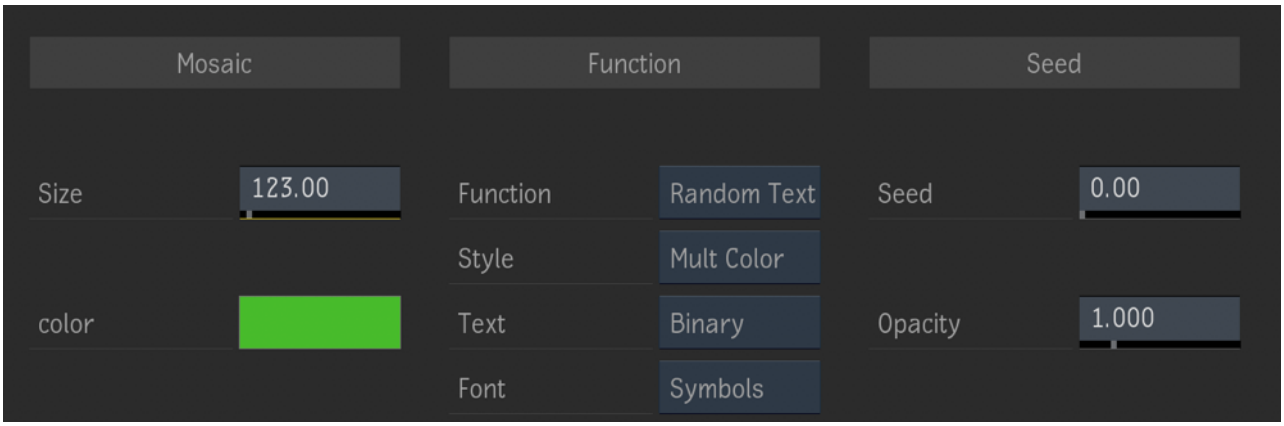
Color = mult color

Function = Random Text, Still Text, Input video

Style, controls the output. Mult with mosaic brightness, Mult with mosaic and color, add to mosaic and mosaic alone or text = alpha.

Text allows you to limit which characters are used. Such as numbers / lower case / upper case / Binary / Hex / special characters.

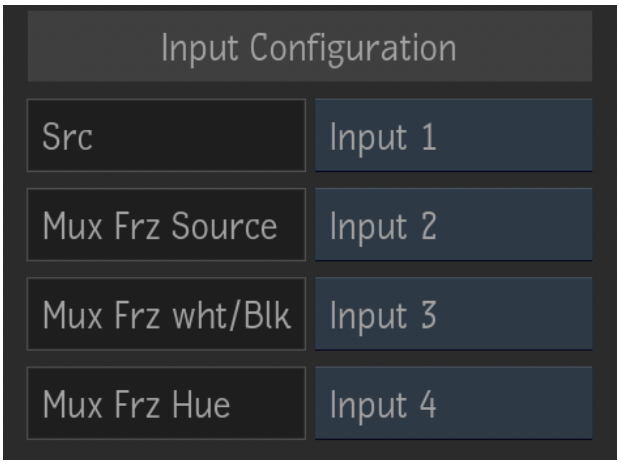
Font choice of Arial / Discreet / Serif / Italic / Symbols



md_Balance

Black/White/Hue/Sat Balance and match

This was written in 2016 and is quite a complex early attempt of mine to match colors. I now have colorTuner_v11 which has other features to help you match colors. However, balance offers some very fine adjustments of color with zoomed color pickers and curves to adjust where the picture is affected.

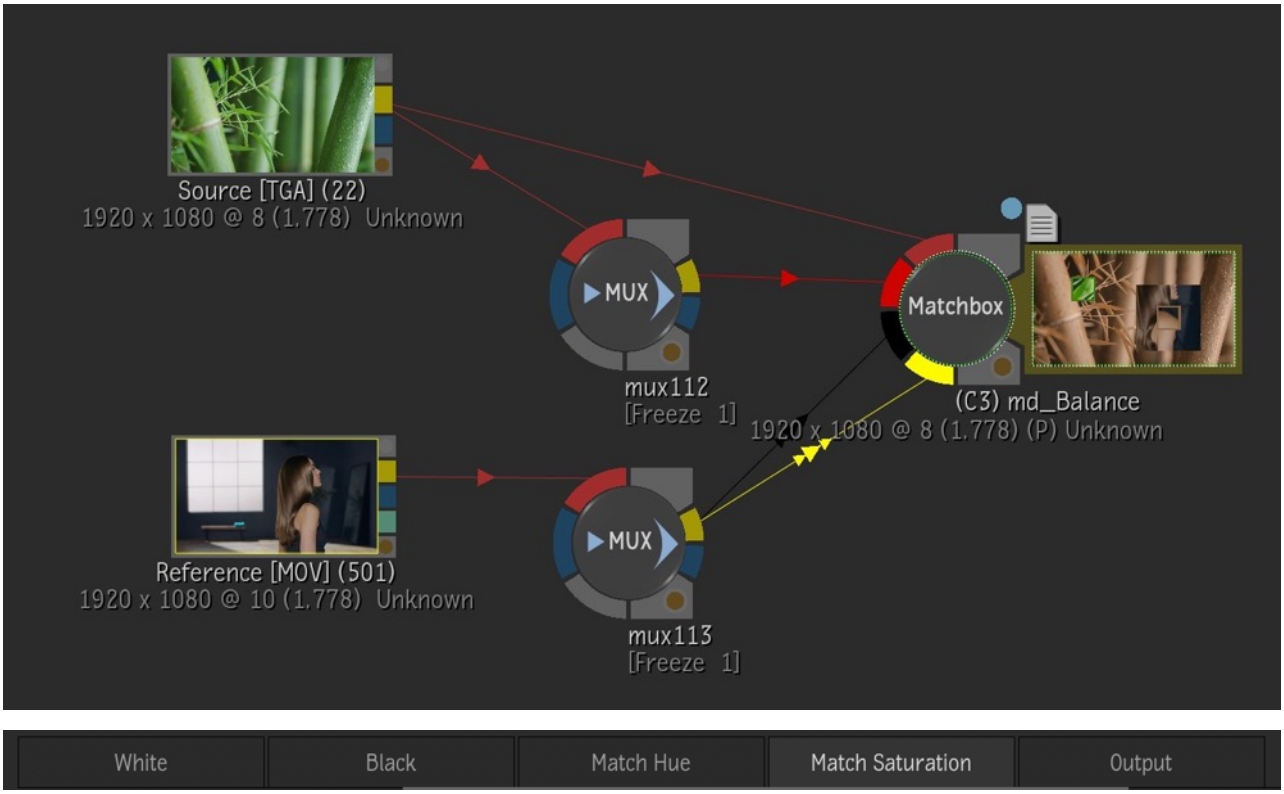


The operation starts at the input configuration. This is the most important part. Src = source video - input 1

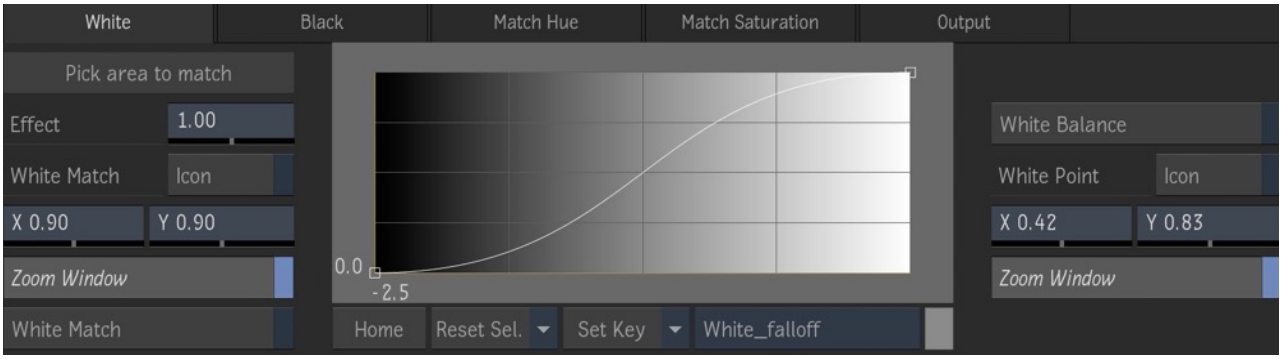
Mux Freeze your source and put into input 2

Mux Freeze your reference footage and pipe to inputs 3 and 4.

If you don't put the correct inputs, the shader will not work as expected. See Schematic for sample patching.



There are 5 tab page menus. White balance/matching, Black balance/matching, Hue Match, Match Saturation and Output.



You can decide to use 1 or all of the tabs. The concept of the white Balance is to match the hue of the white, but not force the brightness of the white. The White match will match both the Hue and Value of the white reference. The curve shows you what luminance of the image is being affected. You can adjust the curve to limit the correction to any luminance area of the picture.

To white balance, patch as per the above schematic. Select the White Balance button. Turn on the white point icon and move that axis to the white part of your picture. The zoom window helps you see your selection a bit closer. Now you can disable the zoom Window to clear up the screen a little.

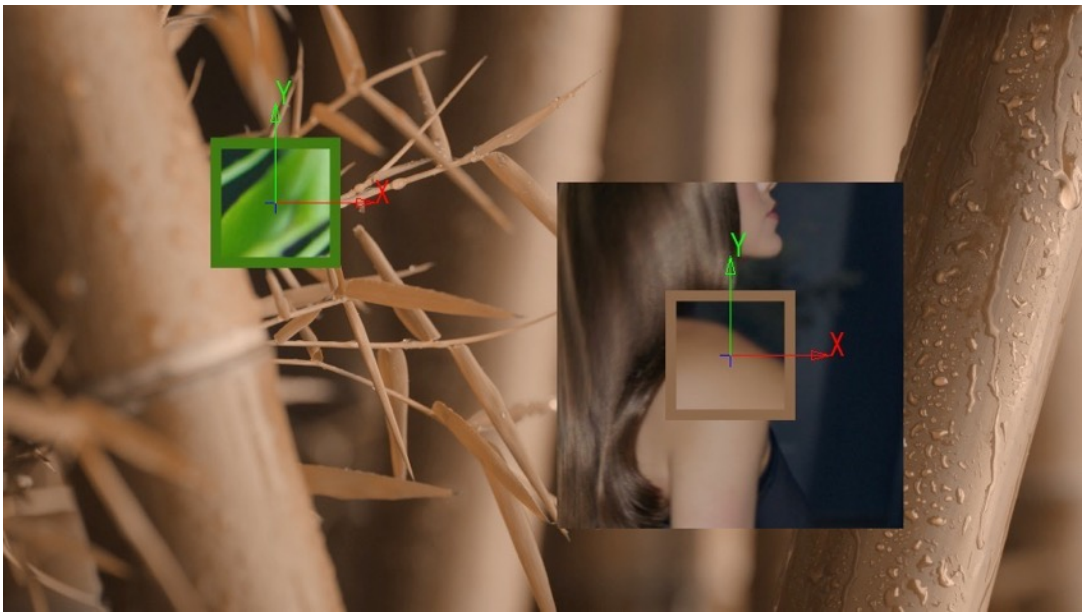
Next enable the White Match Icon and move that axis to your reference video white area. Turn off the zoom window and turn white balance on and off to see the effect. White balance is a subtle effect. You can increase the effect with the effect slider if required. White match is much less subtle and may be more suitable for you.

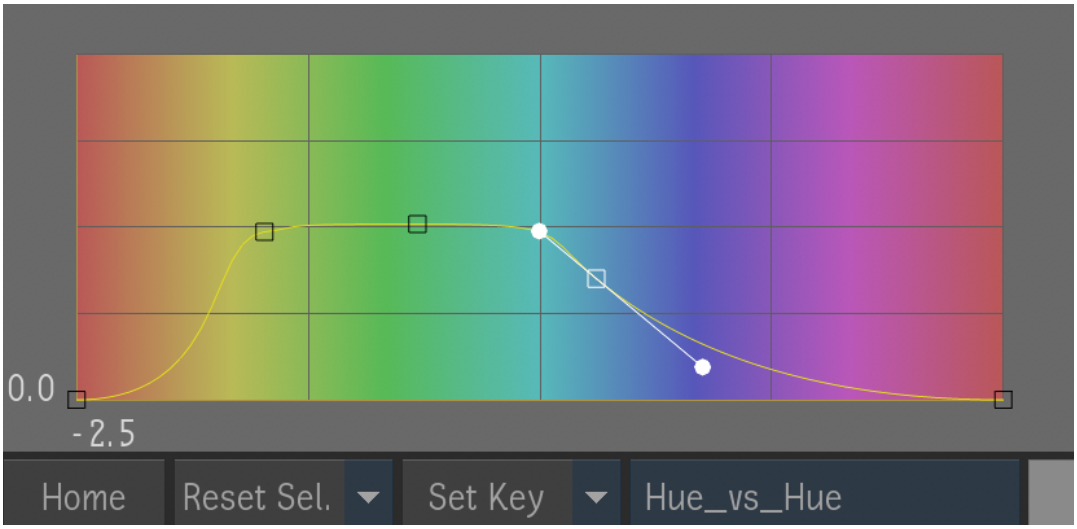
Press the white match button. At this point you should see an obvious color change and you can fine tune this with effect slider or using the graph to limit which part of the luminance range is effected.

If you wish to repeat this for black and hue, remember to turn off the axis for the white balance so you don't mix them up on the next step. Press the Black tab to repeat the previous steps but with black pixels in mind.

Again, remember to turn off the axis once you are happy with the match.

Select the hue tab and repeat.





The hue graph will let you limit the hue change to certain colors.

The middle line = 1.0 times the effect, the bottom = 0.0 and the top = 2.0 times the effect. This can be quite good for hue replacement.

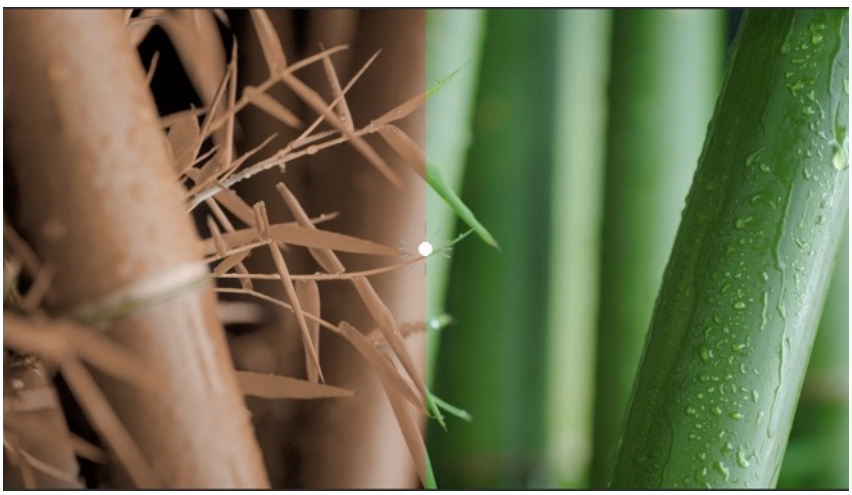
After adjusting your hue, remember to turn off the zoom window and axes. The zoom windows will render and possibly not be the desired effect.

Go to the Match Saturation tab. You can disable this effect or use the graph to adjust the match saturation effect across the luminance range.

Now go to the output tab.

You can do overall color corrections here, and split screen wipe back to your source to help see what effect you have created.

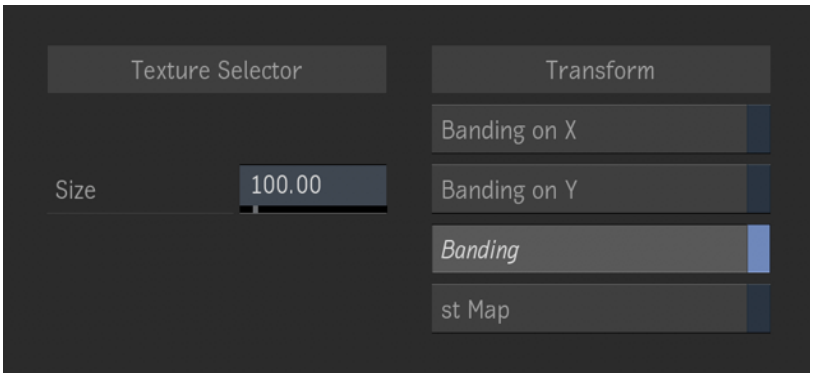
Enable button is for the gain / offset only.



md_Banding

Add banding to an image / create stMap

Adds banding to an image.

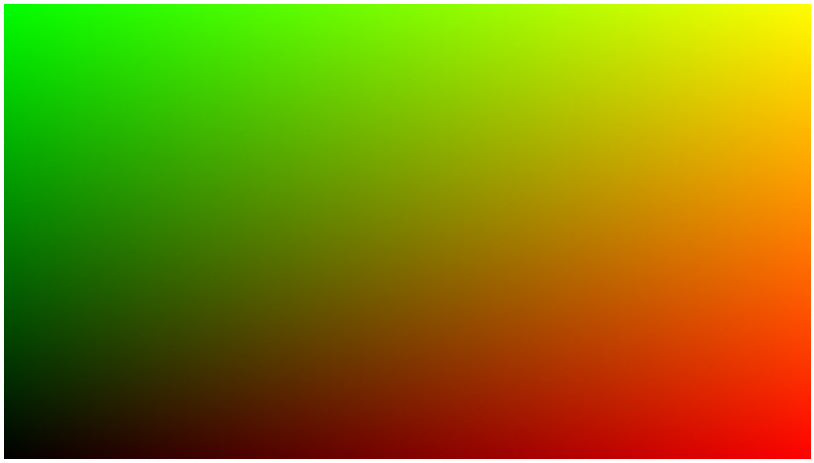


Size in pixels

Posterise color in X or Y, or X and Y or use Banding to do it along luminance contours.

st Map generates a clean map.

This can be used to modulate
an image based on motion vectors



md_BarChart

Generates a barchart from variables

PieChart and BarCharts are generated from variables input by the user. Colours are selectable via 3 palettes. You can change the individual colours under the palette tabs.

The variables work on percentages, however, if your numbers don't add up to 100% just hit the *Auto Fill* button and it will scale your numbers to fit 100%.

The animate button creates an animation of the bar chart and the pie chart.

Style is PieChart or BarChart

Items is number of sectors / bars of data.

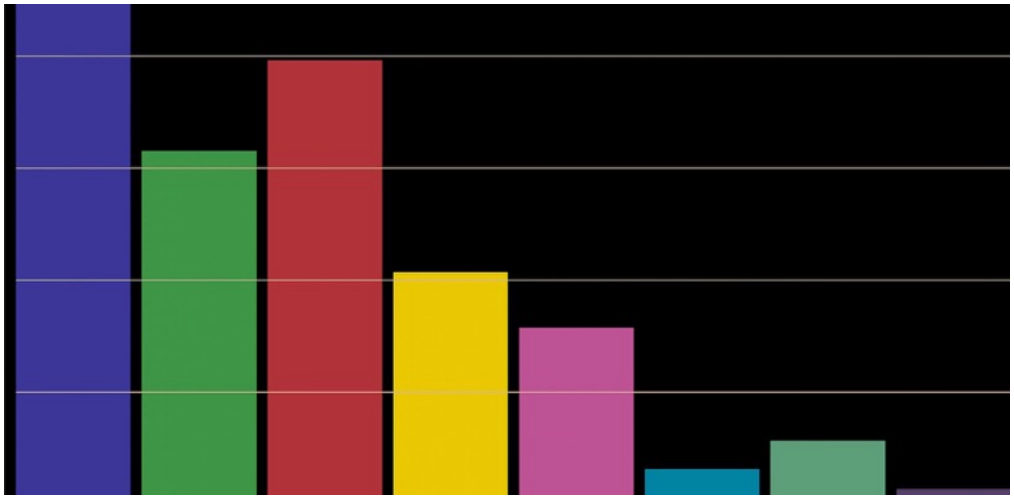
Radius is size of pie chart

Speed is the duration in frames.

Grid is the lines that appear on the bar chart.

Grid Spacing is the distance between the lines.

Demo of barChart used as a VU meter. Cut and paste from your soundtrack data in action into the variable data different frequencies. See Video

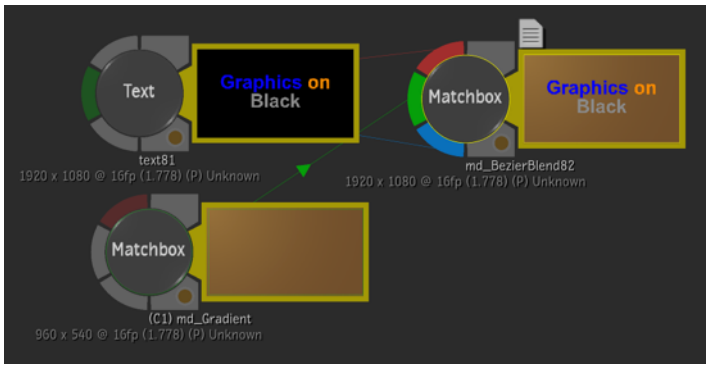


md_BezierBlend

Variety of blending options for a over b.

The 4 blending modes include normal, squared, onWhite and Bezier.

Normal



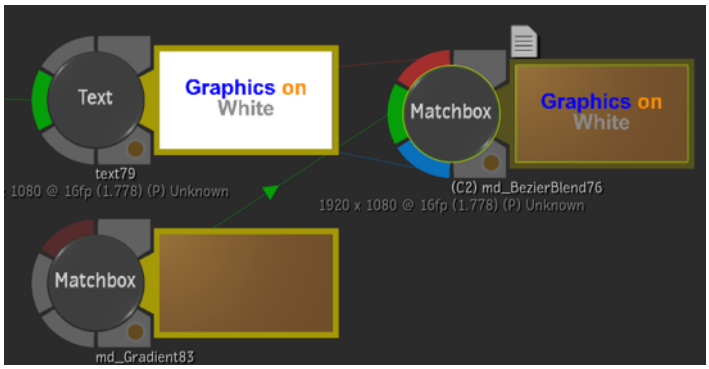
Standard a over b comp with a matte, used when subject is on black. Unpremult if required**.**

Squared

This is good for comping 2 very saturated blurred images and maintaining a nice edge transition.

See squared Blend on the left below v standard comp node blend.

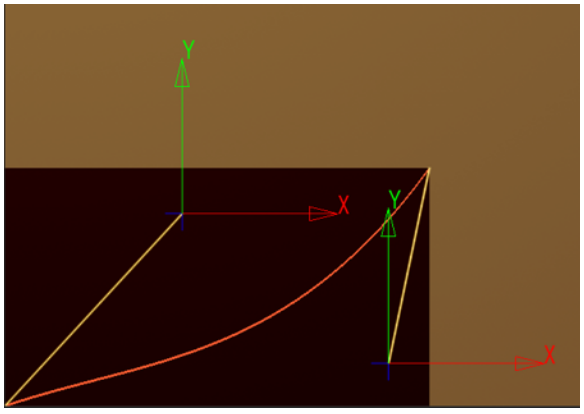
On White



Self explanatory, when graphics are supplied on white, this removes that white edge when keying.

Bezier Blend

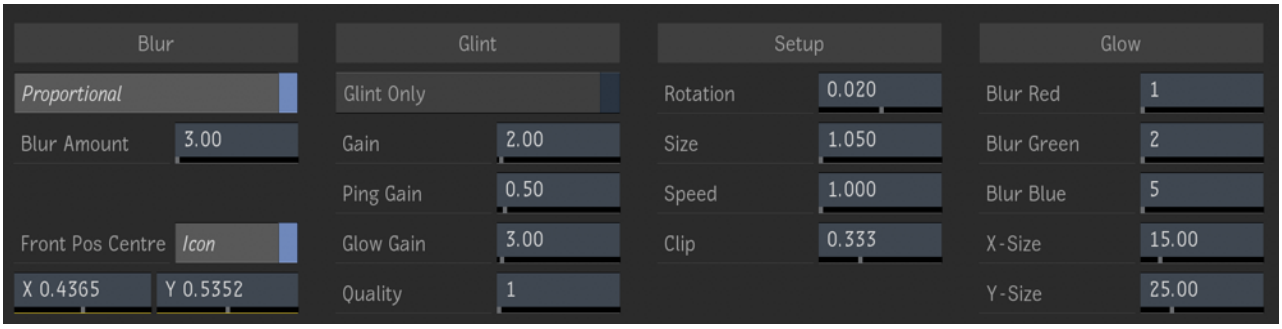
Also for images on white. This gives you an on-screen bezier for the blend. This was necessary, as the standard graph API does not allow personalised presets. Adjust black and white edge of matte blend using the axis icons to shape the curve.



md_Bling

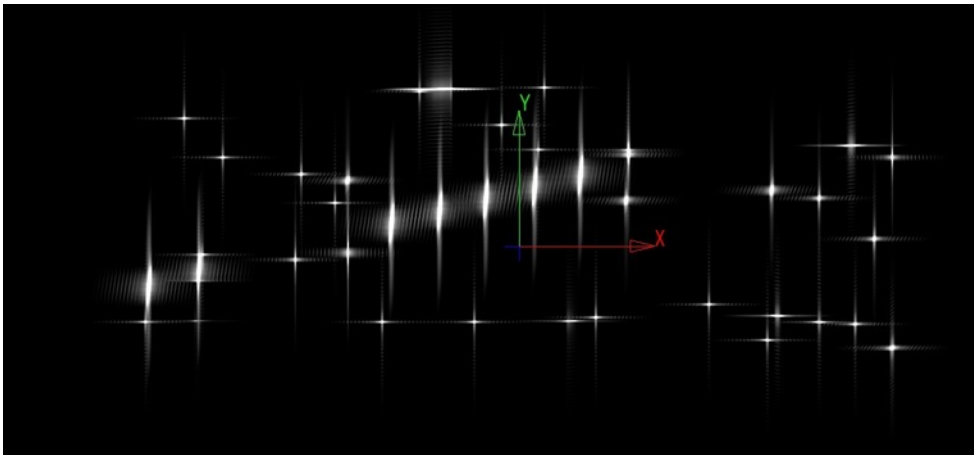
Add some sparkle to your graphics.

Bling is using an old technique from way back, where we used to make an outline of a graphic and then rotate it, multiply by the outline to create points that ran along the edge of the graphic. Then by adding layers of glow and gain, you can make a nice glint effect. You could build this in batch, but I have saved you the trouble.



There are a bunch of adjustments. Without doing anything, it will already gleam and bling your graphics, but if you want to control it you can keyframe the movement of the glints using the front Pos and also size and rotation.

Pressing the glint only button allows you to composite the glint later. Provides an alpha as well.



md_BlurInside

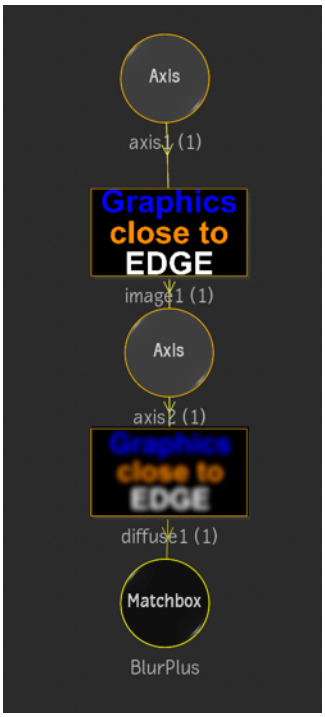
Blur an image inside a sharper matte.

This is pretty cool, as you blur the image, you would expect the outside color to come into the edge of the blur, but not with this matchbox. It cuts the object sharply over black first and then blurs it and adds it back

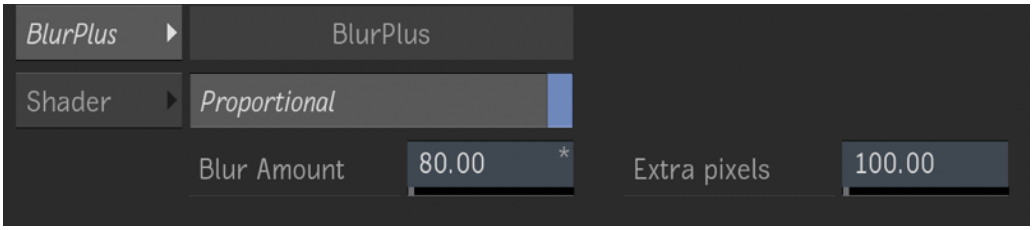
md_BlurPlus

For graphic supplied too close to the edge.

Use this in the case where HD graphics are supplied close to the edge and you want to blur them. You can see the problem on the word Edge below.



The shader works by forcing the HD raster bigger. Use as a diffuse layer in action. You can see it working in the image below. If you are doing a blur larger than 100, then used the extra pixels to shrink the graphic before blurring. The amount of shrink is determined from the amount of blur required.



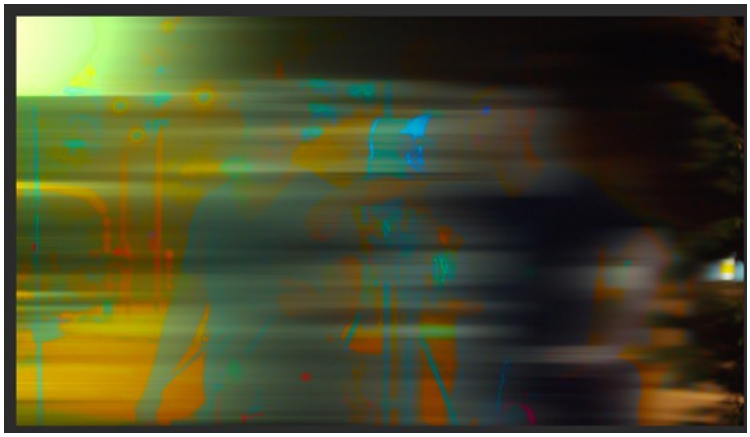
md_BlurProgressive

Blur driven from 2nd input

Progressive blur is similar in function to a zBlur or maybe DOF blur. The 2nd input could be a soft mask, which will make the image more blurred as the mask gets whiter.

Blur can be *proportional* or X and Y separate.

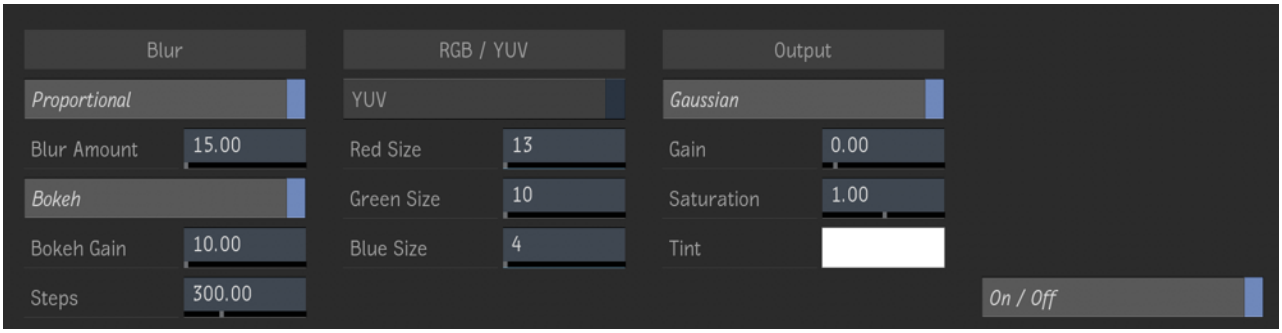
The *RGB* or *YUV* channels can have different blur amounts.



Blur type *Gaussian* or *Box*.

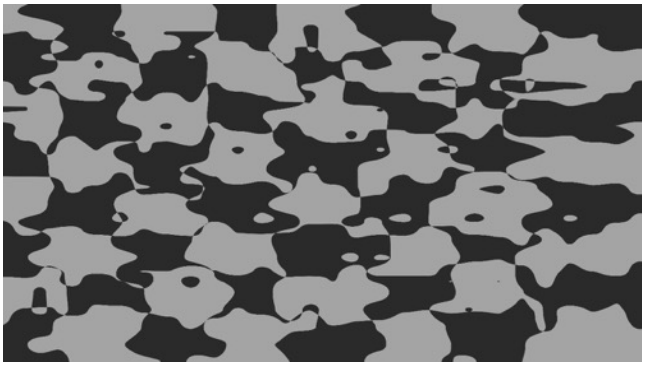
Gain Sat and *Tint* are just color correction style adjustments to create a look.

Bokeh button adds a bokeh on bright elements.

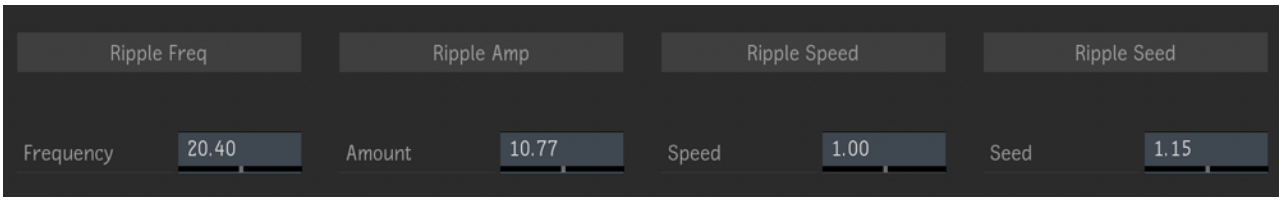


md_Bubble

Random noise bubble ripple.



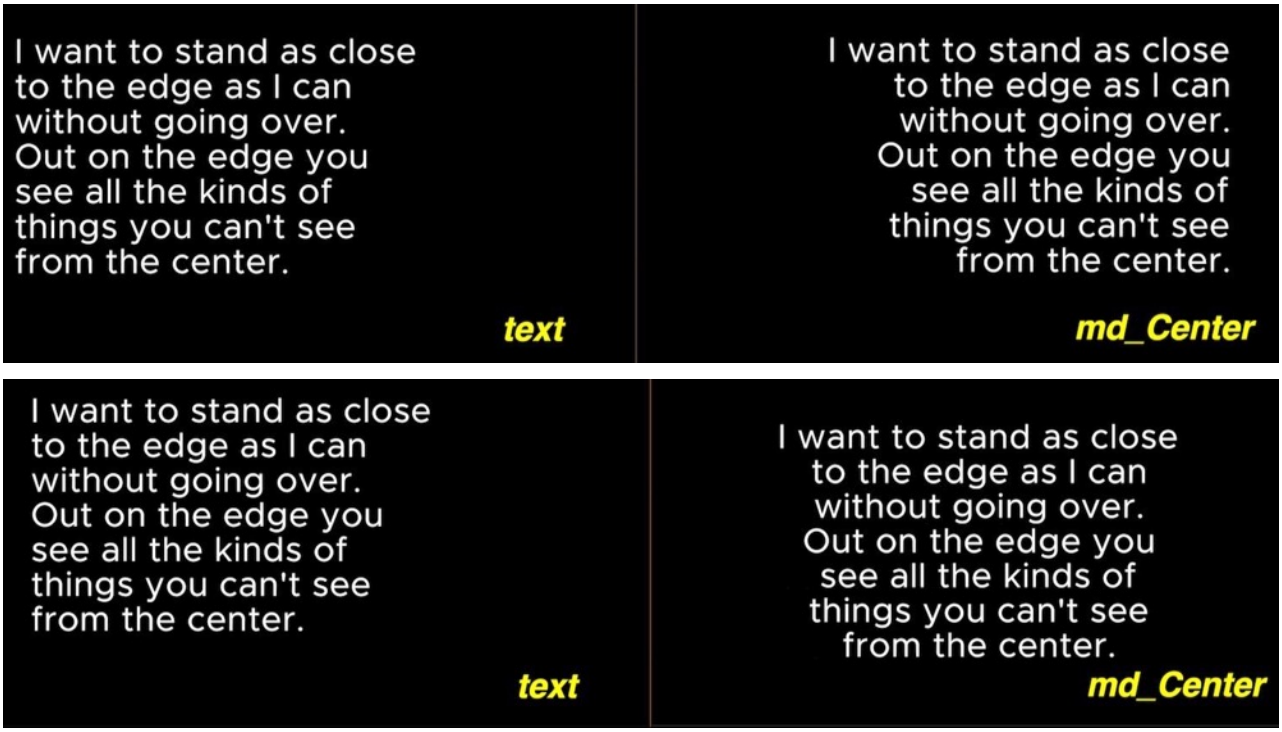
Usual suspects, Frequency, Amount, Speed and Seed to make a random bubble ripple. Could be used to ripple tree leaves (high frequency low Amount)on a wide still shot to create some movement.



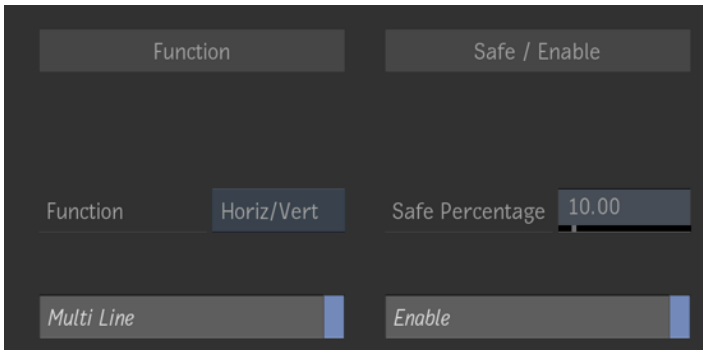
md_Centre

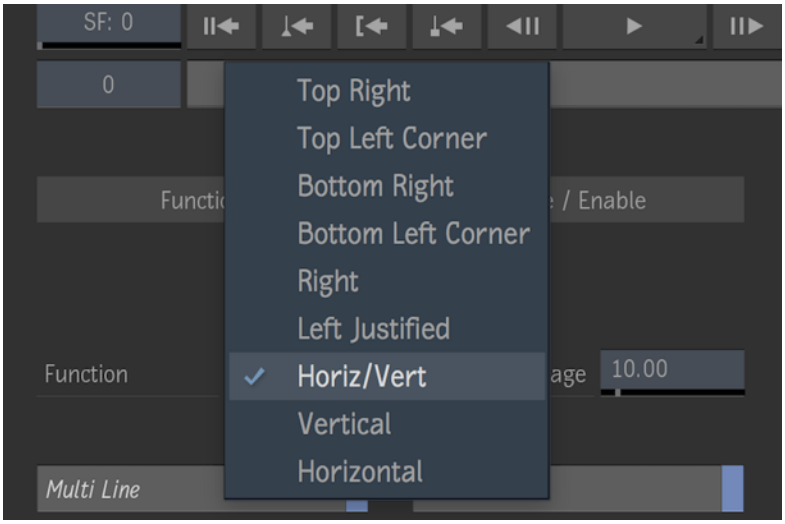
Centres and re-justified text

Very cool matchbox that takes input text / logo matte from graphic or text generator and can center, or justify left and right or even corner justify. Also handles multiline graphics.



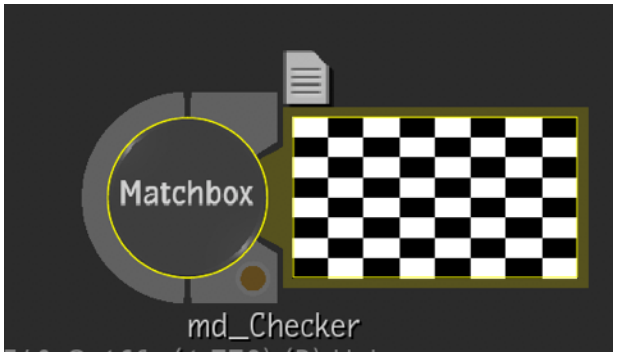
See **Video**



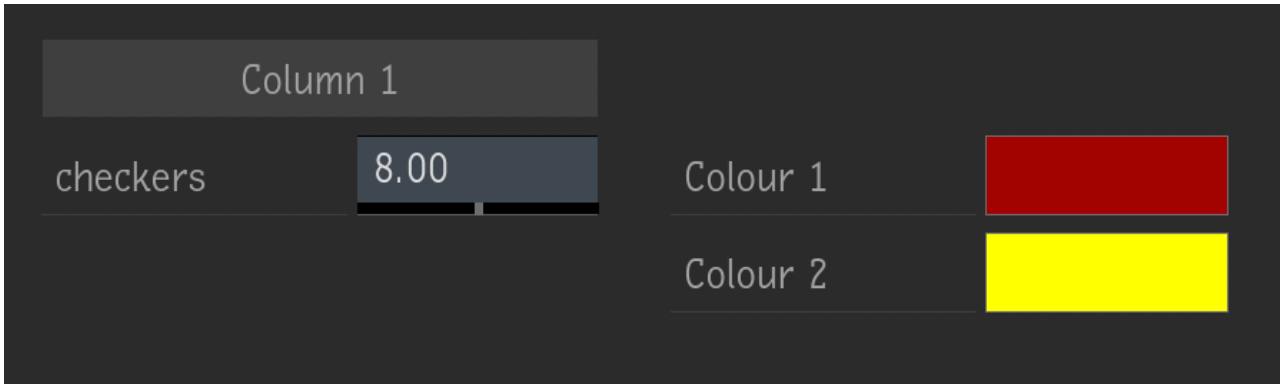


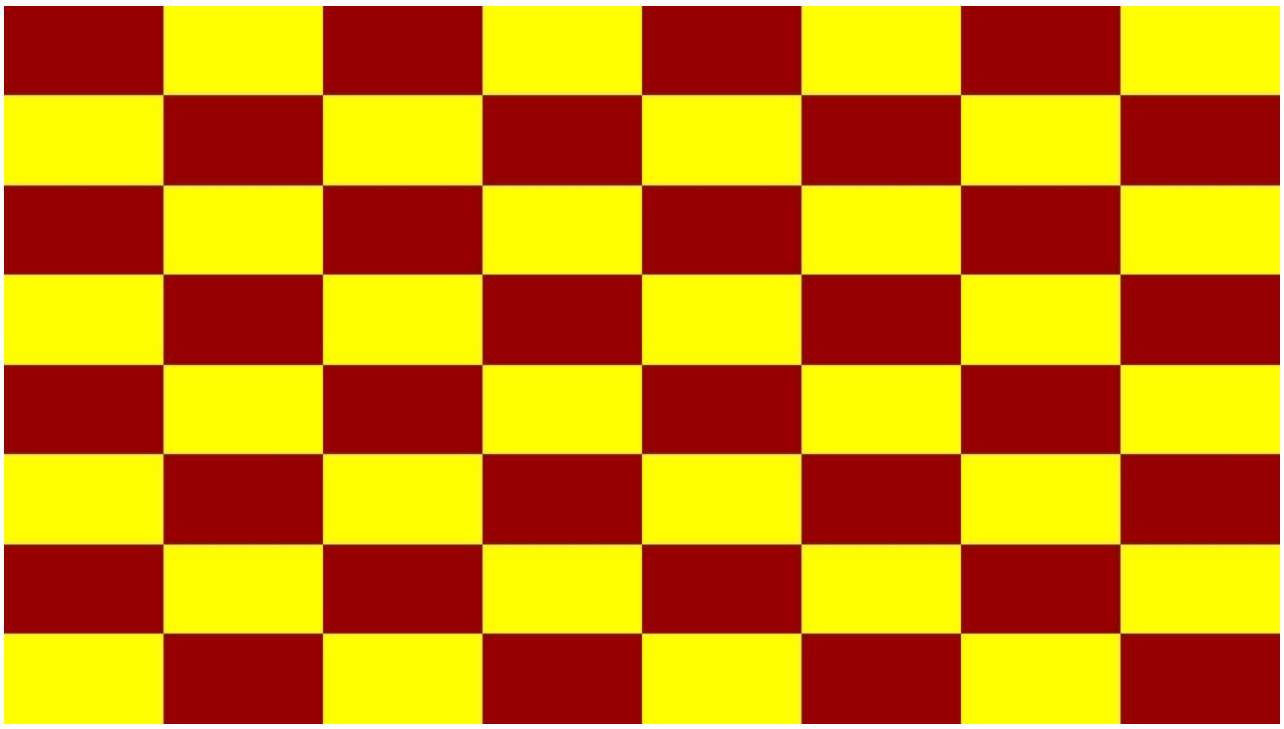
md_Checker

Generates a checkerboard



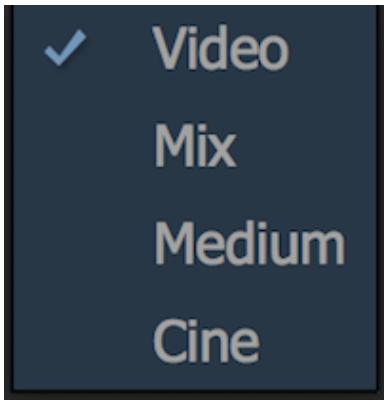
Use this to generate a checker pattern. Change the number of checkers and the colors. Not much to it.





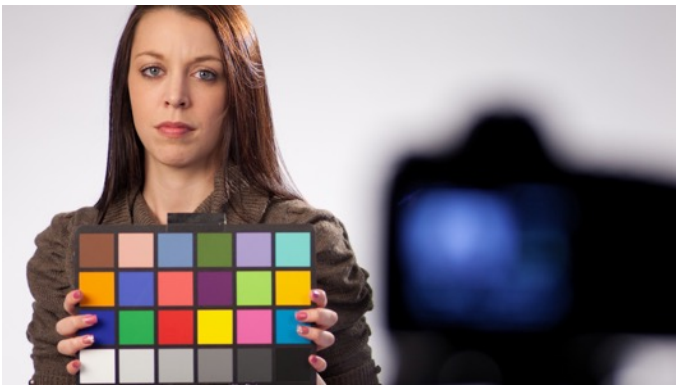
md_Cinefade

Fades like the iris on a camera.



Simulates the old film iris fades, which were done on set by the cameraman while filming.

There are 4 different dissolves. Cine, Medium, Mix and Video. Cine fades black then mid then white. Medium is more averaged, so less time on the white part at the end. Mix is a mix between cine and video. Video is a straight video dissolve. Works in timeline and you can fade in, fade out or fade a to b. Added start frame for Batch and BFX workflow. **Video**

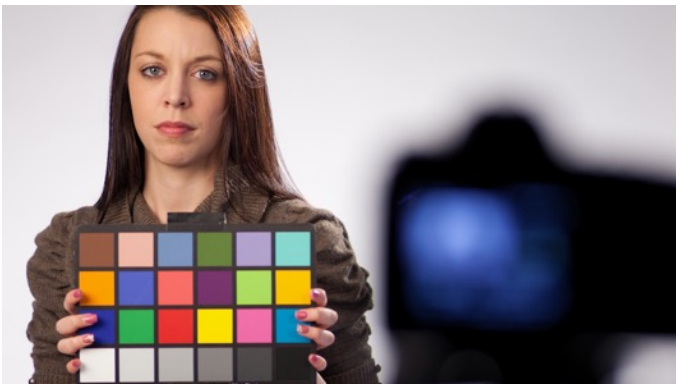


md_CMYK

Converts RGB - CMYK - RGB

Convert RGB to CMYK and vice versa.

Added the native ability of gain, offset and contrast on all CMYK channels. To use CMYK to RGB, apply CMY to the RGB channels and K to the matte channel.



md_ColorData

Displays image source and target data.

Displays RGB, Hue, Sat and Luminance. You can also enable difference and 2 lines become 1 line Source - Target. If all are zero, then you have a grading match. Use it in context view in batch or as a camera fx in action. Change your color correction upstream and let the numbers guide you to a match.

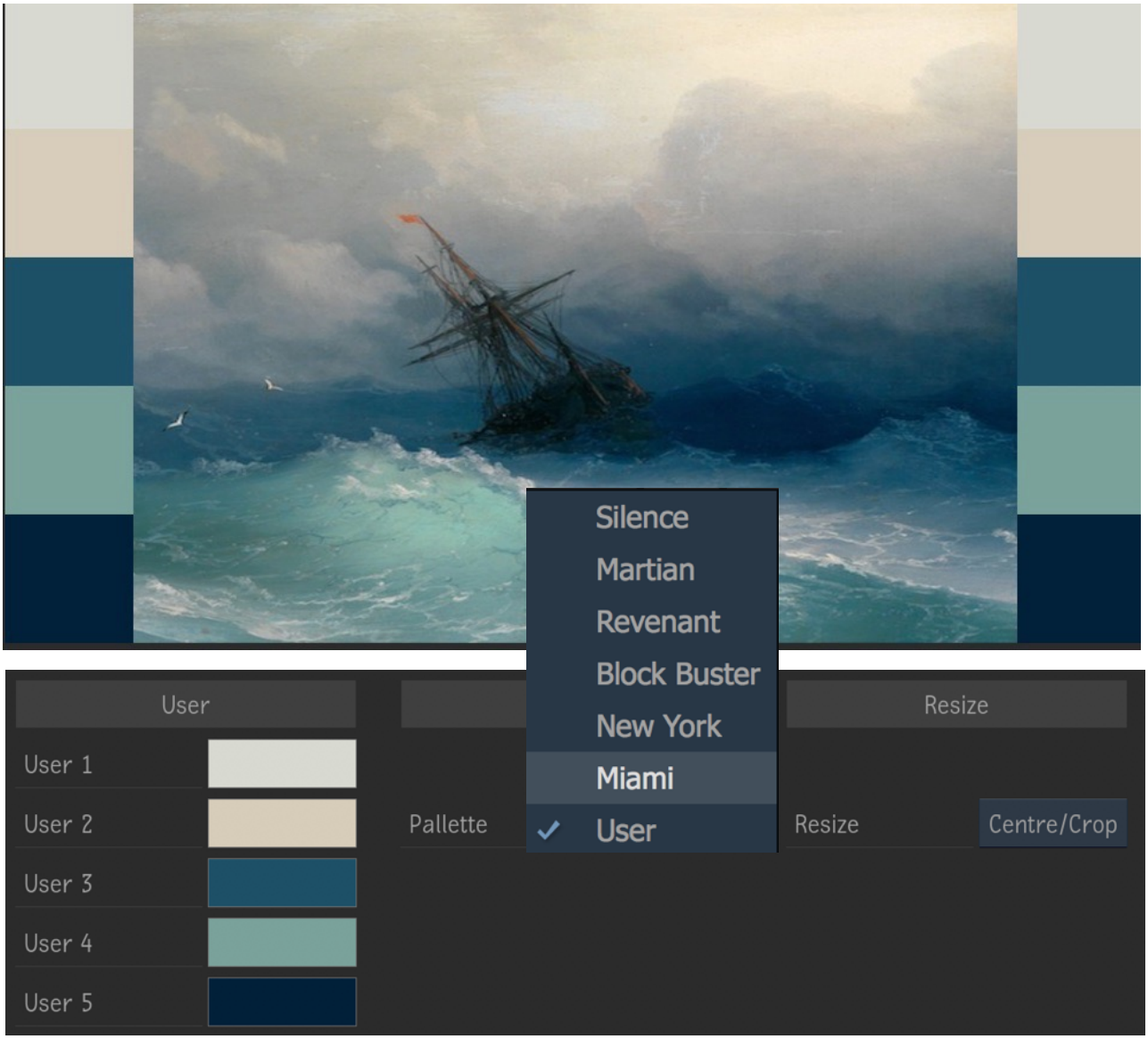
Average the area you are picking with Pixels. Bigger number is slower.

Select your target input between front and back. Use the wipe (light icon) to wipe between front and back. Use the difference button to make only one line of data. set to 960 width for just RGB display.

md_ColorPalette

Gives a color palette to help inspire you.

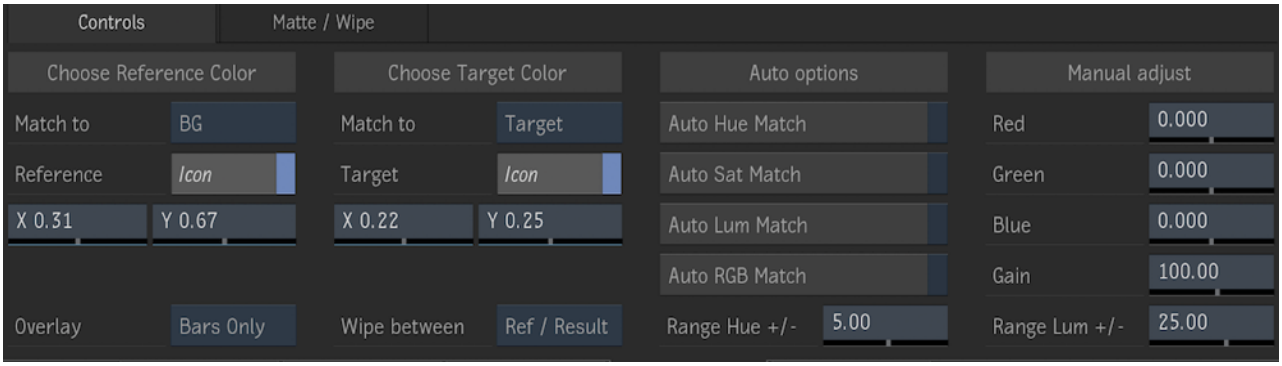
ColorPalette has some preset looks and also a user look, where you can select colors from a reference video and then check your video against them. No auto magic matching on this one yet...



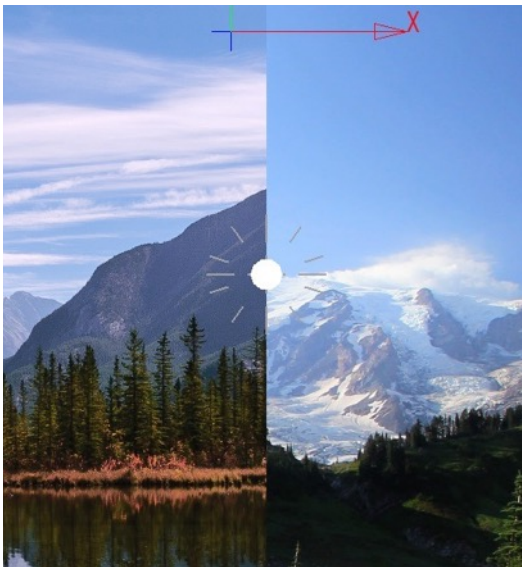
md_ColorTuner

Match colors with reference and target pickers.

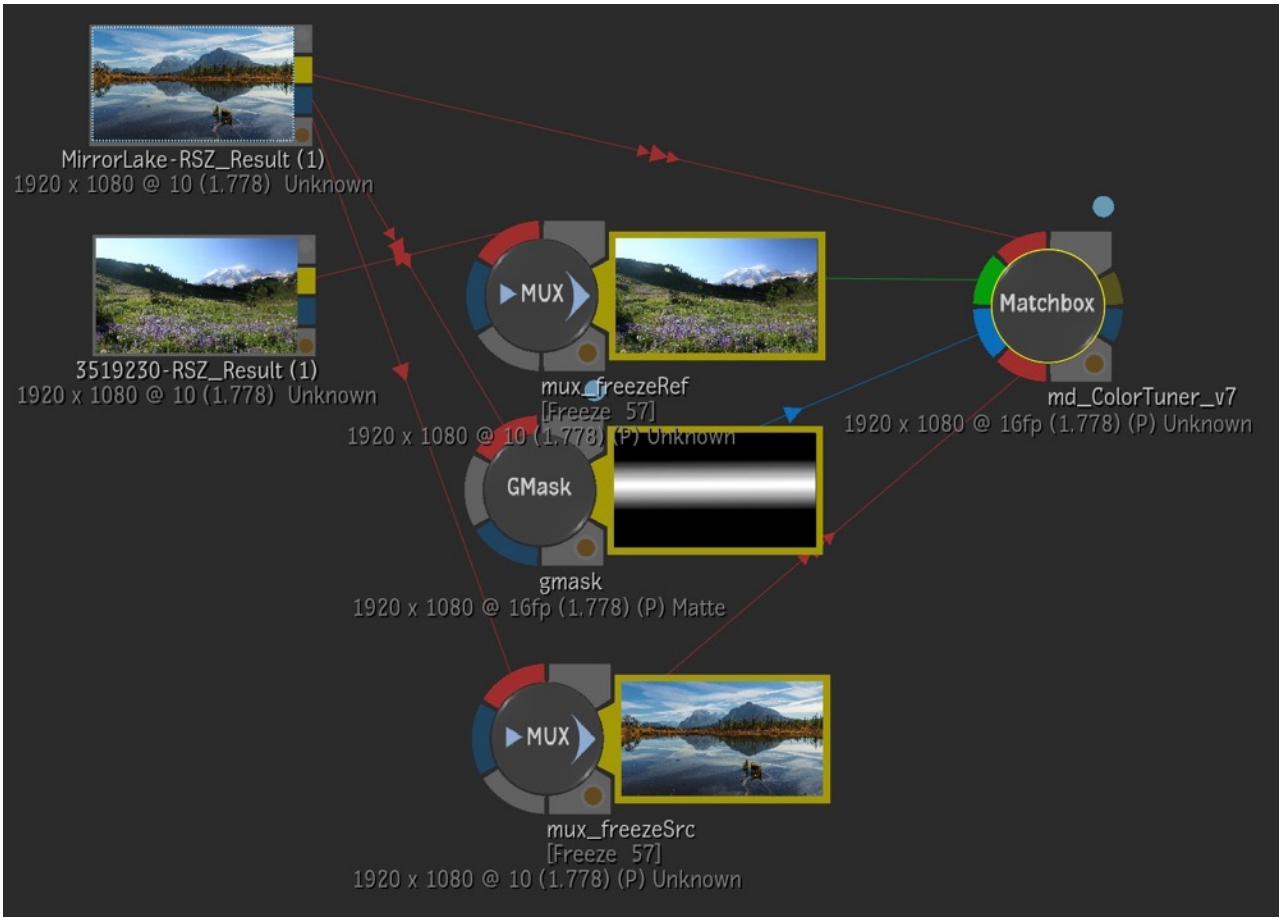
The colorTuner has evolved from a reference only context tool to a complete color correction tool. Video. Using your reference color to guide you, position the target over the part of the input source you wish to change. At this point you have a few options from auto matching Hue, Sat or Lum, or auto match RGB, or manual tuning with the RGB sliders. To auto match, simply press the required button. For manual match, use the RGB bars as a guide and adjust the RGB sliders. The color advice word (+/- red/green/blue) changes to tell you what color to change and when you get it right it even says “Match”. This is very important, as your art director looks over your shoulder and sees the computer report you have matched the color. ;^)



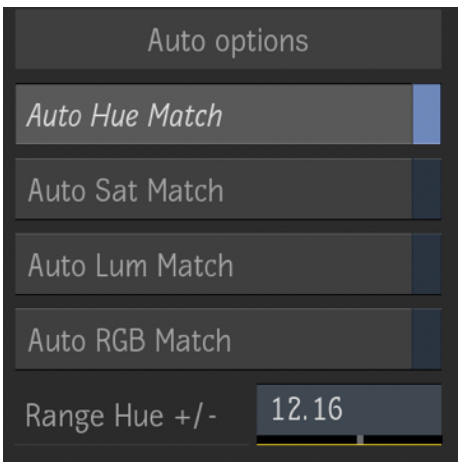
v7 has a new feature to show you a wipe between input / result, or between reference / result. You can easily check the quality of the match.



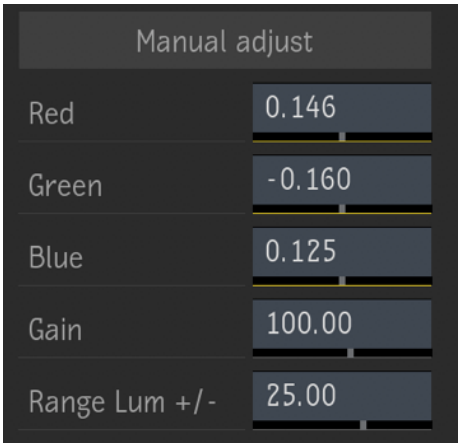
One thing to keep in mind when using the ref / target pickers, the sampling is from live input video. If your shot is panning the sample will change, causing color correction to change. To stop this happening, use the workflow shown in the schematic below, where you MUX-freeze the input and choose BG in the ref pulldown and Target in the Target pulldown. (This is the default behaviour anyway) ColorTuner will automatically show the correct inputs inside the ref / target circular windows.



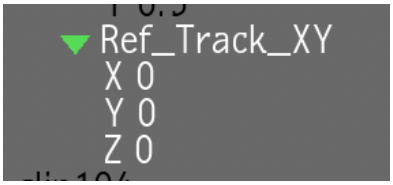
When using the auto buttons to match, the algorithm uses the scene hue to determine what is affected by the color correction. Adjust the +/- hue range to include or exclude parts of the image from the correction.

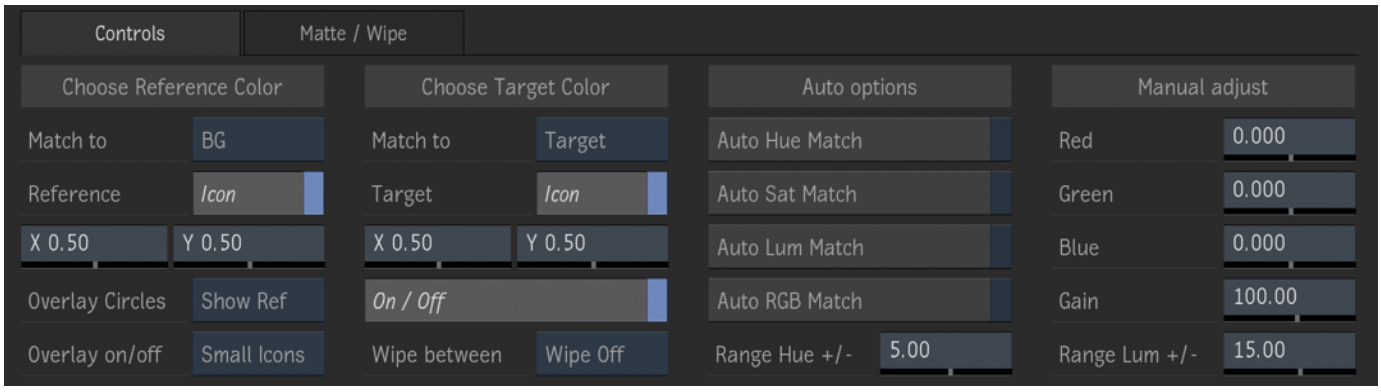


When using the manual adjustments, they are determined on luminance around the target color. Adjust the Lum Range +/- to include or exclude parts of the scene. Hint: You can combine auto adjustments with Manual adjustments to fine tune your result.



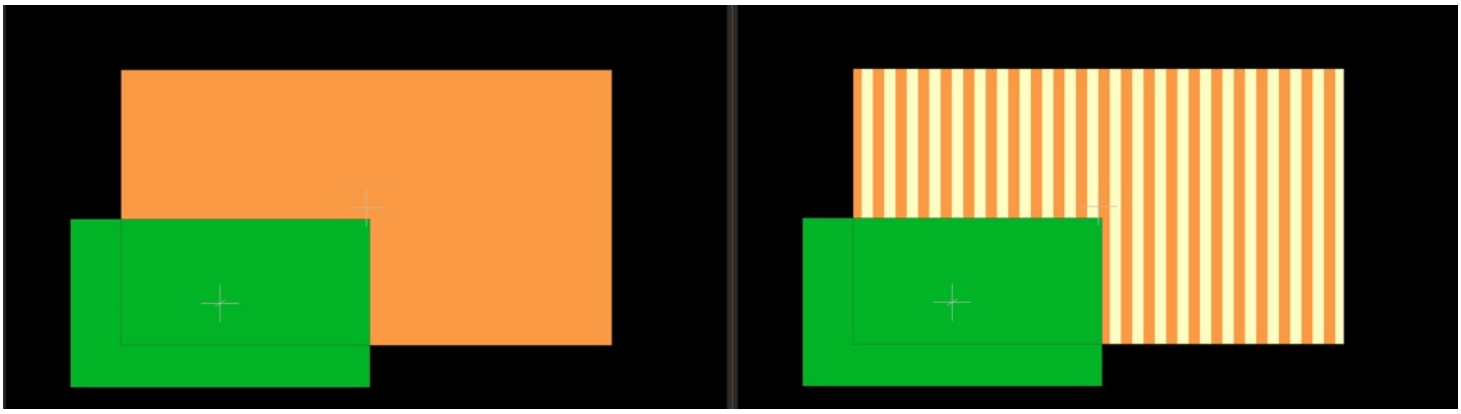
V9 added “Link Track Axis” Under Animation menu in Action, choose your tracked axis, click on position and click copy. Then go to the colortuner_V9 shader Animation, select Ref_Track_XY and press paste or link to get the data from your track. The reference should now follow your track. This is very handy to track a pixel for your reference. If you are matching the bg flicker or removing it.





md_ColorTunerSelective

CameraFx utilising flame 2018 selective.



In the image above, you can see the striped area is selected. Only the layer corresponding to the orange objectID will be affected by the ColorTunerSelective. Up to five objectID's can be selected to be affected by one color correction.

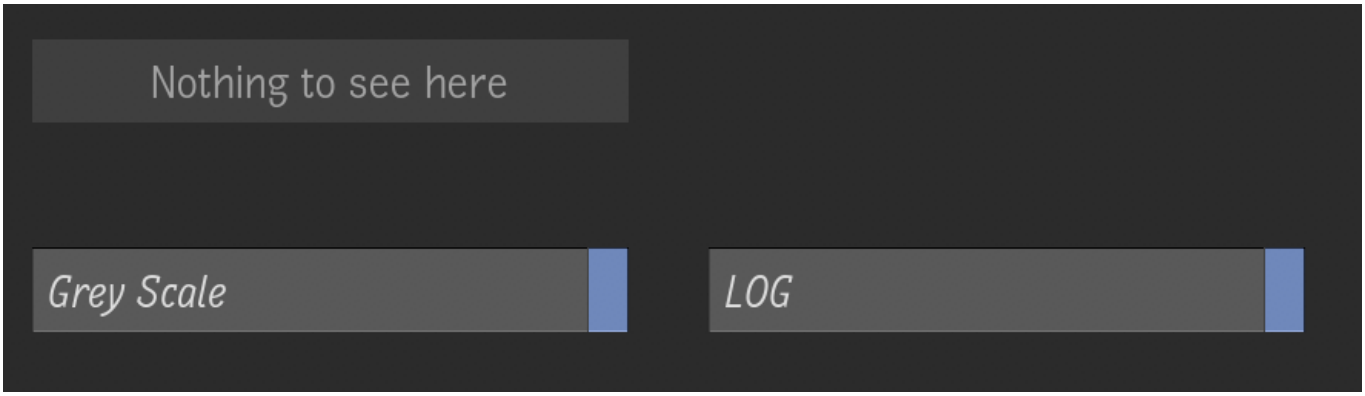
md_ColorWheel

Generates a color wheel and grey shade bar.

This really helps show what a shader is doing. If you use it as a source and select a hue, you can see how the hue rolloff is and the grey shade allows you to see the response on a scope to any color correction.

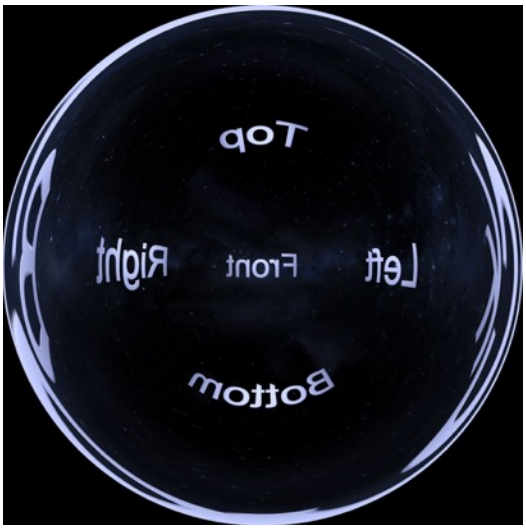
Grey Scale turns the grey bar on and off.

LOG makes the max luminance 10 and using the log scale.

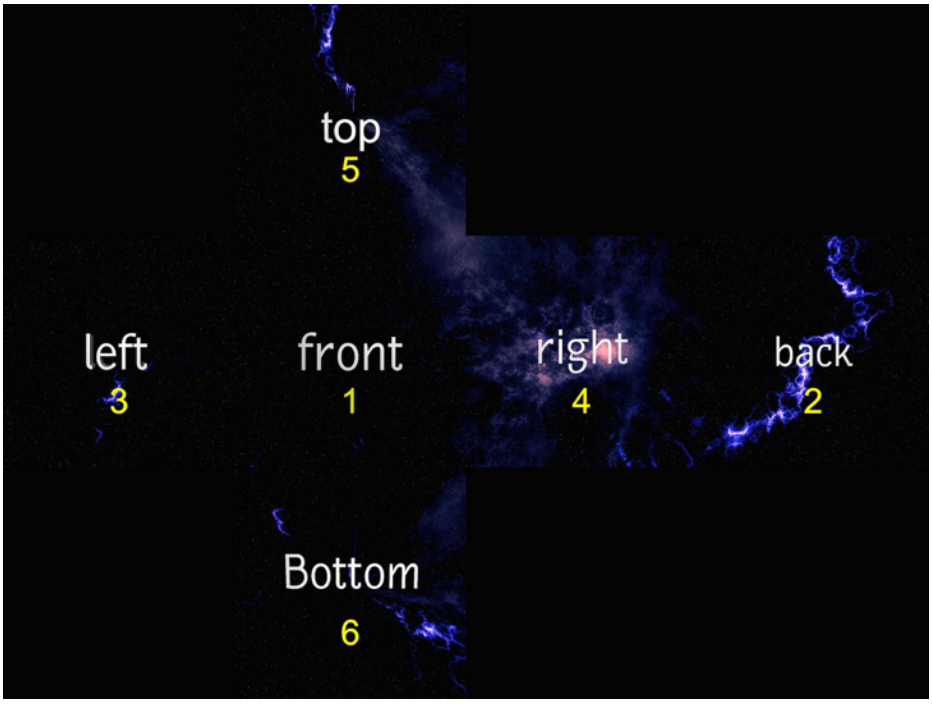


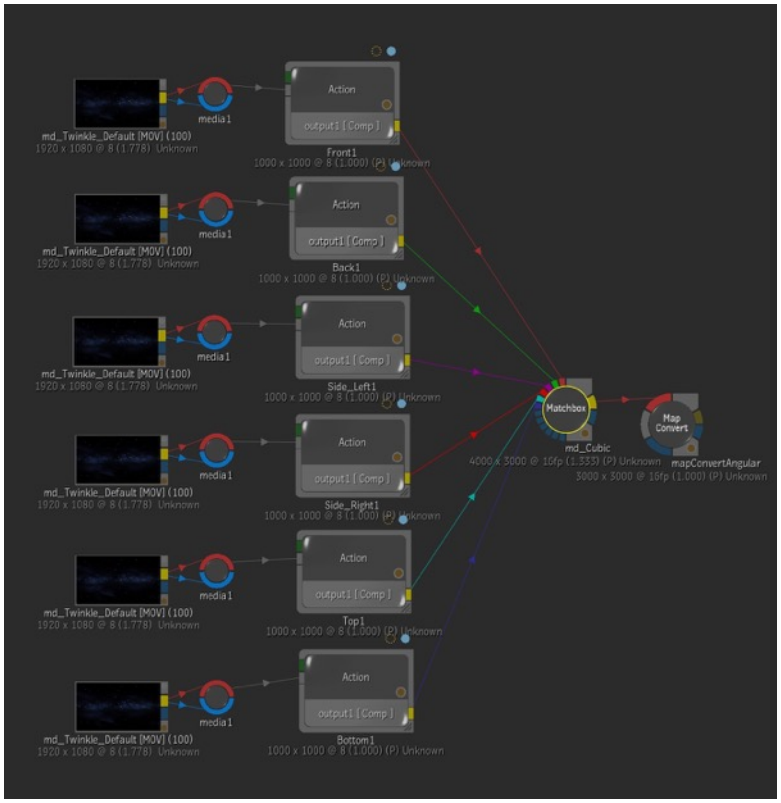
md_Cubic

Takes 6 camera angles and makes 1 cubic



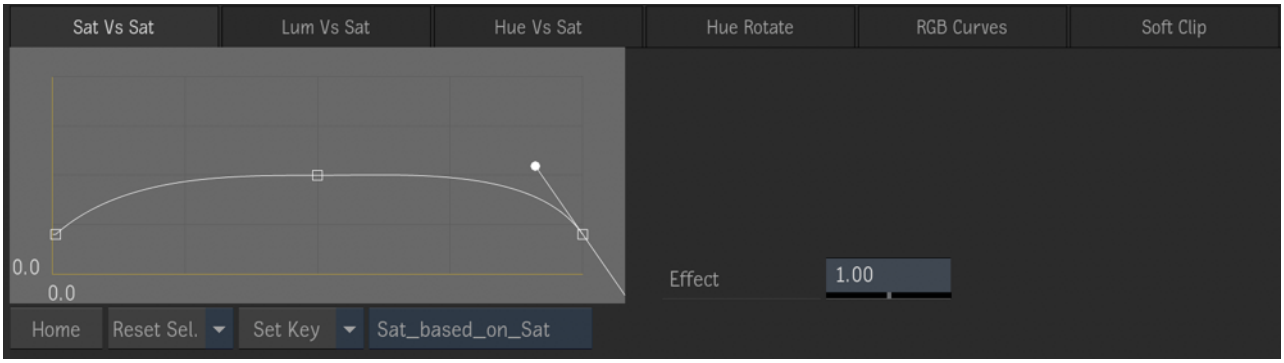
Follow the guide above and schematic to the right to input your 6 camera angles. Then patch into a map convert to make angular / spherical.





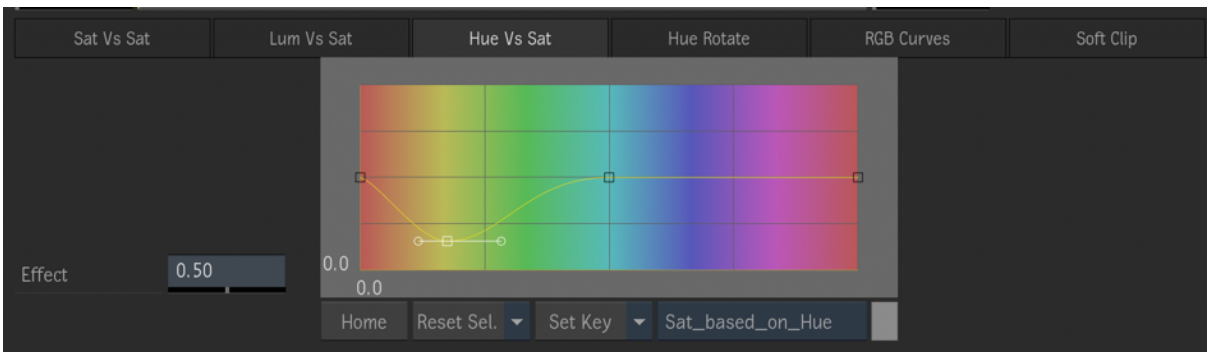
md_Curves

All the curves in one place + Sat v Sat



Sat v Sat is not available in the standard Flame, and after using it in resolve, I had to have it. All curves are cumulative, so you can use one or all. Use the Effect slider to fade out the effect. Just select the tab for the graph you want to use.

Another one that may come in handy is Hue v Sat. In the image below, you can see that I have reduced the saturation of the yellow, but kept the blue in the sky and snow.

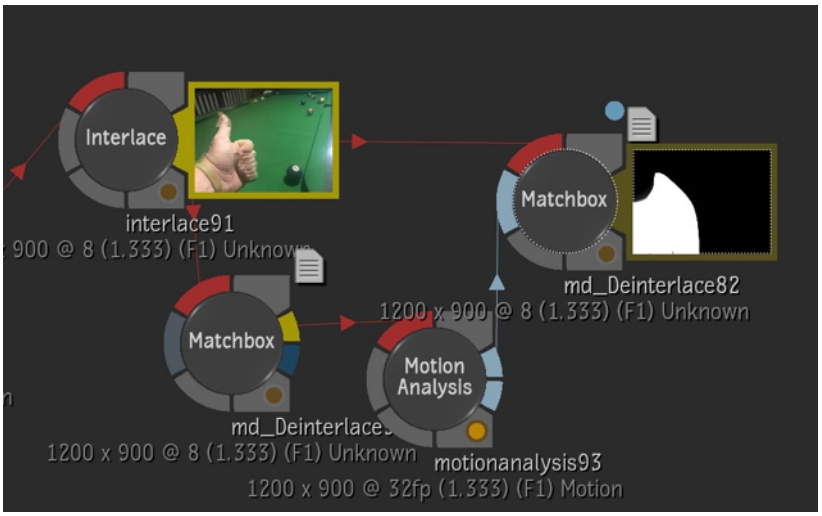


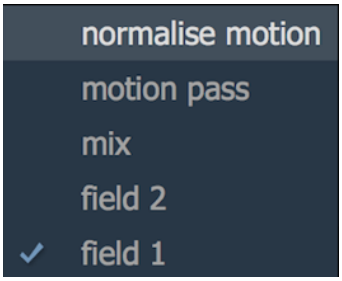
md_Deinterlace

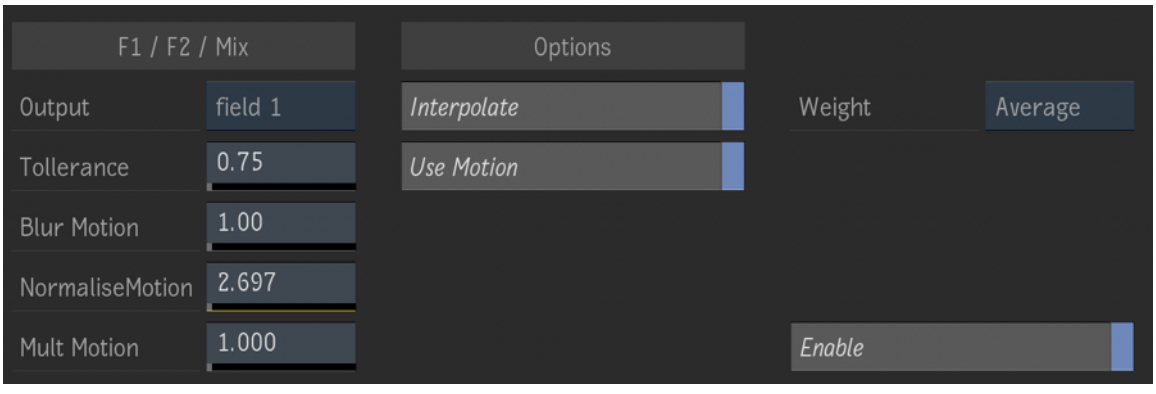
Deinterlace with motion pass

Hopefully you and I will never see interlace footage again. But if you do, and you want to get the very best out of it. You will probably want to paint between a the deinterlace version and the frame version wherever there is no movement.

This shader does it for you. You need a motion pass of field 1 of your interlace footage and then you can tweak the Motion normalise parameter to make a matte area that will blend between the deinterlace moving stuff and the frame based locked off
stuff.



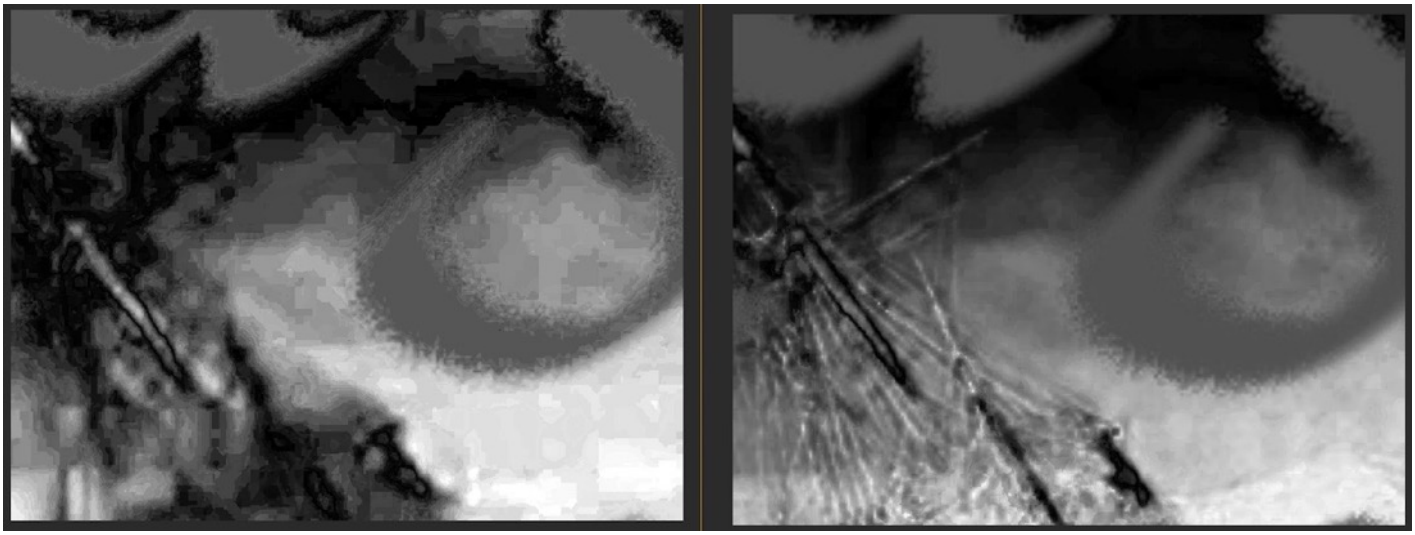




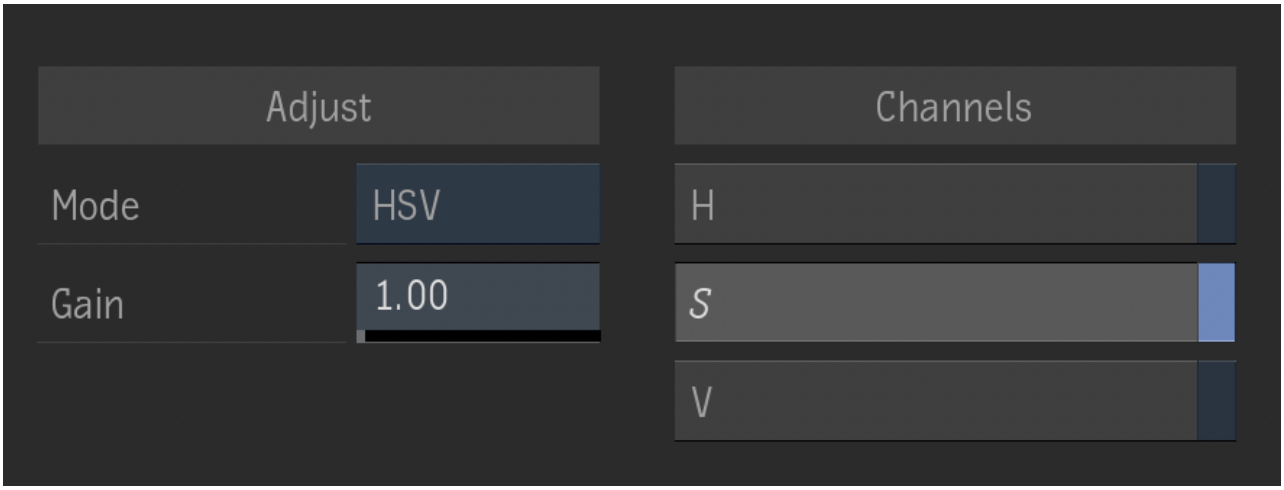
md_DiffKey

Show the difference between 2 inputs.

Modes include RGB . YUV . LUM

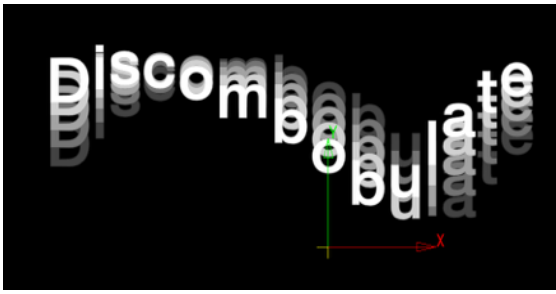


The picture on the left is the standard DiffKey with the U parameter selected in YUV mode. The picture on the right is the md_DiffKey with S selected in HSV mode. There is less quantising for some reason and more detail. The inputs were a color pic and the same pic in mono. So it's adding a saturation diff key to your toolbox.



md_Discombobulate

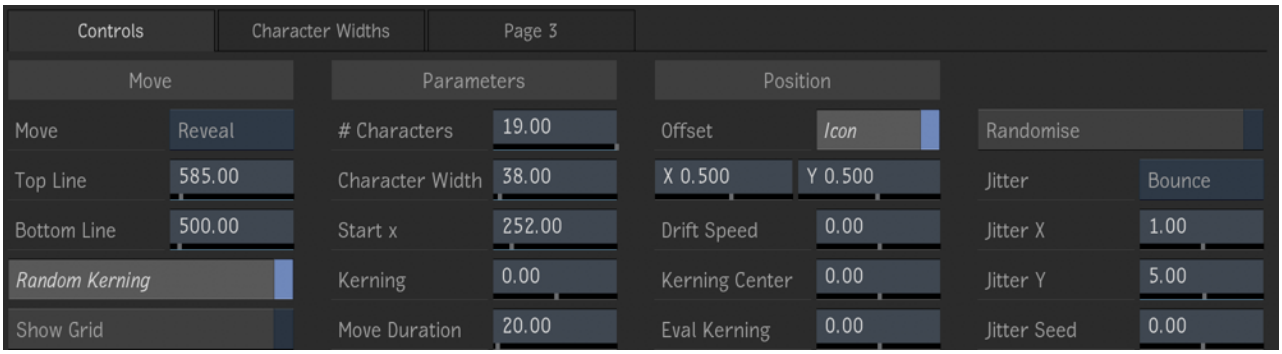
Wacky text movement

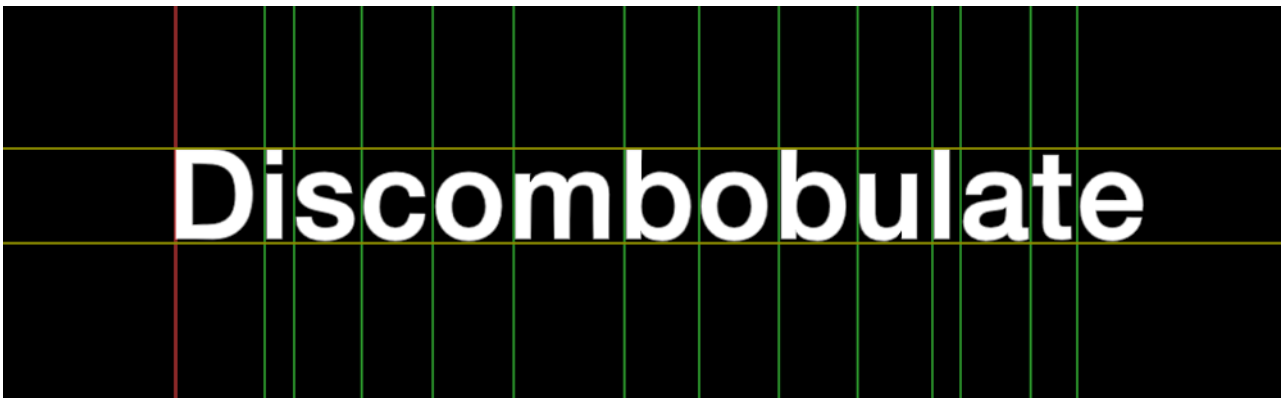


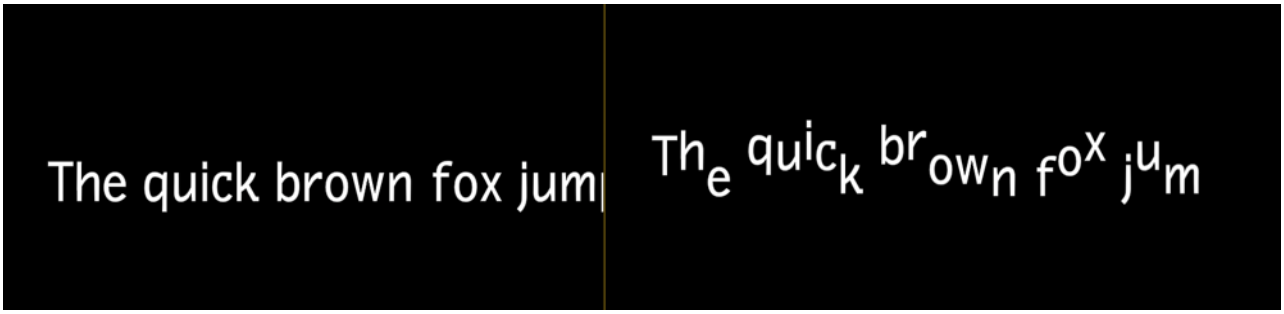
For moving text, split the characters up automatically. Use show grid button to check how it split up your text. You may have to set your text kerning wider to start. Then inside the shader you can Kern it closer again.

You can set an opening move and it's move duration. Adjust kerning. This is good for supplied graphics. Easier than doing it one character at a time in action.

Under the jitter button there are various animation types like bounce, sine. And all of a sudden I am tired of this shader. It does a lot. But probably no one will ever use it...



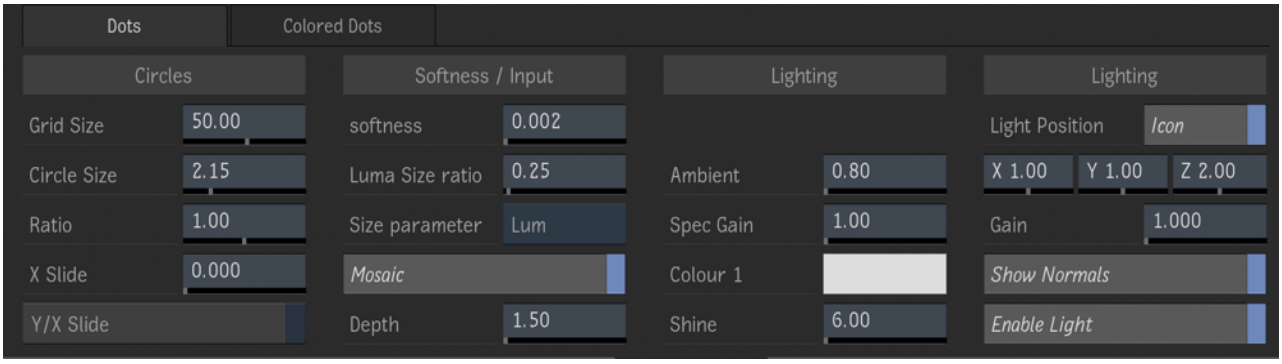




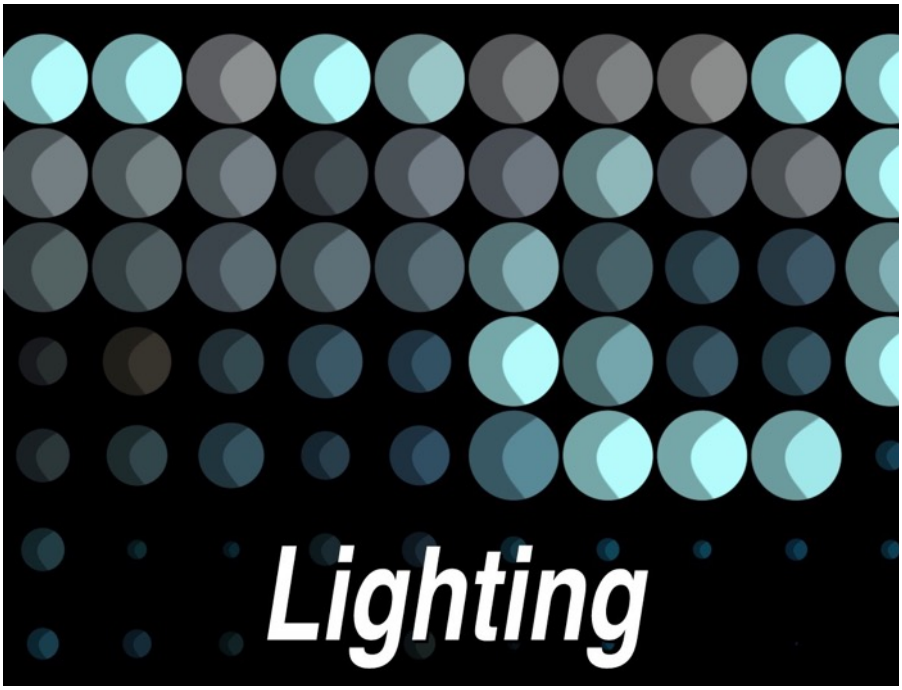
md_Dots

Turns input into dot pattern

It started fairly simply, but with the help of comments from the FB Logik group, it has turned into another monster.



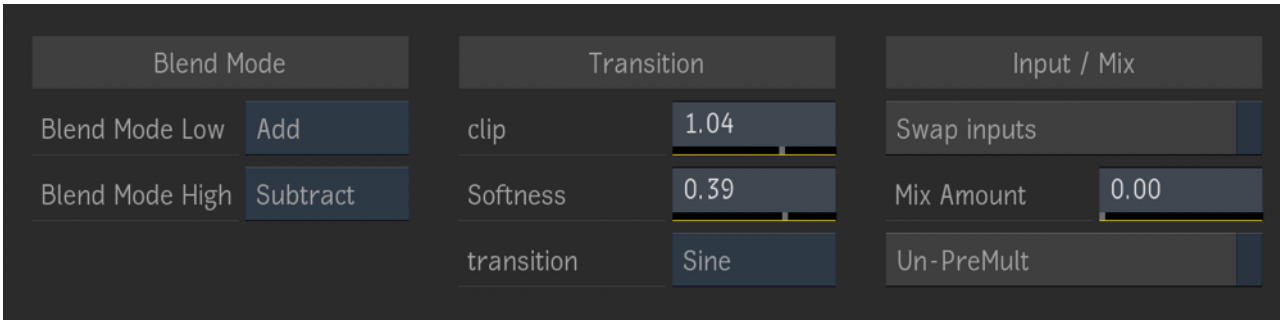
You can adjust the size / ratio of dots, as well as softness. You can use any value selected in the pulldown menu to dictate the size of the dots as well. Mosaic button enabled, gives a single color value for each dot. Pressing lighting turns the whole thing 3D with generated normals used to light the dots into spheres. Position the light and adjust Depth to get a 3D effect.

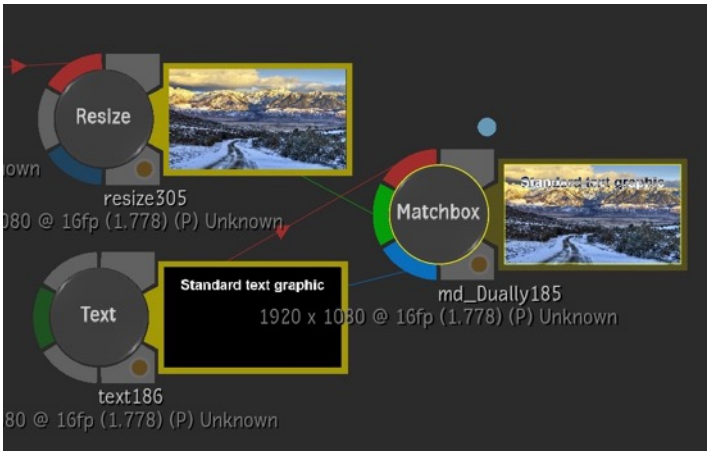


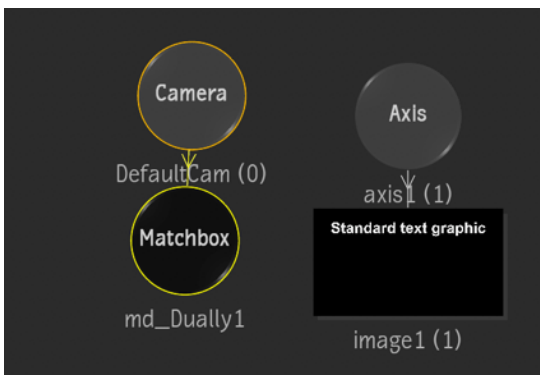
md_Dually

Two blending modes - one layer

Add some interest to your blend modes with Dually. It has dual blend modes, based on the background luminance. So you can transition between any 2 modes. Like Add and subtract. You can adjust the clip and gain of the transition. Works in batch or as a cameraFx.



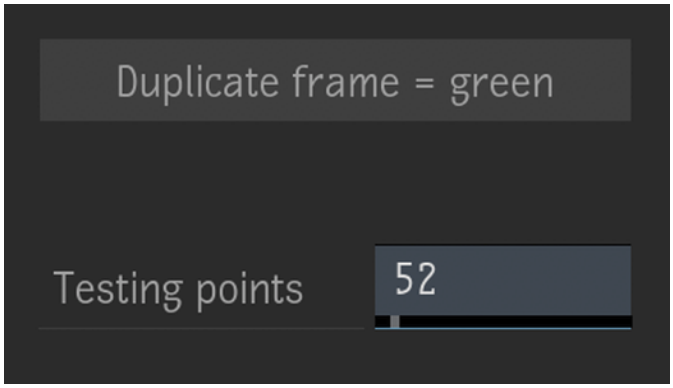




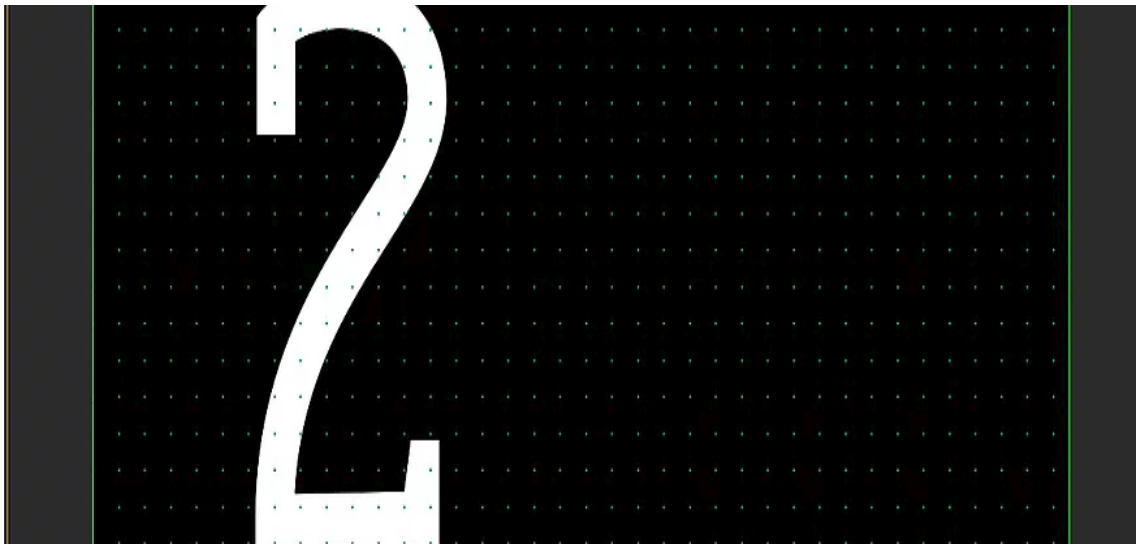
md_DuplicateFrame

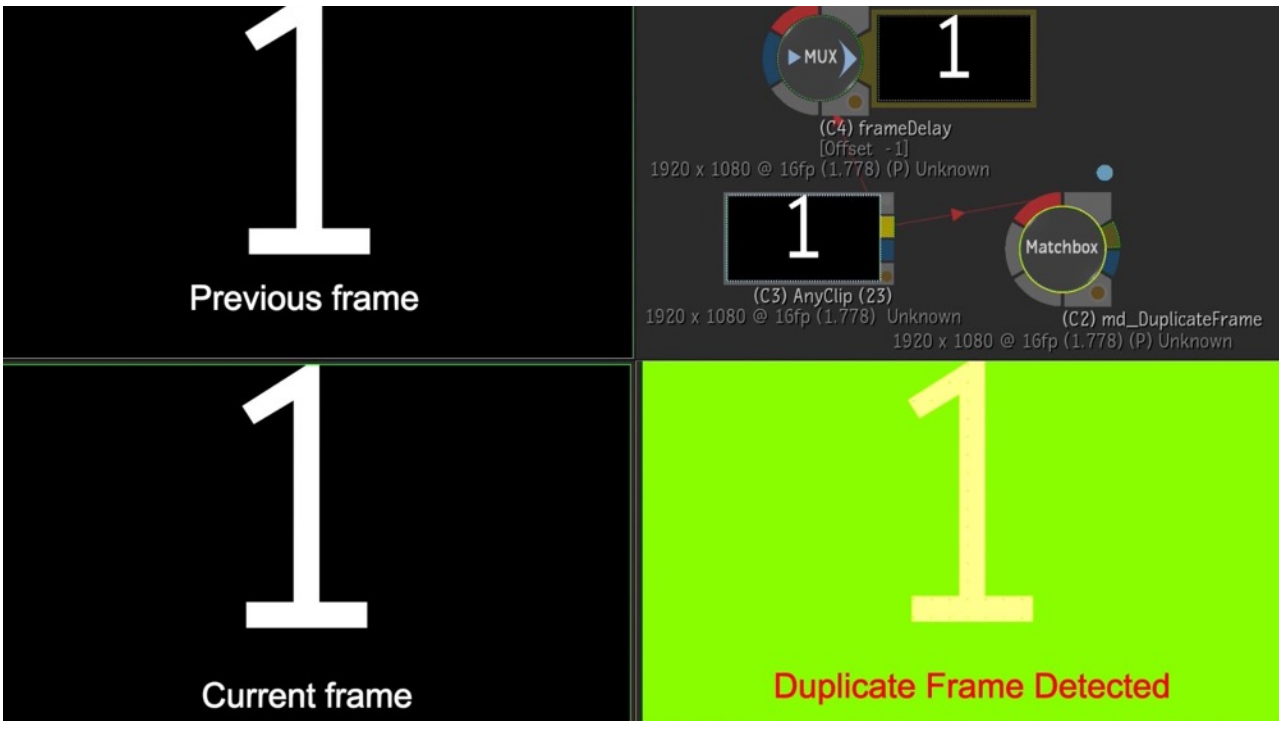
Test for duplicate frames

Duplicate frame looks at the current frame and compares it with the previous frame. If they are the same, it puts a green hue over the screen. The frames have to be digitally 100% identical. Meaning no film grain differences. This will help you spot a bad frame in playback. The pic below shows the grid of test points which you can vary the number of points.



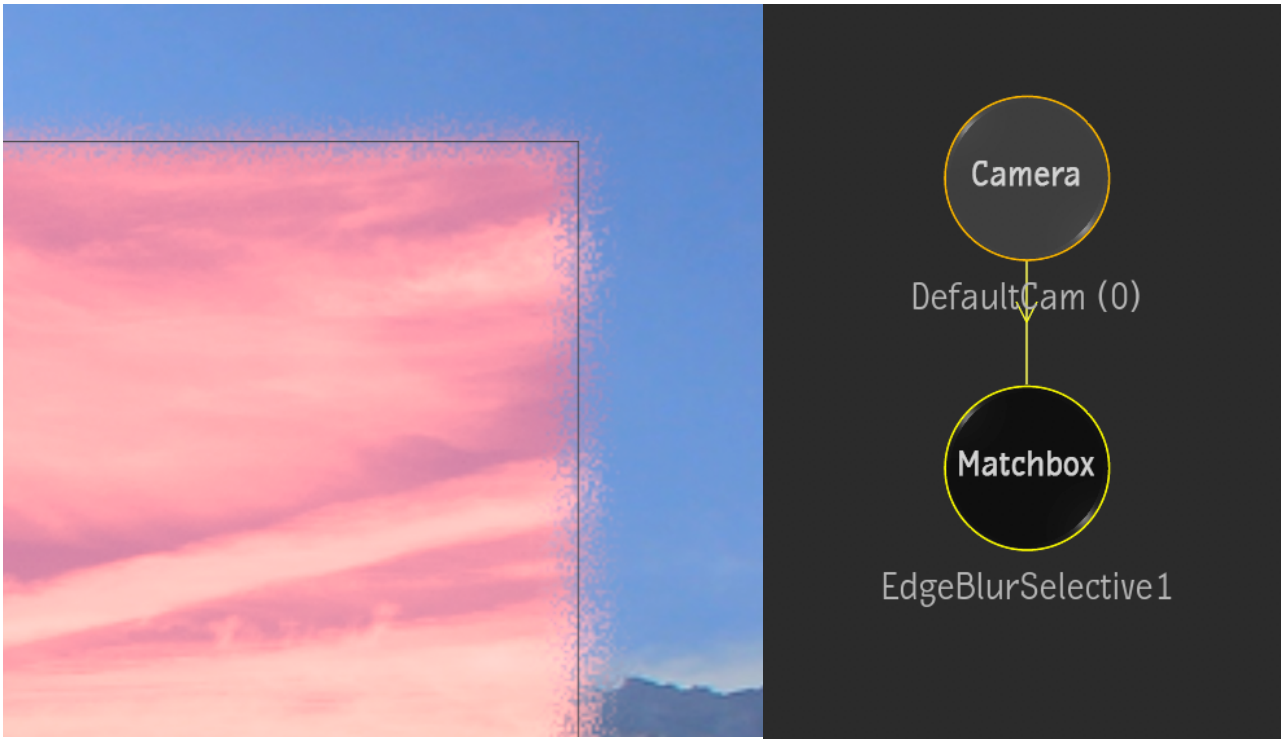
Video





md_EdgeBlurSelective

Blur the edge of a layer + noise

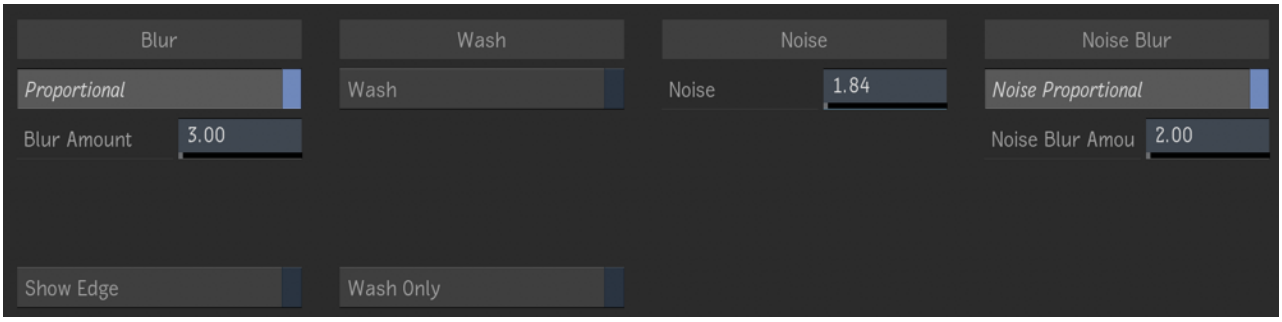


This is a cameraFx which complies with the 2018 selective options including objectID. This allows you to select a layer and blur it's edge. You can add noise through the blur and a wash. The wash can be from the bg color using Replace Hue option or from a flat color by turning replace Hue off. Show Edge button help you see the blur and noise element, while the wash only allows you to wash the edge of your key without blurring or noising.

md_EdgeBlur

Blur the edge comp using comp/bg/matte

Similar to the selective version above, you would use this in batch or bfx schematic. Feed the comp / bg / matte in and it will alter the edge with a blur and the noise also has a blur amount.



md_EdgeBlurZ

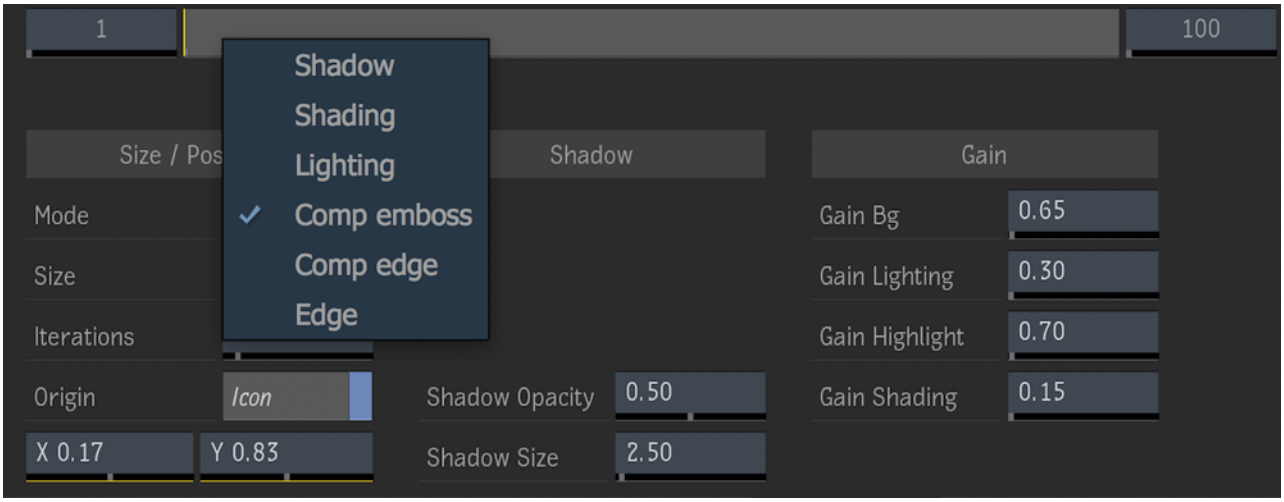
Blur the edge comp using comp/bg/matte/Z

Same as above but with a strength input. Say you want to edgeBlur a comp that has a Z component, this will do it. Using the Zdepth pass as strength matte, it will blur more where the Z is white.

You may also just want to use a gmask ramp to progressively blur an edge.

md_Emboss / EdgeDirection

Creates multiple edge mattes Emboss



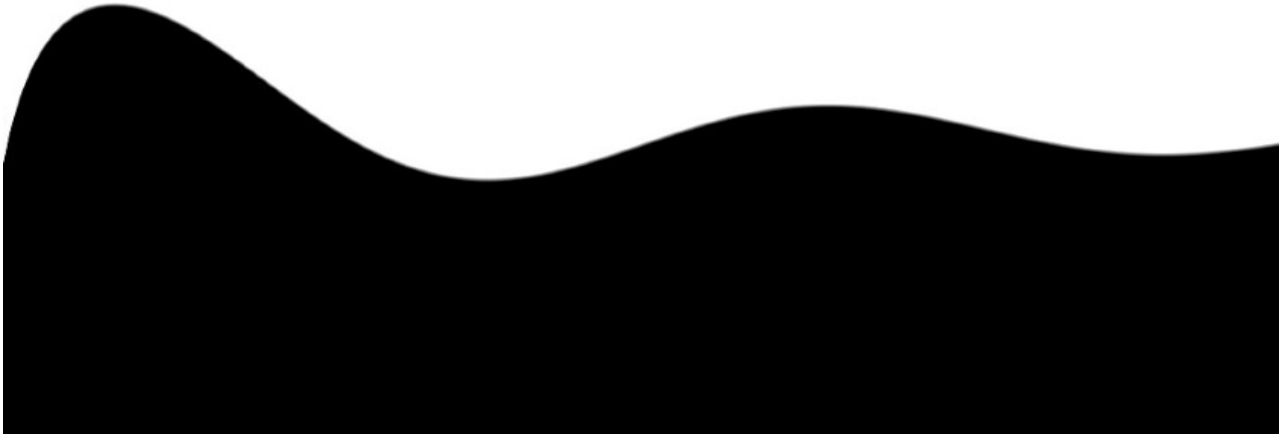
Creates 4 passes: edge direction, lighting, shading and Shadow. These can be combined over a bg with *Comp emboss* setting or just the edge direction with *Comp edge* setting or you can output the individual passes.

Use the light icon to adjust the direction and size of the emboss. Closer to the centre is a smaller emboss. You can also adjust the size using the *size* parameter.

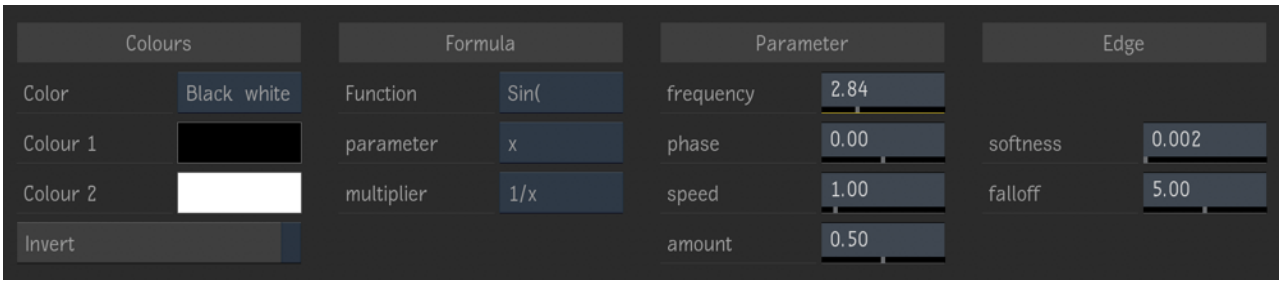
md_EdgeDirection is the same, with just a different preset for default.

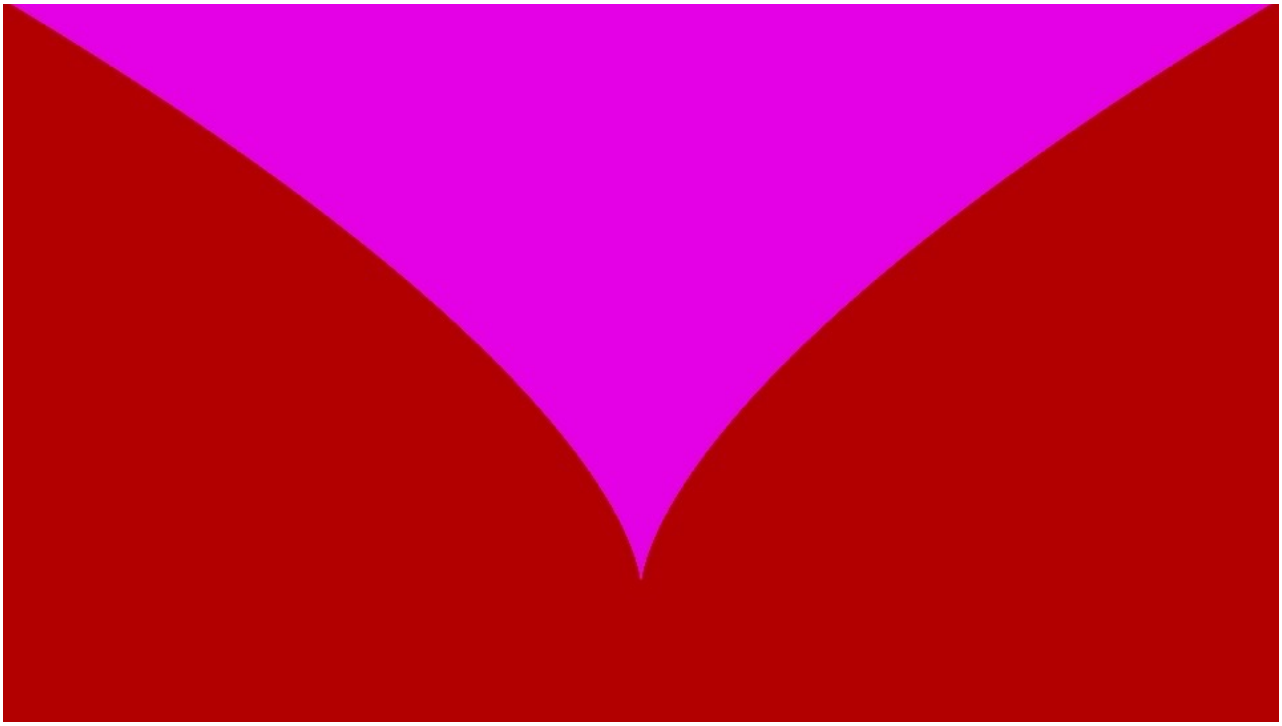
md_Expression

sin/cos/tan curves on x and y



Make your own formula using the dropdown menus. Choose between sin/cos/tan on x or y and with a 1/x multiplier to make the effect falloff. Choose between color / B&W.





md_ExtractFG

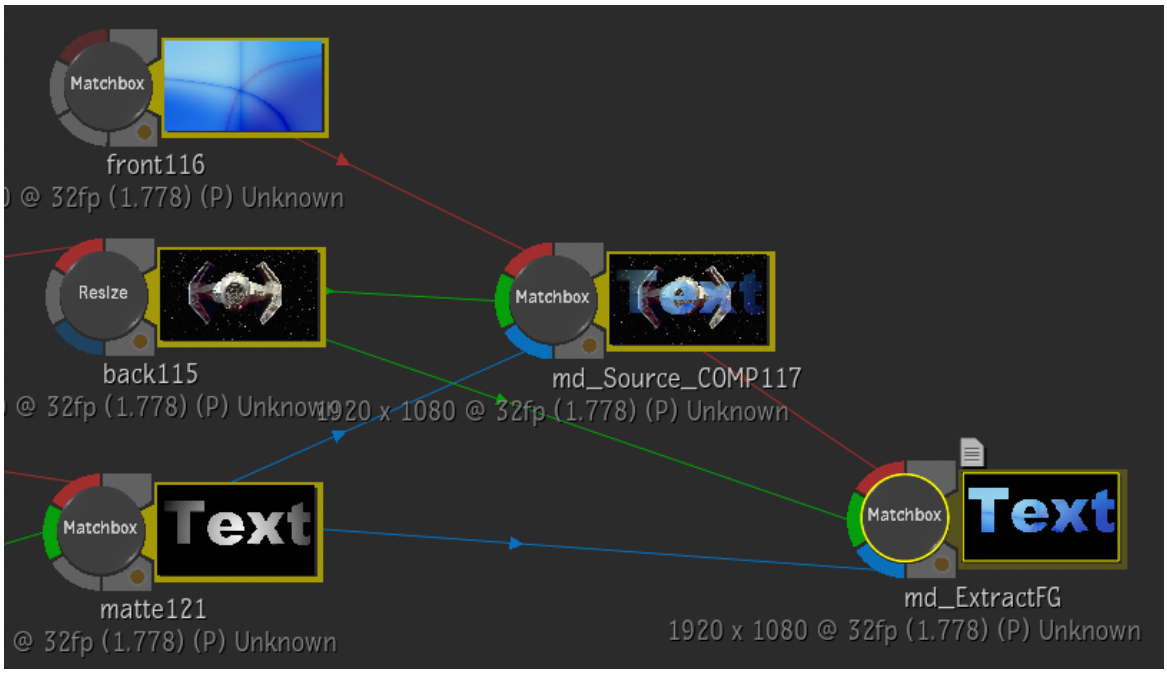
Version of unComp.

Given Comp, Clean BG and Matte, Extract FG is able to give you a clean version of the FG, even with transparency this works. Simple school maths makes this possible.

Maths

C = A * matte + B * (1.-matte) // This is the comp maths.

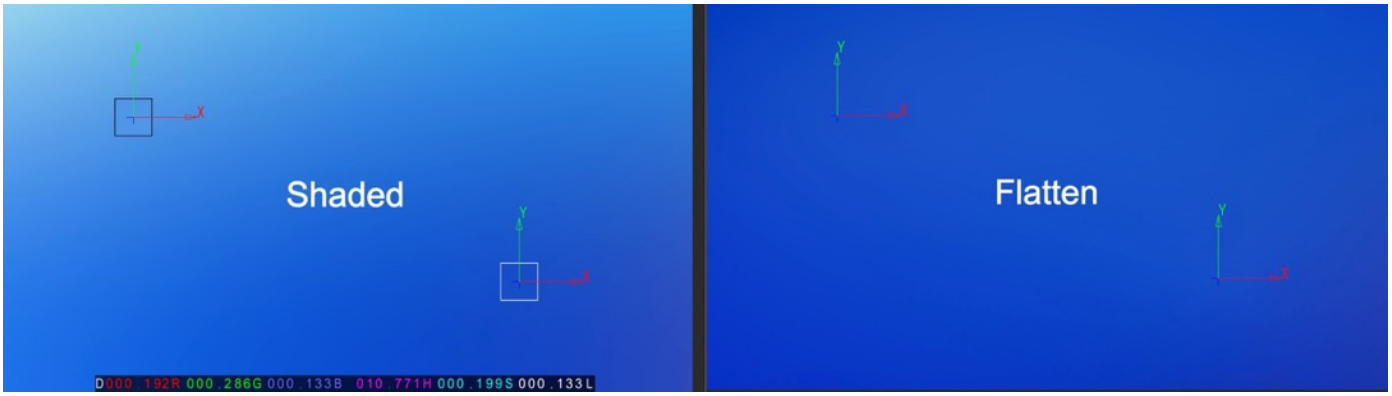
To solve for A (fg) the formula is A = (C - B * (1.-matte)) / matte




```
uniform sampler2D front, back, matte;

uniform float adsk_result_w, adsk_result_h;

void main()

{

  vec2 uv = gl_FragCoord.xy / vec2(adsk_result_w,adsk_result_h) ;

   vec3 c = texture2D (front, uv).rgb; // comp

   vec3 b = texture2D (back, uv).rgb;  // clean sub

   vec3 m = texture2D (matte, uv).rgb; // matte

   vec3 result = clamp((c-(b*(1.-m)))/m,0.,1.); gl_FragColor = vec4(result,m);

}
```

md_Flatten

Even out a bg with shading.

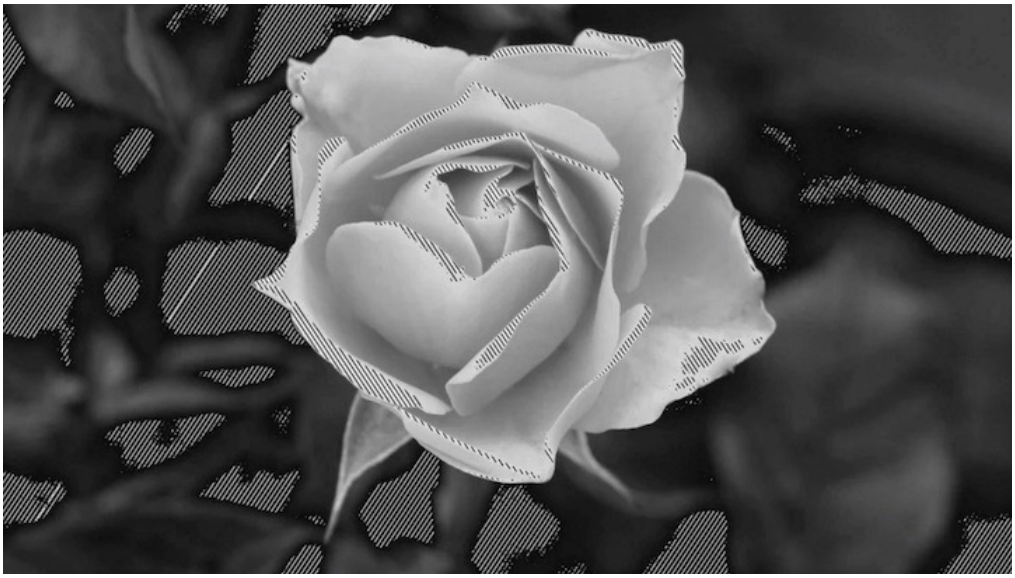


Based on colorData, you also get the number values of the pickers.

The source/target boxes are averaged over a square of 1-400 pixels. The difference is calculated and added across the gradient to “Flatten” the image. This is an RGB effect so in theory, you could also remove a color cast across a bg. This could be handy to flatten a green screen before keying. or to help when making a repeatable texture. When you choose flatten, the menu overlay is automatically removed and the anti gradation applied. You can still move the cursors to tweak the output.The gradation is extended linearly past the source and target cursors.

md_FalseColor

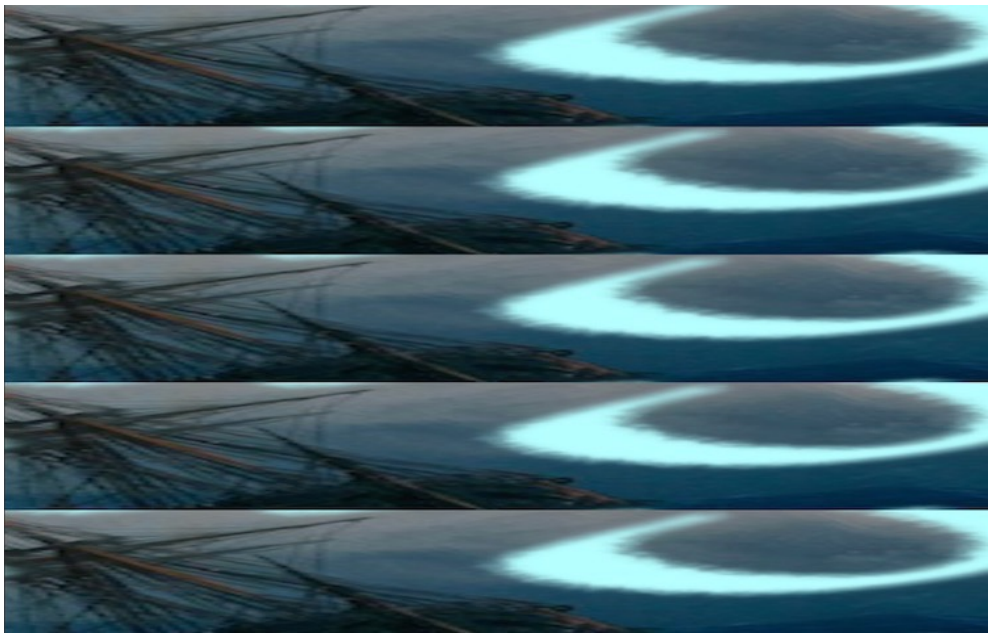
Shows exposure lines and colors.



md_FilmRoll

Reproduces the old Telecine film play stop.

Literally one of my first shaders, feeling nostalgic, take it for a spin.



md_Flame

Quick flame source.

Can change the base color and Top color, plus 3D position, could come in handy for some flame texture.

md_FlickerRemove

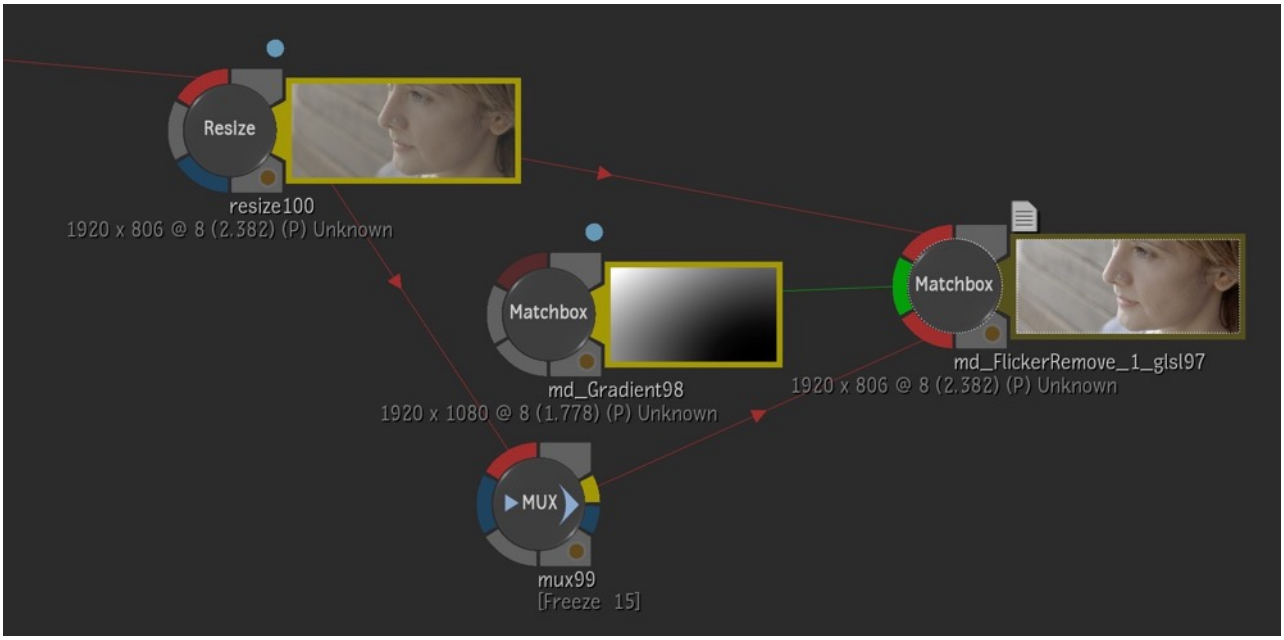
Removes Gain based flicker .

Using auto Min / Max values, the output is equal to the input source multiplied by the difference between the input and the grade ref. You can use a still reference or a changing reference if that is the effect you are after. See Video

By using a black and white image as the reference, your min and max will be set accordingly, resulting in a quick one-lite of raw footage. See image below.

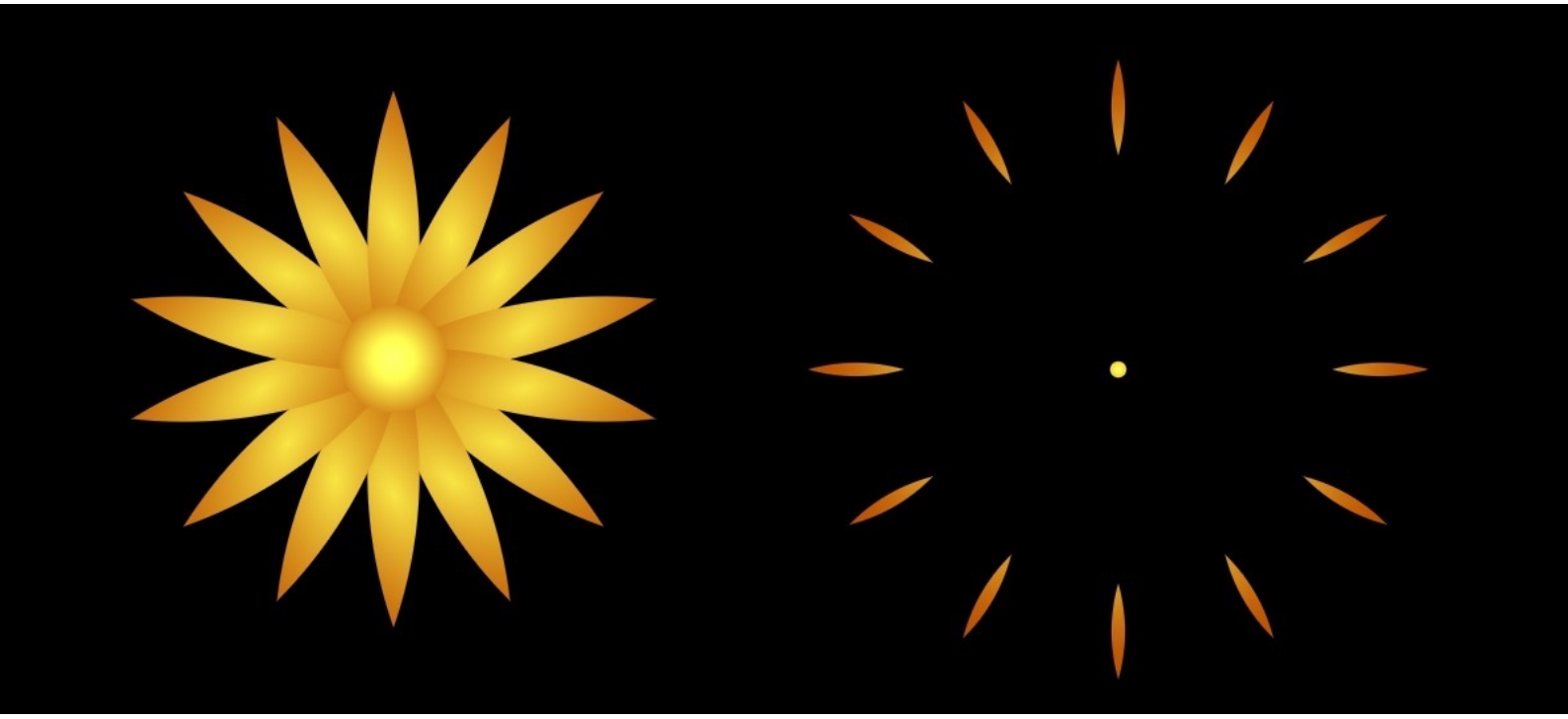
Luminance Based button, stretches the image without doing a white/black balance.

Use input 3 Mux button allows you to blur your input A and use it as the source for the color decision. You may wish to freeze the first frame of your shot to stop any flicker that is occurring due to grain.

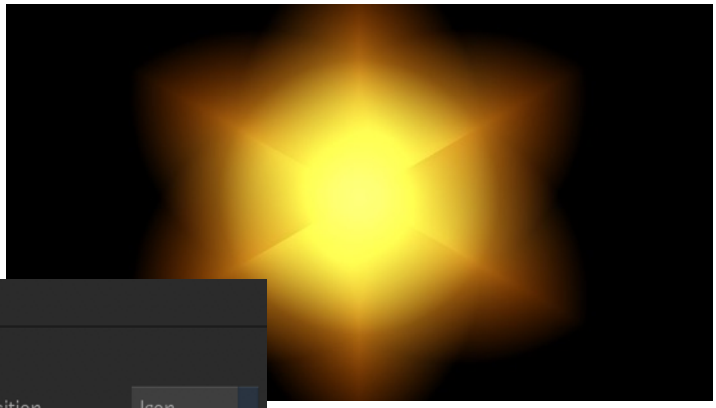


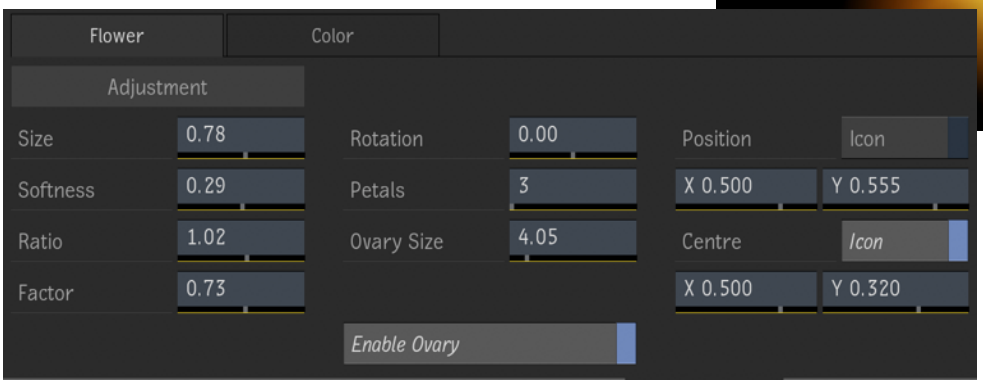
md_Flower

Make a flower or other rotational object



Adjust size and position plus number of petals and color to vary effect. You can even make a clock face or sun. Adjust the number of petals to 30 to make the minutes / seconds indicators. Ovary is the centre of the flower.





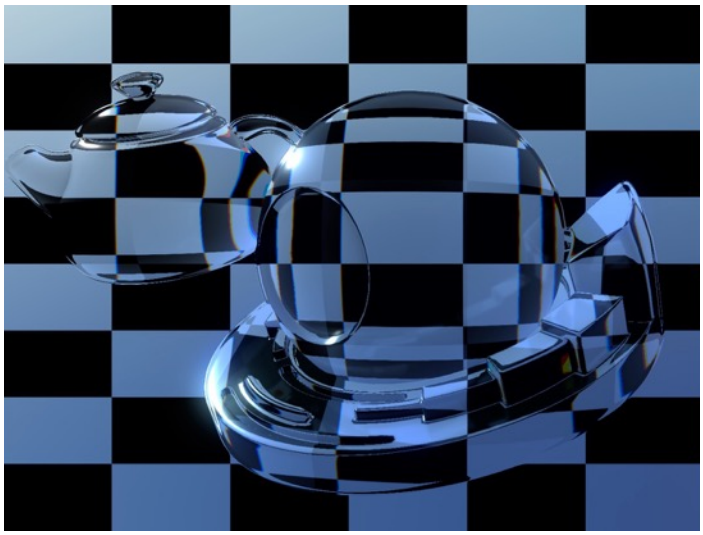
md_FrameCounter

Simple frame count added

A frame counter for your shot. This can be added directly in Action as a cameraFx. Originally made before the new burn-in options became available.

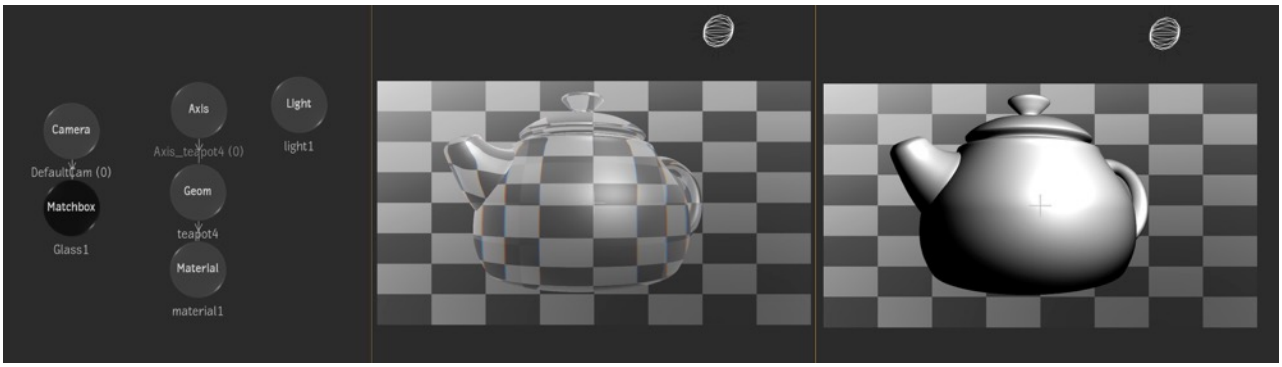
md_GlassSelective

Turns geometry into glass



Glass replaces the texture of each surface with a refracted view of the bg or comp. Utilising the object normals and Position information, the refraction is calculated with an *index* parameter. See Video

Front Mix allows you to bring back the original texture.



Refractive Factor, *Scaling* and *Image offset* allow you to tweak what part of the image is being refracted.

Chromatic adds RGB split based on the amount of refraction.

Texture: **Mirror** or **Clamp** feeds the background through the refraction.

All objects feeds the comp through before Glass was applied.

Other objects feeds the the comp excluding the selected objects. See image below.

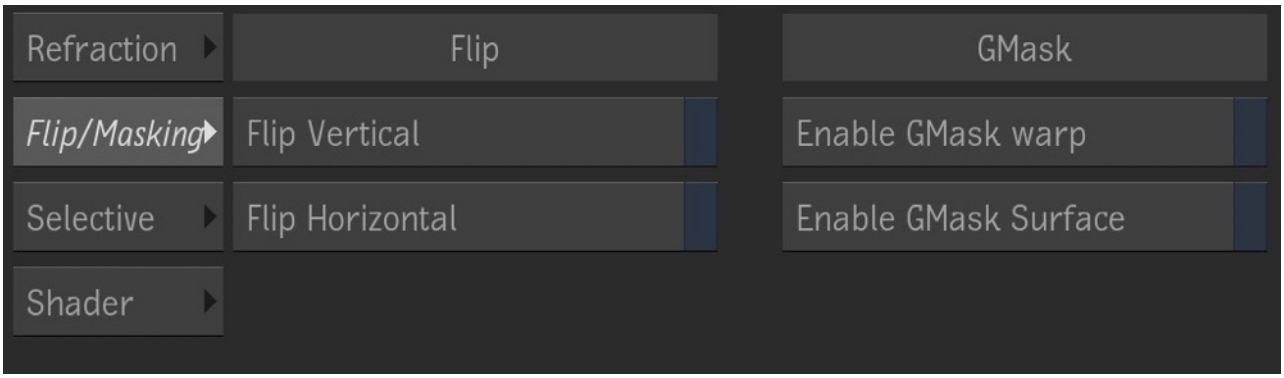
Spec Mix, uses the spec from the geometry and adds it back on top of the glass.

Reflection is also calculated based on the normals. The reflection can be blended over the glass using standard *blend modes*.

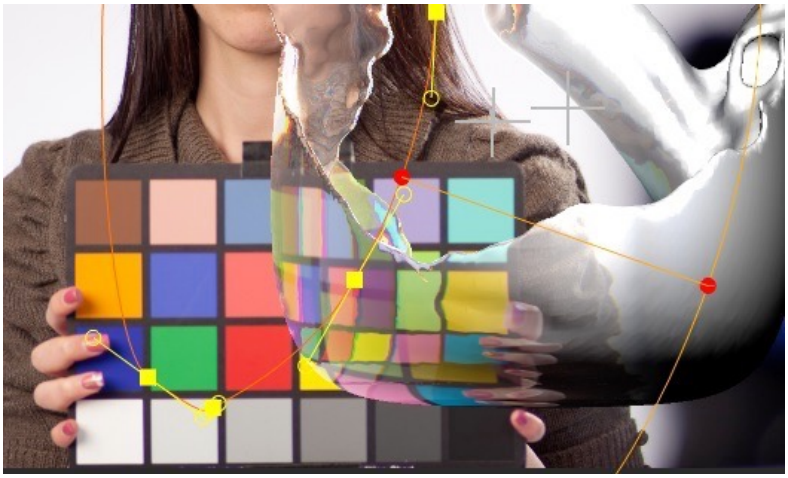
Output: **Final** is the glass effect and **Reflection** is just the reflection for setup viewing purpose.

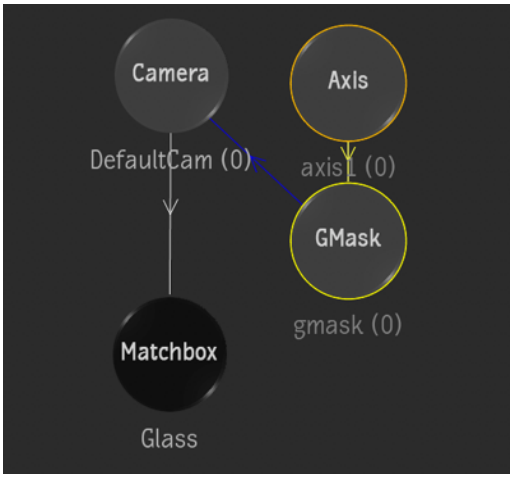
Flip / Masking

Flip allows you to reverse the reflection like looking into a spoon flips the image.



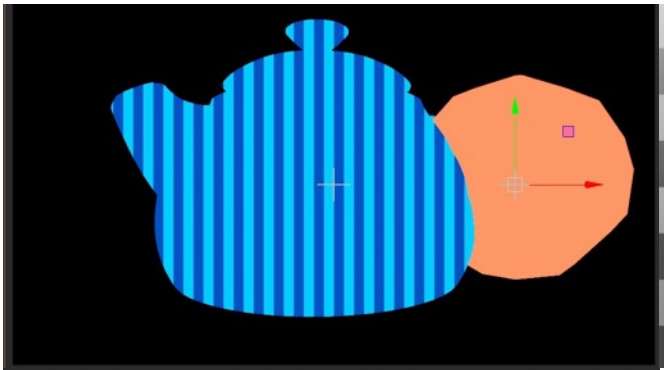
Masking enables the Gmask input which you wire to the camera using Gmask Link.

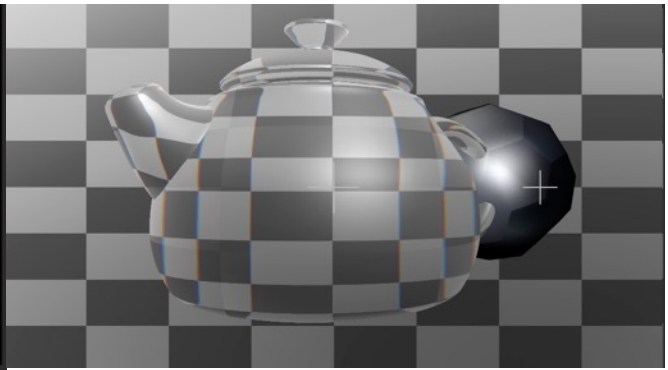


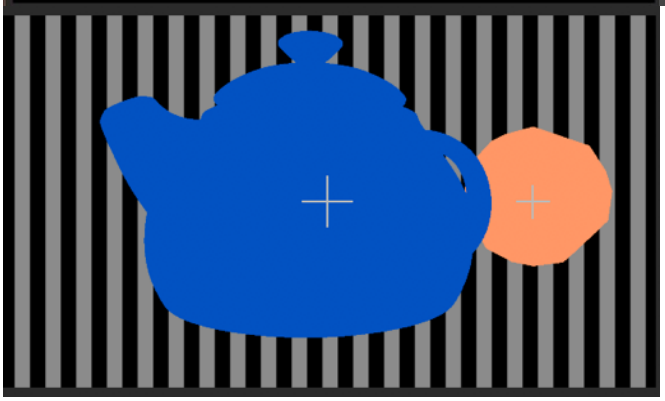


Selective allows you to mask the effect based on standard selective modes, like depth, objectID, color selection etc.

When you select an object using objectID, the object goes stripes as in the image below.



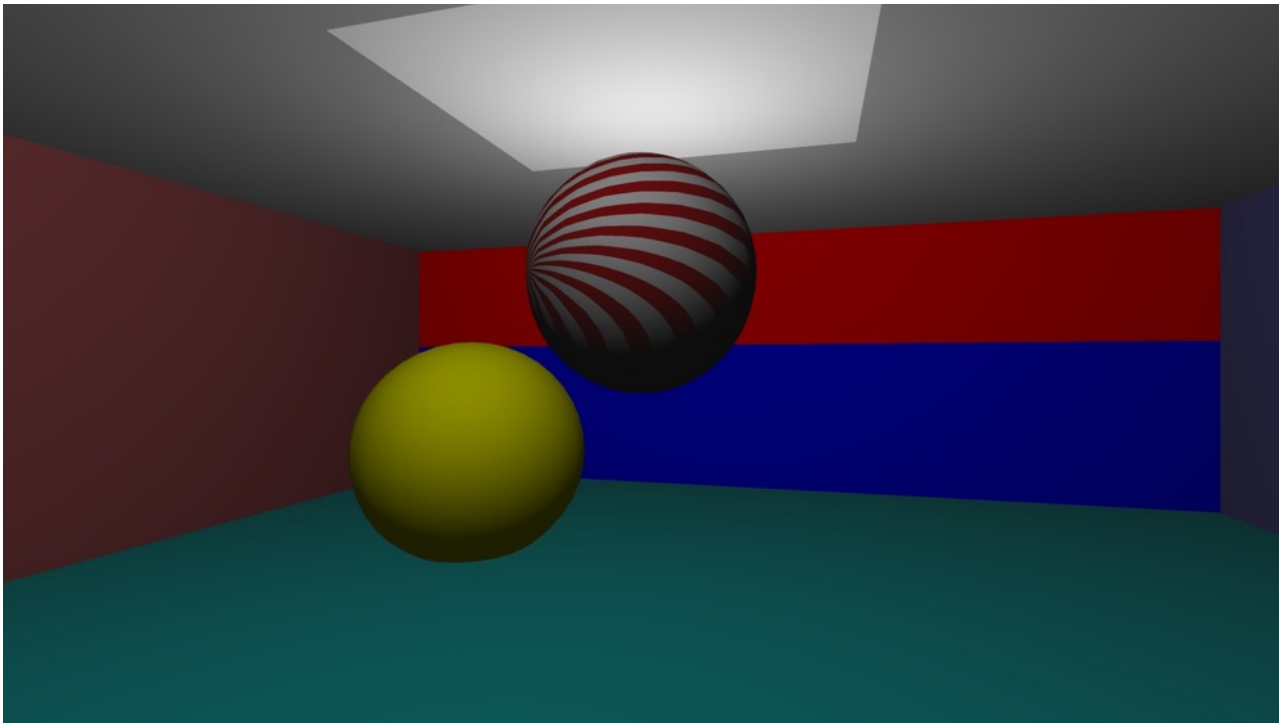




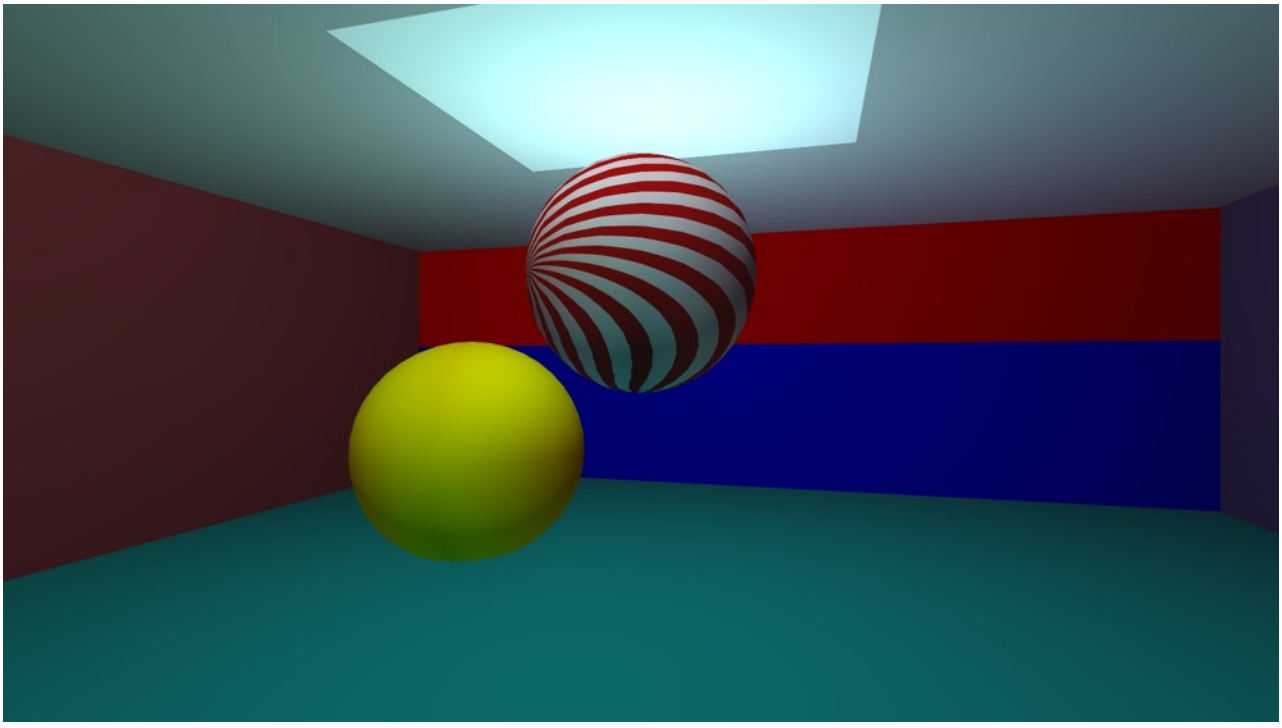
If you get this effect with the bg stripey, you are probably in 8-bit. Which does not work for ObjectID. You must switch action to 16-bit.

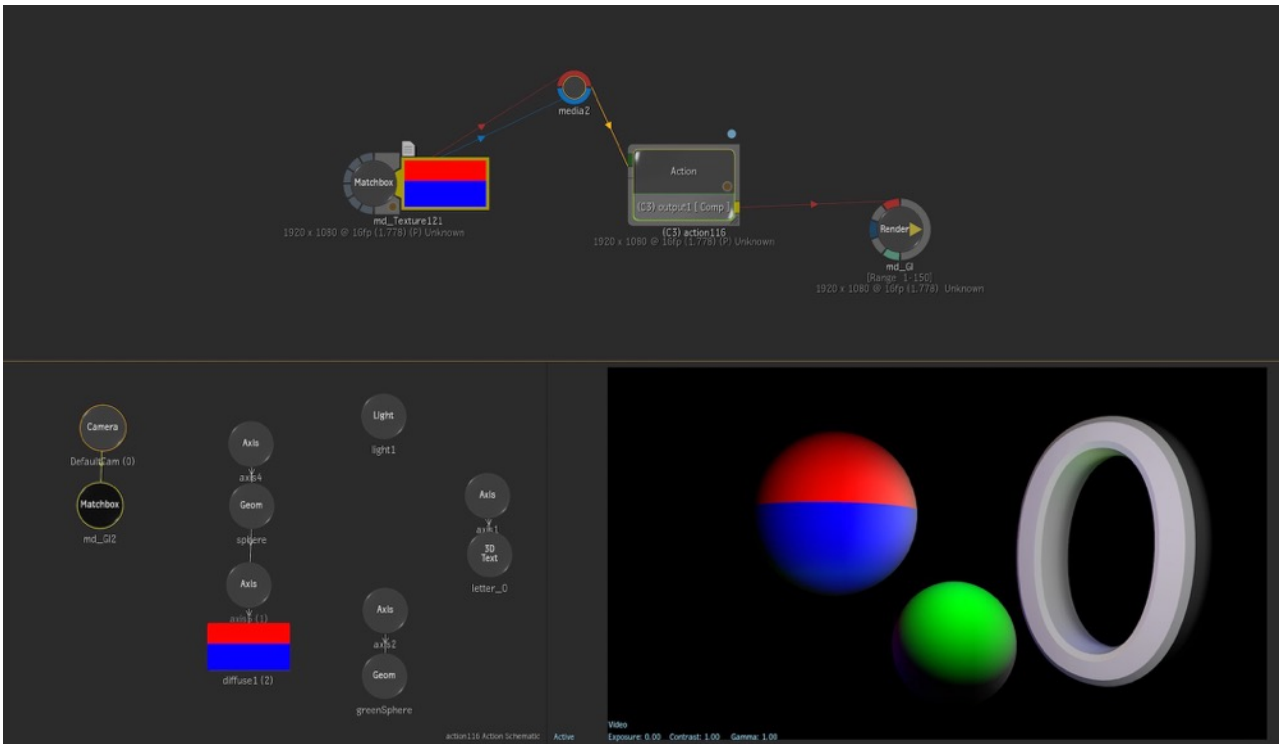
md_GI

CameraFx Global Illumination.



This matchbox adds 2d simulated Global illumination to your 3D scene in action. Using the normals information from the scene, combined with the position data and diffuse information for each pixel, I calculate which pixels would light which pixels and add this light to the scene as in the image below.





The schematic above shows you how to connect your camerafx to add GI to your scene.

Shader controls include gain for each direction and Master gain. You can also use the enable buttons to help determine what each directional GI is doing.

A greater falloff will reduce the distance the light will cast.

Exclude BG uses the action matte to light objects only.

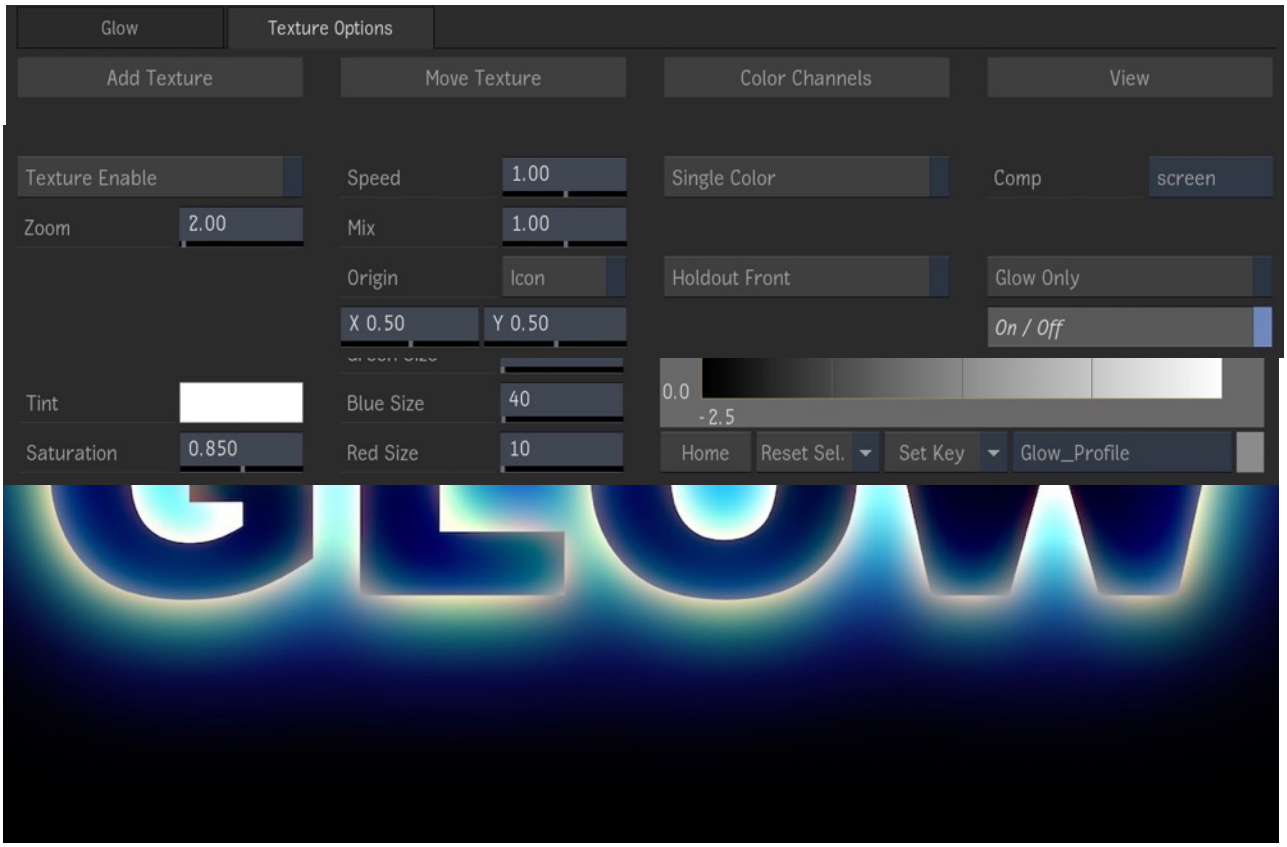
Steps is the number of iterations. More is slower but possibly more accurate. If you are getting a banding fx, try increasing this value.

md_GLOW

Glow comped over input.

Glow takes an input and using threshold, a glow is added to the brighter part of the picture.

Blur Amount is gaussian blur amount. Proportional or X and Y separately. The default has different size glows for each RGB channel. Saturation works on top of this RGB separation. On page 2, you can press single color which disables the separation. The tint is



on top of the separation, or if single color is pressed, the glow will be that color. Threshold and gain are obvious enough, the higher the threshold, the less objects will glow.

On the page 2 menu (image below) you have options for including a texture to give the glow some movement. When you enable the texture, another button pops up to allow separate viewing of the texture only. Disable this button to go back to the glow.

Holdout Front, subtracts the threshold generated matte from the glow. To give a negative effect.

Comp dropdown gives you a choice between add, screen and softlight.

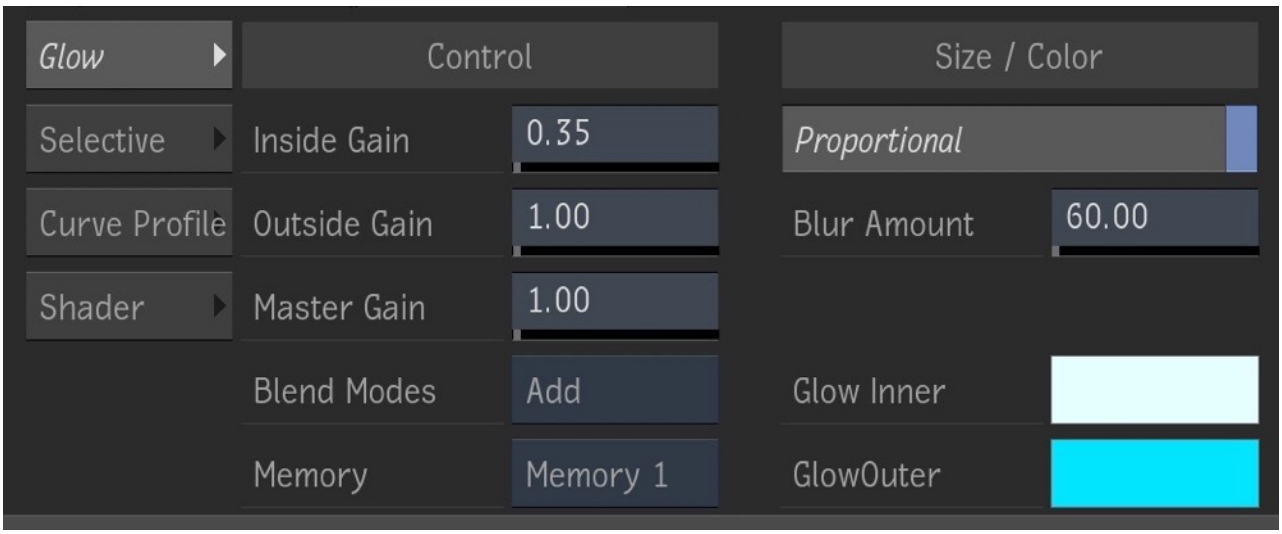
Glow Only lets you output the glow to comp further down your tree.

On/Off allows you to view before and after the glow, which is handy if viewing in context, or a very subtle effect.

md_GlowSelective

CameraFx Glow based on selective.

Glow an object or objects in action using glow selective as a cameraFx.

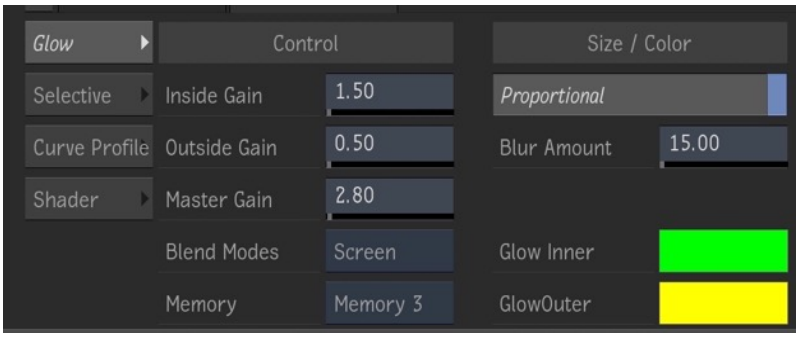


Glow comes with a memory feature with 3 presets. Each parameter has 3 values including the curve profile graph. If you adjust a parameter in one preset, it doesn't effect the other presets. This allows you to flick between options for the client viewing or

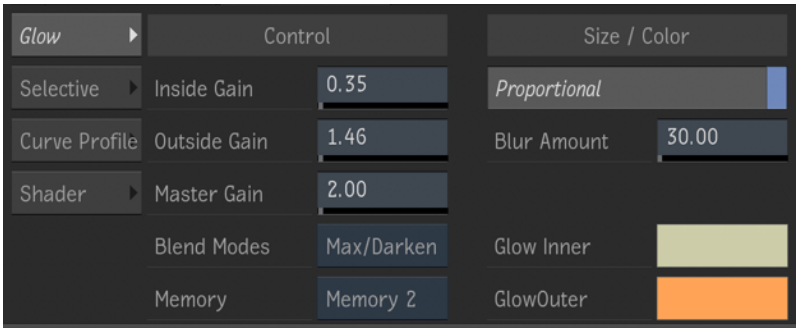
just different presets for different cases.

Inside Gain, is for the glow inside the object.

Outside Gain is for the glow outside the object and Master gain multiplies both. Gains may be negative, which comes in handy if you are using a subtract blend mode.

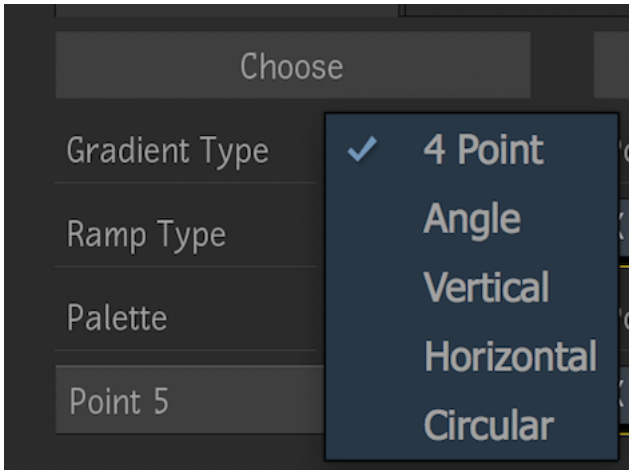


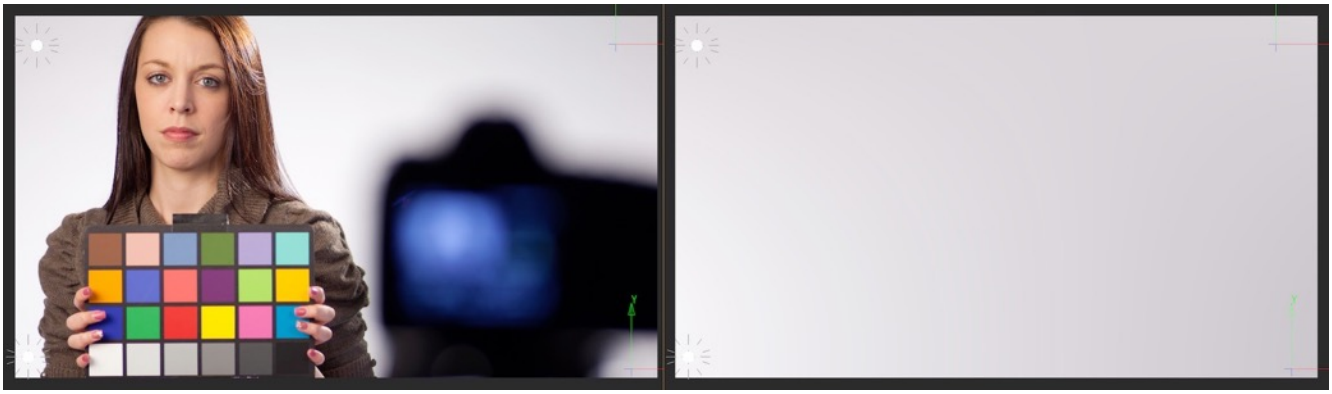
The curve profile represents the outside of the glow at the left and the center of the glow at the right. You can get creative glows by adding points in the curve. This should be adjusted in conjunction with the blending mode.



md_Gradient

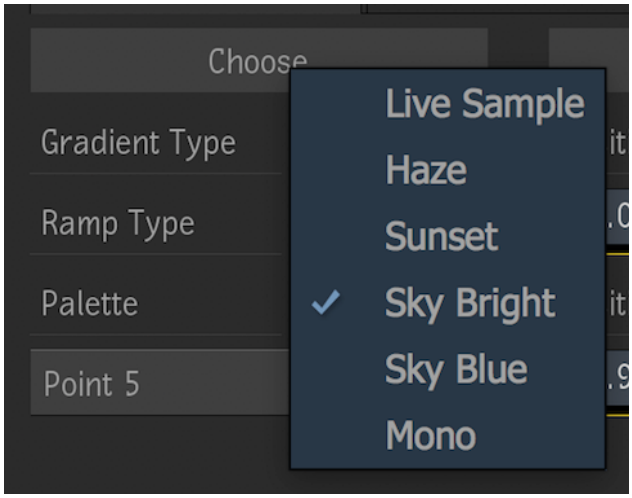
Outputs a gradient of 2, 4 or 5 points





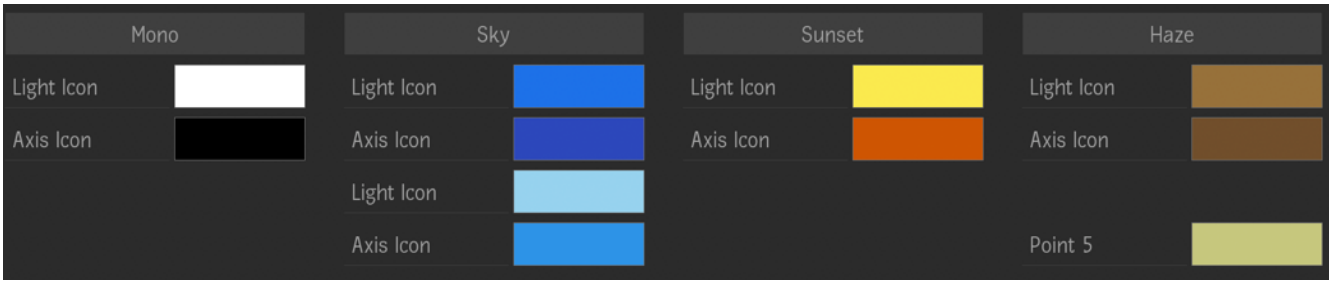
Gradient Type can be **Circular, Horizontal, Vertical, Angle or 4/5 Point**.

Ramp Type can be **Linear, Sine or Graph.** This is the interpolation from one color to the next. Graph allows you to fine tune or make multiple gradations inside one grad. sharper changes in the graph make sharper edges in the gradient.

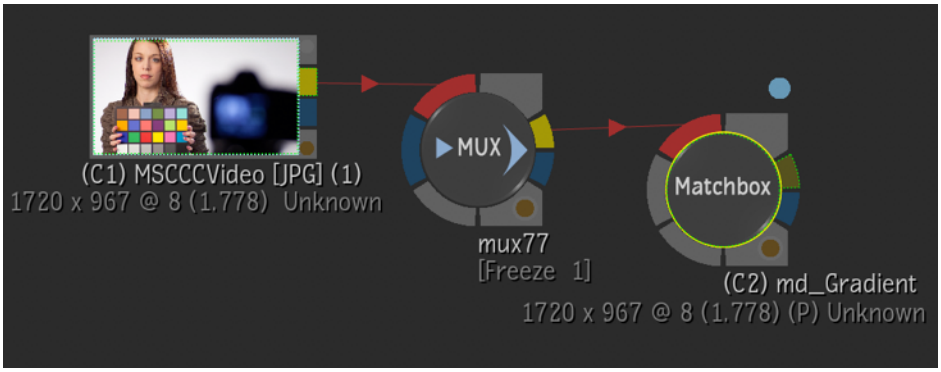


Palette gives you a quick choice of colors that can be adjusted under the palette tab. As well as **Live input**,

which takes the colors from the background. Turn on the axis icons to position the pickers



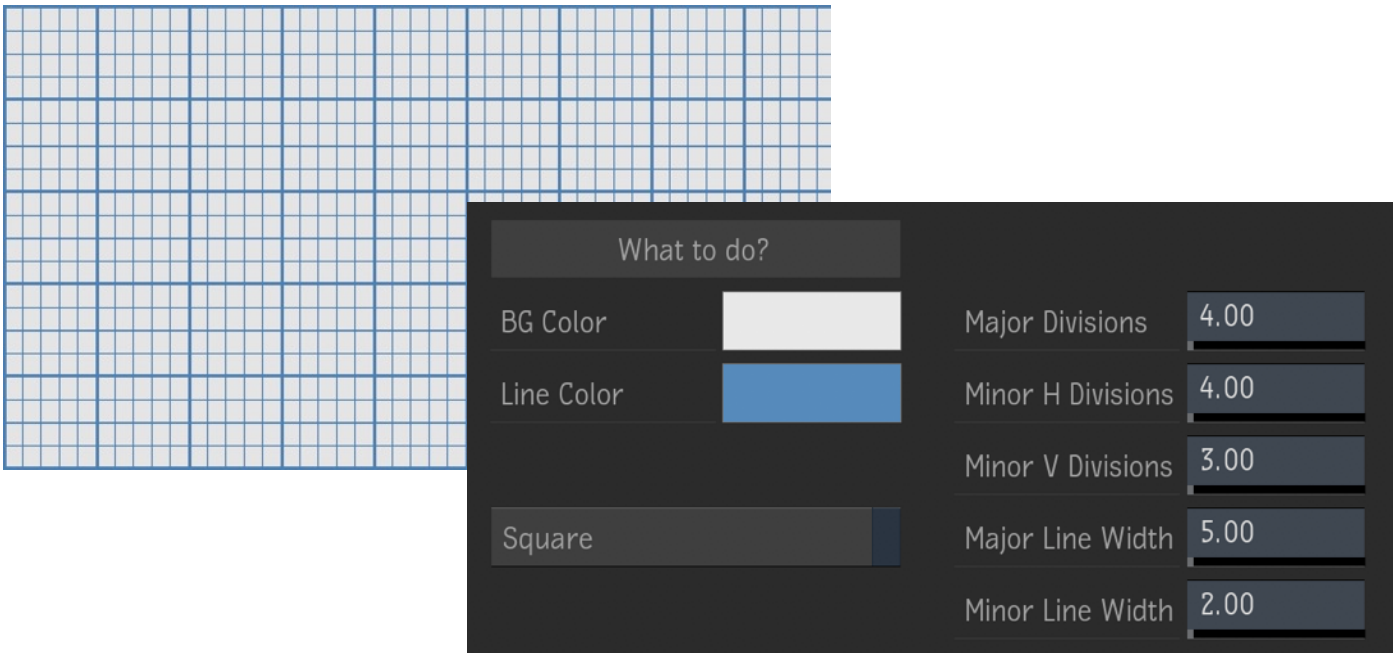
over the correct part of the background. This can be used to make a clean plate. Remember the pickers are live and you may need to MUX freeze the input video.



md_GraphPaper

Another form of grid.

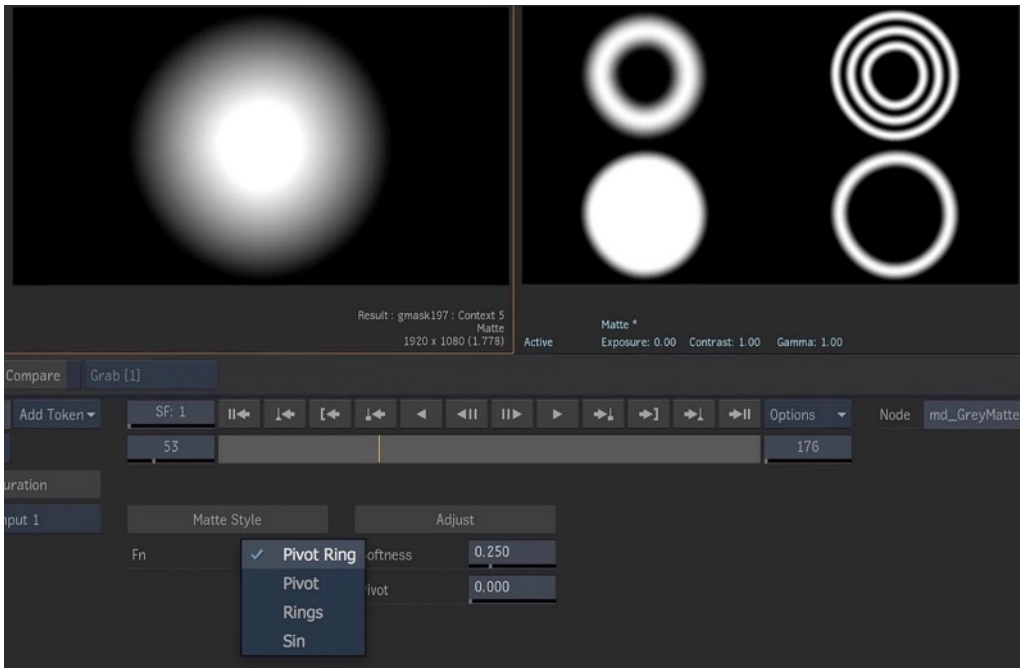
Simple grid with thick and thin lines.



md_GreyMatte

Works on the grey area of a matte

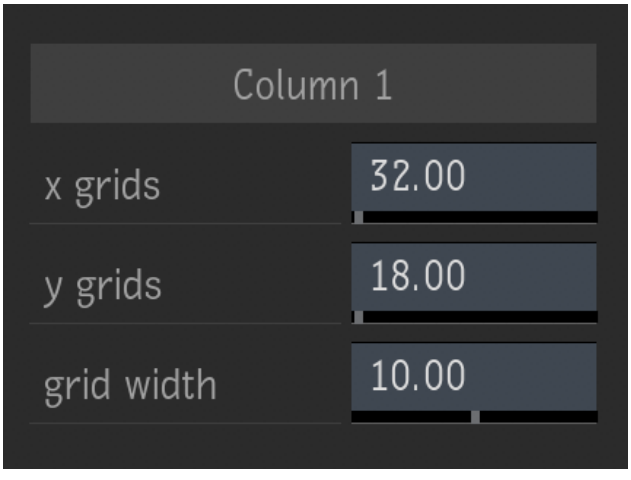
As suggested by John Fegan, this matchbox allows you to change the soft area of a matte in a number of ways. Added a mode for inner / outer softness and pivot point.

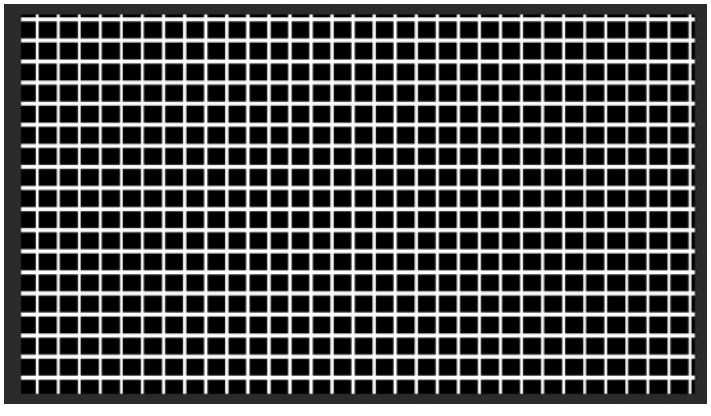


md_Grid

Outputs a grid

Grid is one of my first simple shaders. Outputs a grid of variable size. This can be used to help you line up a perspective.

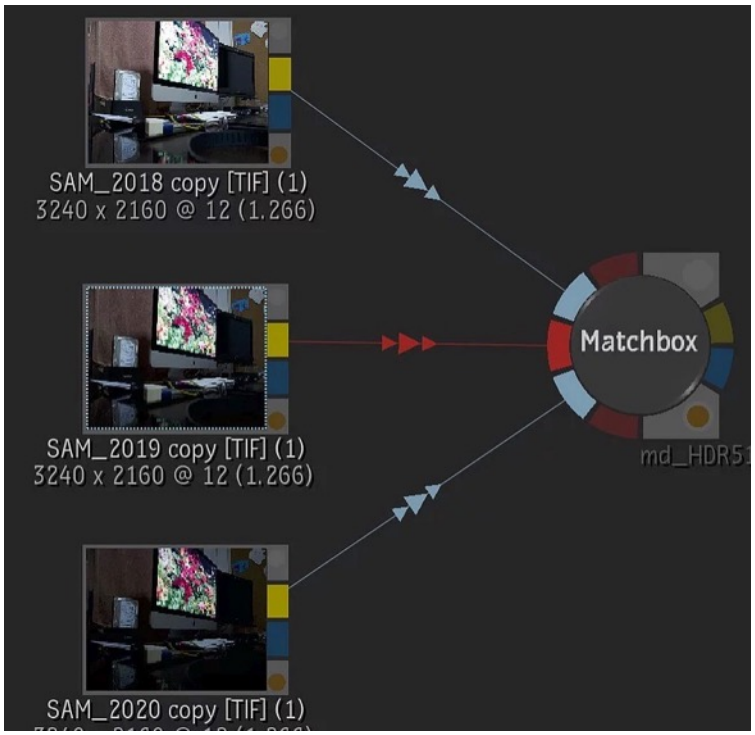


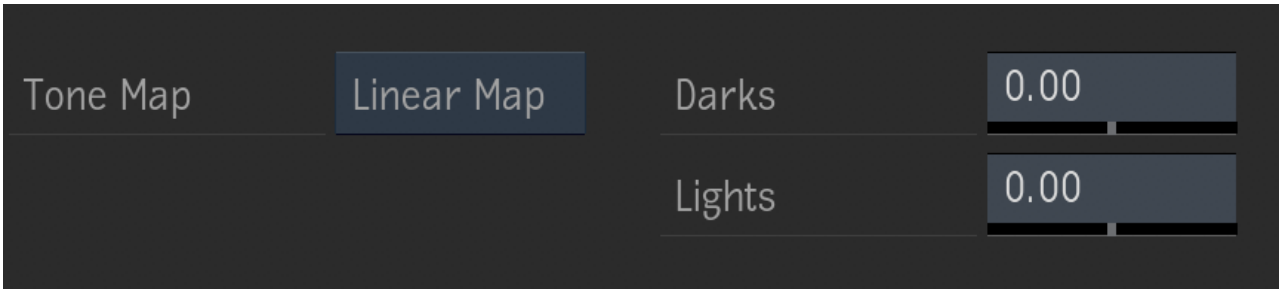


md_HDR

Makes a single image from Multiple exposures.

Use 3 or 5 exposures and combine into 1 image. Like in photoshop. Number of inputs is automatically detected.

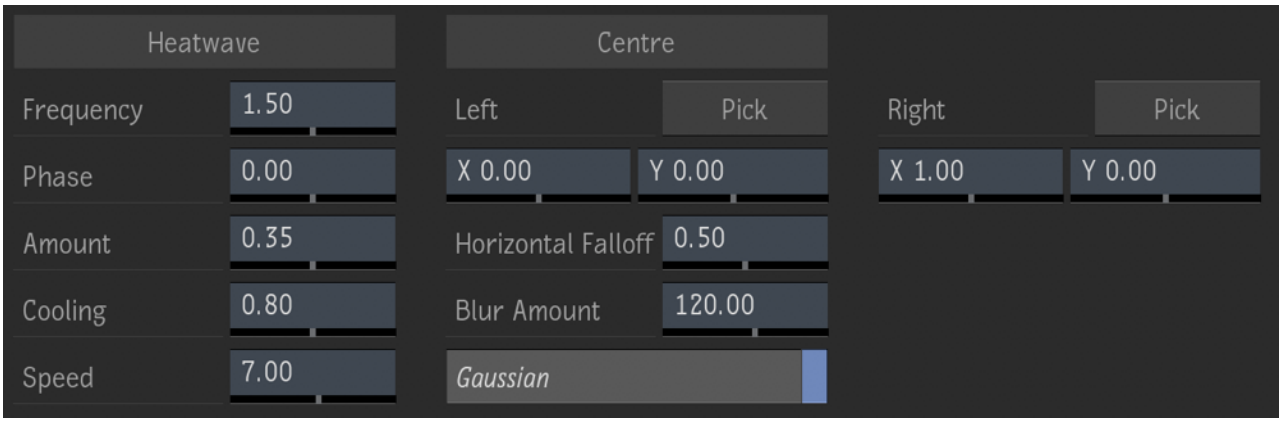




Linear map gives control over darks and lights. While Log map uses a curve for more control.

md_Heatwave

Ripples the picture like a heat source.

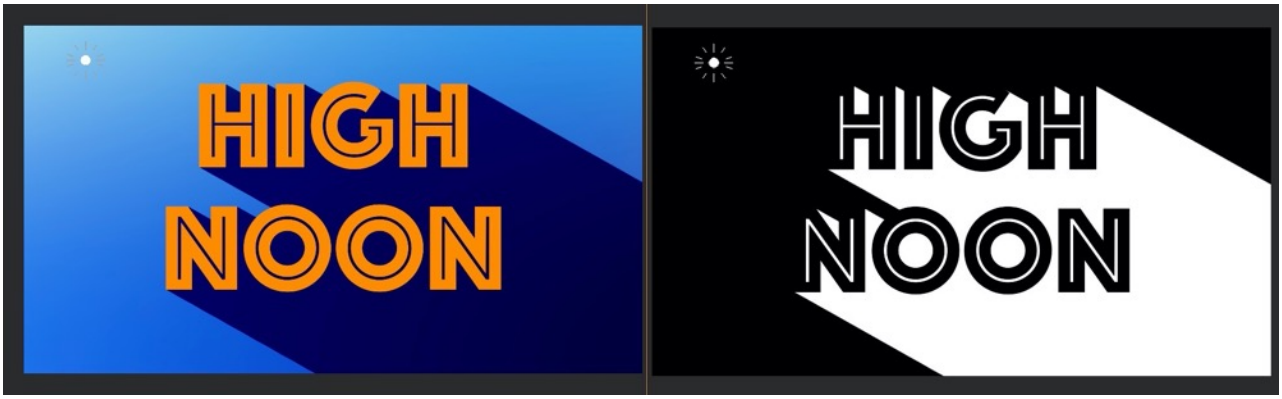


This fx is similar to when the ripple you get from a heat source in front of camera.

You can adjust horizontal left and right as well as fall off or cooling. Blur Amount smears the stretchy parts of the ripple.

md_HighNoon

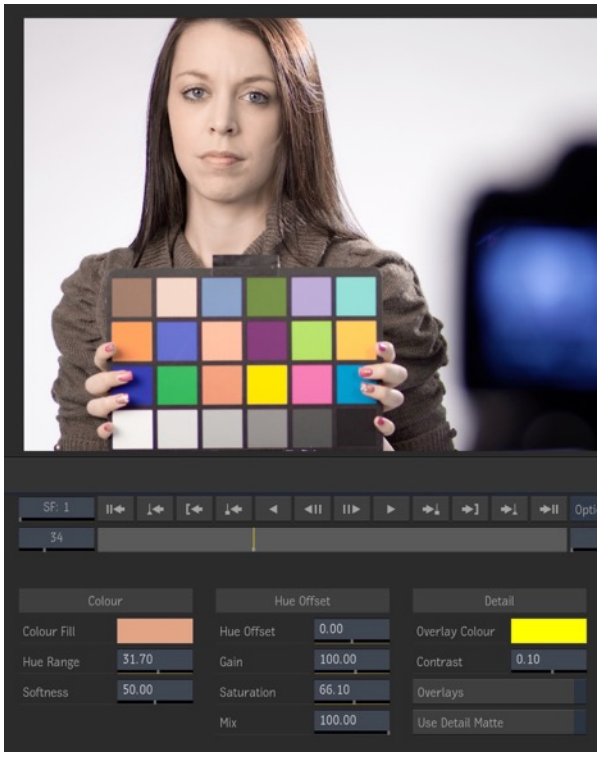
Makes a unique style dropshadow.



Quite a nice drop shadow effect. You can fade the length or mix the density. Iterations = quality of the edge.

md_Huematch

Draws hues towards a target Hue.



Select a target hue, like in this case, the skin tone. All hues that are close to the target will be drawn towards the target, based on the hue range and softness. This has the effect of making red blemishes on a face change to the preferred skin colour. Also brown patches of grass will tend to disappear towards the green selection. You can use it creatively to desaturate a particular hue.

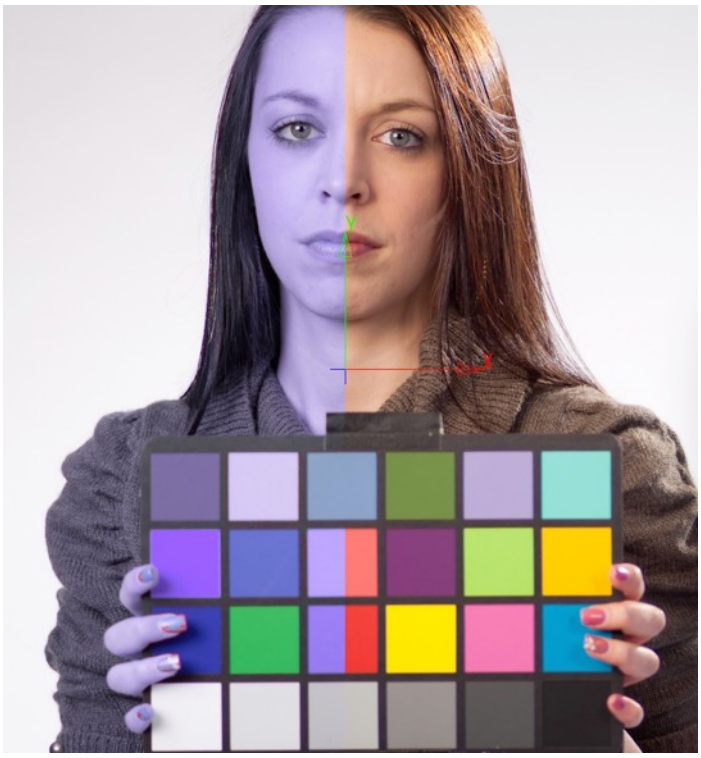
Hue offset rotates the affected hue.

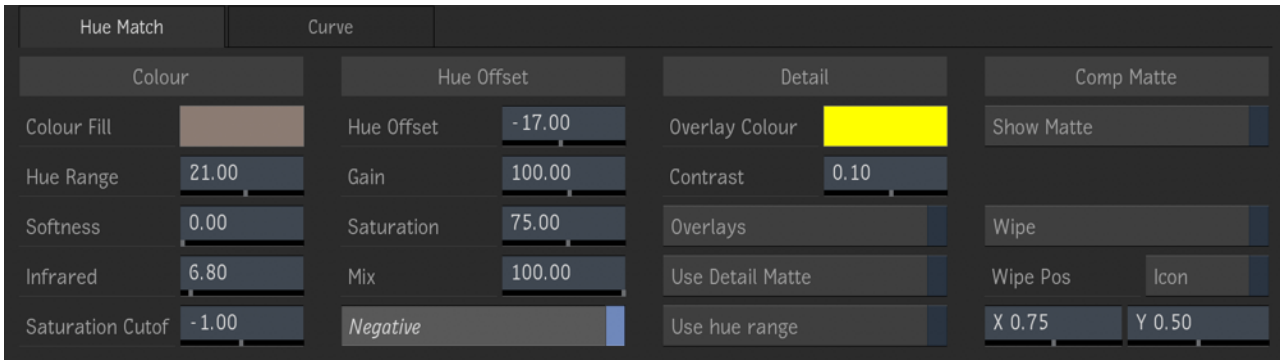
Mix mixes off the effect.

Use Detail brings back the edges using a contrast filter.

Overlays shows you the contrast.

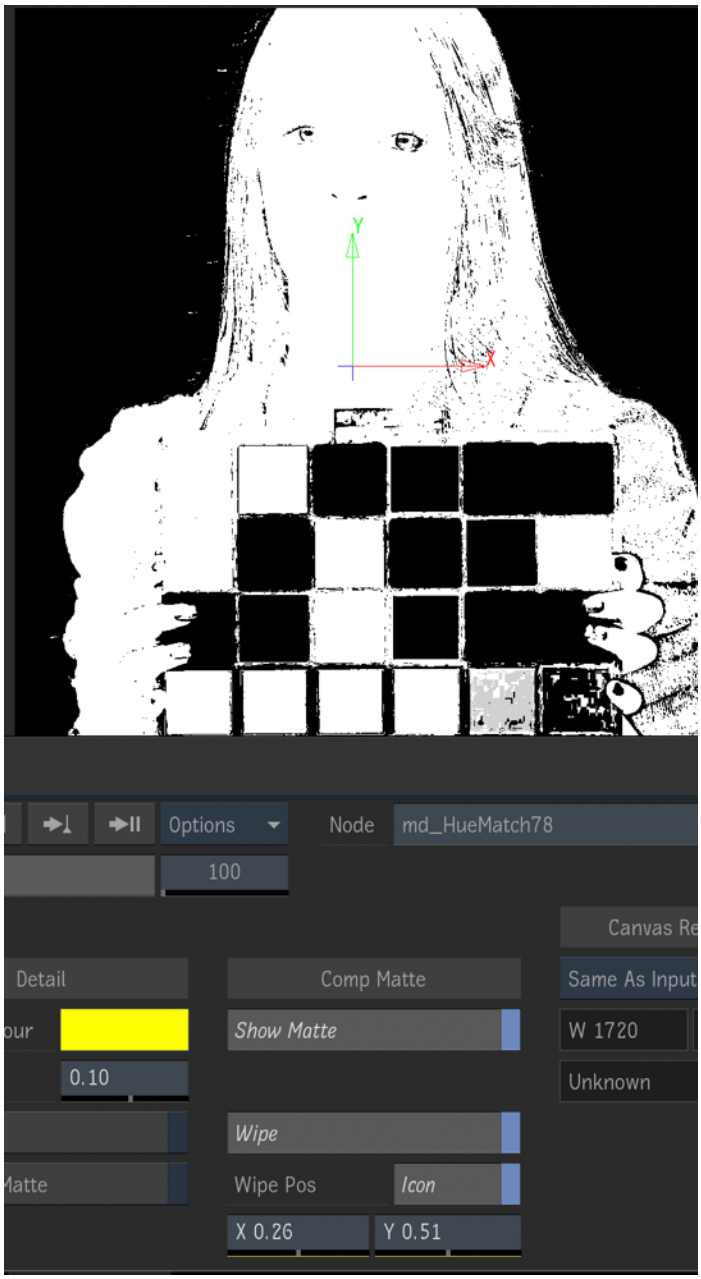
Wipe wipes between the output and the bg input. This allows you to see what you're doing.





ShowMatte shows a difference matte between input and output so you can see what is being affected.

It's quite a handy tool and deserves some investigation.



md_Infrared

Converts to infrared looking picture.

Default negative looks like infrared footage. You can however limit the effect to a hue range or saturation cutoff to achieve quite different effects.

Colour Fill is the hue selection for hue range button.

Hue Range is the hue effected in degrees.

Softness is a ramp off of the effect based on the hue.

Infrared is the range of hues that will be used to replace existing hues.

Saturation Cutoff helps limit the effected area.

Hue Offset is a hue rotate.

Gain / Saturation, standard adjustments. *Mix* mixes back to the input picture. *Negative* inverts luminance.

Overlay Colour is the colour seen when overlays is on.

Contrast is what part of the detail from the input you would like to keep.

Overlays displays the contrast selection.

Use Detail Map, will bring back the input using the contrast selection.

Use Hue Range limits the effect to a hue and softness range.

Show Matte shows the difference between input and output

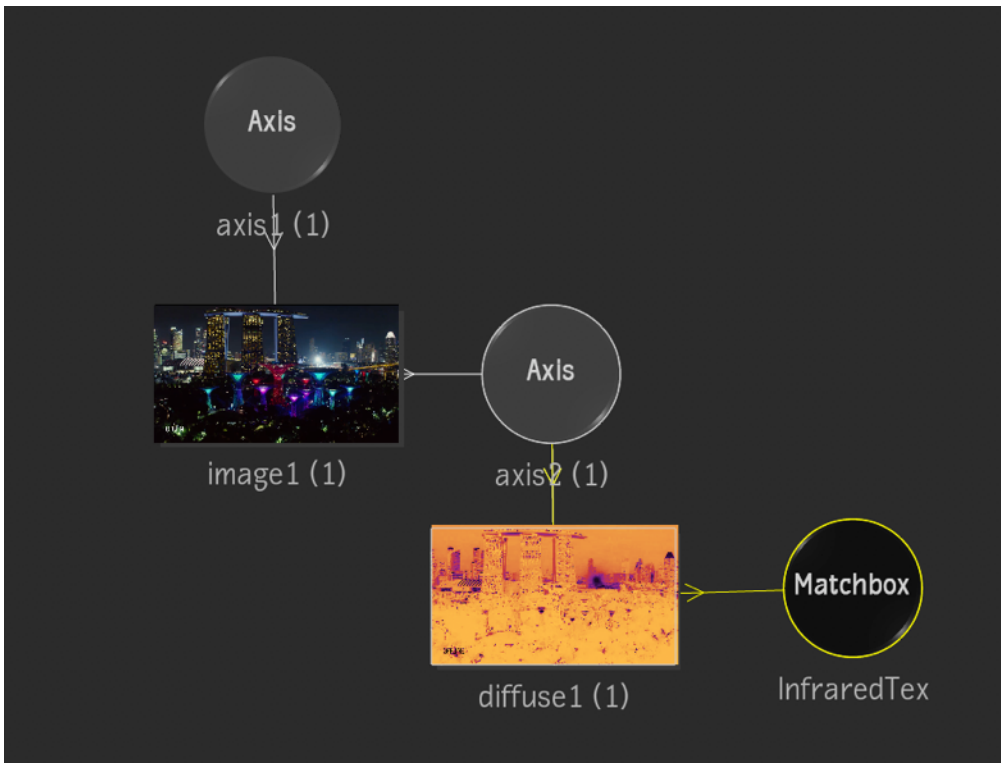
Wipe wipes between bg input and output. Can help if you are trying to match another shot. Turn on the *icon* and drag it to see the other image.

HueCurve allows you to adjust the hue curve in a non linear way. Please show me when you figure out when to use this one.

md_InfraredTex

Converts to infrared looking picture.

Same as Infrared, but works as a diffuse texture.



md_LAB

Converts RGB to LAB and LAB Grading.

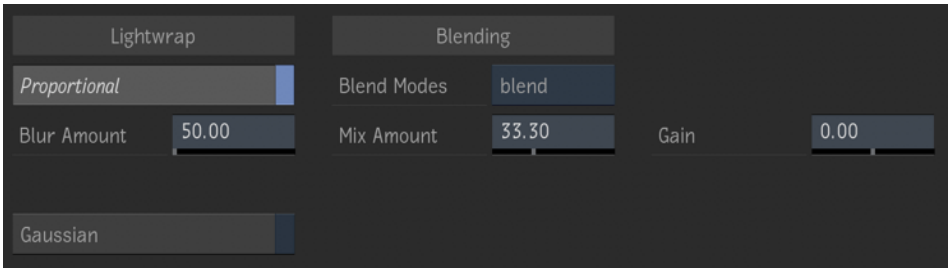
The Lab color space describes mathematically all perceivable colors in the three dimensions L for lightness and a and b for the color opponents green–red and blue–yellow. md_LAB converts RGB to LAB and LAB to RGB. You can use your own manipulations between these two or you can use the LAB Grade mode, which has Gain, Offset and Contrast of L, A and B.

The other feature of md_LAB is color Contrast. Which contrasts A and B in sync, but leaves L alone. This has the effect of vibrancy. So you can make the colours ping. Play with the curve for even more interesting effects.

md_Lightwrap

Wraps the bg over the fg comp.

Lightwrap blurs the bg and blends it over the fg through the matte. You have 3 blend modes. Blend, Add and Screen. You can adjust the blur amount, mix the fx and gain in the case of blend mode.



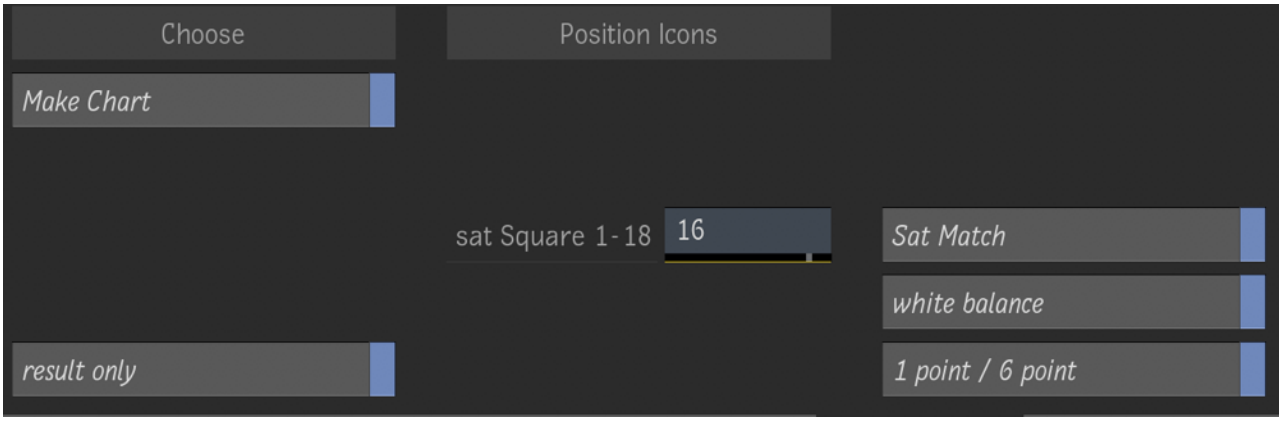
md_Macbeth

macbeth white balance.

Can do a 1 point or 6 point white balance, based on the macbeth chart black - white patches. Plan was to balance the whole chart, but that magic has not materialised yet.

Sat Match currently takes the saturation of 1 patch and compares it with the macbeth color for that patch and matches the saturation.

Make Chart shows a chart with the Macbeth colors.



Result only show the output balanced picture.

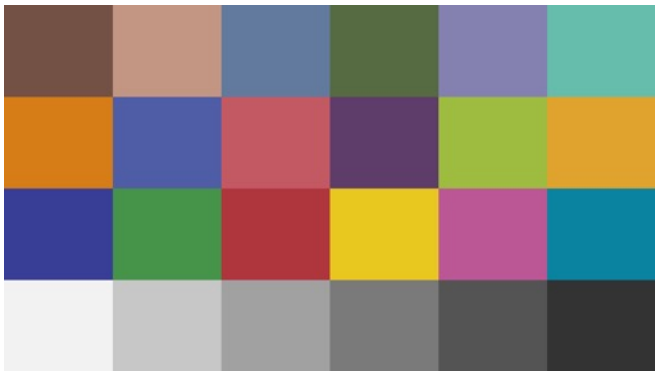
If *Result only* is off and *Make Chart* is off it shows the sampled colors of your chart. You use this to position the corners correctly.

Note: This shader is still a work in progress

md_MacbethChart

Generates a Macbeth Chart.

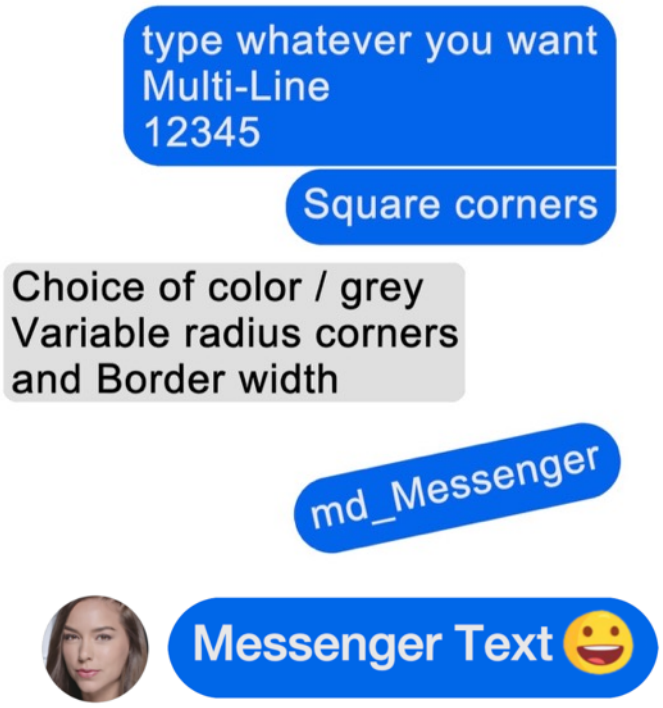
Not much to see here. You can change the chart colors if you wish.



md_Messenger

Generates messenger style backdrop.

Creates round corner boxes below your text. Variable corner radius and border width. Enable buttons for each corner in case you want square corners to join two boxes together as in the pic to the right.

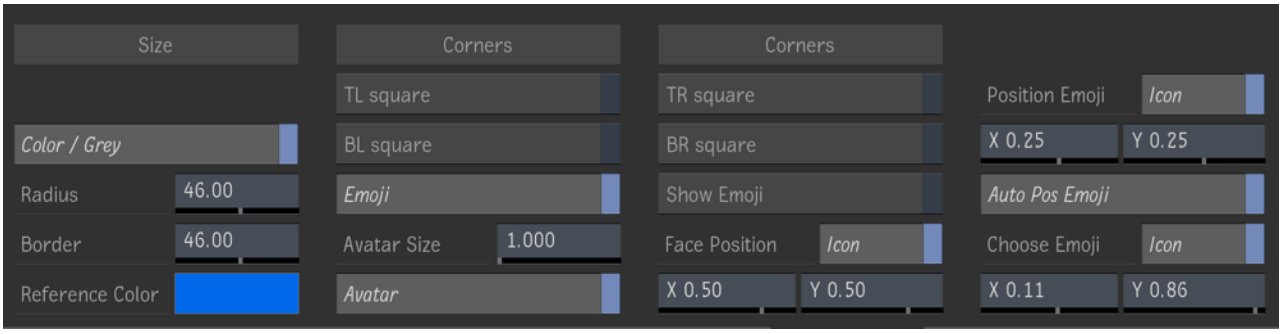


A-input can be from text or graphic matte. B-input is for your avatar.

Color option switches between color/white and grey/black. Enable the avatar button to include your image to the left in a circle. Use the centre axis to adjust your avatar position and Avatar size after positioning.

Also has a button to add in a single emoji.

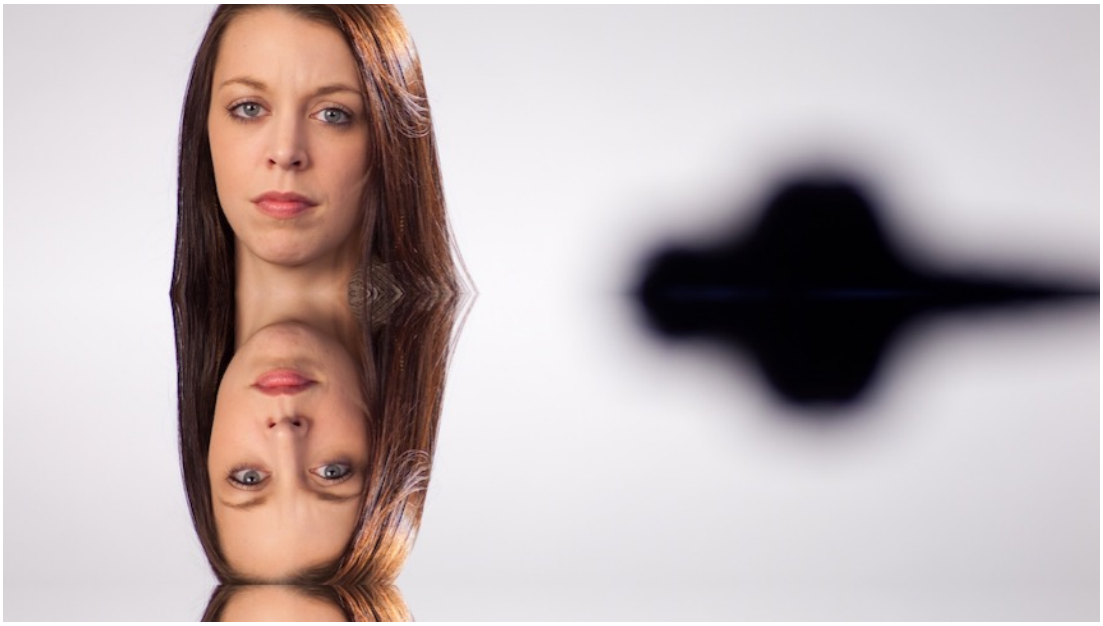
Enable Emoji button, use the light icon to select your emoji then press the Show Emoji button off. Then press Auto pos Emoji to make extra space in your backdrop for the emoji. Also, use the lower axis icon to fine tune your emoji position.



md_Mirror

Mirror around a point

Mirror horizontal, vertical or both.

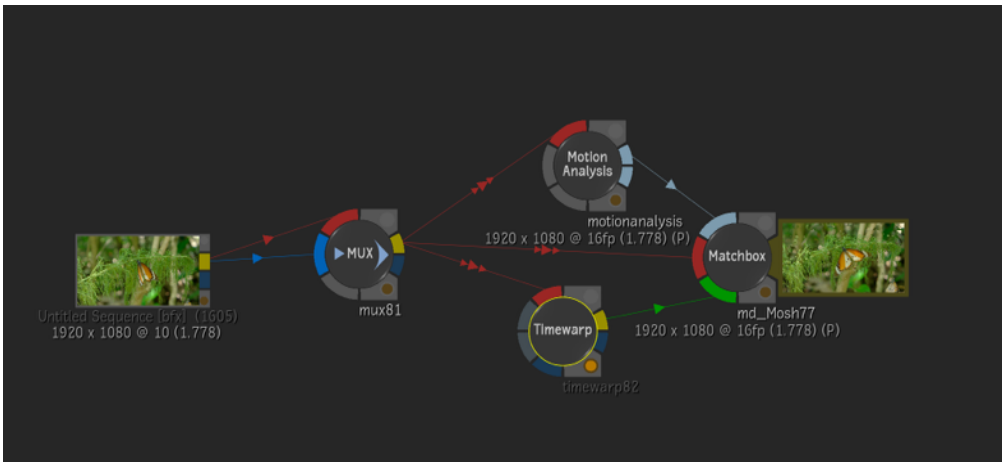


md_Mix

Mix or wipe A / B sources

Quick way to mix or compare 2 parts of your batch tree.

VERY HANDY



md_MosaicArt

Mosaic squares or triangles

Mosaic in squares or triangles, or a combination of both. Hmmm… let's just say also WIP.

md_Mosh

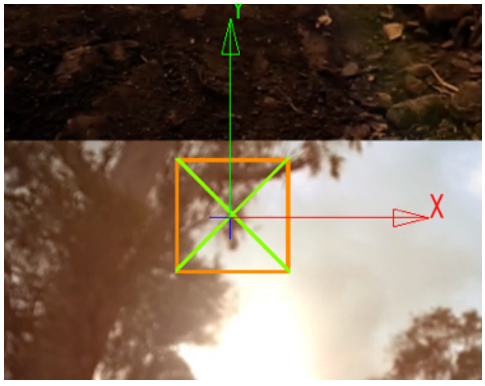
Moshes two pictures together.

Simulates bad internet bandwidth. Allows you to mosh between two sources. Use a motion analysis on one image to give a reason for the mosh. Using threshold, you can transition between images.

If you only have one video, and you want to simulate bad bandwidth, you can use a timewarp of the input to make the 2nd source, and vary it between 0% and 200% speed. So it is approximately in sync, but will slip a few frames and mosh edges will freeze and jump.

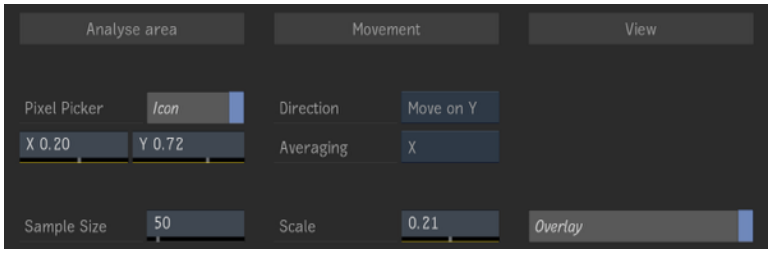
md_MoveLum

Move 1 pic based on another's luminance.



Use a strength video to move another picture in x or y or x and y. This was a requested shader, so I'm not sure what to do with it. x or y are driven by lum. "x and y" is driven by R and G.

It comes with a sample size in pixels, which will help average the movement. You can also scale the amount of movement.

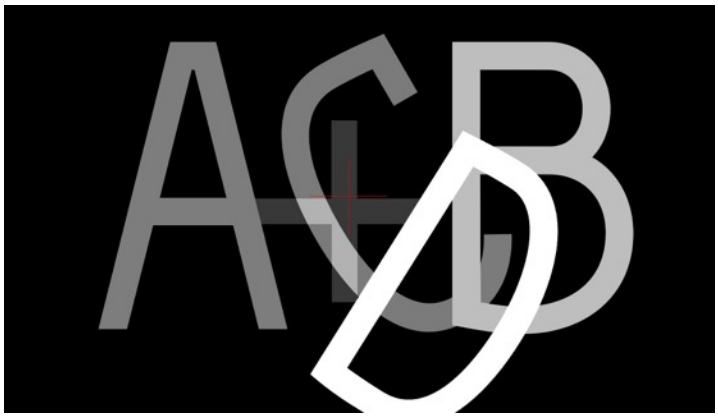


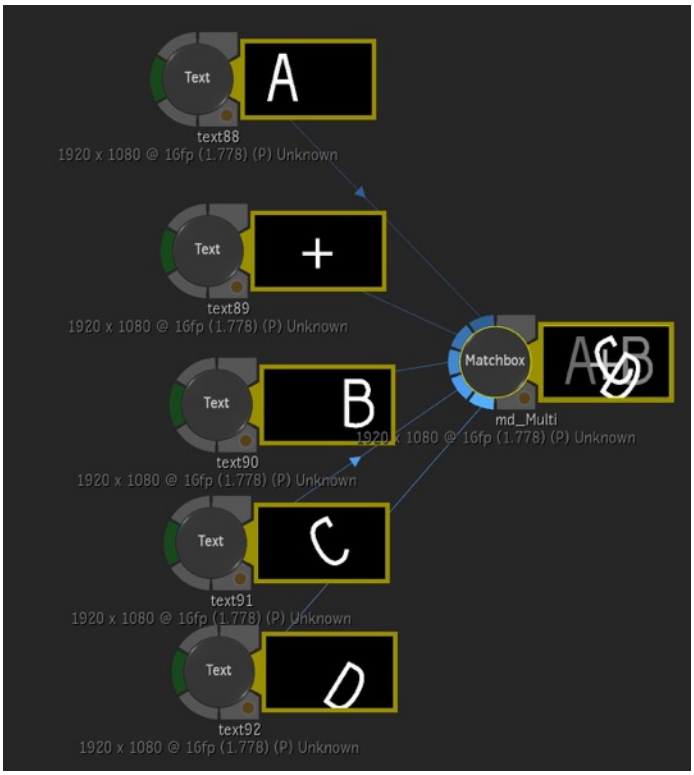
md_Multi

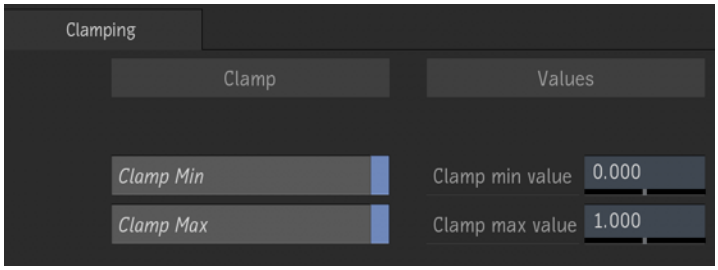
Combine 6 mattes with blend modes.

Multiple Logic Ops in one node.

Add 2 - 6 mattes together with various blend modes and transparencies. each action can be inverted. New enable buttons and clamp values.

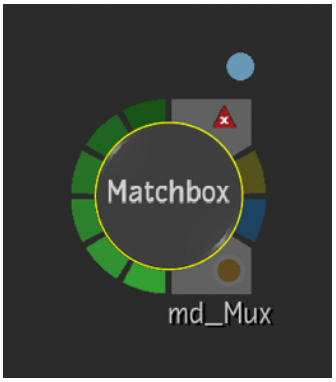




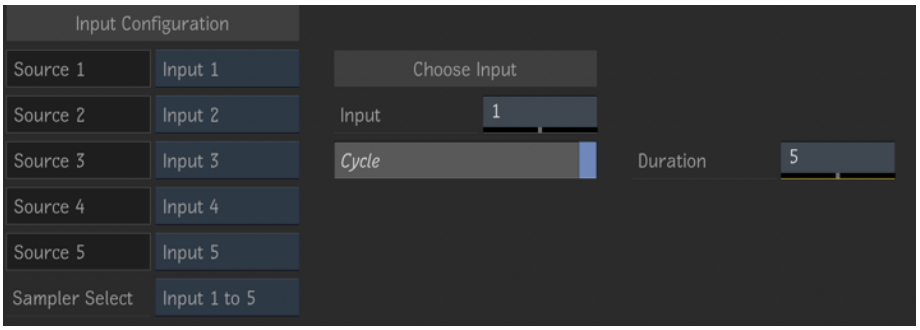


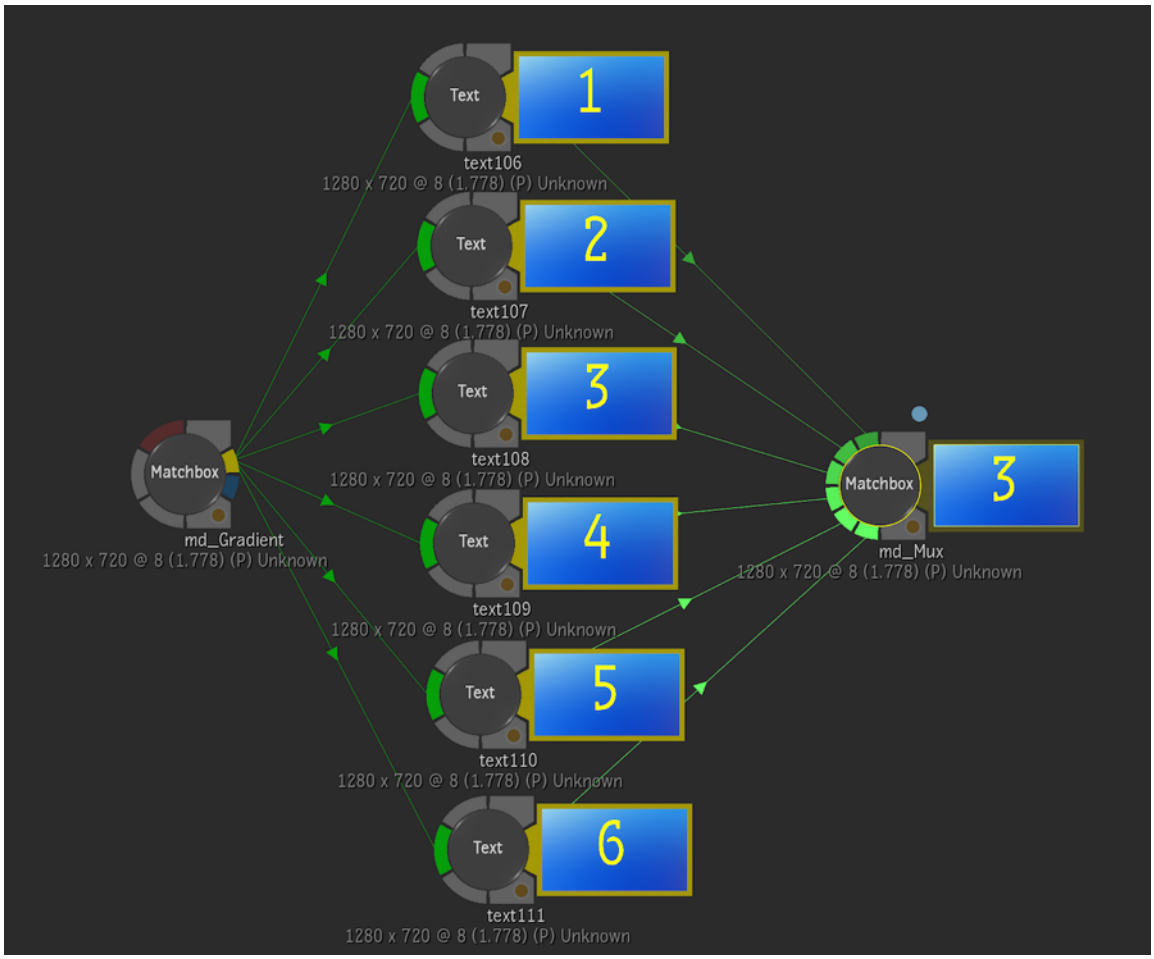
md_Mux

Switch between up to 6 inputs with cycle mode.



Like the Autodesk Mux node, without the matte input. Cycle auto detects the number of inputs and will cycle input every x frames.





md_Neon

Converts regular text to neon.

Takes a regular black and white graphic and makes a Neon Look Graphic.

md_NeonStranger

Same as Neon with a texture.

You can animate a texture through the neon with the light source icon.

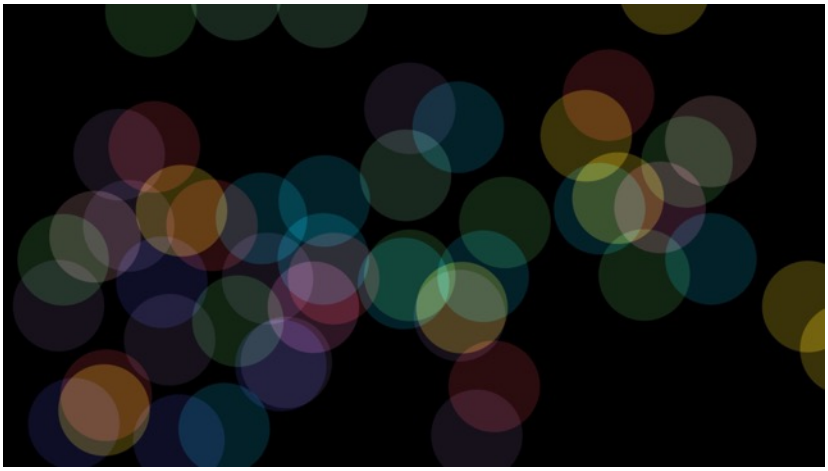
To see the texture, press *Show Texture* button.

md_NightclubSelective

Add multiple random lightsources

Moving light sources that respect scene normals and depth. Multiple blend modes, palettes and light shapes, combined with gain and mix values can create many looks.

See video here.



Page 1 menu has all the controls.

Number of Lights is exactly that.

Light size, you may need to vary this in conjunction with Screen size to get the spacing you want.

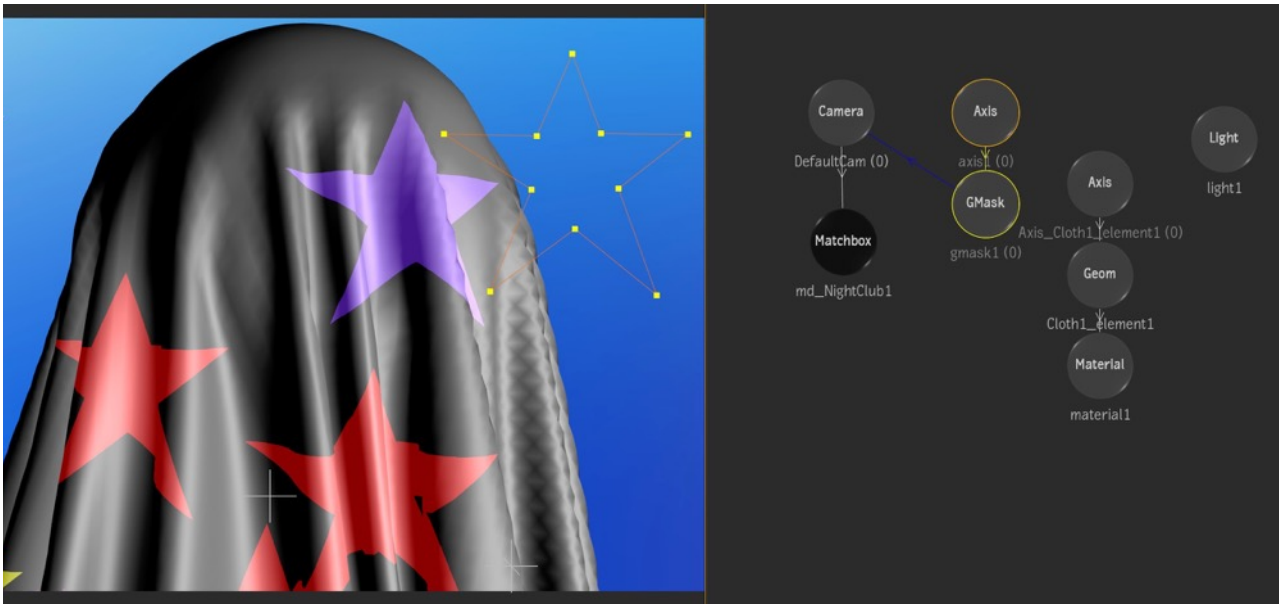
Screen Size means the area the lights can move around in. If you make it smaller, you will need less lights to fill the screen. When the Screen Size is bigger, some lights may spend their time off screen in their random wanderings.

Min Softness, is basically the sharpest a light will appear when it is in the z depth centre.

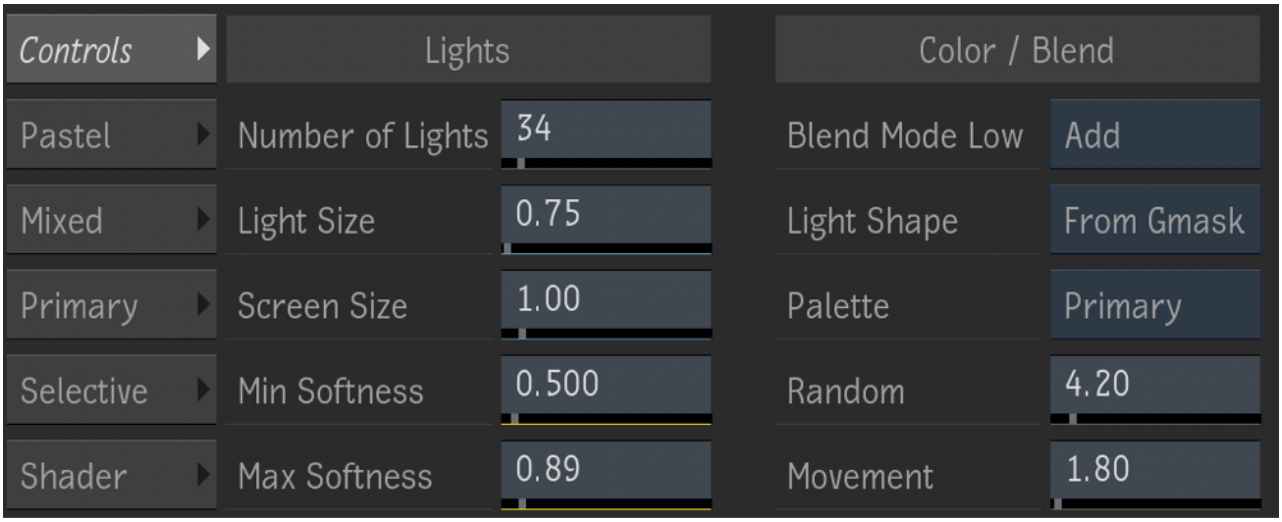
Max softness is the softest a light will appear when it is close to or far away from camera.

Blend Mode has all the usual suspects. **Add/Screen/Divide/Mult** etc.

Light Shape, choice of **circle, square, rectangle, From Gmask**



If you are trying the From Gmask option, above is an example of the Gmask link required. Also see below is the settings I used. Note that the Gmask is in the top right corner. Also Light Size is set to .75, and that softness does not work. You would need to add softness to your mask, and it would be uniform and not responding to zDepth.



There are 3 palettes supplied. **Pastel, Mixed** and **Primary.** You can change the color of any of the lights inside the palette section.

Random is the seed for the movement.

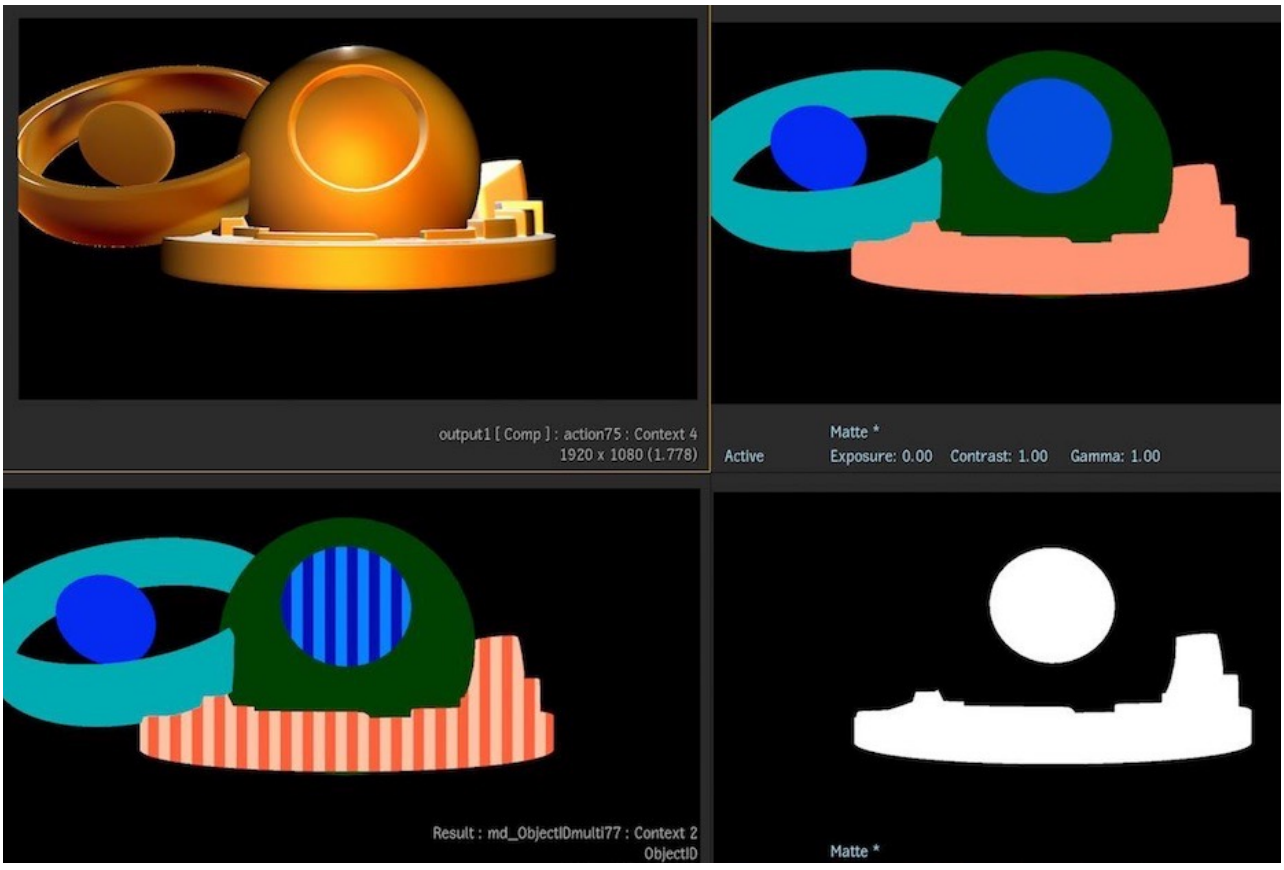
Movement is the distance. Although, these two could be interlinked.

Selective operates the same as other Selective. See Glass Selective for more information.

md_ObjectID_Picker

Adds together objectID mattes.

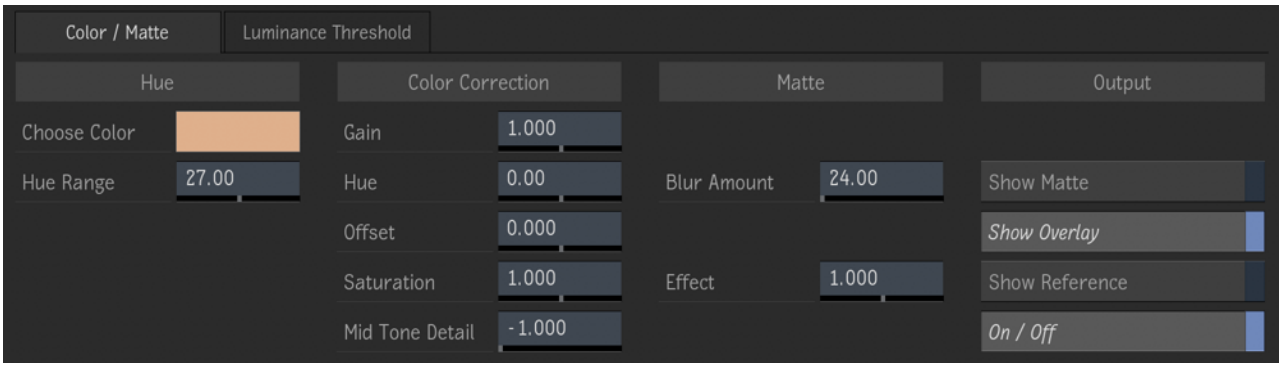
Simply create an objectID output from action for your scene and use this shader to select various objects to use to form a matte

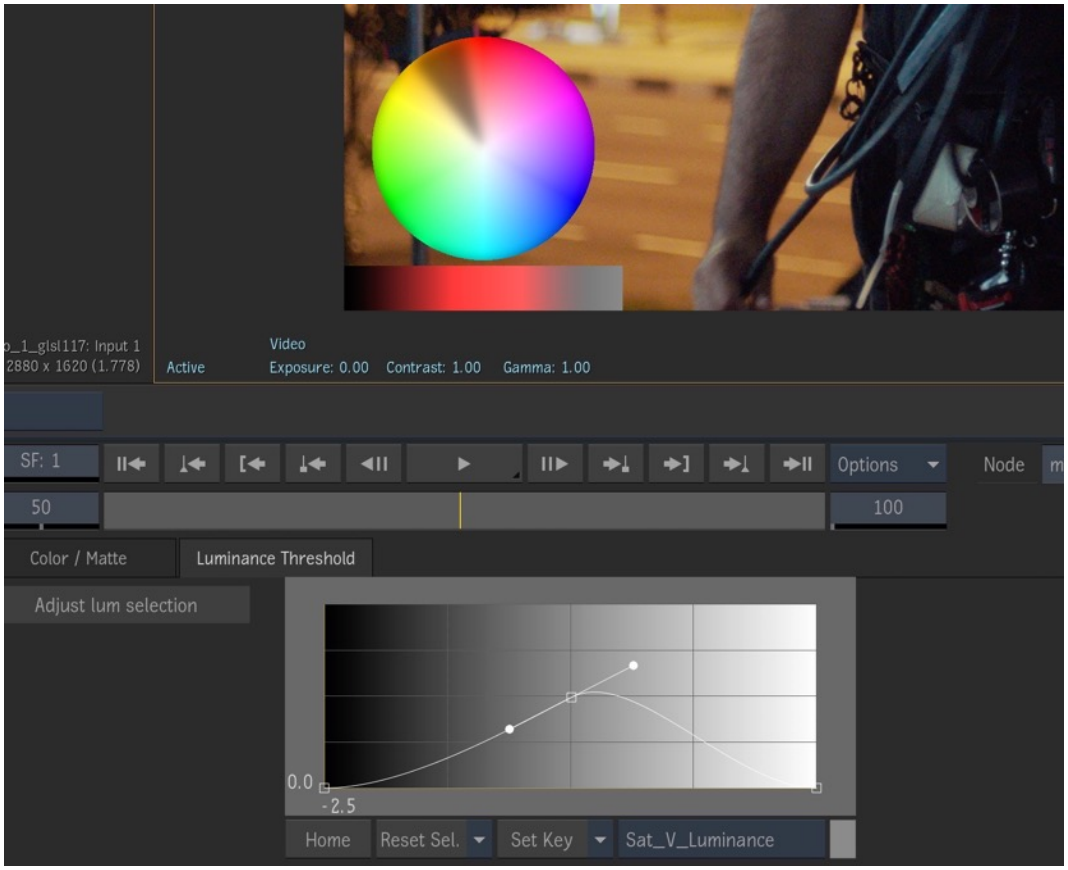


md_OrangeVsat

Secondary color corrector.

The name is in convention with other software. I don't like it. Please send me suggestions for renaming this shader.





This shader can be used to correct skin tone or any other secondary correction.

Select the *color* first. Adjust the *hue range*. Press *Show Matte* to view and refine your matte with *Blur Amount*.

Use the *Gain / Hue / Offset / Saturation / Mid Tone Detail* to adjust your selected area.

The Effect allows you to fade your selection back to the input.

Show Reference will show the B input so you can cut back and forth to a reference frame.

Show overlay brings up an overlay which shows the hue and black and white area you are using to clip your matte.

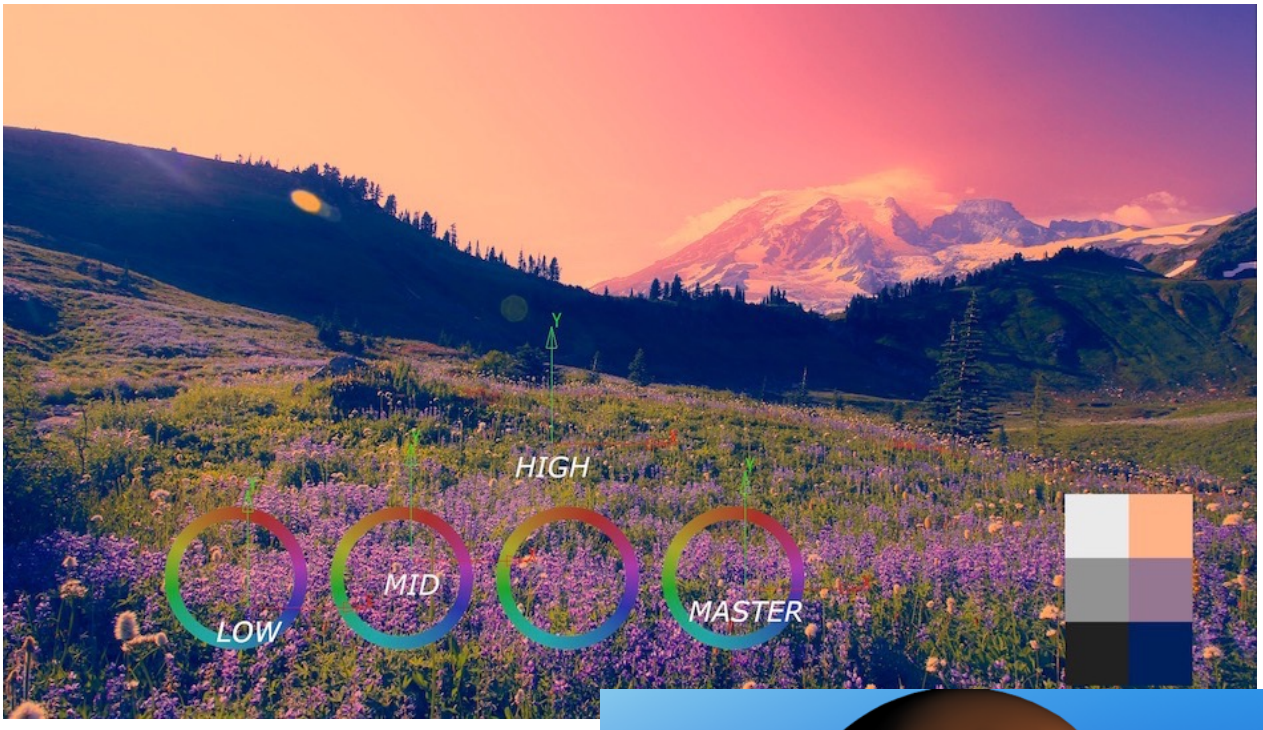
The 2nd menu page has a graph which allows you to limit your hue selection to your favoured luminance. pulling the curve down will remove that luminance from the matte area.

The overlay shows in red the luminance selected.

md_OSCC

Onscreen color correction.

Originally written for shake, this has been resurrected for flame.

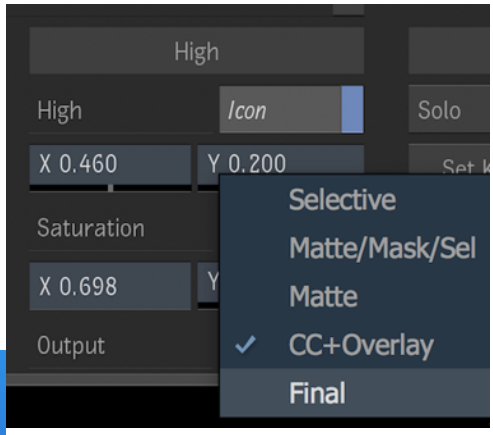


Use the cursors and move in the direction of the color you want.

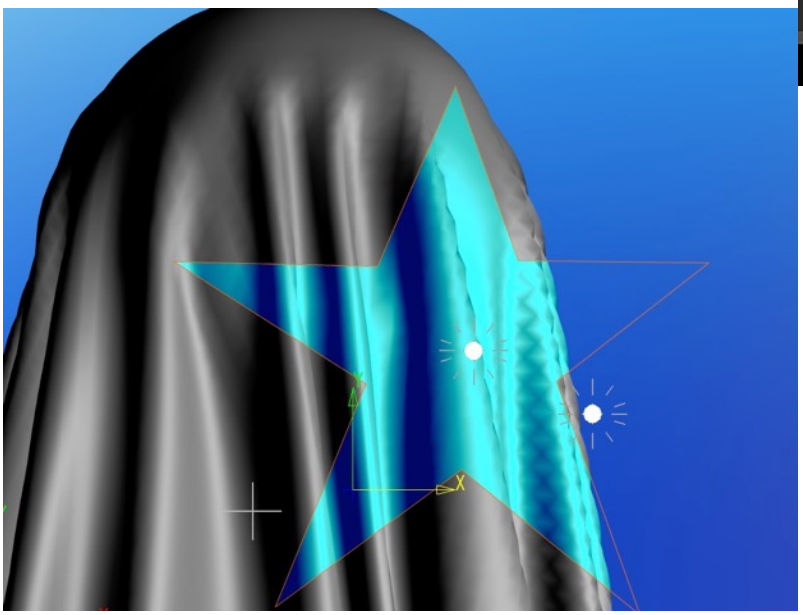
you can vary the cross over point between low - mid and mid - high.

To adjust post correction sat and gain, move the light icons.

To remove the overlay, choose final in the Output button. The output button also allows you to view your matte, your selective and Matte/Mask/Selective.



Under the mask tab you can enable the matte or

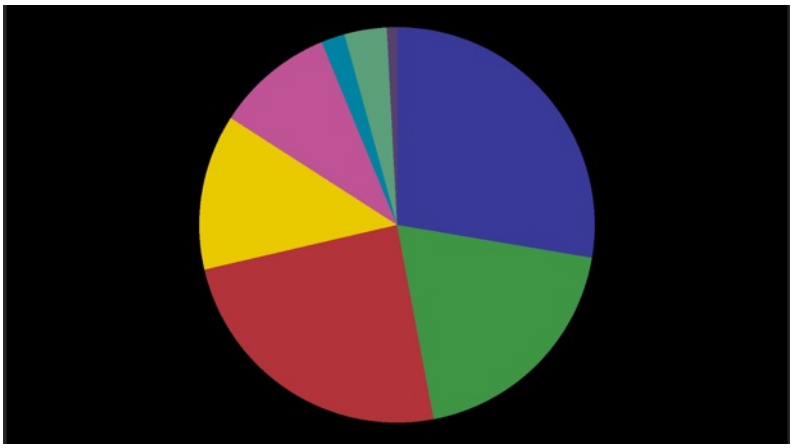


Gmask function. To use the Gmask you must create a Gmask and Gmask link it to the camera.

Under the mask tab you can enable the matte or Gmask function. To use the Gmask you must create a Gmask and Gmask link it to the camera.

md_PieChart

Generates a piechart from variables



PieChart and BarCharts are generated from variables input by the user. Colours are selectable via 3 palettes. You can change the individual colours under the palette tabs.

The variables work on percentages, however, if your numbers don't add up to 100% just hit the *Auto Fill* button and it will scale your numbers to fit 100%.

The animate button creates an animation of the bar chart and the pie chart.

Style is PieChart or BarChart

Items is number of sectors / bars of data.

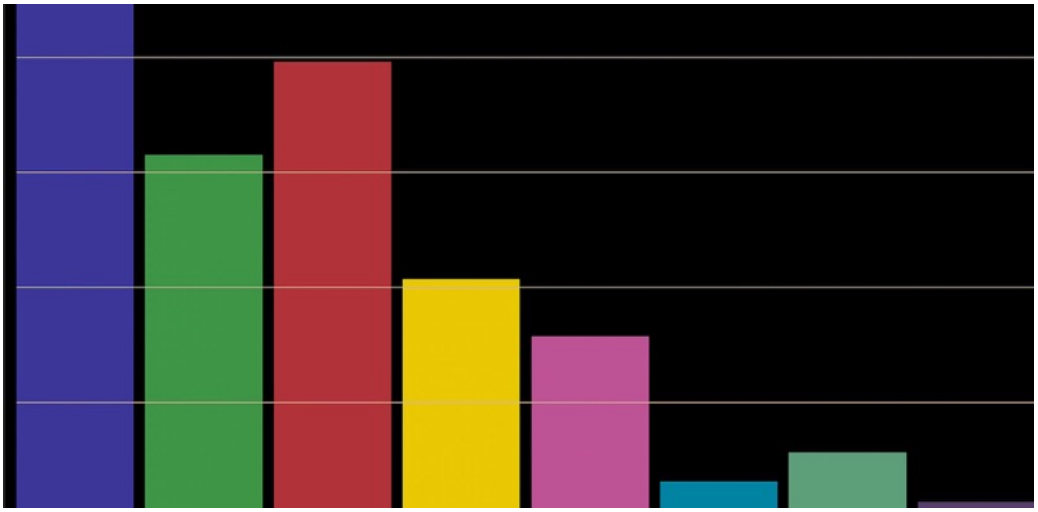
Radius is size of pie chart

Speed is the duration in frames.

Grid is the lines that appear on the bar chart.

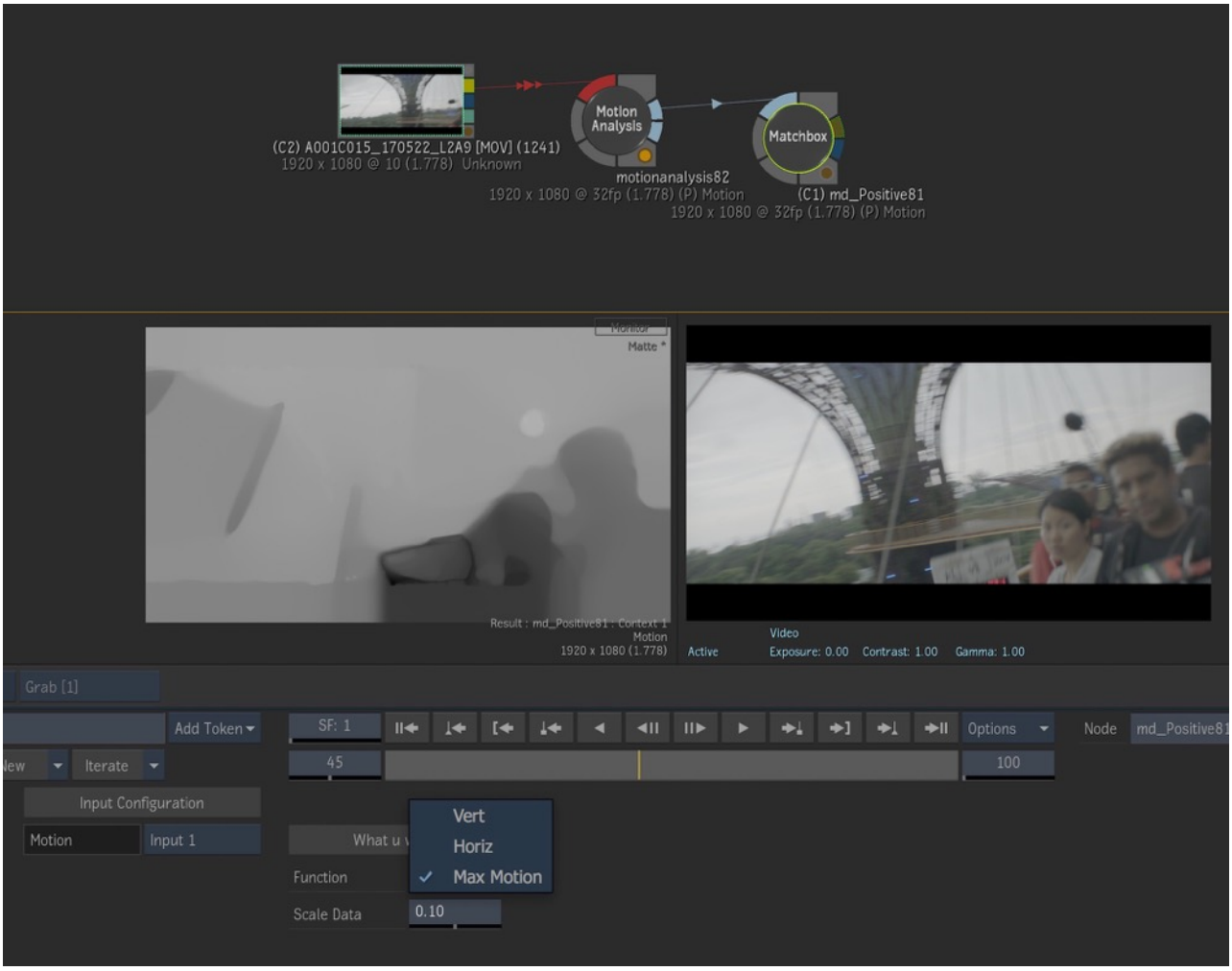
Grid Spacing is the distance between the lines.

Demo of barChart used as a VU meter. Cut and paste from your soundtrack data in action into the variable data different frequencies. Video



md_Positive

Converts Motion Analysis to positive values



Pipe footage into Motion Analysis node and then motion data into positive. You can adjust the scale of the data and choose between horizontal, vertical or maximum motion. Could be used to displace the image based on motion. Or you could use it on a locked off camera to get a type of difference matte? Or, really this is wide open for you to experiment with.

md_Rainbow

Generates a rainbow.

Generates a rainbow. Rainbow only above or comped below. You can change the width, thickness and softness.

md_Raindrops

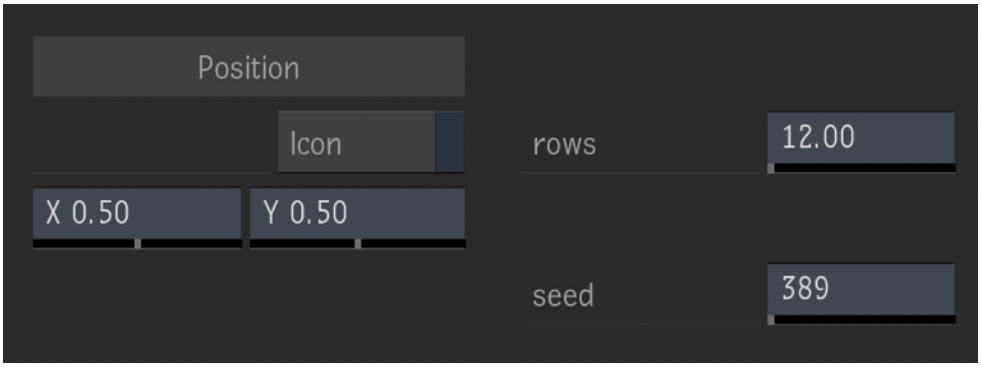
Makes a puddle raindrop ripple.

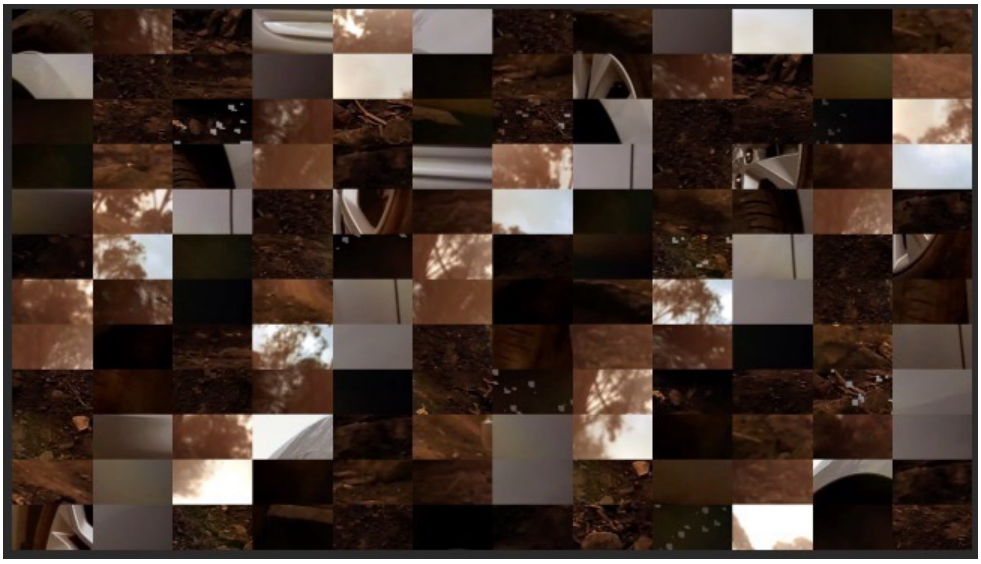
Use Radius for drop size, Index for distortion, Gain for highlights, Speed for well… speed. Use extend to fill edges of frame, ration/angle to adjust the surface angle. Spread to spread the droplets apart in space.

md_Randomise

Randomises the image in a square pattern.

Use the seed to vary the "random" pattern. You could wrap this around a sphere to make a mirror ball...

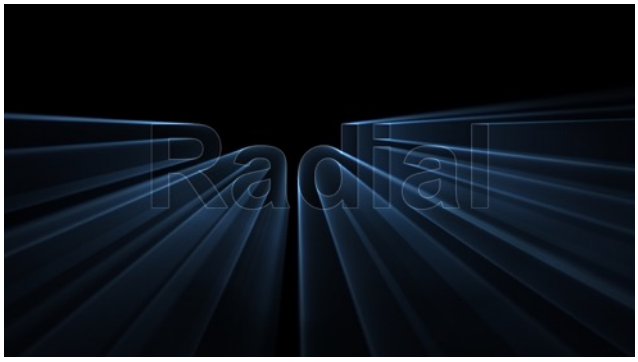




md_Rays

Generates light rays with Shimmer

Radial blur from a movable centre. Start with a standard text or graphic or image.



First Rays generates an outline (Neon) Then it scales them and adds to the image through recursion of iterations.

See video *here*.

Decay Adjust fade off

Circular allows the light source to be more focussed

Iterations = quality. Higher is better

Length 1 makes the rays leave screen

Gain = brightness

Noise is slow and basically mottles the rays

Add Source Outline brings back the original graphic outline.

Shimmer uses a noise pattern to multiply the original outline.

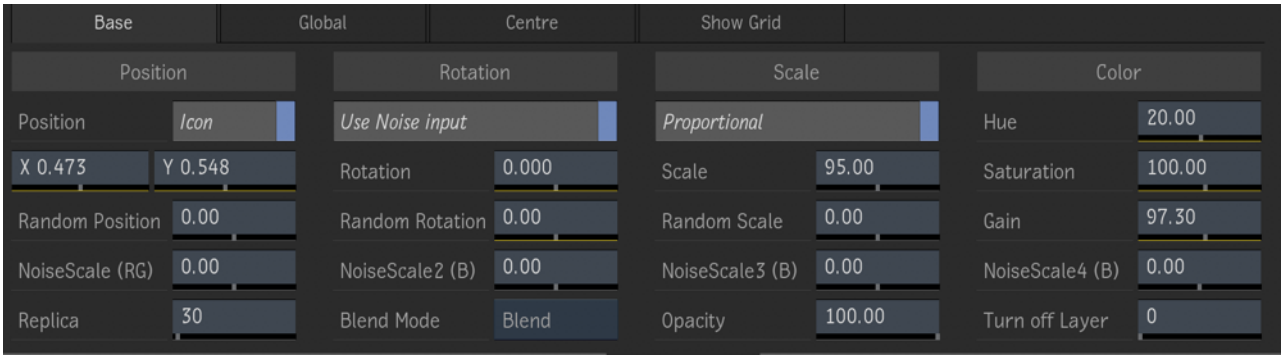
md_ReplicaMulti

Like Replica in Flame + options.

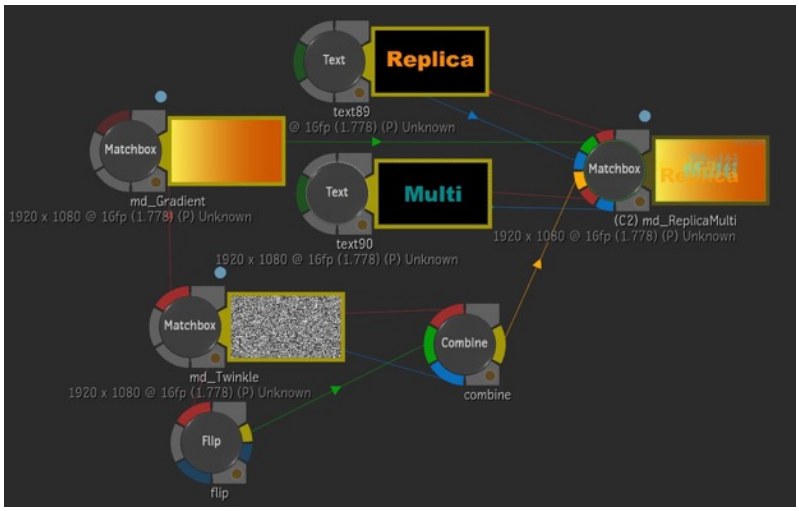
If you're missing the 70's you're not any more. Replica started out for smoke people to have a flame feature, but it has grown into much more than that.

This Video shows how you can make a very complex image from a few nodes.

Replica accepts 6 inputs. fg, bg, matte, noise, fg2 and matte 2. It comps internally so you can use a bg or it outputs a matte, so you can comp later. Each parameter (pos/rot/scale) can have a random amount applied to each of the replicas. This will be multiplied by the replica number. They may also have a Noise scale applied. The noise comes from the orange input. You could put a grad or just random noise to make stuff jump about. You can also use **md_Twinkle** to output a noise that is changing in a speed controlled smooth way. Also combine 2 different noises in red and green to control x and y



differently. See node schematic.



At the bottom left of the menu you have

Replica which is the number of instances.

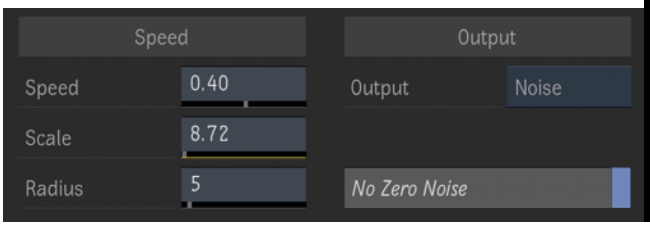
Blend Mode with the usual suspects.

Opacity which fades incrementally down the instance line.

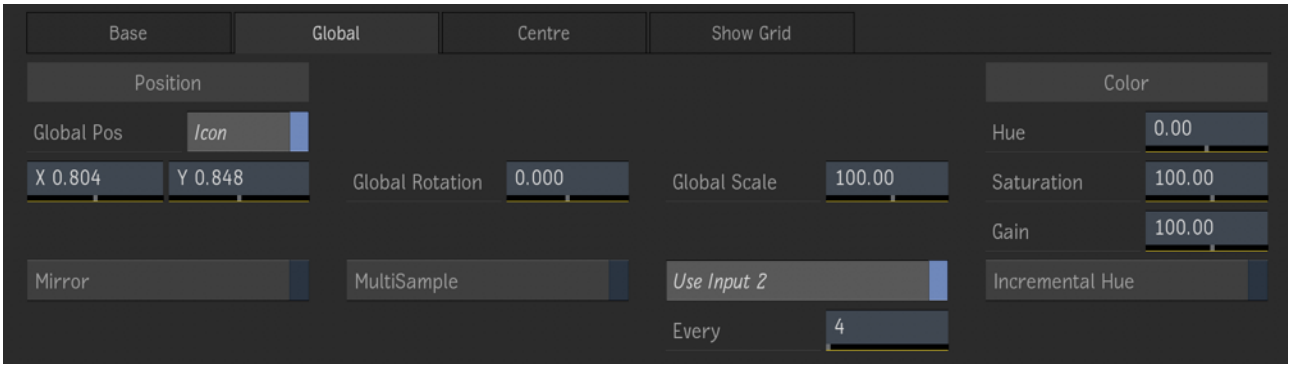
Turn off Layer which allows you to turn off the fg most layers.

So you can animate the instances on with *Replica* and off with *Turn off Layer*

md_Twinkle set to *Noise output and scaled up*. *No Zero Noise* refers to image never staying black. Or in our case it makes never stop moving.



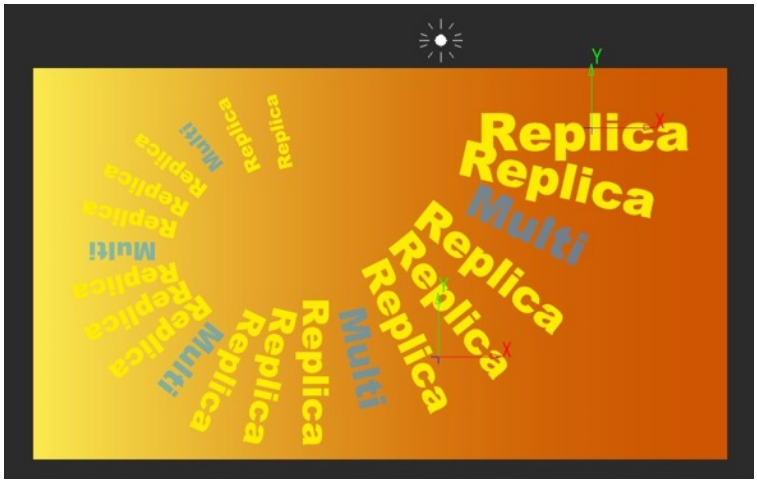
Under the global tab of the menu you have controls for the overall colour, scale, rotation and position. Option buttons include:



Mirror, use mirror repeat texture.

Multisample, slight softening to remove aliasing.

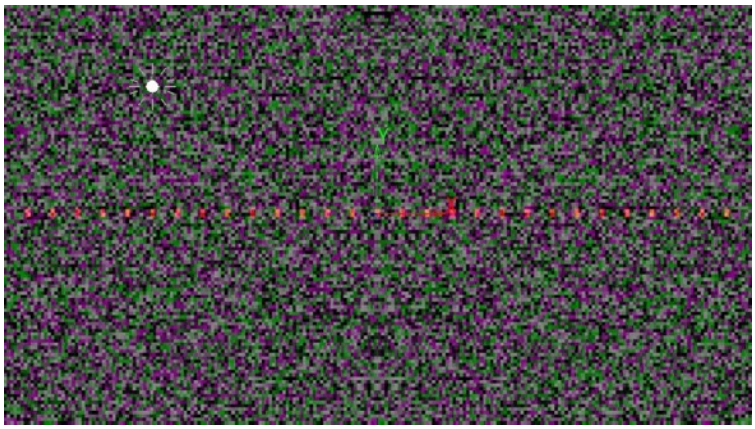
Use input 2, this allows you to mix the 2nd input into the replica with a spacing under the Every parameter.



Incremental Hue, allows you to disable the hue change per replica.

Under the *Centre* tab, you can adjust the centre of rotation. See the light icon in the picture above.

And the final tab *Show Grid* is to show you where on the noise, I am getting the noise value from for each replica movement. The red dots in the image to the left show where the noise is coming from. Press the *Show Grid* button to toggle this image.



md_RevealFast

Ye old text reveal.

Seems like a simple feature, but the text tool in flame does not do this.

So type your text, or for that matter grab your clients graphic file, and feed it into this shader for a reveal.

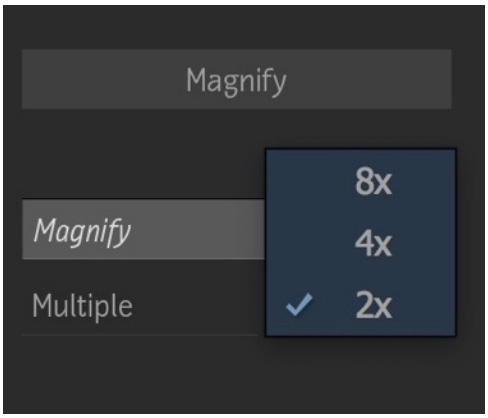
Limited only by your imagination, and 1 parameter, this is an awesome shader, and as the name suggests it's fast. Real time. Which is only impressive, because the earlier version was much slower.

Set your reveal speed and that is it.

md_RGB_Viewer

Viewer for checking grain.

Zoom into your pic with separate RGB channels. 2x, 4x, 8x and choice of RGB split or individual with mono button.



md_Round

Softens edge of matte to make it round

Can be used to blur/erode off a graphic.

md_RingDarken

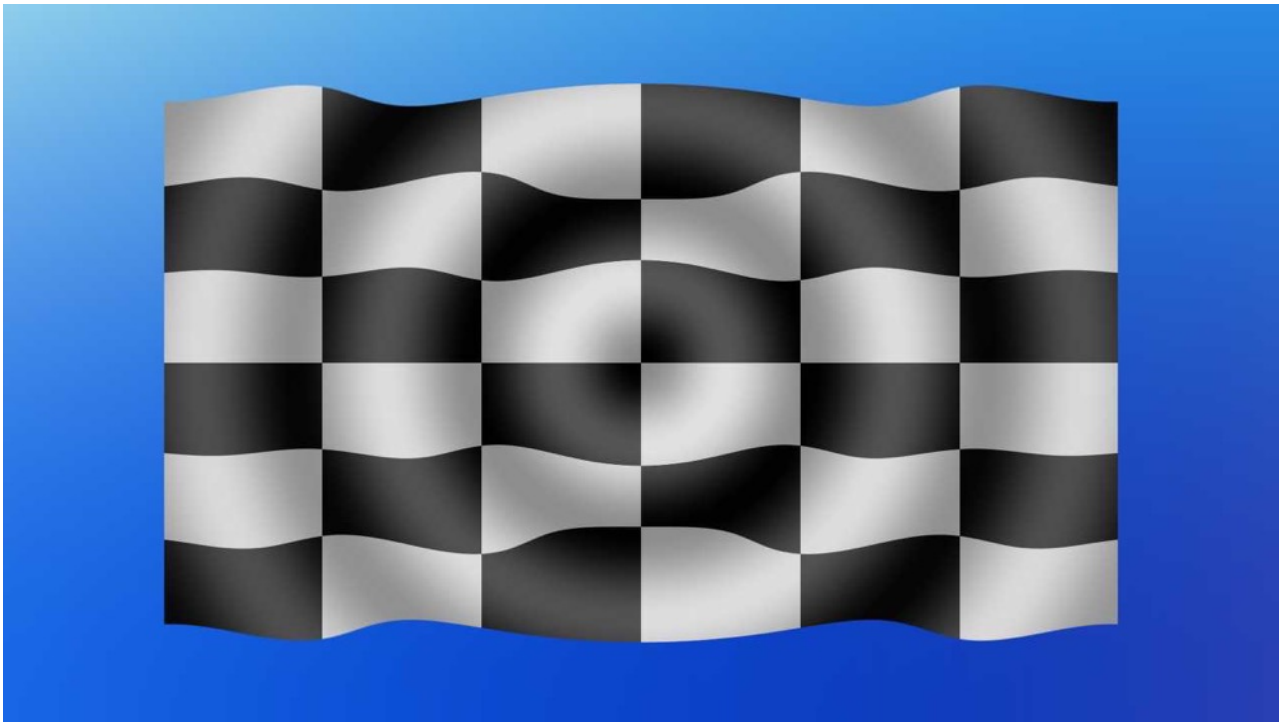
Specifically for the ring in Lensflare.

As requested by Andy Davis,

Darken / Lighten the inside or outside of the ring to add a subtle effect. Default values match the size of the Lensflare ring.

md_Ripples

Simple ripple with fake lighting



Position the ripple, adjust frequency, phase, height, frequency Delta, Speed, Height Falloff, Droop, Squish.

Freq Delta, changes the frequency across the frame.

Height Falloff changes the Height from beginning ripple to end

Droop makes the right side change vertically

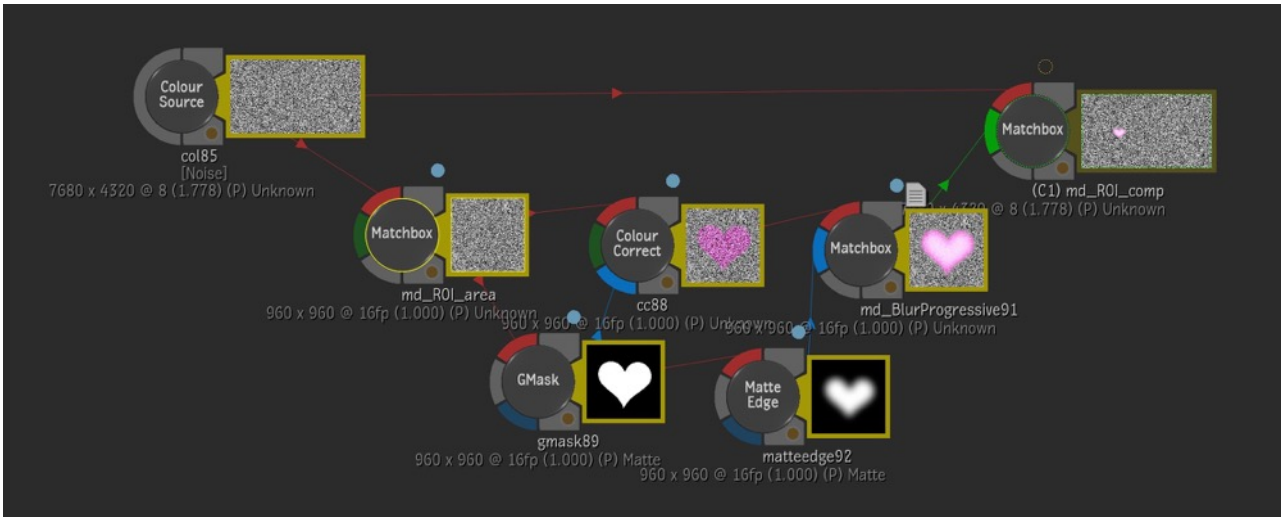
Squish makes one side not as tall as the other

Lighting is on or off with Brightness and Offset

Lock X does exactly that

md_ROI

Region of interest Crop / Comp.



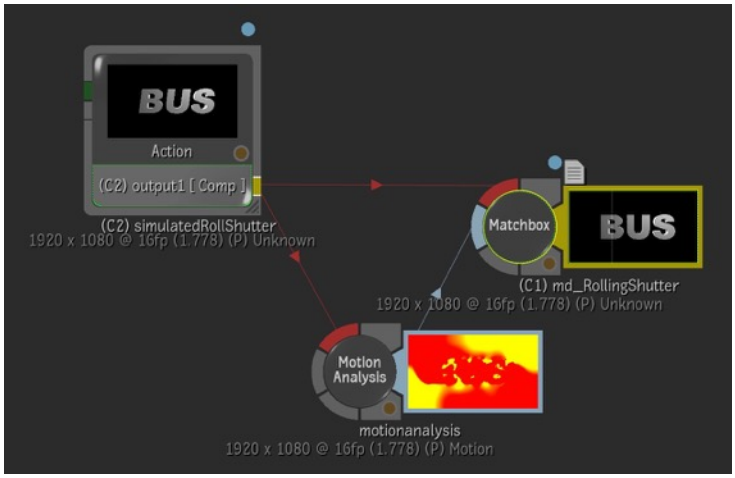
Picture says it all. Take your large plate, use the ROI to crop a square 960x960 pixel area. Do your painting / comp work on that small area. Then copy paste your original ROI node. Press the comp button and size to input 1. Then it will automatically comp back your touched up area into your larger plate.

Now comes in two flavours, the original at 960 pixels and another version with 1500 pixels.

md_RollingShutter

Helps correct rolling shutter.

Uses motion analysis to detect movement and adjusts the skew of the image based on horizontal movement. Turn on the grid to help you adjust the *Skew*. At the highest amount of rolling shutter, adjust the *Skew*. The motion input should then vary the amount of skew based on horizontal movement.

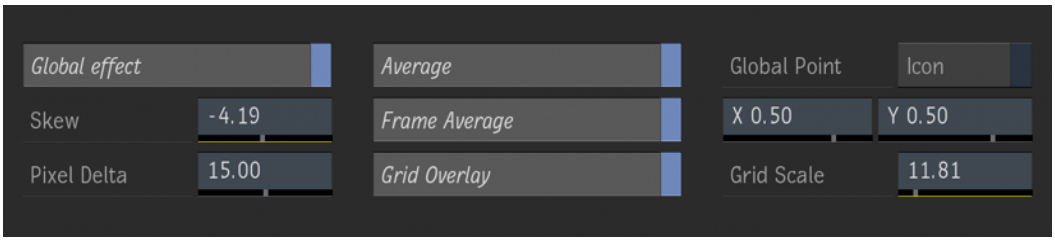


Global Effect, enables one skew amount for the whole image. When off, the skew amount is based more on the motion analysis at pixel level.

Pixel Delta is for the Average function, which averages the motion based on 5 samples (Pixel Delta apart).

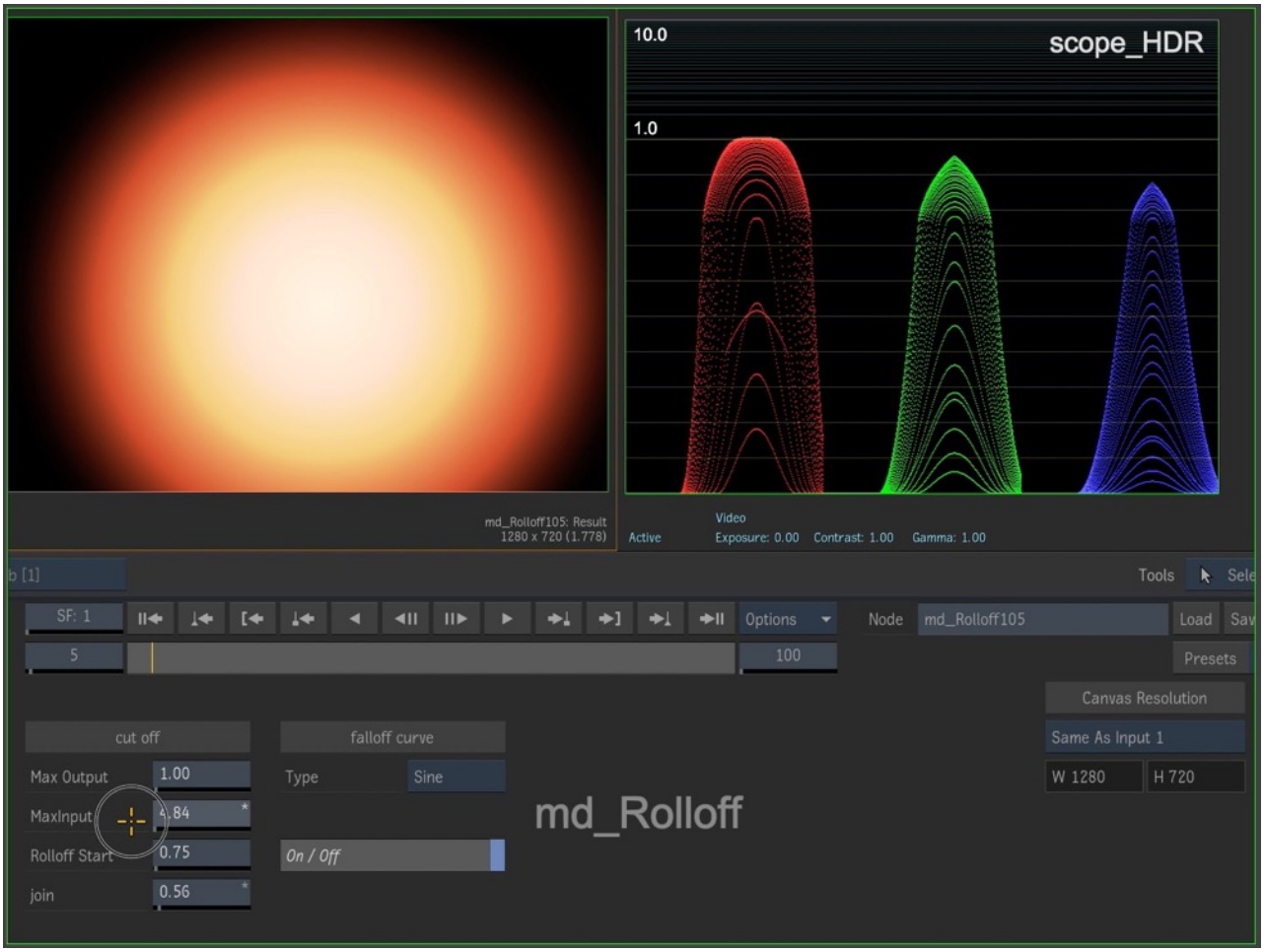
Global Point is the point to take the global effect skew motion from.

Frame Average uses next and previous frame to average the motion effect.



md_Rolloff

Rolls off high luminance values.



Check the video here. You will see how it pulls in the luminance higher than 1.0 and how the join parameter works. Use in conjunction with Scope_HDR or Scope_Float.

Max Output limits the output with to a maximum value.

Max Input helps you adjust what luminance values will be rolled off

Rolloff Start is the value where you start rolling in the higher values

Join adjusts the slope of the join between normal and rolled off values.

Type is the type of rolloff formula. **Sine** or **Linear**

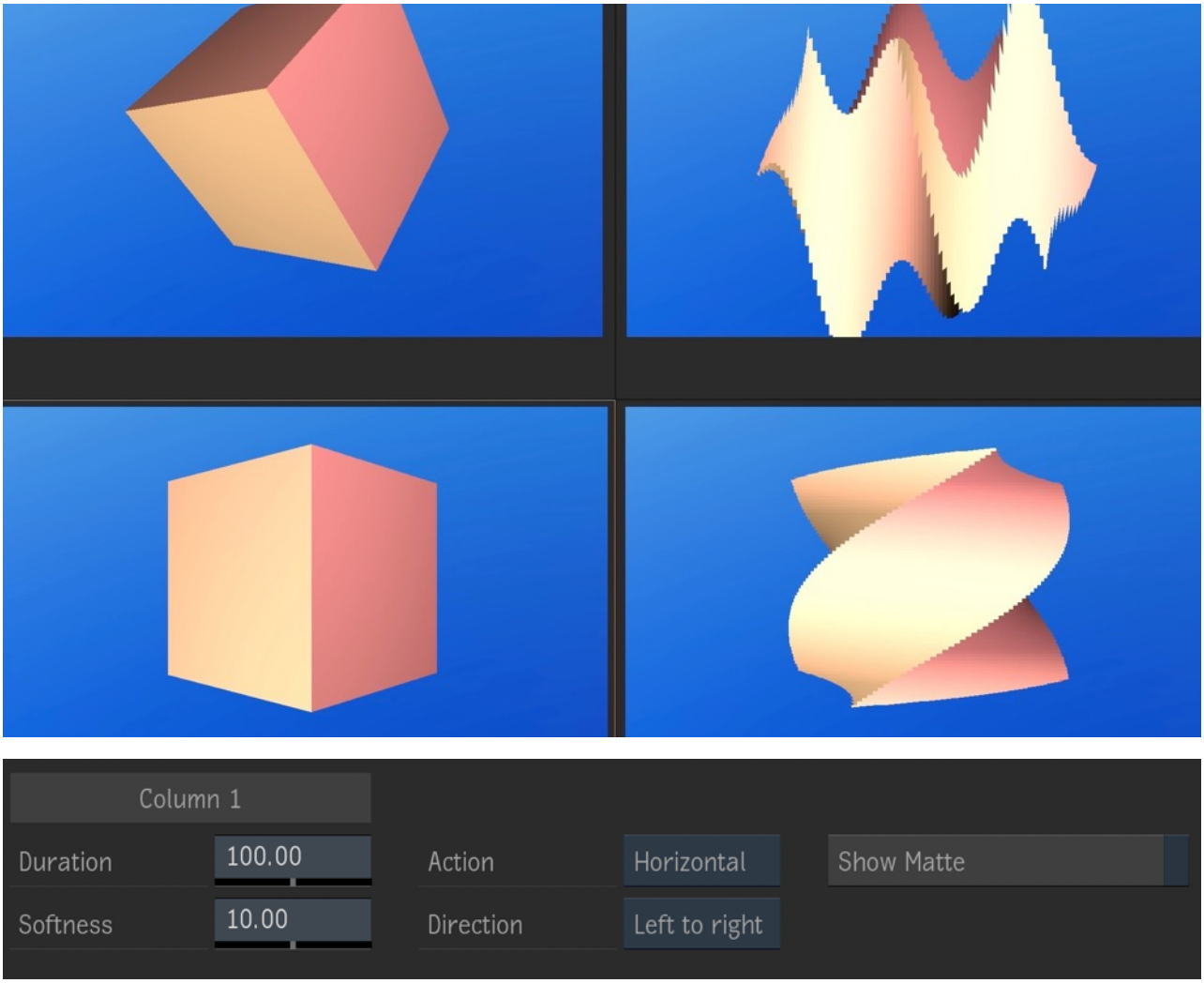
On/Off button to help you see the difference

Mail me this word (Minion) for your choice of shader at no cost.
flamemark@hotmail.com

md_Scan

Scan line effect.

By playing or rendering, you will get a slit running across the frame vertically or horizontally, over a duration and freezing each line as it goes. This gives a frozen frame which includes the movement over time of the frame. It's a little complicated. Maybe this video *helps show the effect.*



Duration, how long the effect takes to build. Or how fast the scan is moving across frame.

Softness blurs the join between samples

Action has choices for **horizontal** or **vertical**

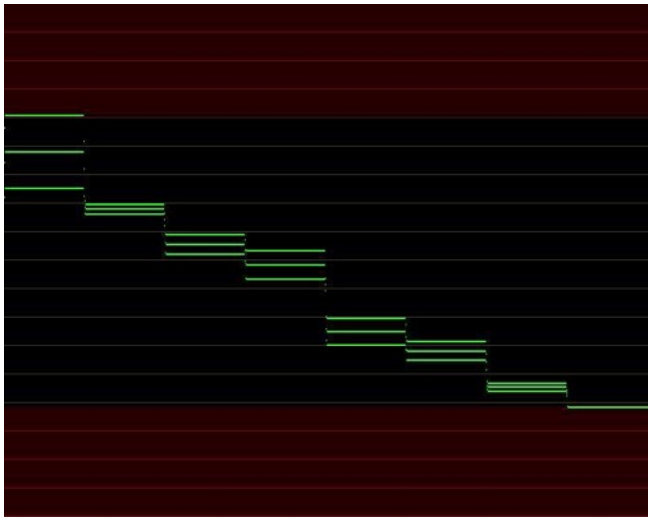
Direction is either **left/right** or **up/down**

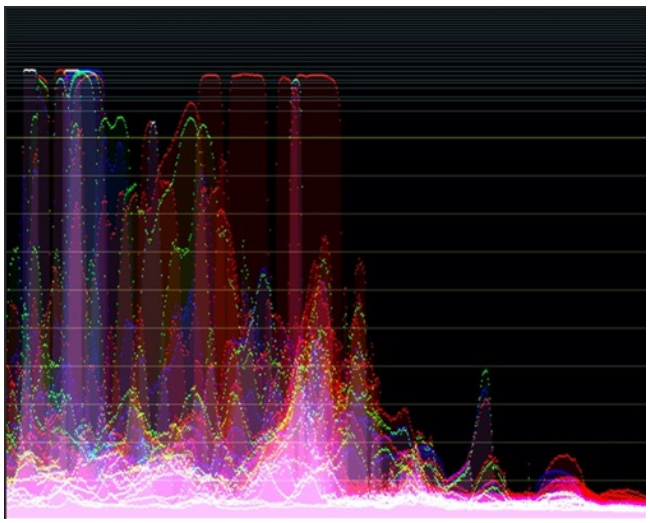
Show Matte shows the scan moving across frame for your reference

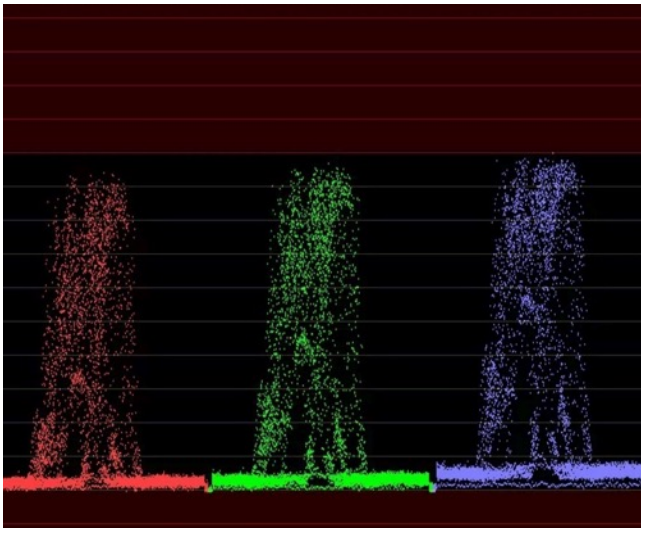
md_ScopeFloat

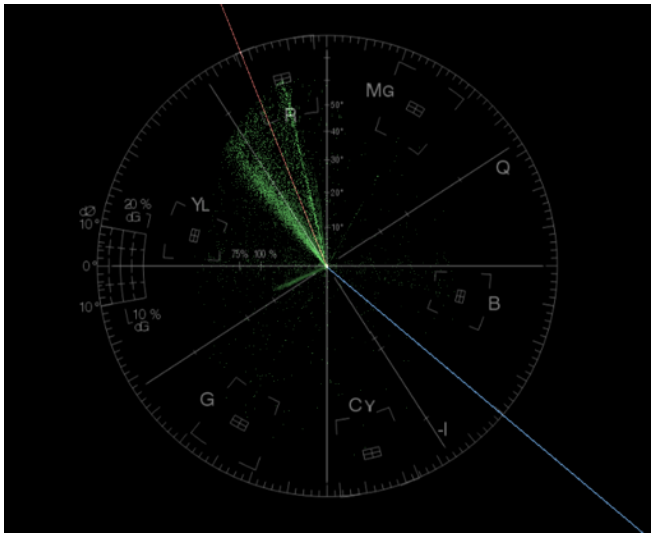
The latest version of scope.

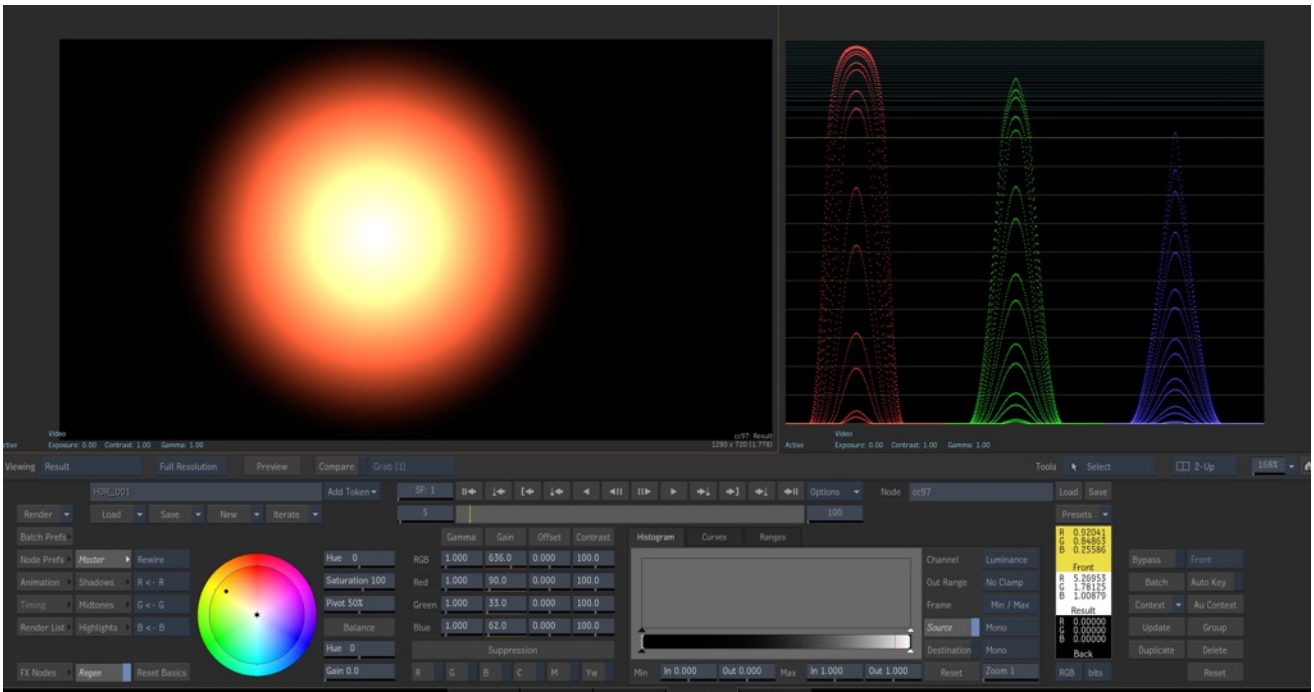
This version of scope includes Scope HDR and vectorscope. Float scope shows values below 0.0 and above 1.0. You can adjust the scale for whatever values you need to view.

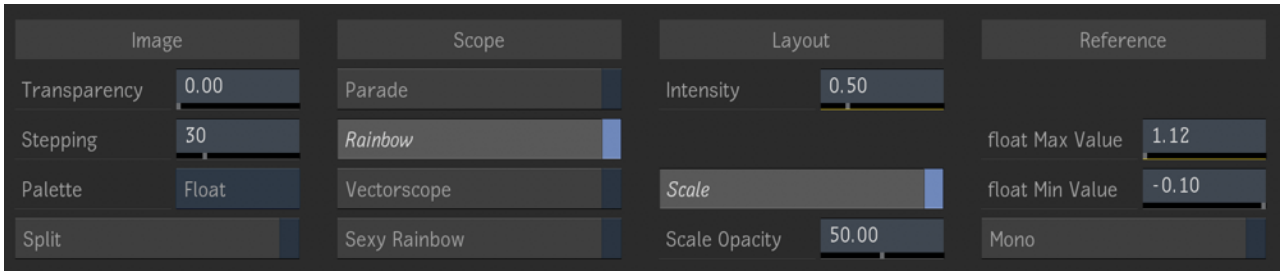


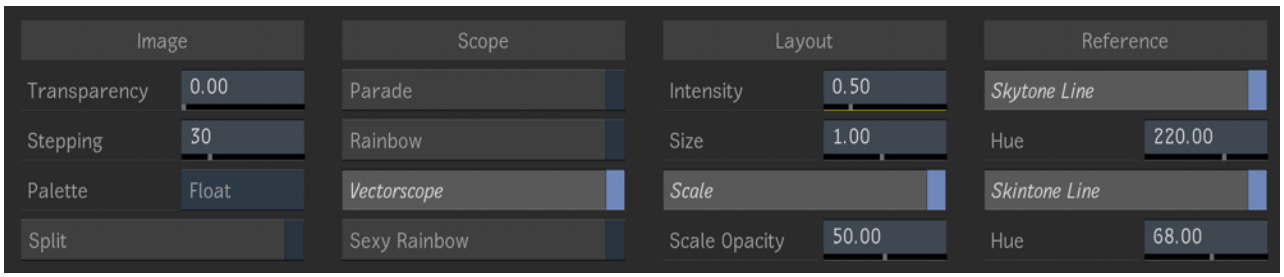












There are 2 different menu sets for Scope. The 2nd is *vectorscope* which has the *Skytone* and *Skintone* reference lines. These are not necessary on the other views, and make room for the float Max and Min values. And also the *Mono* button.

Most buttons are self explanatory, except maybe *Split*, which splits the view with the picture, and *sexy rainbow*, which is just another version of *Rainbow*. You may want to adjust the intensity when you view this mode.

Transparency will bring the full screen input image back through the scope.

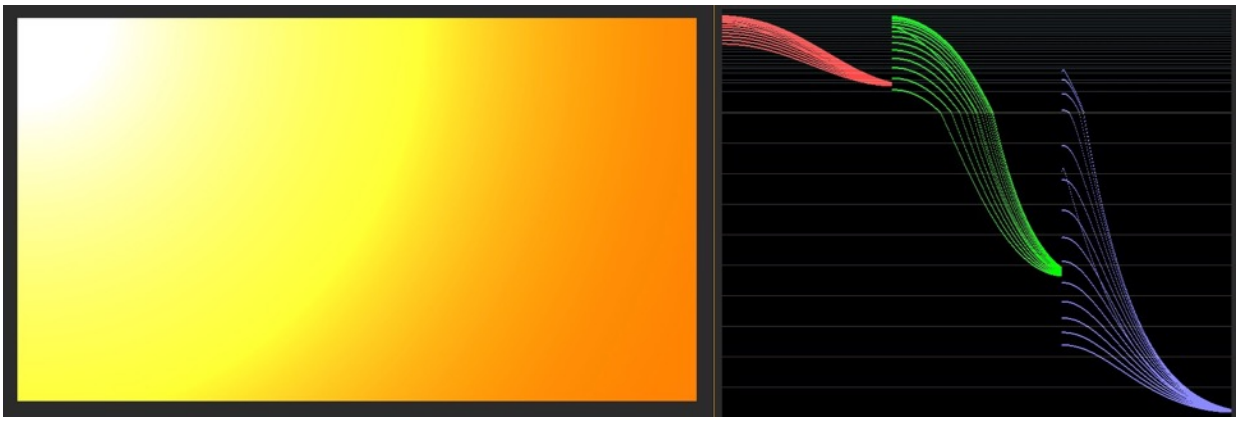
Stepping is the number of pixels skipped to speed up the analysis process. You can relate this to the resolution of the scope. Lower numbers are slower and will give a nicer image.

Palette switches between **Float** and **HDR**

md_ScopeHDR

The HDR version of scope.

See above. The HDR scope is now incorporated into the Float scope. The only difference, is that if you turn off the HDR scope in this version you get the original 0.0-100.0 scope.

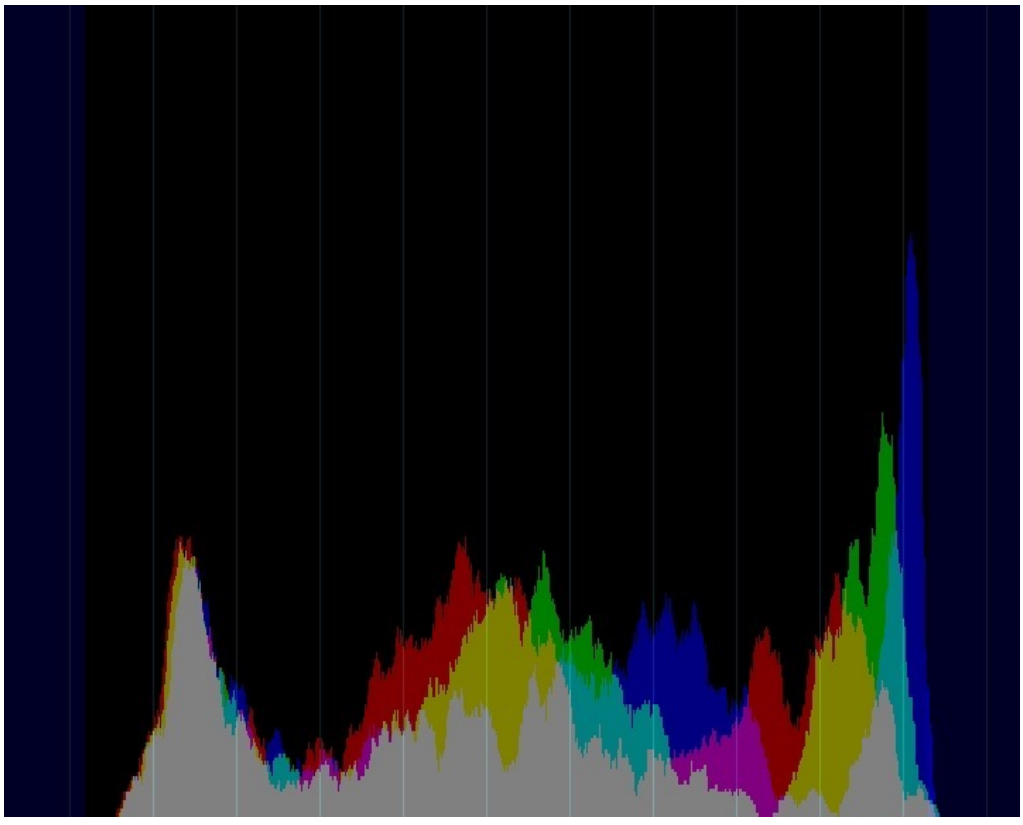


md_ScopeHisto

The latest version of scope.

Includes HDR Scope and Float Scope and Vectorscope as pulldown menu options.

Histogram gives you a red, green and blue overlay, of the relative number of different values from 0.0 to 1.0. Another feature introduced with Histogram is *Patch*. Using the axis icons provided, you can limit the part of the image the histogram is displaying. As in the picture to the right, you can see only the water is being displayed in the histogram. When you enable patch mode, the other overlay lines are automatically removed for clarity and the bg picture displayed.



The dark blue at the left and right, represents below 0.0 and above 1.0. the lines represent every .1 units.

md_Sharpen

Matrix sharpen filter.

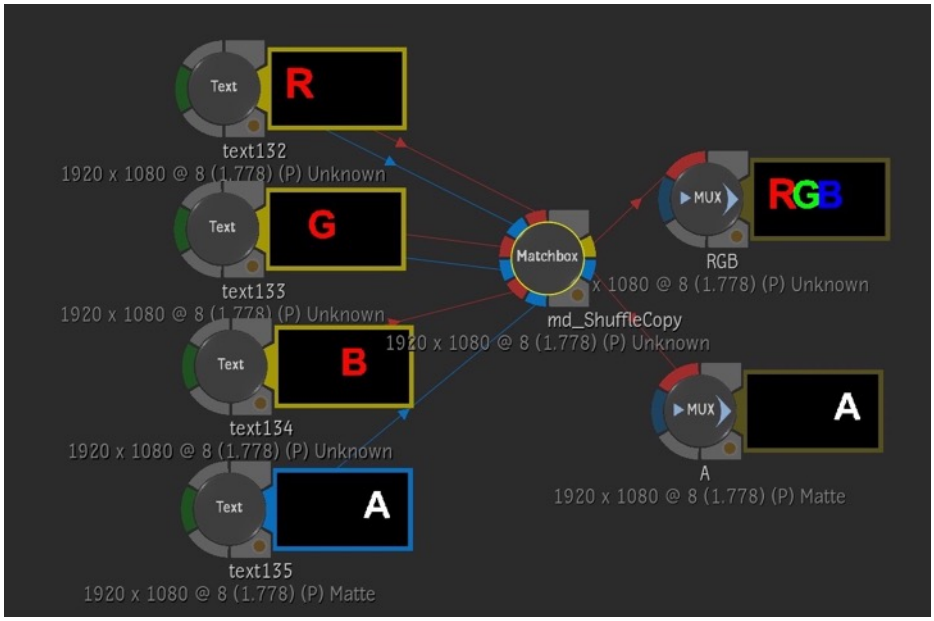
Simple 3x3 matrix sharpen.

-1 -1 -1
-1 9 -1 *Pixel weight distribution*
-1 -1 -1

```
// Filename: MD_Sharpen.glsl
// c Mark Doney February 12, 2015  email: flamemark@hotmail.com
//

uniform sampler2D input1 ;
uniform float adsk_time;
uniform float adsk_result_w, adsk_result_h;
uniform float Amount;

vec3 sourceColor1,sourceColor2,sourceColor3,sourceColor4,sourceColor5,
sourceColor6,sourceColor7,sourceColor8,sourceColor9;

void main(void)
{
    vec2 coords = gl_FragCoord.xy / vec2( adsk_result_w, adsk_result_h) ;

//Assign the 9 pixel matrix: sourceColor5 is the current pixel
   sourceColor1 = texture2D(input1, coords-vec2(1.0,1.0)/ vec2( adsk_result_w, adsk_result_h)).rgb ;
   sourceColor2 = texture2D(input1, coords-vec2(0.0,1.0)/ vec2( adsk_result_w, adsk_result_h)).rgb ;
   sourceColor3 = texture2D(input1, coords-vec2(-1.0,1.0)/ vec2( adsk_result_w, adsk_result_h)).rgb ;
   sourceColor4 = texture2D(input1, coords-vec2(1.0,0.0)/ vec2( adsk_result_w, adsk_result_h)).rgb ;
   sourceColor5 = texture2D(input1, coords).rgb ;
   sourceColor6 = texture2D(input1, coords-vec2(-1.0,0.0)/ vec2( adsk_result_w, adsk_result_h)).rgb ;
   sourceColor7 = texture2D(input1, coords-vec2(1.0,-1.0)/ vec2( adsk_result_w, adsk_result_h)).rgb ;
   sourceColor8 = texture2D(input1, coords-vec2(0.0,-1.0)/ vec2( adsk_result_w, adsk_result_h)).rgb ;
   sourceColor9 = texture2D(input1, coords-vec2(-1.0,-1.0)/ vec2( adsk_result_w, adsk_result_h)).rgb ;


// Sharpen Matrix Calculation. weight = 9  for centre and -1 for adjoining 8 pixels. Total weight (9-8=1)
   vec3 result = sourceColor5*9.0-sourceColor1-sourceColor2-sourceColor3-sourceColor4-sourceColor6-sourceColor7-
sourceColor8-sourceColor9;

// Don't sharpen the edge of the picture pixel
   if (gl_FragCoord.x <1.0 || gl_FragCoord.x >adsk_result_w-1.0 || gl_FragCoord.y <1.0 || gl_FragCoord.y > adsk_result_h-1.0)
       result = sourceColor5;

// Use Amount parameter to fade between input and sharpen
  gl_FragColor= vec4( result * Amount + sourceColor5*(1.0-Amount) , 1.0 );
}
```

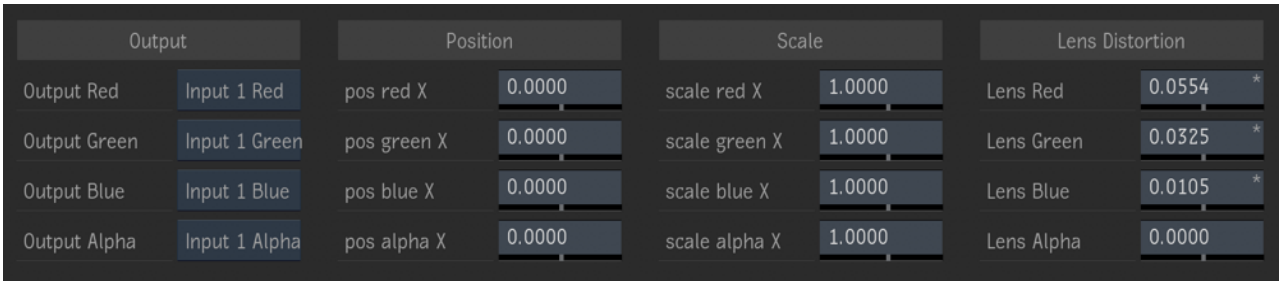
md_ShuffleCopy

Nuke style shuffle copy 3 RGBA inputs.



3 front and 3 matte inputs, can be piped into one RGB and one Matte output. This may seem of little use, but I can remember using it a lot in nuke.

For my version, I have added pos / scale X and Distortion per channel. This nicely splits the RGB channels to give chromatic aberration.



Choose the channel to send to the output. Adjust the pos / scale X / distortion per channel.

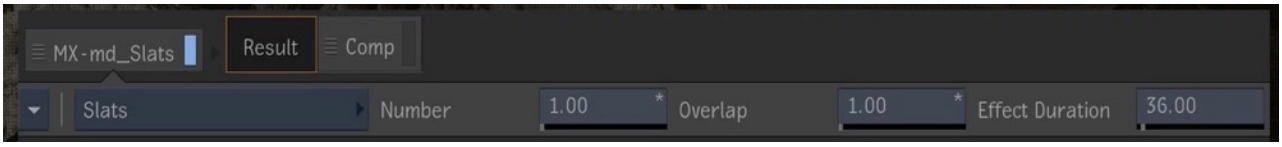
An interesting effect may be to timewarp a clip in and out of sync, then use the TW in the 2nd input to make the RGB channels slide across one another.

Lens Distortion may be used on a single input to reduce chromatic aberration.

md_Slats

a-b DVE style move in slats.

Transition from one source to another with slats, vertically, horizontally any number any duration and overlap.



Works in the timeline.

Slats can be vertical or horizontal.

Number of slats = how many divisions for the picture

Overlap is how many slats are moving at one time

Effect Duration is the end time for the effect

Direction is up, down, left, right

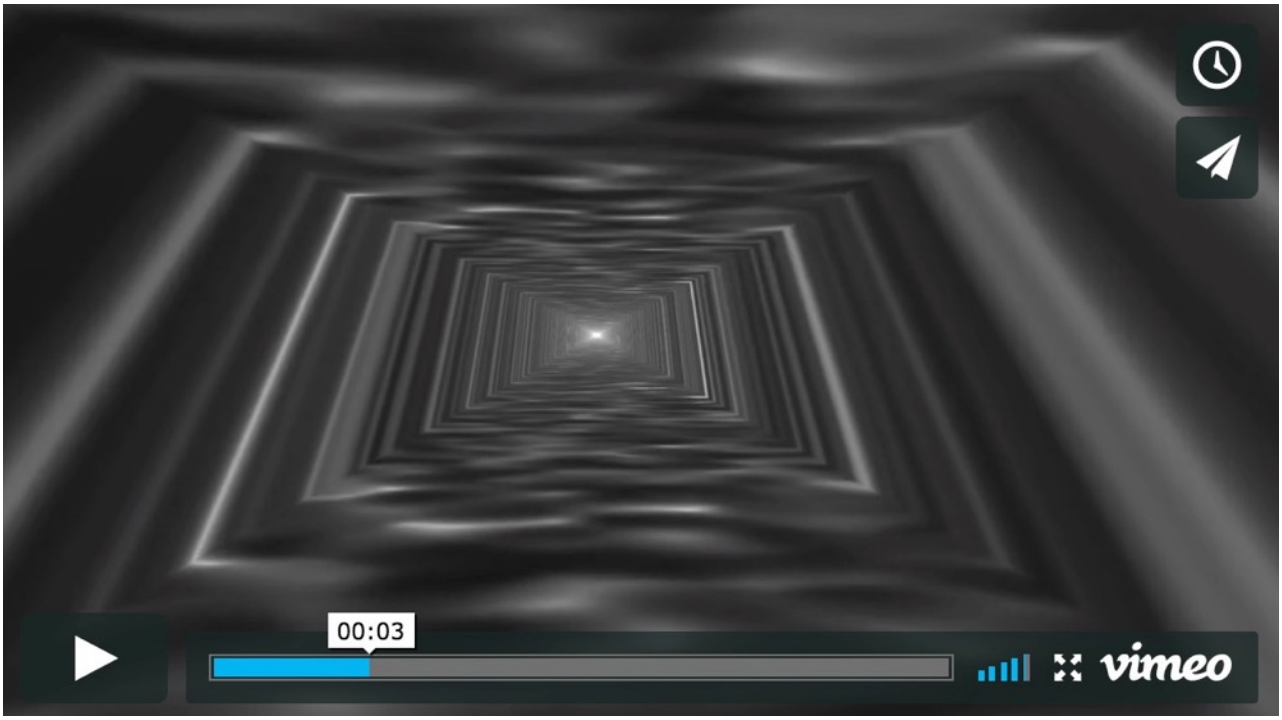
Interpolation is Ease in/out or linear

For a simple push / slide effect, set number to 1 and overlap to 1

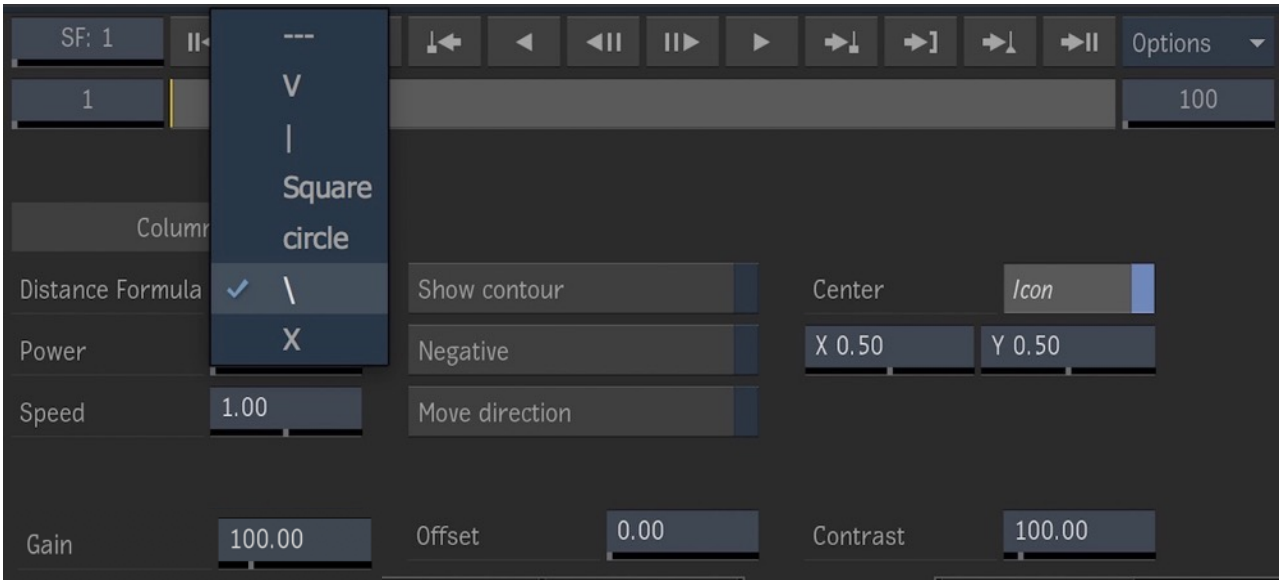
Great for use on the timeline

md_Slitscan

Trance inducing moving texture.



See Video here



Distance Formula gives the texture shape. 7 choices.

Power is like a zoom factor on the formula.

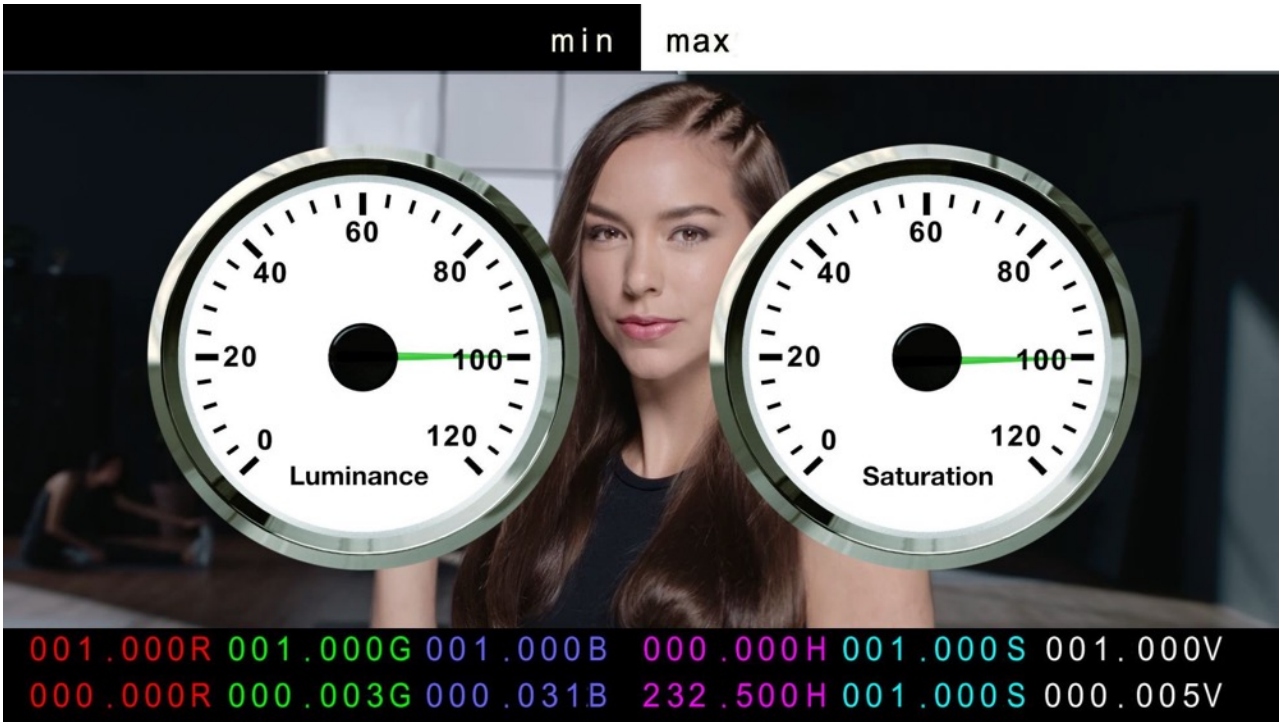
Speed, how fast the texture moves.

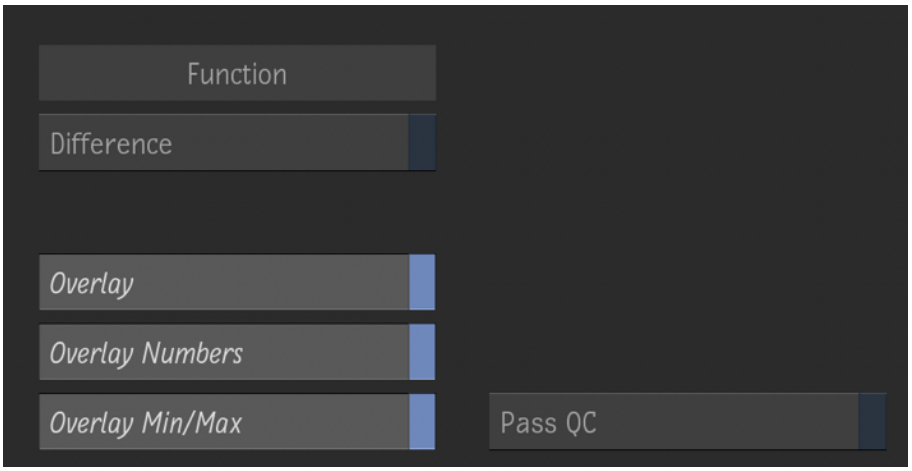
md_Stats

Auto min / max values.

Used to detect over value and monitor rgb values in real time. Use it in context to keep an eye on values during color grading sessions.

New PassQC button to add grain if it finds negative or black pixels. Added speedo GUI.

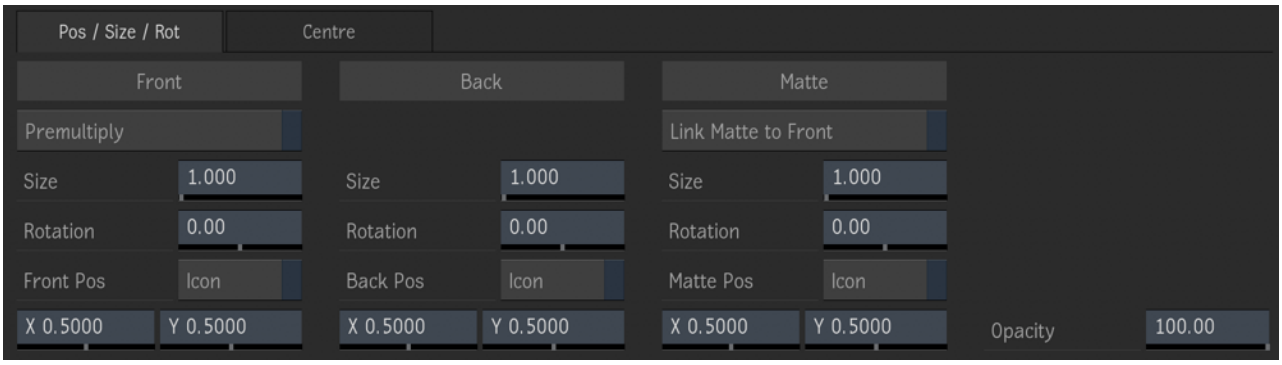




md_Source

Source Front/Back/Matte for Bfx/Batch.

As requested by John Fegan.



This is a simple source node for batch.

You can adjust the size/position/rotation of Front/Back/Matte separately.

Inputs are Front, Back, Matte. Output is comp. You can use premultiply for fg's over black and in the 2nd tab, you can adjust the center of rotation.

Opacity allows you to mix the fg when premultiply is off.

Added link matte to font button in case you just want to adjust both together.

Highly recommended by John Fegan *put it in your favourites bin.*

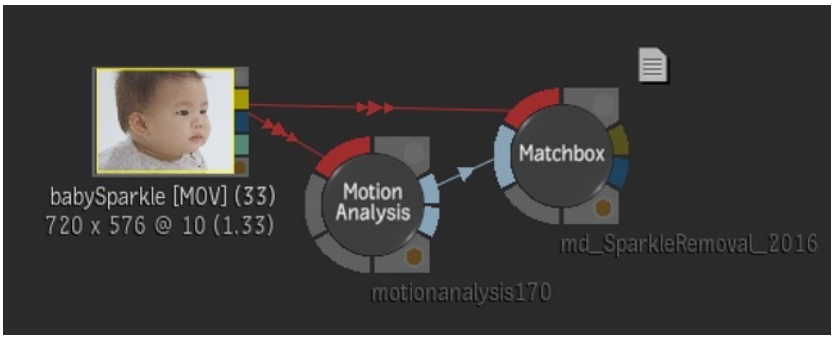
md_SparkleRemoval

Clean dust and sparkle.

Using magic, this shader removes dots that shouldn't be there. Use motion estimation to replace the dot more accurately.

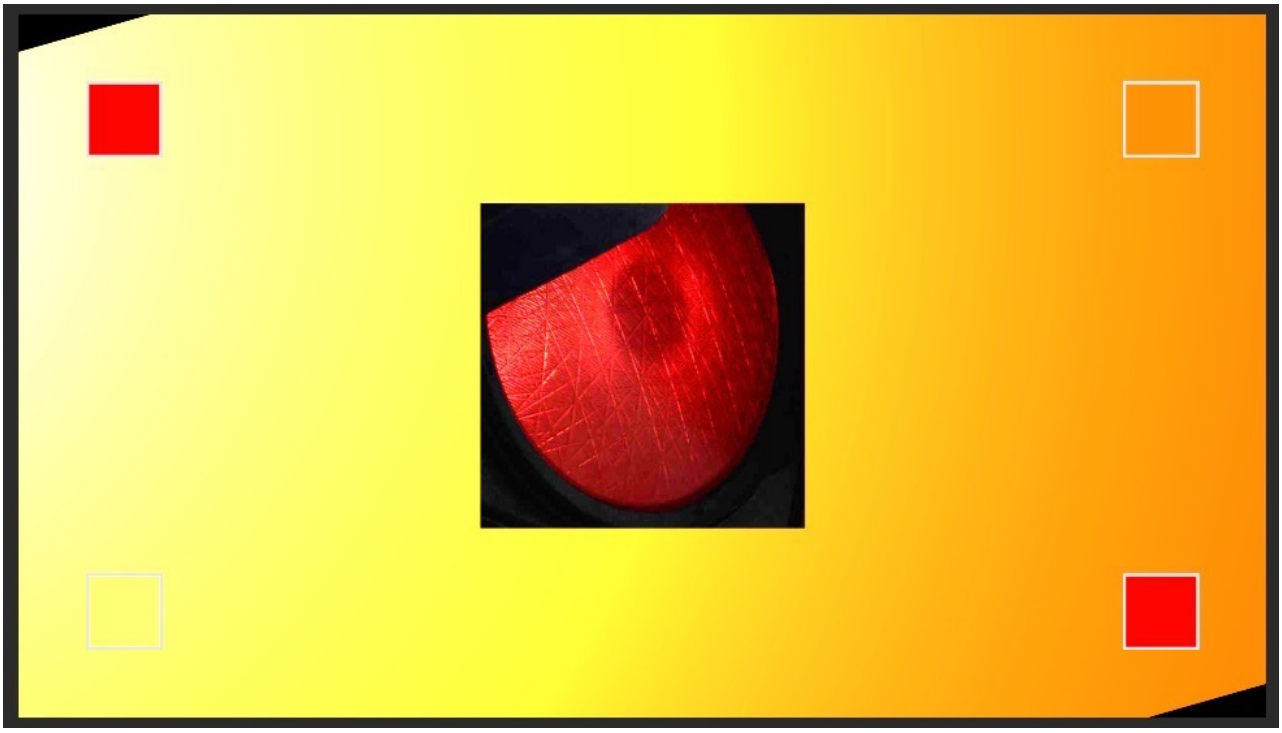
See Video here

Range adjust for more or less sparkle. Watch for artefacts.

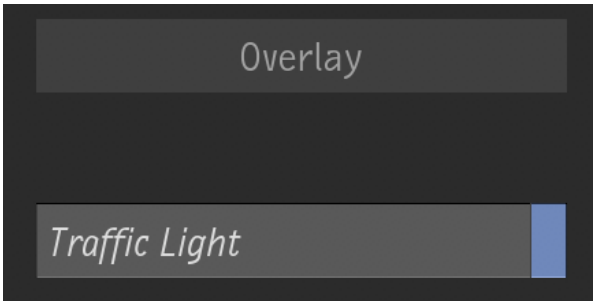


md_SureEye

Helps spot black edge pixels while stabiling.

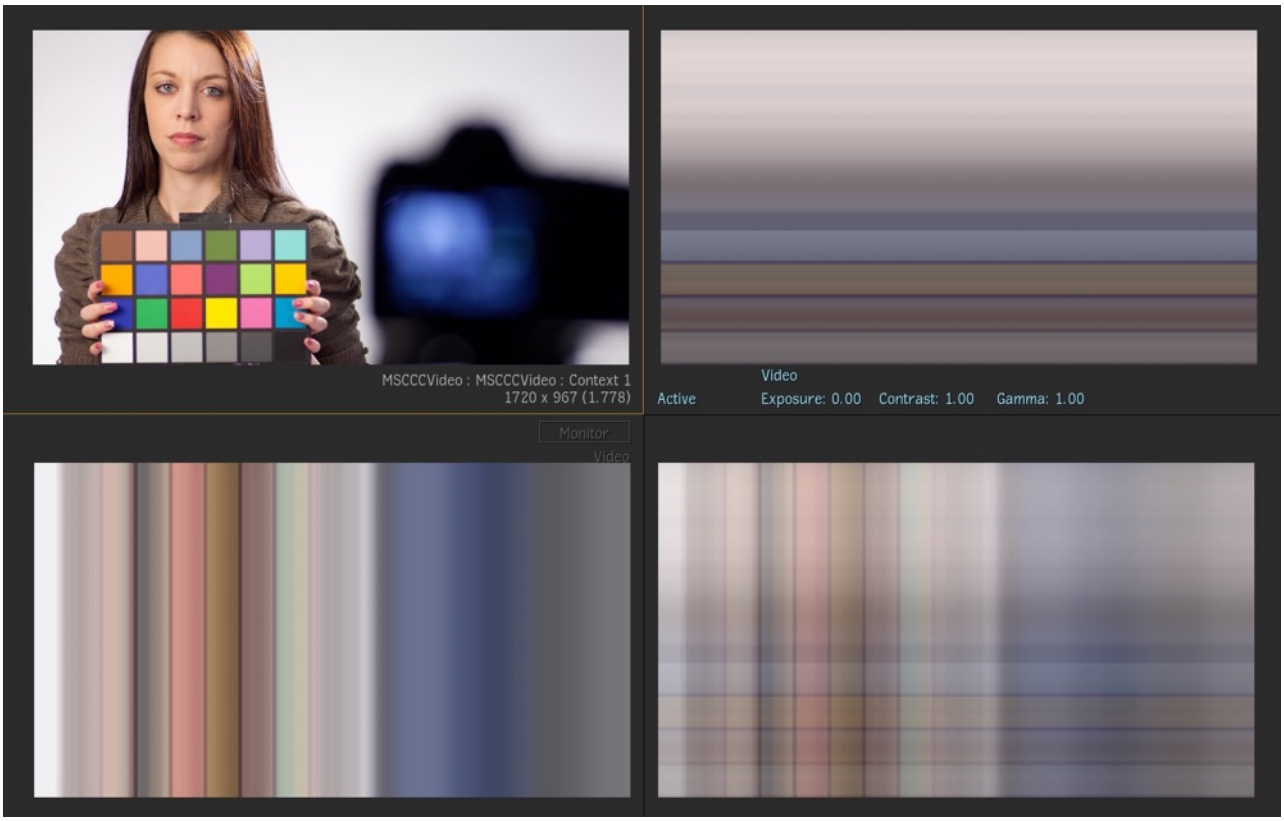


Checks your stabilised footage for any black pixels in the corner. Use this in context to alert you to the problem when you didn't zoom your stabilisation up enough.



md_Tartan

Makes a tartan like pattern from input video



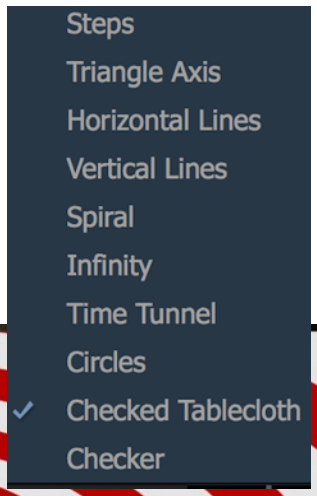
Averages line or column or both to create a tartan pattern.

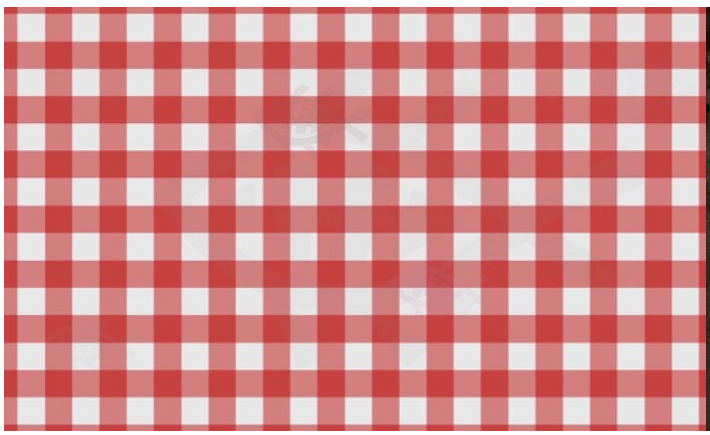
Quality = number of samples.

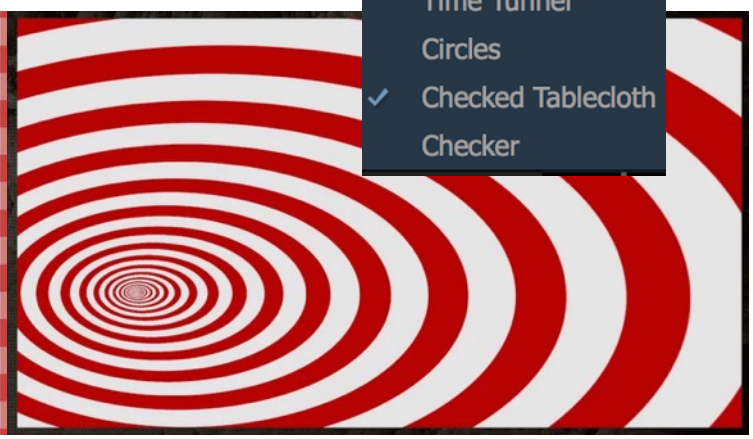
md_Texture

Generates various textures

Choice of time tunnel, tablecloth, circles, Spiral, Infinity, Horizontal, Vertical ,Triangle or Checkers

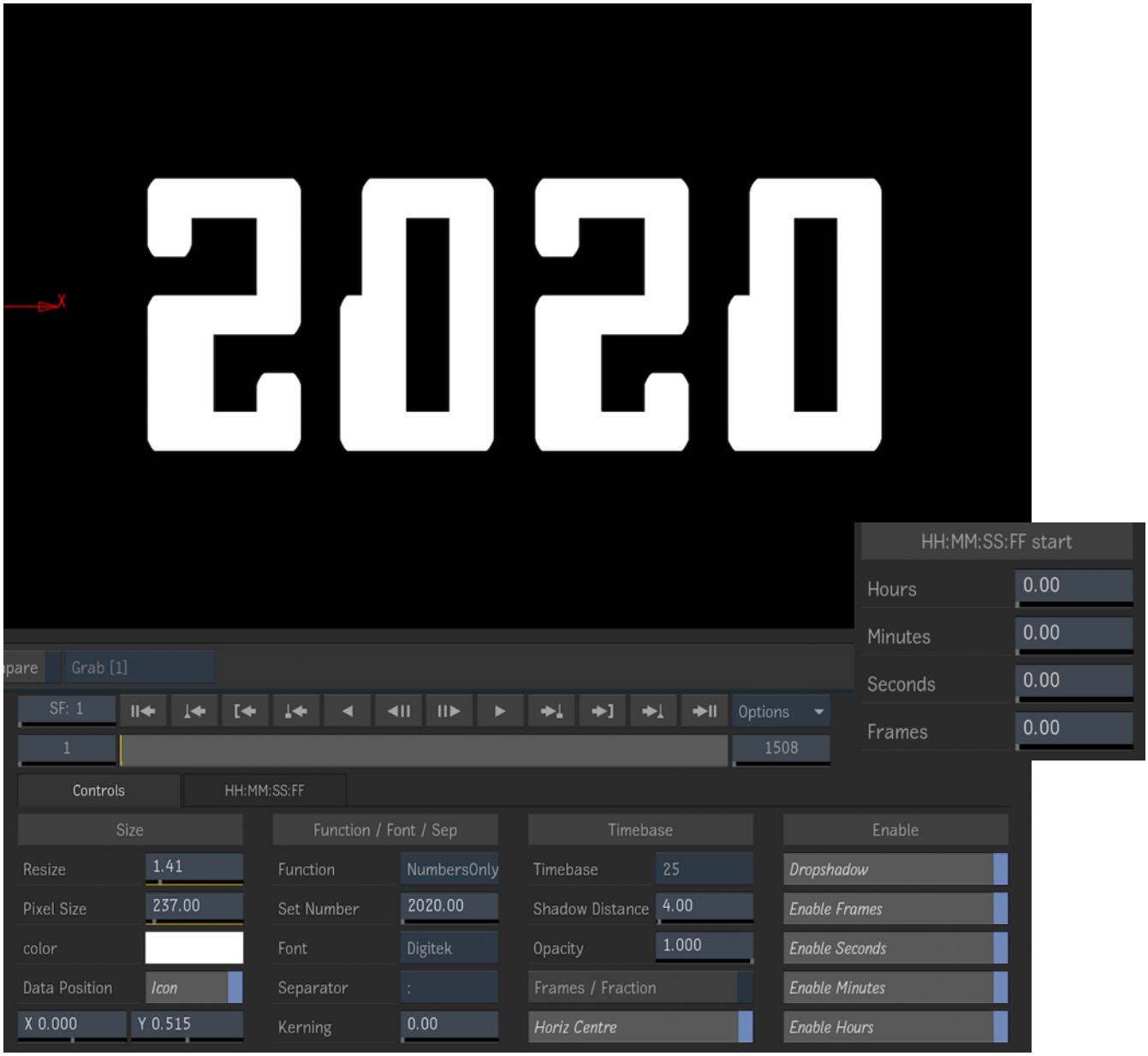






md_Timer

Burn in timer + a lot more.



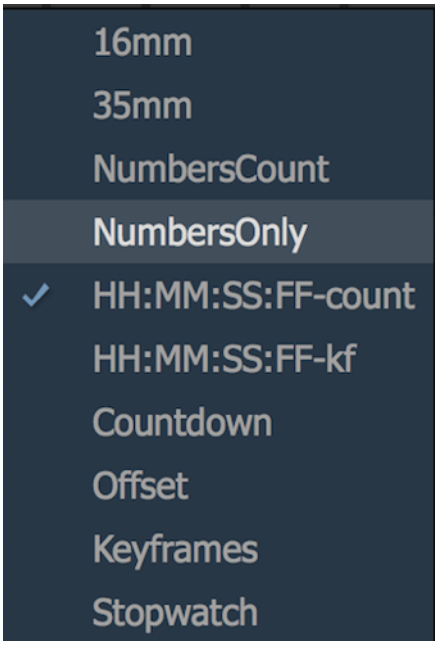
HH:MM:SS:FF timer. Adjustable size/color/kerning/font (16 in total).

md_Timer is a multi pass shader. This means the characters are created in one pass and manipulated in another pass. Pixel Size is layer 1 (Creation). Depending on your output resolution, this number can cause the frames to be cut off. So if you are losing your frames, reduce the Pixel Size.

Resize is a post effect which happens after everything else.

Data Position allows you to move the counter around the screen with an axis. If it will only move vertically, check the Horiz Centre button is not on.

Function - Feet and frames (16 and 35mm)



Numbers Count, counts frames with no separators.

Numbers Only, allows you to kf any number you want

HH:MM:SS:FF - count, starts with the page 2 setting for hours/min/sec/frames and counts adding the frame number

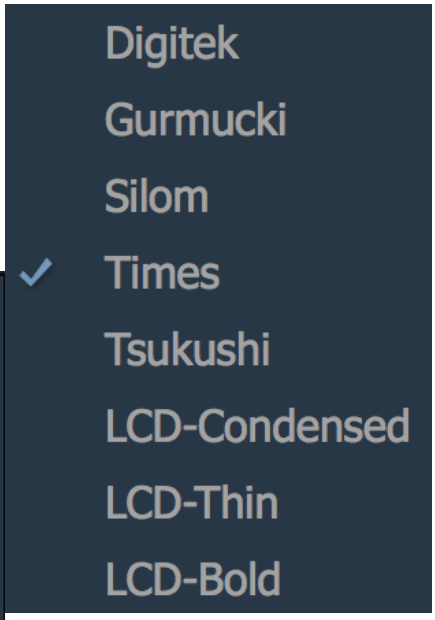
HH:MM:SS:FF - kf let's you keyframe the timer using the page 2 settings.

Countdown, lets you set a start amount and it will count down and stop at 00:00:00:00

Offset, offset the start time of the counter and count.

Keyframes, set any time to any time (in frames)

Stopwatch, counts upwards starting from frame 1.

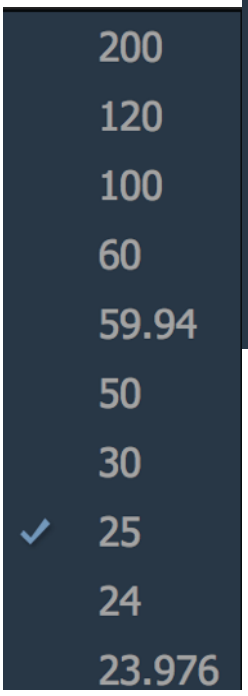


Fonts, there are 2 Timers, counters B, and C have 8+8 fonts.

Separator allows you to choose from : ; . *

Kerning, adjust the kerning, but will cut off if you go to hard.

Timebase, decides how many frames in each second. frame rates >= 100 do not display frames correctly, but will give you the correct seconds etc.



Frames / Fraction button will give you the :FF as a fraction.
e.g., 20f @ 25fps = .80

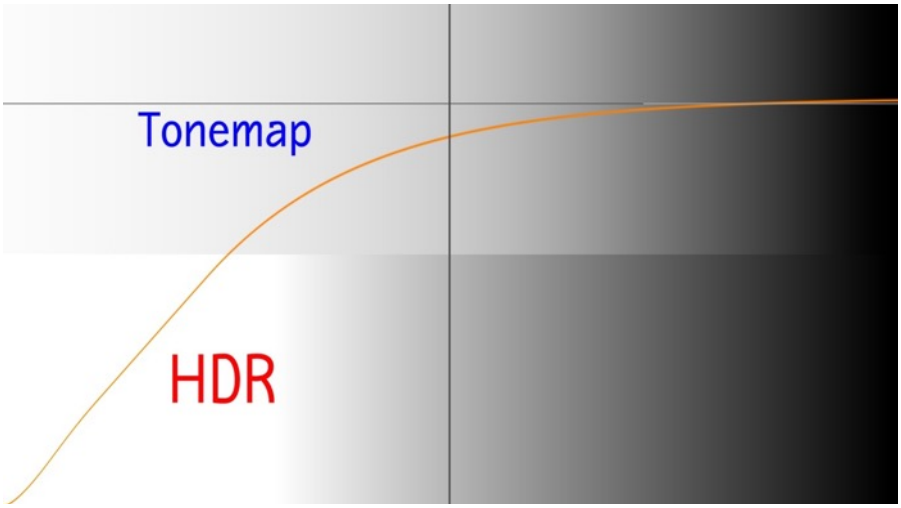
but @ 30fps = .66

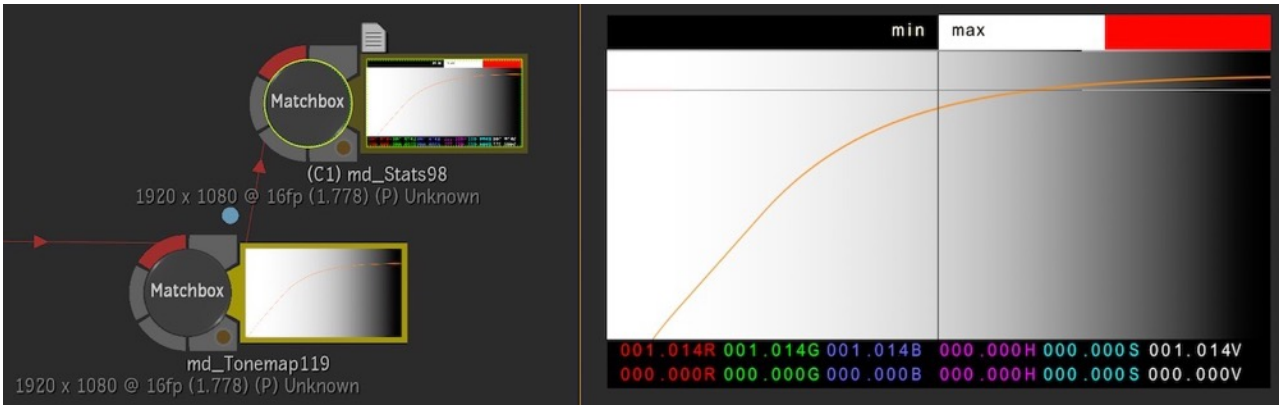
Horiz Centre button forces the counter to center even when you disable any of the frames / seconds / minutes / hours segments.

md_Tonemap

Tone map HDR - normal values.

Use this to map HDR into regular values. Use in conjunction with md_Stats to monitor over values. Choice of Uchimura (adjustable curve), Lottes (Adjustable curve), Aces (fixed) and Unreal (fixed). Has split screen for before and after view.

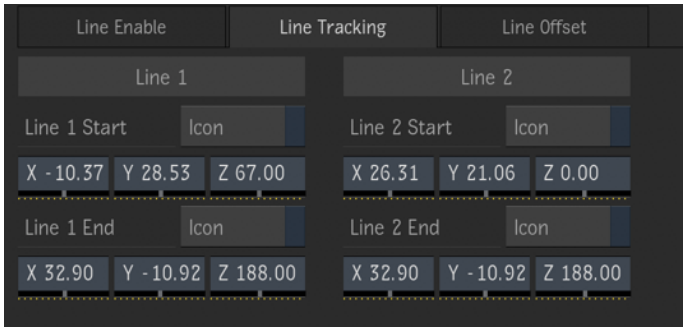




md_TraceLines

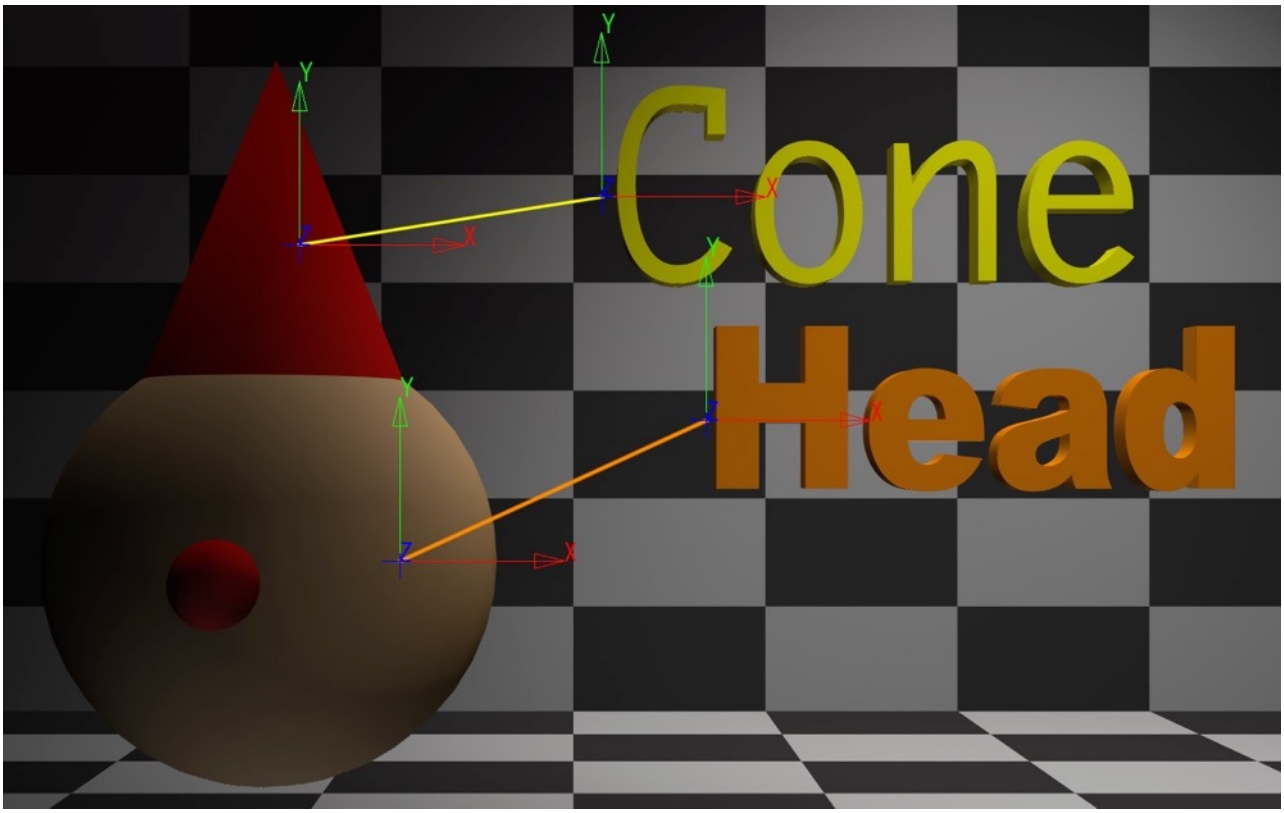
Draws lines from start to end point.

This is similar to what you may do in After Effects. You can link an axis position to the start and end points of 2 lines in this matchbox. It also has an offset for each start and end point.



Line width and color is adjustable.

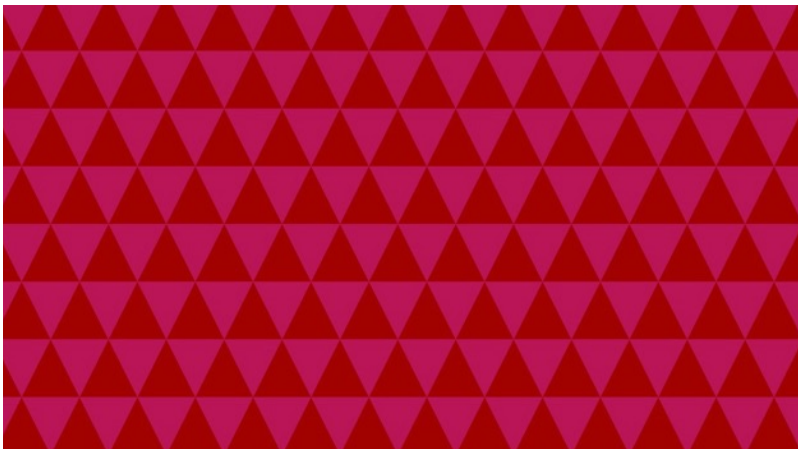
Use track Data will turn off the offset caused by the linked axis.



md_Triangle

Makes bicolour triangle pattern.

As requested by Sinan Vural. You can use a matte to reveal, and the triangles will pop on.



md_Twinkle

Makes twinkling stars out of freeze frame.

See Video here

Makes a still frame of a star field twinkle. Keeps cloud or other blurry fg image.

Speed = speed of twinkling

Scale = zoom in on twinkling random texture

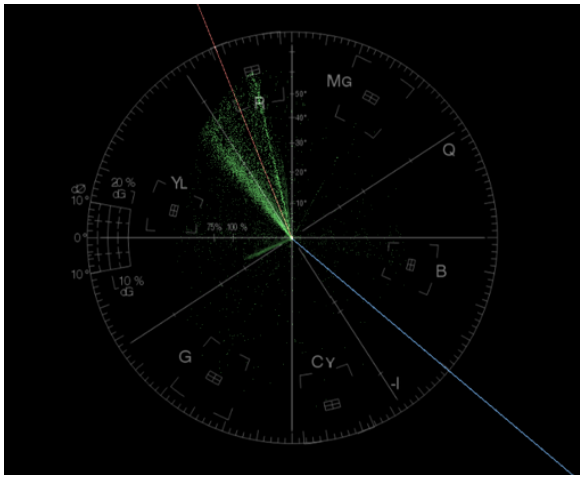
Radius = pixel distance for average pixel offset

Output choices, **Mult Input, Noise, Median, Average**

md_Vectorscope

Standalone vectorscope.

See Scope for more info.

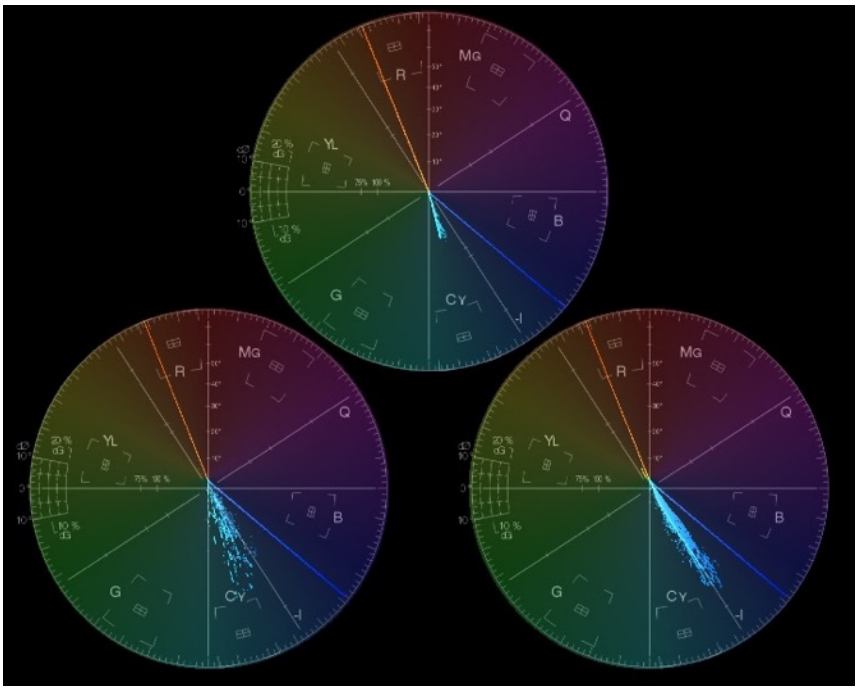


md_Vectorscope_HML

Standalone vectorscope for high/mid/low.

Low values on the left, Mid luminance values in the middle and High on the right.

Some swear it's very useful in grading sessions. YMMV.



md_Vignette

Add Darkness and Blur.

Another simple but very handy matchbox.

Darkness, 0.0 = black, 1.0 = no change

Blur Amount, progressive blur of the image within the vignette.

Position, enable icon to see axis and position if necessary.

Size, size of vignette mask

Ratio, to alter the standard screen ratio of the circle / ellipse

Softness, of the vignette. 0.0 = sharp circle edge.

md_Warp

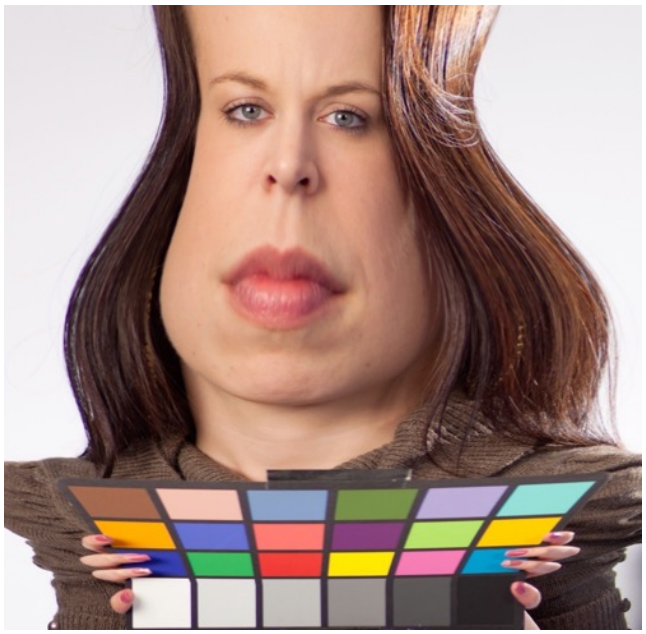
Source - Destination warper.

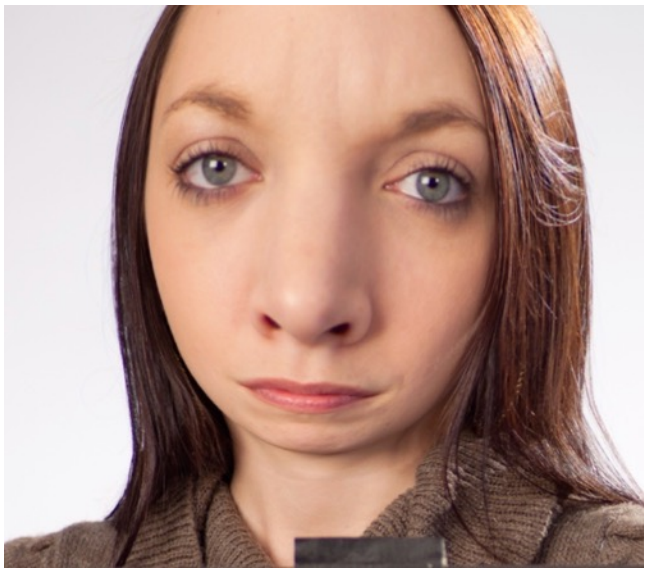
Press source destination on to set the source with the cursors.

Press again and enable the icons (lights) to adjust the destination.

Adjust to radius and it will warp a radius around your destination back to the source position. Weird and unintended effects can be made.

Big Eyes mode, will expand the eyes. No source cursor needed. Just adjust the destination (lights) over the eyes and adjust eye Max Warp and radius for falloff. Hours of fun!



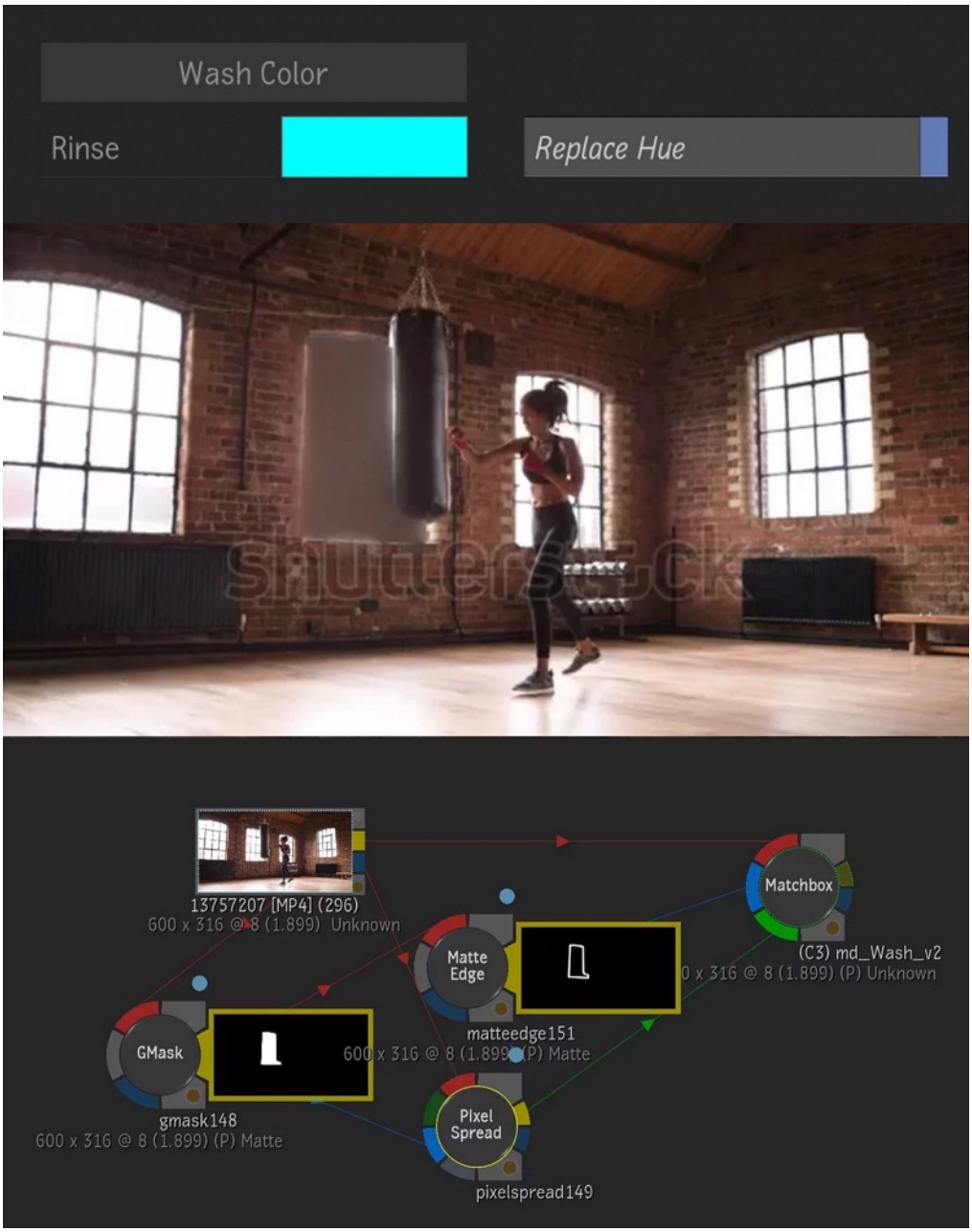


md_Wash

Color wash old style from desktop paint.

Recreates the desktop paint wash brush. Use it with two up, paint on front and matte.

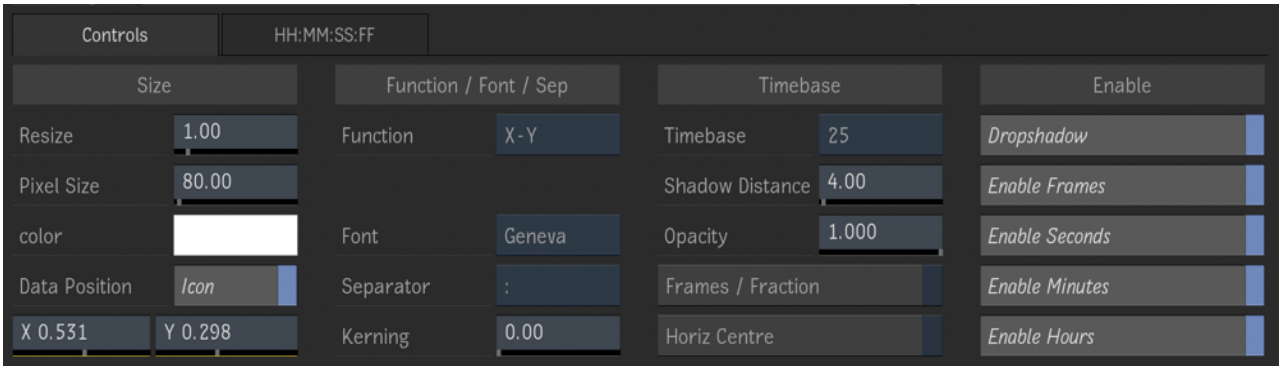
ReplaceHue button replaces hue from back input. Use PixelSpread interpolate to get the correct hue. see schematic below.

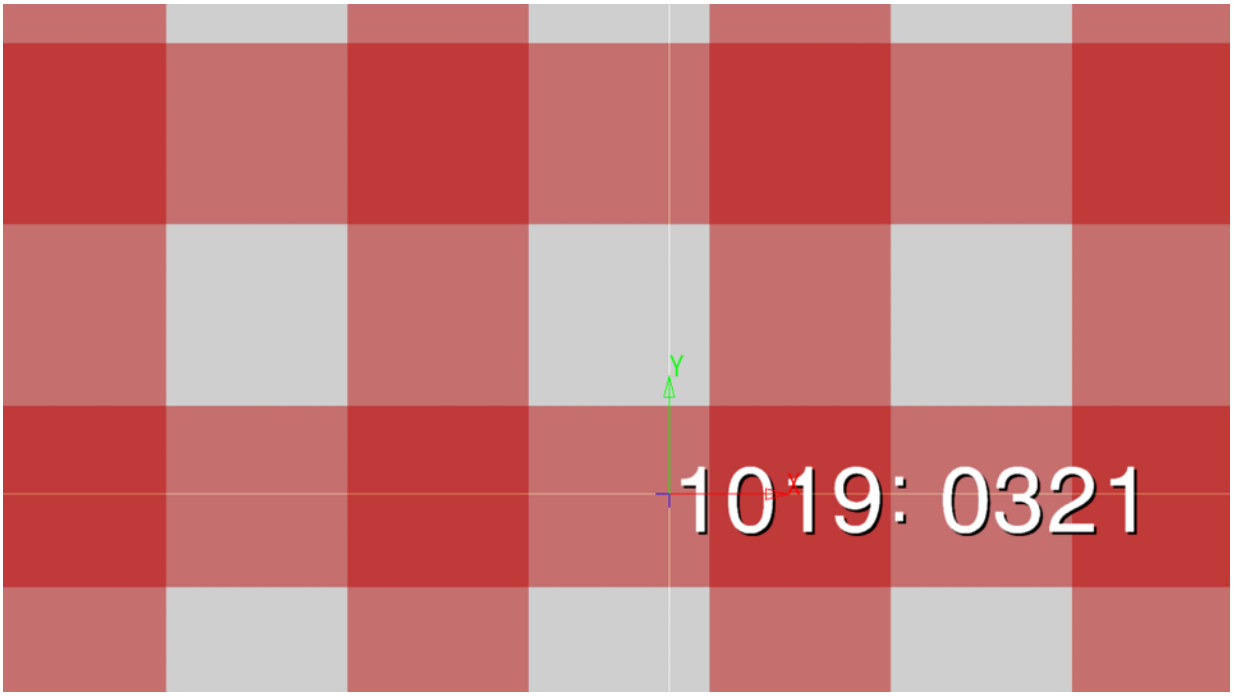


md_X-Y

Spawned from md_Timer

Displays the x/y pixel position numbers of the cursor. Could be technically useful or just a gag for some onscreen graphics mock-up.

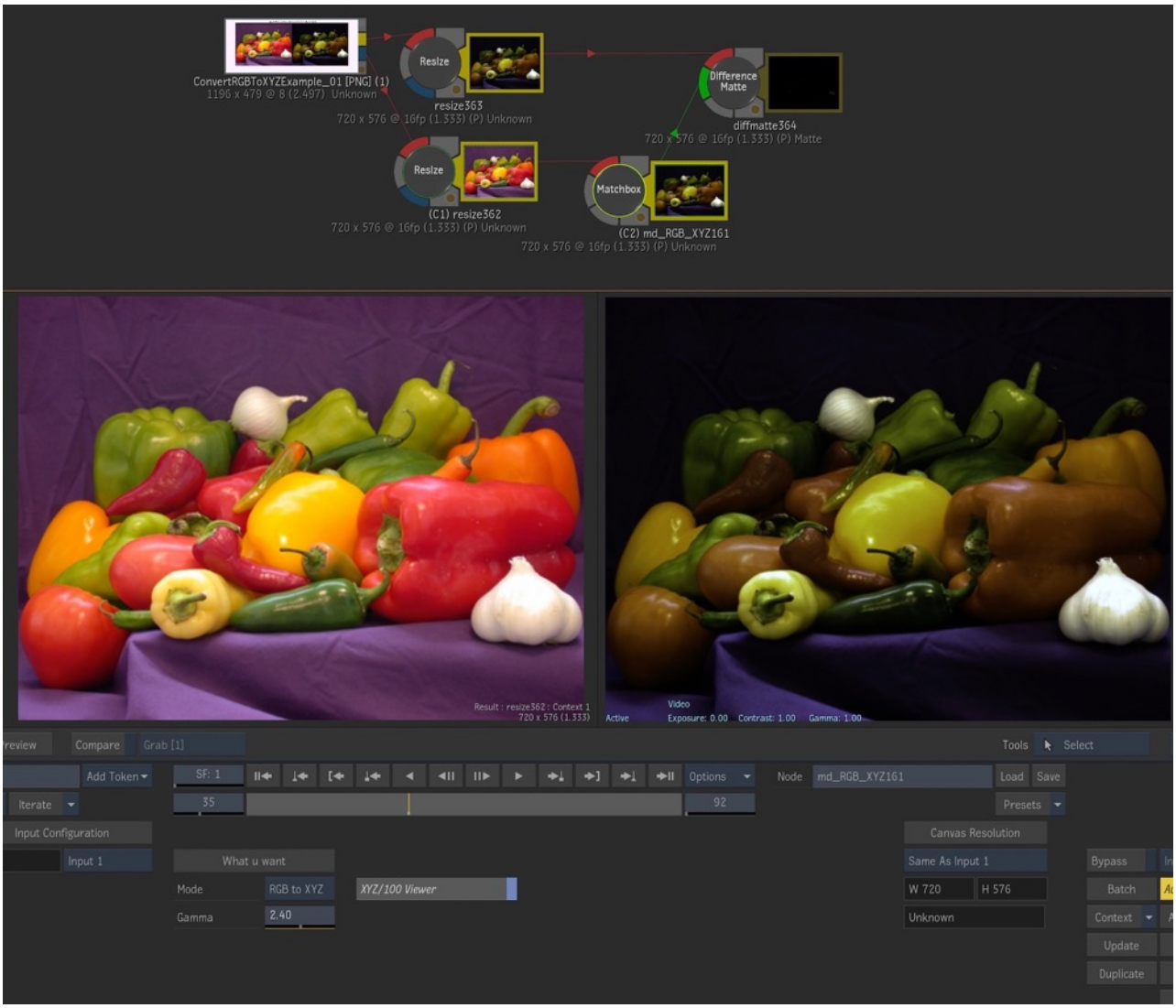




md_XYZ

Converts colorspace from RGB to XYZ

XYZ is the colorspace used in DCP's. This simply converts rec709 to xyz. You can change the gamma as well.



md_ZSplice

Blend two RGBAZ images

Mixes 2 images with z depth. For instance, two different action particle systems. see schematic below.