



Give photos a cartoon look. **ToonIt! Photo 2.6**



Easily create a cartooned look
in Photoshop and Photoshop Elements



[from: Digital Anarchy]
f/x tools for revolutionaries
www.digitalanarchy.com



[render code by]
Toonamation



Intro to ToonIt! Photo 2.5	1
How it works	1
Easy, believable cartooning	1
OS & Application Support	2
Installation & Location	2
Support, Registration & Training	2
Creating good source images	3
Plan your photos	3
Check for good lighting	3
Illuminate the subject	3
Pay attention to clothing	3
Look for the little details	4
Watch out for shadows	5
Resolution affects cartoon detail	6
Overview of Interface	7
How to apply ToonIt settings	8
Apply & Cancel buttons	8
Move command	8
Undo, Redo	8
Zoom In, Zoom Out	8
Contextual menu	8
Show Original Image	9
Works with Actions & Batches	9
Changes from ToonIt 2.0 to 2.5/2.6	10
Render times & settings	11
Quality vs Speed	11
Tips for faster render	11
The spinning cursor...	12
Last settings & Reset button	12
Changing the settings	12
The Preview Window	13
Render & Preview look different	13
Caps Lock disables preview	13
Zoom Control	14



The Preset Manager	15
Shipped presets	15
Apply Preset button	15
Save Preset button	15
Load in presets	15
Effects Palette	16
Summary of Effect groups	16
Sumamry of Outline Effect groups	16
Pre-Blur tab> Main Blur	17
How It Works	17
Main Blur popup	18
Blur Type> None (NEW to v2.5)	18
Blur Type> Box Blur	18
Blur Type> Gaussian Blur	19
Blur Type> Supersmart Blur (NEW to v2.5)	19
Main Blur> Box & Gaussian controls	20
Radius	20
Threshold	21
Quality popup	21
Main Blur> Supersmart controls	22
How It Works	22
Blurring (NEW to v2.5)	22
Test Radius (NEW to v2.5)	23
Blur Radius (NEW to v2.5)	24
Pre-Blur tab> Outline Blur	25
How It Works	25
Use Outline Blur checkbox	25
Outline Blur popup	27
Blur Type> None (NEW to v2.5)	27
Blur Type> Box Blur	27
Blur Type> Gaussian Blur	28
Blur Type> Supersmart Blur (NEW to v2.5)	28
Outline Blur> Box & Gaussian controls	29
Radius	29
Threshold	30
Quality popup	30



Outline Blur> Supersmart controls	31
How It Works	31
Blurring (NEW to v2.5)	31
Test Radius (NEW to v2.5)	32
Blur Radius (NEW to v2.5)	33
Halftone/Stipple tab> Halftone Effect	34
Dot Size	35
Red/Green/Blue Angle	35
Transparency	35
Dot Quality popup	35
Halftone/Stipple tab> Stipple Effect	36
Use Stipple checkbox	36
Density	37
Threshold	37
Dot Size	37
Transparency	37
Not a WYSIWYG view	37
Shadow Effect	38
Use Shadow checkbox	38
Threshold	38
Antialias	39
Use Tint checkbox	39
Transparency	39
Shadow/Color tab> Color Effects	40
Lightness	40
Lightness Type	41
Blend with Original	41
Shadow/Color tab> Duotone Effects	42
Use Duotone checkbox	43
Light Color, Dark Color	43
Creating grayscale images	43
Outlines tab> Outlines Only	44
Outlines Only checkbox	44
Keep Comic or Soft active	44
Outline Color	45
Background Color	45



Outlines tab> Comic Outlines	46
Use Comic checkbox	46
Sensitivity	47
Strength	47
Thickness	48
Antialias	48
Transparency	48
Quality popup	49
Outlines tab> Soft Outlines	50
Use Soft checkbox	51
Strength	51
Thickness	51
Transparency	51
Quality popup	52
Marker/Woodcut tab> Marker Outlines	53
Use Marker Outlines checkbox	53
Flatness	54
Simplicity	54
Crack Size	55
Thickness	55
Antialias	55
Minimum Difference	56
Transparency	57
Marker/Woodcut tab> Marker + Reuse Crackle	58
Reuse Crackle checkbox	58
Create a Stained Glass effect	59
Thickness	60
Minimum Difference	60
Marker/Woodcut tab> Woodcut Outlines	61
Use Woodcut checkbox	61
How It Works	62
Threshold	62
Sensitivity	63
Strength	64
Strength may color in opposite	64
Strength and Sensitivity	66



Antialias	66
Quality popup	66
Thickness	67
Use Tint checkbox	67
Transparency	68
Experiment with Woodcut	68
Scratch/Conte tab> Scratchboard Outlines	69
Use Scratchboard checkbox	69
Threshold	70
Style popup	70
Detail	71
Focus	71
Antialias	72
Use Tint checkbox	72
Transparency	72
Scratch/Conte tab> Conte Outlines	73
Use Conte checkbox	73
How It Works	74
Light Color	74
Light Strength, Dark Strength	74
Light Thickness, Dark Thickness	75
Transparency	76
Quality popup	76
Style Controls	77
Flat Shaded Style	78
Flatness & Simplicity	78
Strength	79
Quality popup	79
Flat Detailed Style	80
Temporal Fix	80
Strength	80
Level	81
No Roto Style	82
Airbrush Style	83
Brush Size	83
Light Mix	84



Strength	84
Blacklight Edges group	85
No Effects Palette controls	85
Edge Color	85
Background Color	85
Edge Width	86
Invert checkbox	86
Colorflow checkbox	87
Bristle Style	88
Pre Sharpen	88
Brush Size	88
Post Sharpen	89
Quality popup	90
Crackle Style	91
How It Works	91
Use Marker Outlines for Stained Glass	91
Flatness	92
Simplicity	92
Crack Size	93
Strength	93
Droplet Style	95
Use without Main Blur	95
Brush Size	96
Strength	96
Goth Style	98
No Effects Palette controls	98
Type popup	98
Light Color	99
Mid Color	99
Dark Color	99
Color Width	99
Level	100
Antialias	100
Gouache Style	101
Pre-Blur	101



Pre-Sharpen	102
Brush Size	103
Post-Sharpen	103
With Main Blur	103
Quality popup	104
Heat Vision Style	105
No Effects Palette controls	105
Offset	105
Poster Paint Style	106
How It Works	106
Poster Paint 1	107
Poster Paint 2	107
Poster Paint Blend	108
Foreground	108
Radius	109
Contrast	109

Intro to ToonIt! Photo 2.5

Finally! An easy way to give your photos that sought-after cartoon look. ToonIt! 2.5 uses advanced algorithms to process your image and create cartoon shading and lines. ToonIt! plugins free you from time consuming techniques like rotoscoping and hand painting.

How it works

ToonIt! analyses an image, then reduces its color palette and detects where the important edges are. The edges are used to shape and control fields of color. Use Outline options to create a realistic line drawing or accent the . Combine different styles and outlines to create even more variation. Voila: you've been toon'ed.

Easy, believable cartooning

Creating a cartoon look -- a really GOOD cartoon look -- is typically very time-consuming and hits a lot of limitations. ToonIt! gives you the power of new technology designed by Toonamation specifically for digital photographers and Photoshop artists. An easy-to-use interface and custom controls give you unlimited flexibility. No other cartooning solution produces such good results with so little work.

Using the Effect Palette and Style Creator, you can effortlessly cartoon in many different styles including: flat cel-shaded colors, dramatic Graphic Novel, high contrast Comic Noir, Halftone dots, Stained Glass, and even black-and-white Line Art. Hope you enjoy the product as much as we do!

This plugin set is a collaboration between Digital Anarchy (that's us!) and the technology company Toonamation, Inc.



Toonamation



OS & Application Support

On Mac, ToonIt! is supported in OS 10.4, 10.5 and 10.6. It runs natively on Intel Macs and PPC's.

On Windows, ToonIt! supported in Windows XP Home, XP Home, Vista 32-bit, Vista 64-bit and Windows 7.

ToonIt! supports Photoshop 7.0, CS, CS2, CS3, CS4 and CS5. ToonIt! runs natively in both 32-bit and 64-bit. ToonIt! also supports Photoshop Elements 6.0-9.0 and Apple's Aperture 2.0 and 3.0.

Installation & Location

Installation is simple and directed towards your Photoshop/Plug-ins folder. For help installing ToonIt!, please refer to our installation material.

In Photoshop and Elements, ToonIt! appears in a Digital Anarchy sub-menu in the Filter menu.

Support, Registration & Training

Registration occurs when you purchase the filter. We register you in our database using the contact information you supplied upon purchase, and the serial number we've given you. If you need a serial number, installer, or any other material support, just contact sales@digitalanarchy.com.

We hope that you find ToonIt! to give you all the control you could want, while simple enough that you can set everything up in a few minutes. It's our desire to make sure you're satisfied with your purchase. If you have any questions, comments, or whatever, we'd love to hear them. Send an email to info@digitalanarchy.com.

If you're having trouble with ToonIt!, please make sure to go through the intro video tutorials available at www.digitalanarchy.com/toonPS/tutes.html. They're quite helpful, we promise. We also have a forum area that you can post to, www.anarchyunderground.net/forum.





Creating good source images

ToonIt! is a very intuitive product but like all software, it needs a little nurturing. ToonIt! will do its darned best to 'toonify' your image with a minimum amount of tweaking when you first apply it. The result of this cartooning is in part based on the quality of your footage. As with most graphics, the better your source material, the better your final results.

Plan your photos

Visual information is brought out by good lighting, attention to composition, and the quality of the capture.

For instance, starting from a RAW file will give you a bit better results than working with a JPG. There's usually not much advantage to working in 16 or 32-bit mode, so 8-bit is fine.

The better your photos, the less initial tweaking you'll have to do to get a good, solid toon. Being aware of the potential issues can allow you to take good photos and avoid time consuming modifications.

Check for good lighting

A good image for cartooning has contrast... but only in the right areas. The face is generally what people focus on and it needs to be flatly lit. Any shadows on the face will cause the Outlines to be drawn across the face. Not usually what you want. Pay attention to where the shadow edges are because those will become solid edges.

Illuminate the subject

Usually you want to have the main area of interest fully illuminated. In the case of portraiture that means you want plenty of light on the face. You tend to get more detail in the lighter areas, so if you have bright background and poorly lit foreground, the source photograph may be difficult to work with.

Pay attention to clothing

Since people are often the subject for cartooning. It is important to pay attention to clothing. If you're trying to create a flat, cell-shaded look, you don't want to have busy patterns on the subjects' clothing. Use single color clothing with no pattern. Be aware of where the neckline and the ends of sleeves are. You're going to have big solid outlines where the clothing reveals skin.

Look for the little details

Paying attention to lighting, shadows, clothing, and other details leads to a final tip. Often we don't have the time to really frame a shot. Before you toon your image, look for the little details that may translate a little strangely into a cartoon.

For instance, if you look at the pumpkin photos below, you can see spot on the child's chin. That's from a highlight which doesn't look bad in the original image but is pretty noticeable in the cartoon. You can also see the photographer's thumb at bottom left of the photo.

A bit of editing in Photoshop removes the light spot from the child's face, and the cartoon looks much better. We also removed the erroneous thumb. Again, it's often the small details that sell an image.



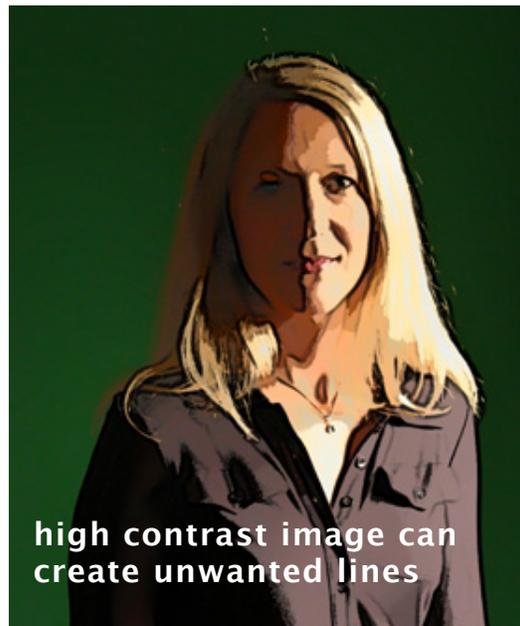
small details can make or break the cartoon look



Watch out for shadows

If you are planning to use outlines in the cartoon, it's very important to notice where shadows fall in your photograph.

If you use a common portraiture technique like having one side of the face slightly better lit than the other side, you're likely to have a line running down the subject's face. The outlines are based on the border between contrasting areas to create the lines and a shadow counts just as much as a hairline.



A good image has contrast but not too much contrast. The face is generally what people focus on and it needs to be well lit. In fact you want the whole subject well lit, but especially the face, because you don't want a line in face where there's a shift from light to dark. Contrast on the subject's nose and lips is good because that's where line are going to drop.

Resolution affects cartoon detail

Size does matter. The resolution of your file will affect the way the cartoon appears. In our images below, the higher-resolution cartoon shows finer detail, even though the same ToonIt settings were applied.



Overview of Interface

ToonIt Photo pairs an amazing rotoscoping engine and terrific edge detection to produce a full-fledged cartoon effect. The interface has five sections. Two are work areas, one gets you started with presets, and the other two are for viewing your project.

Preview Window (a)

Where you view the image as it is being toned.

Preset Manager (b)

Load up presets that shipped with ToonIt. You can also save new presets and load them back in later.

Style Selector (d)

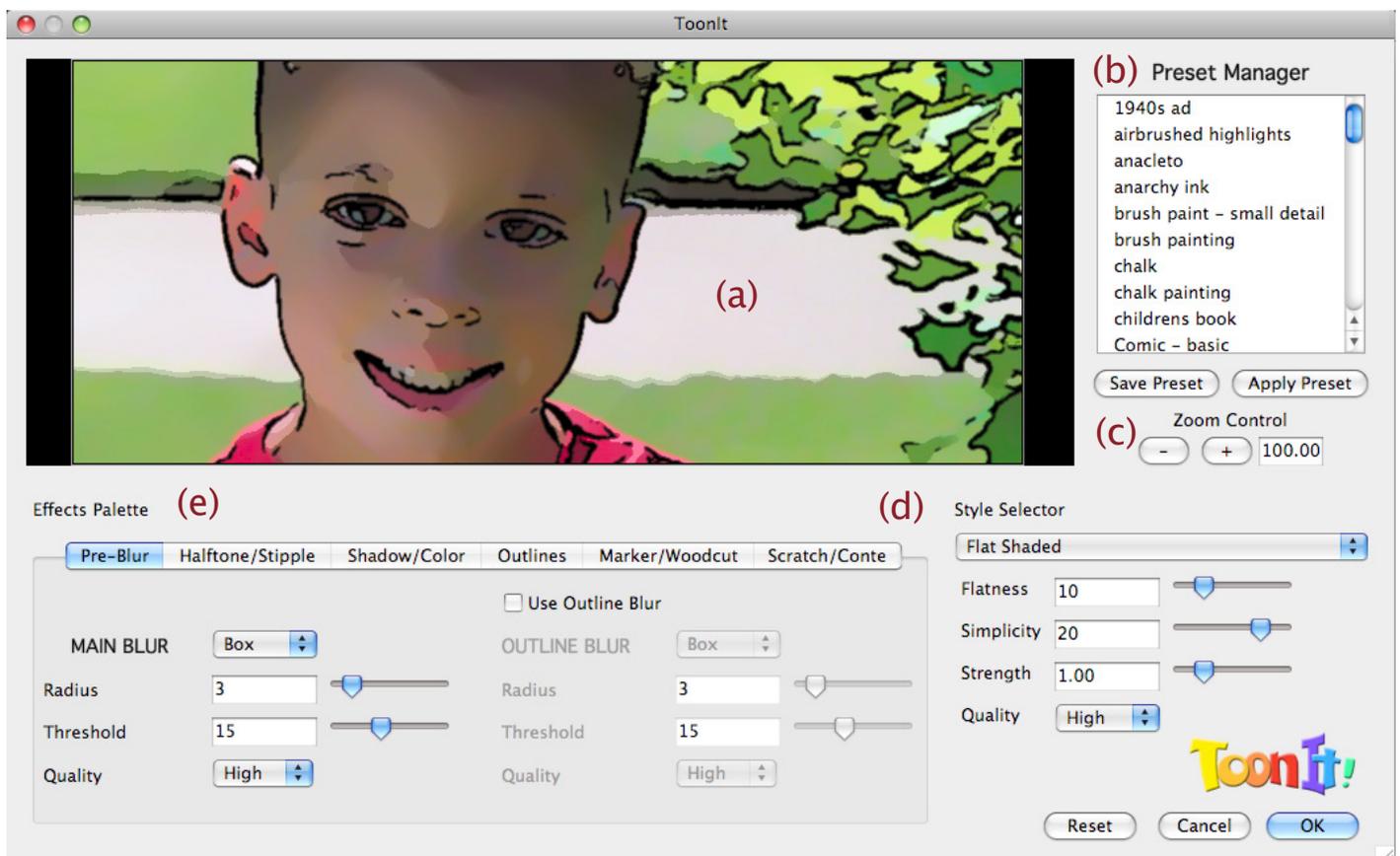
Fine tune the effect that you have constructed.

View Controls (c)

The Zoom controls. There is also move functionality that you get by holding down the spacebar to get a grabber hand.

Effects Palette (e)

Choose the basic effect. The Effect Groups are Pre-Blur Halftone, Stipple, Shadow and Outlines. By default, Pre-Blur and Outlines are active but the other groups aren't.





How to apply ToonIt settings

The ToonIt interface works in a very straightforward way. Type a numeric value into the number fields or use a slider to set that value. To make the numeric value apply, hit the Tab key or click into another input field.

The only thing to be aware of is that the Return and Enter keys do not apply your settings. Clicking the Return or Enter button will activate the OK button, which renders your cartoon into Photoshop.

Apply & Cancel buttons

To render your image, click the Apply button. To cancel what you've done, click the Cancel button.

Move command

You can use the spacebar key to grab and move your image in the Preview Window. There is no Move tool for this functionality.

Undo, Redo

There are 10 levels of Undo and Redo built into ToonIt.

Zoom In, Zoom Out

You can use the keyboard commands Control+Plus/Minus (Win) or Apple+Plus/Minus (Mac) to zoom in and zoom out of your image. You can also choose Zoom In or Zoom Out from the contextual menu or the Zoom Palette.

You may find that a very sluggish speed is related to the zoom level. The Preview window will render whatever is in it. So if you're zoomed out and the image fills just a portion of the preview window, ToonIt will render faster than if you're zoomed in at 100% and the image fills the entire window. So zooming out is one way to keep preview rendering time down. [Read more here.](#)

Contextual menu

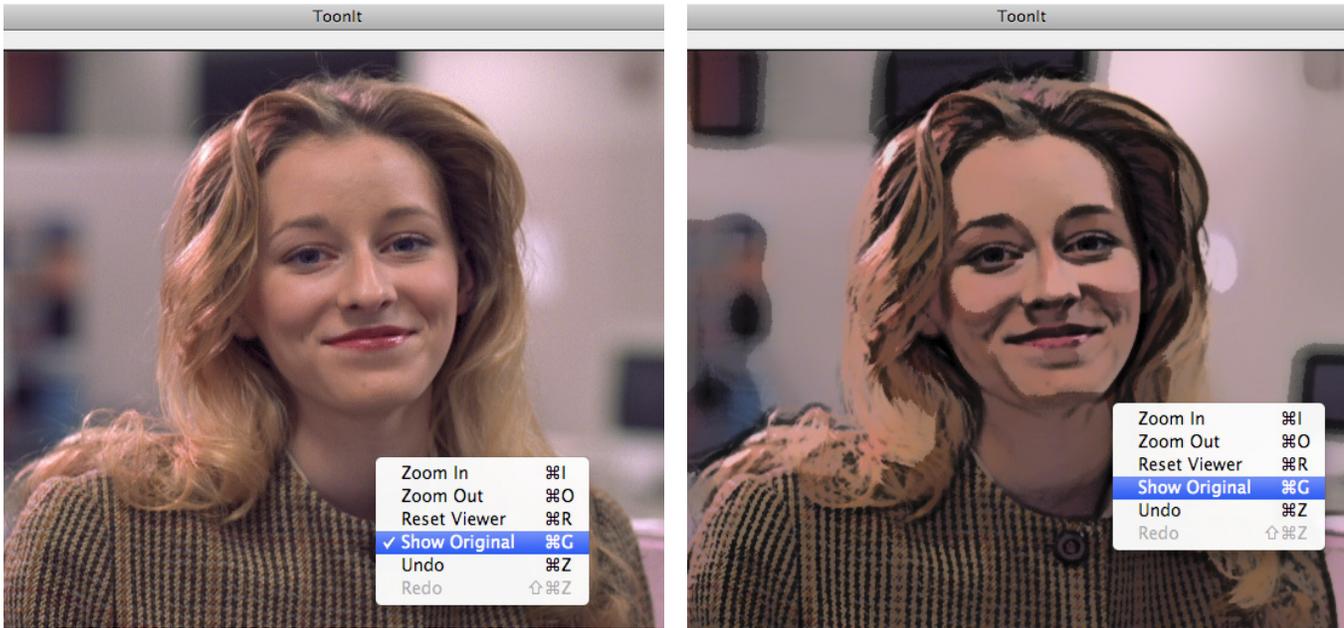
You can bring up a menu of commands by right-clicking (Windows) or Control-clicking (Mac) in the Preview Window. This contextual menu lets you access many of the controls that we discuss here.

Zoom In	⌘I
Zoom Out	⌘O
Reset Viewer	⌘R
Show Original Image	⌘G
Undo	⌘Z
Redo	⇧⌘Z

The contextual menu is accessed by right or control clicking.

Show Original Image

A great feature in the Preview Window's contextual menu is Show Original Image. This menu item toggles between a display of the tooned image and the original image. This command lets you compare the cartoon-in-progress with the original image you imported. The keyboard shortcut for Show Original is Control+G (Win) or Command+G (Mac).



Works with Actions & Batches

ToonIt can be tied into an Action or Batch process in Photoshop. Its ability to remember its last settings is terrific if you are processing a large group of images or an image sequence. [Read about last settings.](#)



Changes from ToonIt 2.0 to 2.5/2.6

This page lists the changes between ToonIt 2.0 and 2.5/2.6. Read this list if you originally owned version 2.0 and want a quick summary of the new features.

Faster & better performance

- 64-bit support for Photoshop CS5. This is a biggie! Now ToonIt can run much faster.
- Background rendering was added. This means you can stop a control from rendering its results when you click a new control.
- A Status Bar lets you know how processing-heavy an effect or change may be.
- The ability to disable the ToonIt preview. Just toggle your keyboard Caps Lock button to turn on/off the Preview Window. [Read more.](#)
- In version 2.0, there was one level of Undo/Redo. Now there are 100 levels.

The Effects Palette has three new effects

- New Scratchboard effect and controls.
- New Conte effect and controls.
- New Woodcut effect and controls.

Two new Blur types

The Main Blur and Outline Blur popups have new options. Previously there were Box Blur and Gaussian Blur options.

- We have added a Suerpsmart Blur choice, which comes with three new controls: Blurring, Test Radius and Blur Radius.
- We have also added a None choice, which turns off the Blur. [Read more.](#)

Tabs in the Effects Palette are reorganized

- Blur/Color tab is now called Pre-Blur.
- The Halftone and Stipple tabs are now combined into one tab called Halftone/Stipple.
- The Shadow tab is renamed Shadow/Color. We have moved the Color Effects and Duotone Effects controls from the Blur/Color tab.
- The Marker Outlines section is renamed Marker/Woodcut due to the new Woodcut controls that have been added.

Other interface changes

- In Shadow/Color tab, Tint Foreground is now the Use Tint checkbox.
- In Marker Outlines, the Separation control has been renamed Crack Size.
- In Airbrush style, Contrast has been renamed Brush Size.



Render times & settings

ToonIt! is a quality vs. speed effect. It simply requires a lot of processing to create the desired effect. Other cartooning effects use glorified Posterization algorithms to create their cartoons. This is pretty fast but doesn't create as nice of a look.

Quality vs Speed

ToonIt's render time can be slow. We are committed to improving the preview and render times as this product matures. However, we are even more firmly committed to making sure that the quality of the results are rivaled only by manual masking and rotoscoping. The high quality results are what makes ToonIt! stand out and makes the product worth using.

One of the main features of ToonIt! is how it holds up when dealing with human faces. This tends to be the hardest part of cartooning an image and where most cartooning filters fall apart. ToonIt! provides pretty spectacular results and that is part of the reason its preview/render time is high.

Tips for faster render

The main thing that slows ToonIt down (other than big images) is setting the Blur parameters to high values. Keep Blur at moderate values unless necessary.

Some Styles take longer to render. For example, Crackle tends to be slow while Flat Shaded tends to be fast.

Working in CMYK mode takes longer than RGB. Makes sense since RGB mode stores less information. If you are going to print your image, consider running ToonIt! on an RGB file, then converting to CMYK.

Larger images take longer than smaller images. (Surprise!) If a 6x9 inch cartoon is going to be printed at 2x3 inches, you can do the scaling before applying ToonIt. Having said that, the resolution of your source image will affect the detail quality of the cartoon that is produced, so you should balance out those factors.



The spinning cursor...

...of death! Hee hee, no, we're just kidding. Aren't you glad that you're reading the manual now?

When Toonit processes a setting, you will see a spinning cursor. This just lets you know that Toonit is thinking and rendering. In version 2.5, we have added a Status Bar to let you know in more detail how processing-heavy an effect or change may be.

Last settings & Reset button

When you open ToonIt, the plugin remembers the last settings it applied to an image. By 'apply' we mean the last settings that were rendered out. If you mess around in Toonit but click Cancel without applying the cartoon effect, then Toonit will not render a cartoon and it will not remember what you did.

If you change some settings inside Toonit and click Apply, then Toonit will render a cartoon and it will remember what you did. The next time you open Toonit, the plugin will have those same parameter settings. This is true for settings in both the Effects Palette and the Style Creator.

If you want ToonIt to forget its previous settings, just click the Reset button. All of ToonIt's defaults will come back.

This is useful if you want to apply the same settings to multiple images or if you don't like the way something rendered, you can undo, and go back into ToonIt where all the settings you last applied will still be there.



Changing the settings

When you make a change in another parameter, rendering is canceled and priority is given to the new change. This may make previewing seem a little slow.

The Preview Window

The Preview renders the image in the viewer. If you have the image scaled high, like 75%, you will see a more accurate cartoon, but that preview will take longer to build. If you have the image scaled to 25% of the viewer, then the preview builds fast. If you want faster previews, scale the image down. If you want more accurate previews, keep the scale at 100%.

Render & Preview look different

You will sometimes find that a render of ToonIt into Photoshop looks different than what you saw in the Preview Window.

The Preview Window is just a preview. If you want to see exactly what the image is going to look like when rendered in Photoshop, you need to have the preview set to 100%. This view does take longer to build.

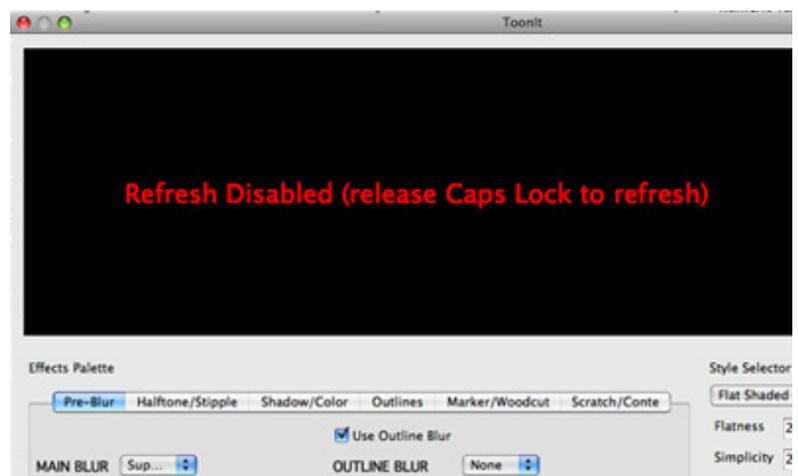
ToonIt bases its calculations on the actual pixels in your source image. Applying the effect to a 1000x1000 pixel image vs. a 500x500 pixel image (50% and a lot less pixels) will yield slightly different results.

If an image is scaled down, it has fewer pixels than when it is at full resolution, which makes for a faster but less accurate preview. Since it doesn't have all the pixels of the full image, you will get different results when it's rendered on the full image. Sometimes the difference is very minor, but it can be significant.

Caps Lock disables preview

In ToonIt 2.5, we have added the ability to turn off the Preview Window while you work. This preview disable is wonderful for speeding up your workflow.

You can hit Caps Lock, change a bunch of parameters, then hit Caps Lock again. Those changes will render one preview, rather than generating a new preview after each edit.





Zoom Control

The Zoom Control palette is simple and standard.

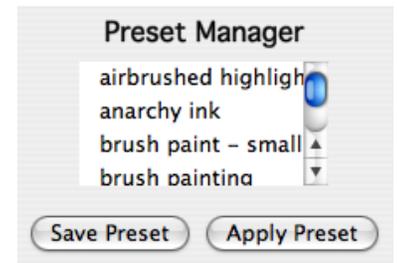
Click the Plus or Minus buttons to zoom in or out of your image. The numeric field lets you input an exact zoom value. You can also choose Zoom In or Zoom Out from the contextual menu, or use the keyboard commands Control+Plus/Minus (Win) or Apple+Plus/Minus (Mac).

Zooming to 100% will give you the most accurate preview of your cartoon. However, it will also make the preview a bit sluggish, as mentioned on the previous page.



The Preset Manager

The Preset Manager is a simple interface area that lets you work with premade groupings of settings. These are parameter options that have been chosen in the Effects Palette and Style Creator.



Shipped presets

Since every image is different the presets won't have the same effect. Sometimes they'll come out as expected, some times you'll need to tweak them a bit, and sometimes they just won't work for a given image.

In general, the presets are designed to work with an image similar to the sample image... a well lit face, with a dark background, and not much detail in the clothing. The further away you get from that (e.g. subject in shadow with a bright background) the less likely the preset will produce an expected result.

Also, if your preset is created for a file of a certain resolution, and then you use it for a file of a different resolution (say 2000x1500 vs 300x400), the preset is going to play out much differently.

Apply Preset button

You can apply a preset in two ways. One, select the preset from the Preset List, then double-click the preset to apply it. Two, select the preset, then click the Apply Preset button.

Save Preset button

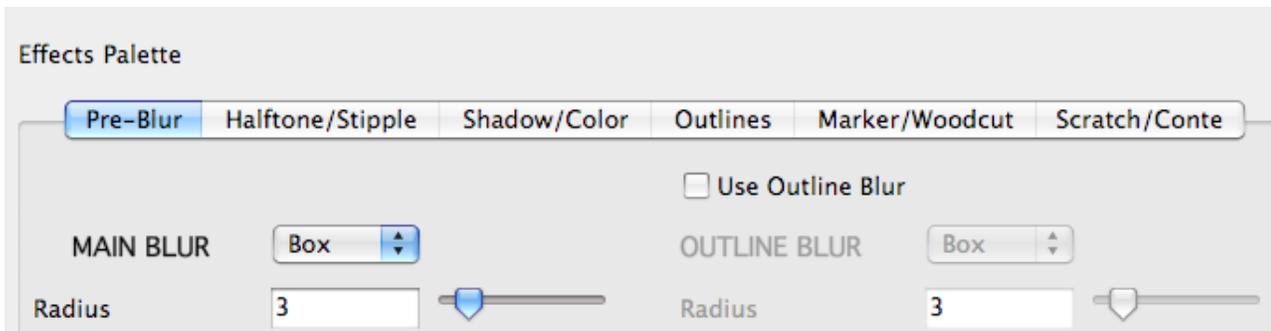
If you find a look that you really like, you can save your own presets. Once you get everything set up, just click the Save Preset button. You'll be asked to name it and save it in the Presets folder. A thumbnail will be generated automatically using the default image. You'll then see your preset listed in the Preset Manager.

Load in presets

If a client or colleague has a preset you'd like to use, you can just copy it from their machine. Copy it from their presets folder into your presets folder and it'll automatically show up in the Preset Manager.

Effects Palette

This is where you choose the basic effect. Each Effect group has a set of parameters to change its look around. By default, Pre-Blur and Outlines are active (by being checkmarked) but the other groups aren't. This section of the manual discusses each Effect and its parameter group.



Summary of Effect groups

Six of the Effect groups are designed to work with the cel-shaded color fields that make up the base of the Effect. They are:

- Main Blur, in Pre-Blur tab
- Halftone, in Halftone/Stipple tab
- Stipple, in Halftone/Stipple tab
- Shadow, in Shadow/Color tab
- Color, in Shadow/Color tab
- Duotone, in Shadow/Color tab

Sumamry of Outline Effect groups

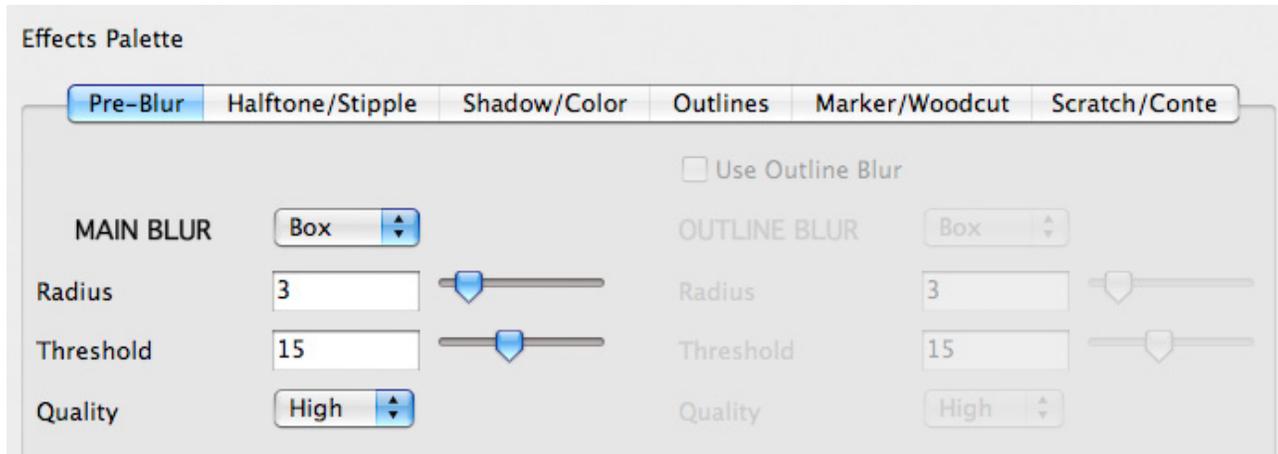
Eight Effect groups are designed to work with the cartoon outlines. They are:

- Outline Blur, in Pre-Blur tab
- Outlines Only, in Outlines tab
- Comic Outlines, in Outlines tab
- Soft Outlines, in Outlines tab
- Marker, in Marker/Woodcut tab
- Woodcut, in Marker/Woodcut tab
- Scratchboard, in Scratch/Conte tab
- Conte, in Scratch/Conte tab

Pre-Blur tab > Main Blur

The Pre-Blur palette is an important part of every cartoon effect. This group of parameters sets the Blur and Color properties used by the rotoscoping algorithm.

The Main Blur group determines, to a large degree, how detailed or soft the rotoscoping effect is. This is where your beautiful cartoon look starts.



How It Works

Main Blur is always on by default. There is no checkbox for turning it off/on as with the other Effect groups. To turn Main Blur completely off, set the Radius or Blurring control to 0.

The Main Blur parameters create a pre-blur, blurring out your image before ToonIt processes it. The more blur there is the softer and less detailed the result cartoon will be. While some amount of blur is necessary to get a cel-shaded look, too much blur will turn the image into a mush of colors with poorly defined regions.

How Main Blur behaves is determined by the four options in Main Blur popup. Let's learn about them, and how you can customize their look.

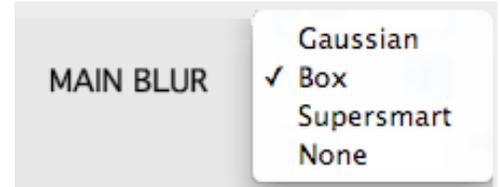


Original image, courtesy of ArtBeats
www.artbeats.com.

Main Blur popup

This popup box lets you select between three Main Blur methods for the ToonIt algorithm to use. You can also turn off the Main Blur by selecting None.

Three Blur methods give you a choice in the type of blending and smoothing that occurs among the color fields and line segments created by ToonIt. Select between a Box Blur, Gaussian Blur or Supersmart Blur for the rotoscoping algorithm to use.



Blur Type> None (NEW to v2.5)

To disable the Main Blur group and run ToonIt without a primary blur, select None. This Blur Type grays out all of the Main Blur parameters.

Blur Type> Box Blur

Box Blur is selected by default. This option will generally give you the best final results. Box will render a bit faster, but is a little lower quality.

In this blurring technique, each pixel in the resulting image has a value equal to the average value of its neighboring pixels in the input image. A Box Blur can approximate a Gaussian Blur effect but it uses a much simpler algorithm which is significantly faster.



Blur Type> Gaussian Blur

Gaussian Blur tends to soften the image. This blurring technique typically reduces image noise and reduces detail. Gaussian creates a smooth blur that preserves boundaries and edges better than more uniform blurring options.

How does Gaussian do its magic? The formula produces concentric circles of blur distribution from a center point. The original pixel's value receives the heaviest weight and neighboring pixels receive smaller weights as their distance from the original pixel increases. This creates the soft, smooth, concentric blur.

Blur Type> Supersmart Blur (NEW to v2.5)

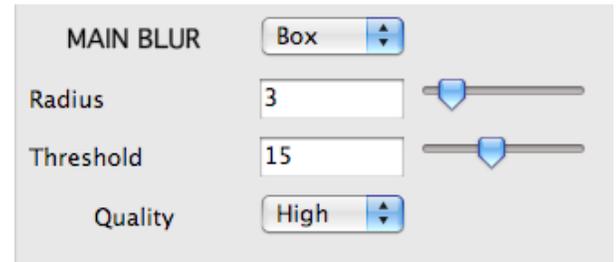
Supersmart Blur creates a smarter, more detailed blur. This option will smooth and simplify an image or frames of a video while still maintaining high contrast detail. The advantage of Supersmart is that it can be better at removing unwanted noise and artifacts, while still leaving each frame look relatively crisp and not out of focus.

Box Blur and Gaussian Blur are based on bilateral filtering, with some additional tweaks. Supersmart Blur is a smart blur that is based on a different principle. You will see less difference between the Box and Gaussian Blurs than you will in comparison to the Supersmart Blur.



Main Blur > Box & Gaussian controls

When either Box Blur or Gaussian Blur is chosen as the Main Blur option, three controls become active. These controls are Radius, Threshold and Quality. They work directly with each other to set the blur, and Radius and Threshold are especially tied together.



Actually, these controls are visible by default because the Box type is chosen by default. When the None option is chosen, all of these parameters are grayed out.

Radius

This parameter is active when Box or Gaussian Blur are chosen.

Radius sets the amount of pre-blur, much like setting the radius of any Blur filter in Photoshop. This affects how much detail will be apparent in the image. The more blur, the less detail, especially in Outlines.

If Radius is turned down to 0, then Threshold and Quality are grayed out and no blur is applied.

At a high value like 30, less detail will be apparent in the footage because the color areas will blur together more. At a low value like 1 or 3, there will be more color detail because there's less blur.



Radius at 3 (default). Other params default.



Radius at 15. There is less detail in the footage; especially in the background foliage, details are blurred together.

Threshold

This parameter is active when Box or Gaussian Blur are chosen.

Threshold sets how much of the image is affected by the blurring. This operates a bit like Smart Blur. It identifies edges in the image and blurs between the edges. The higher the Threshold value, the more edges will get blurred. For example, the hairline above the woman's face (below) is a very distinct edge between color regions. You will not see the face and the hair blur together unless you have the Threshold set to the maximum value.

If the value is high, then more of the image will be affected. If you set Threshold to 30, there will be less definition between the color fields and many of the outlines will disappear (if Outlines Effects are turned on).

If the Threshold value is low, then even areas with very soft edges (like the highlight on her forehead) will not be blurred and will form separate color regions. With a low Threshold and Blur setting Outlines become very dense, creating an etched look.



Threshold at 15. Other params default.



Threshold at 30. At a higher value, more blurring occurs. The shadows in the girl's scarf aren't as deep, and the background leaves appear softer.

Quality popup

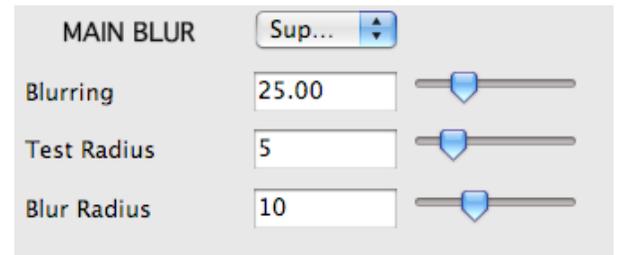
This parameter is active when Box or Gaussian Blur are chosen.

Determines the quality of the Blur effect, or basically the amount of detail that is affected by any setting. The popup menu has two options, a Fast Quality and High Quality. Set it to Fast for faster results while making your parameter tweaks. Always set it to High prior to rendering the cartoon.



Main Blur > Supersmart controls

When Supersmart Blur is chosen as the Main Blur option, three controls become active. These controls are Blurring, Test Radius and Blur Radius. They work directly with each other to set the Supersmart Blur.



How It Works

Here is how the three controls work together. Imagine that Blur Radius creates a blurred image from the original source footage. Supersmart Blur wants to blend the original and blurred images together. To do this, Blurring and Test Radius work together to create something like an alpha channel for the Supersmart blending.

Where the level of detail/contrast is high in the original image, more of that original shows up in the final blended result. Where the level of detail/contrast is low, less of the original image shows up in the result.

Blurring (NEW to v2.5)

Blurring creates a defined amount of blurring on the image. Values go from 0 to 100. The default is 25% and this creates a slight blur. A value of 0 will turn off the Blur Type (the equivalent of selecting None as the Blur Type).

At 0%, Blurring copies the original image to the output, so none of the image is blurred. At 100%, it copies the blurred image (that Blur Radius has made) to the output, so all of the image is blurred. At mid-range values like 50%, Supersmart Blur creates an intermediate blend of the original and blurred images.



Blurring at 0. Other params default.



Blurring at 25 (default).



Blurring at 50.



Blurring at 75.

Test Radius (NEW to v2.5)

Test Radius has a unique role. It tests or measures the contrast and level of detail in a defined area (or 'radius') of the original image. This lets Supersmart Blur figure out how much level of detail there is in each part of the source image so it can do its magic.

The default is 5. Values range is 0 to 30. Higher values sample from a larger area (or radius) of the image. A value of 0 will turn off the Blur Type (the equivalent of selecting None as the Blur Type).



Test Radius at 5 (default).



Test Radius at 30.

Blur Radius (NEW to v2.5)

As mentioned above, Blur Radius essentially generates a blurred image from your original image. Values go from 0 to 30. The default is 10. At higher values, the blurred image that Supersmart Blur creates is... blurrier! This blurry image is then selectively blended with the original image to produce the output. A value of 0 will turn off the Blur Type (the equivalent of selecting None as the Blur Type).

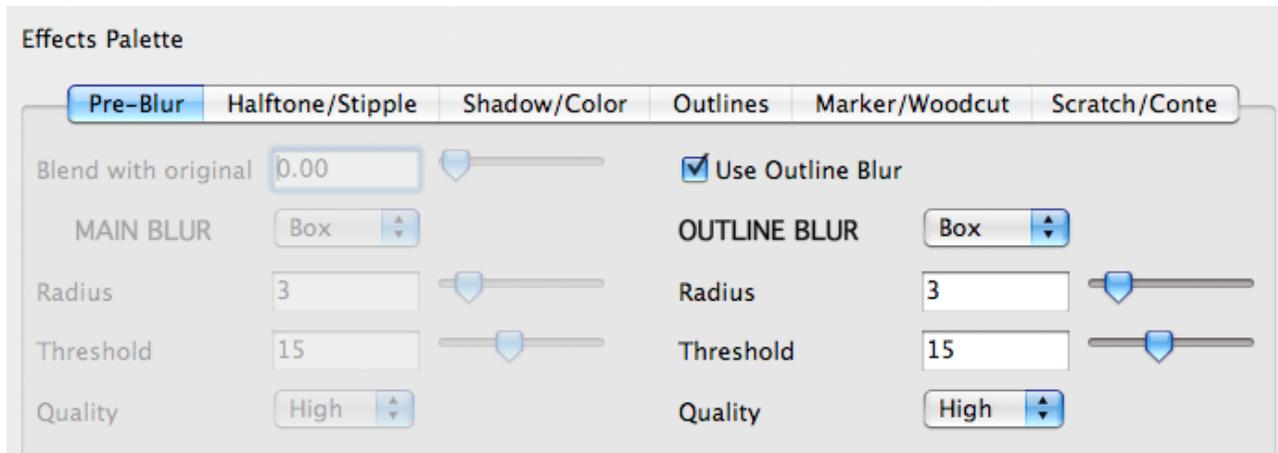
In our experiments, Supersmart Blur gives the best results when Blur Radius is kept around twice Test Radius, but your mileage may vary.



Blur Radius at 10 (default). Other params default. Blur Radius at 25.

Pre-Blur tab > Outline Blur

This group of parameters sets the Blur properties used by the Outlines created by the ToonIt! rotoscoping algorithm. Outline Blur allows you to have separate blurs for the color regions and outlines.



How It Works

Outline Blur is a cool palette to know about. It allows you to completely but subtly change the look of your cartoon.

Let's say you want to have less distinct color regions but still have relatively detailed outlines. By enabling Outline Blur, you tell the Main Blur section to affect the color regions but not the cartoon lines. This gives you more control and precision set up of your cartoon.

Use Outline Blur checkbox

Checkmark this option to turn on the Outline Blur settings. Select this if you want to have separate blurs applied to outlines and color fields.

The Outline Blur controls work the same as the Main Blur controls. The results are typically more subtle in their differences since lines are overall a more delicate graphic element than color fields.



Original image, courtesy of ArtBeats
www.artbeats.com.



Main Blur Radius at 3 (default). Outline Blur off.



Main Blur Radius at 15. Outline Blur off.



Main Blur Radius at 15. Outline Blur on.
Outline Radius at 3.

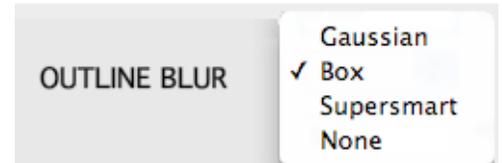


Main Blur Radius at 15. Outline Blur on.
Outline Radius at 153.

Outline Blur popup

This popup box lets you select between three Outline Blur methods for the ToonIt algorithm to use. You can also turn off the Main Blur by selecting None.

The Blur methods give you a choice in the type of blending and smoothing that occurs among the line segments created by Outlines. Select between a Box Blur, Gaussian Blur or Supersmart Blur for the rotoscoping algorithm to use.



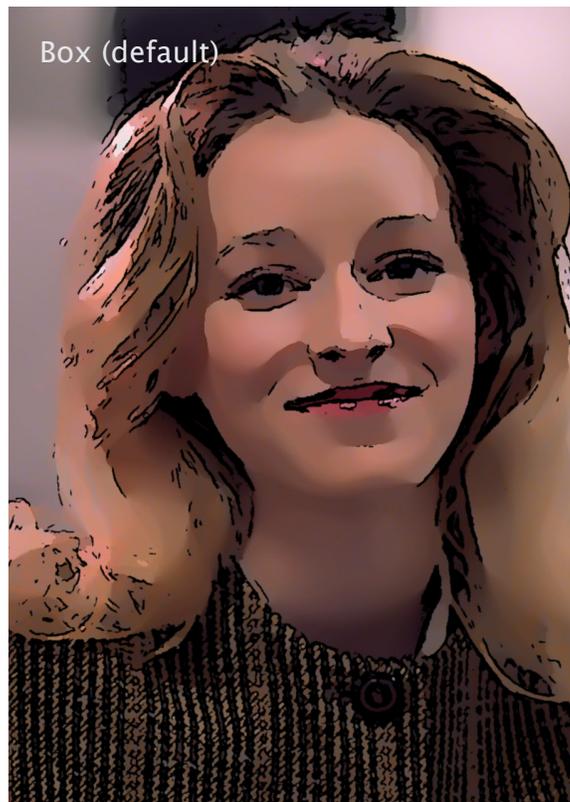
Blur Type> None (NEW to v2.5)

To disable the Main Blur group and run Toon without a primary blur, select None. This Blur Type grays out all of the Main Blur parameters.

Blur Type> Box Blur

Box Blur is selected by default. This option will generally give you the best final results. Box will render a bit faster, but is a little lower quality.

In this blurring technique, each pixel in the resulting image has a value equal to the average value of its neighboring pixels in the input image. A Box Blur can approximate a Gaussian Blur effect but it uses a much simpler algorithm which is significantly faster.



Blur Type> Gaussian Blur

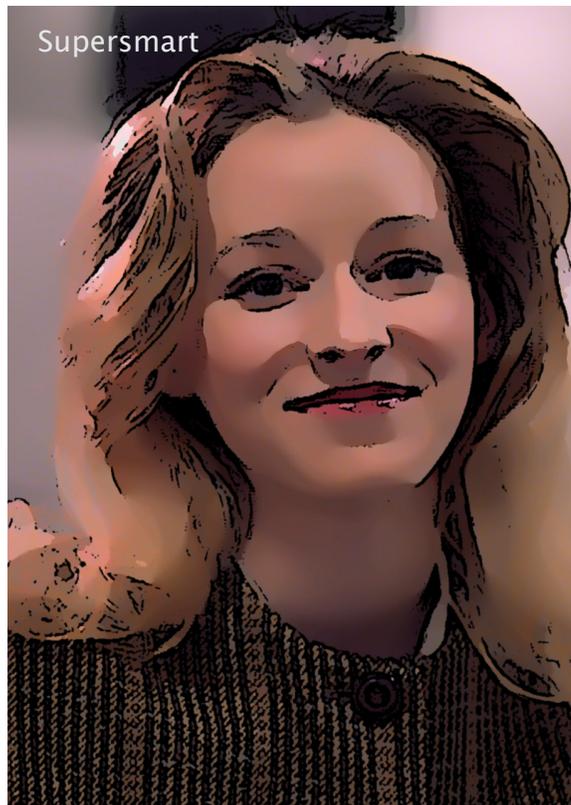
Gaussian Blur tends to soften the image. This blurring technique typically reduces image noise and reduces detail. Gaussian creates a smooth blur that preserves boundaries and edges better than more uniform blurring options.

How does Gaussian do its magic? The formula produces concentric circles of blur distribution from a center point. The original pixel's value receives the heaviest weight and neighboring pixels receive smaller weights as their distance from the original pixel increases. This creates the soft, smooth, concentric blur.

Blur Type> Supersmart Blur (NEW to v2.5)

Supersmart Blur creates a smarter, more detailed blur. This option will smooth and simplify an image or frames of a video while still maintaining high contrast detail. The advantage of Supersmart is that it can be better at removing unwanted noise and artifacts, while still leaving each frame look relatively crisp and not out of focus.

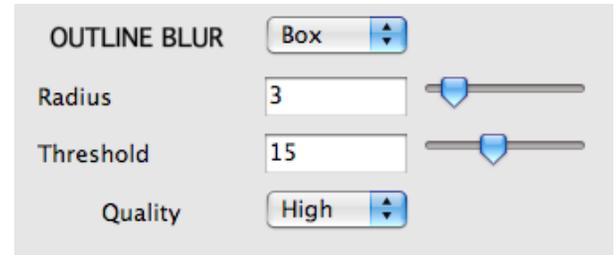
Box Blur and Gaussian Blur are based on bilateral filtering, with some additional tweaks. Supersmart Blur is a smart blur that is based on a different principle. You will see less difference between the Box and Gaussian Blurs than you will in comparison to the Supersmart Blur.



Outline Blur > Box & Gaussian controls

When Box Blur or Gaussian Blur is chosen as the Outline Blur option, three controls become active. These controls are Radius, Threshold and Quality. They work directly with each other to set the blur, and Radius and Threshold are especially tied together.

Actually, these controls are visible by default because the Box type is chosen by default. When None is chosen, all of these parameters are grayed out.



Radius

Radius sets the amount of pre-blur, much like setting the radius of any Blur filter in Photoshop. Raising this value will result in fewer outlines and the outlines will only appear where there are significant edges between color regions. With low settings, you may see many outlines producing an etched or highly detailed look.

If Radius is turned down to 0, then Threshold and Quality are grayed out and no blur is applied.

At a high value like 30, less detail will be apparent in the footage because the color areas will blur together more. At a low value like 1 or 3, there will be more color detail because there's less blur.



Outline Radius at 5 (default). Other params default.



Outline Radius at 30.

Threshold

Threshold sets how much of the image is affected by the blurring. This identifies edges in the image and blurs between the edges. The higher the Threshold value, the more edges will get blurred. Lower values produce more outlines and higher detail, larger values produce fewer outlines.

For example, the hairline above the woman's face (below) is a very distinct edge between color regions. You will not see the face and the hair blur together unless you have the Threshold set to the maximum value.

If the value is high, then more of the image will be affected. If you set Threshold to 30, there will be less definition between the color fields and many of the outlines will disappear (if Outlines Effects are turned on).

If the Threshold value is low, then even areas with very soft edges (like the highlight on her forehead) will not be blurred and will form separate color regions. With a low Threshold and Blur setting Outlines become very dense, creating an etched look.



Outline Threshold at 5. Other params default.



Outline Threshold at 30.

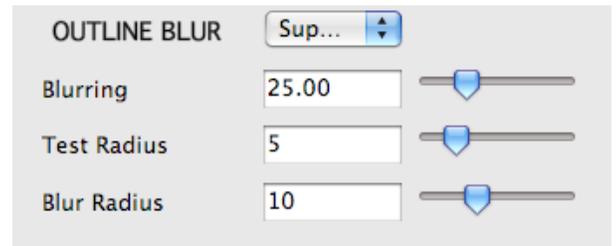
Quality popup

Determines the quality of the Blur effect, or basically the amount of detail that is affected by any setting. The popup menu has two options, a Fast Quality and High Quality. Set it to Fast for faster results while making your parameter tweaks. Always set it to High prior to rendering the cartoon.



Outline Blur > Supersmart controls

When Supersmart Blur is chosen as the Main Blur option, three controls become active. These controls are Blurring, Test Radius and Blur Radius. They work directly with each other to set the Supersmart Blur.



How It Works

Here is how the three controls work together. Imagine that Blur Radius creates a blurred image from the original source footage. Supersmart Blur wants to blend the original and blurred images together. To do this, Blurring and Test Radius work together to create something like an alpha channel for the Supersmart blending.

Where the level of detail/contrast is high in the original image, more of that original shows up in the final blended result. Where the level of detail/contrast is low, less of the original image shows up in the result.

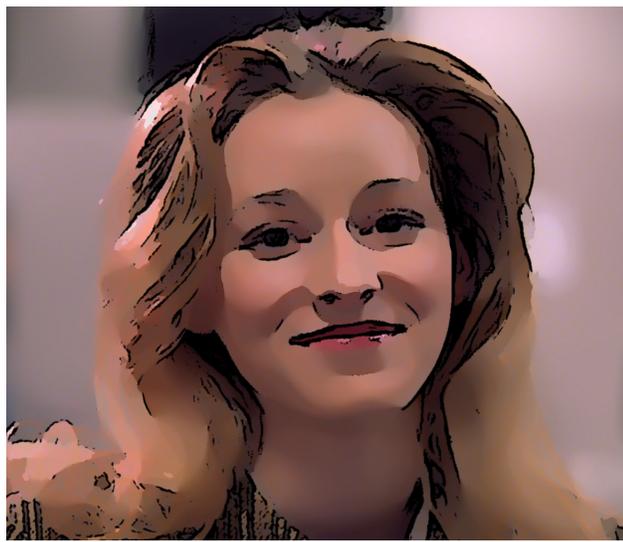
Blurring (NEW to v2.5)

Blurring creates a defined amount of blurring on the image. Values go from 0 to 100. The default is 25% and this creates a slight blur. A value of 0 will turn off the Blur Type (the equivalent of selecting None as the Blur Type).

At 0%, Blurring copies the original image to the output, so none of the image is blurred. At 100%, it copies the blurred image (that Blur Radius has made) to the output, so all of the image is blurred. At mid-range values like 50%, Supersmart Blur creates an intermediate blend of the original and blurred images.



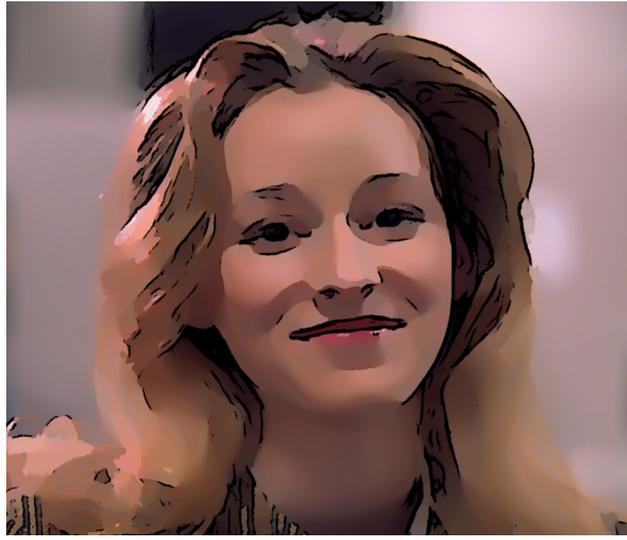
Outline Blurring at 0. Other params default.



Outline Blurring at 50.



Outline Blurring at 75.

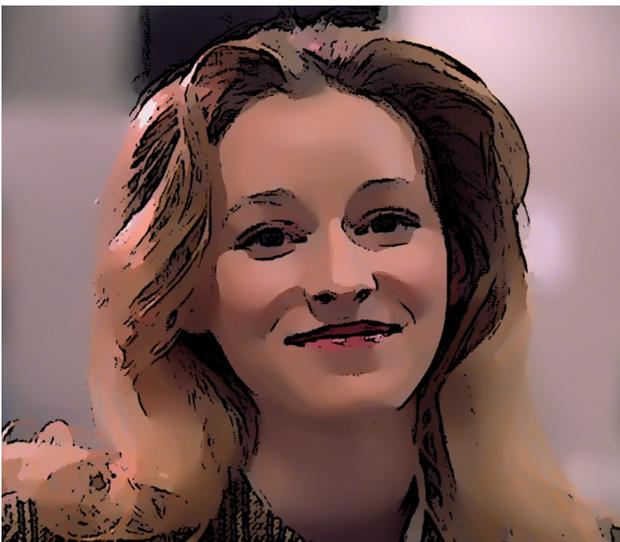


Outline Blurring at 100.

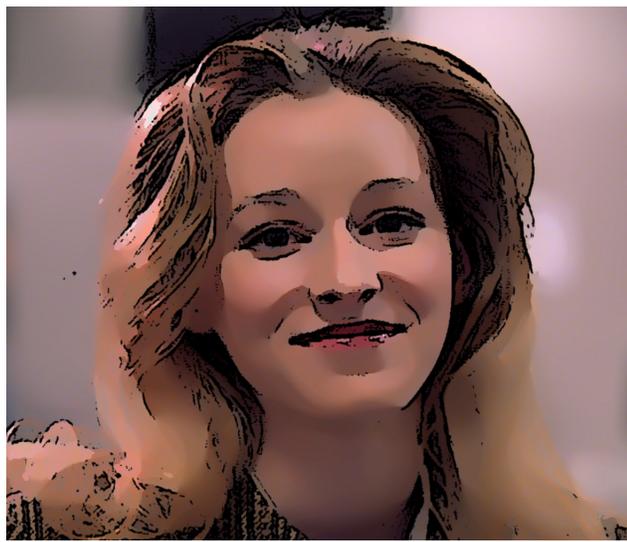
Test Radius (NEW to v2.5)

Test Radius has a unique role. It tests or measures the contrast and level of detail in a defined area (or 'radius') of the original image. This lets Supersmart Blur figure out how much level of detail there is in each part of the source image so it can do its magic.

The default is 5. Values range is 0 to 30. Higher values sample from a larger area (or radius) of the image. A value of 0 will turn off the Blur Type (the equivalent of selecting None as the Blur Type).



Outline Test Radius at 5 (default).
Other params default.



Outline Test Radius at 30.

Blur Radius (NEW to v2.5)

As mentioned above, Blur Radius essentially generates a blurred image from your original image. Values go from 0 to 30. The default is 10.

At higher values, the blurred lines that Supersmart Blur creates are... blurrier! This blurry image is then selectively blended with the original image to produce the output. A value of 0 will turn off the Blur Type (the equivalent of selecting None as the Blur Type).

In our experiments, Supersmart Blur gives the best results when Blur Radius is kept around twice Test Radius, but your mileage may vary.



Outline Blur Radius at 5. Other params default.

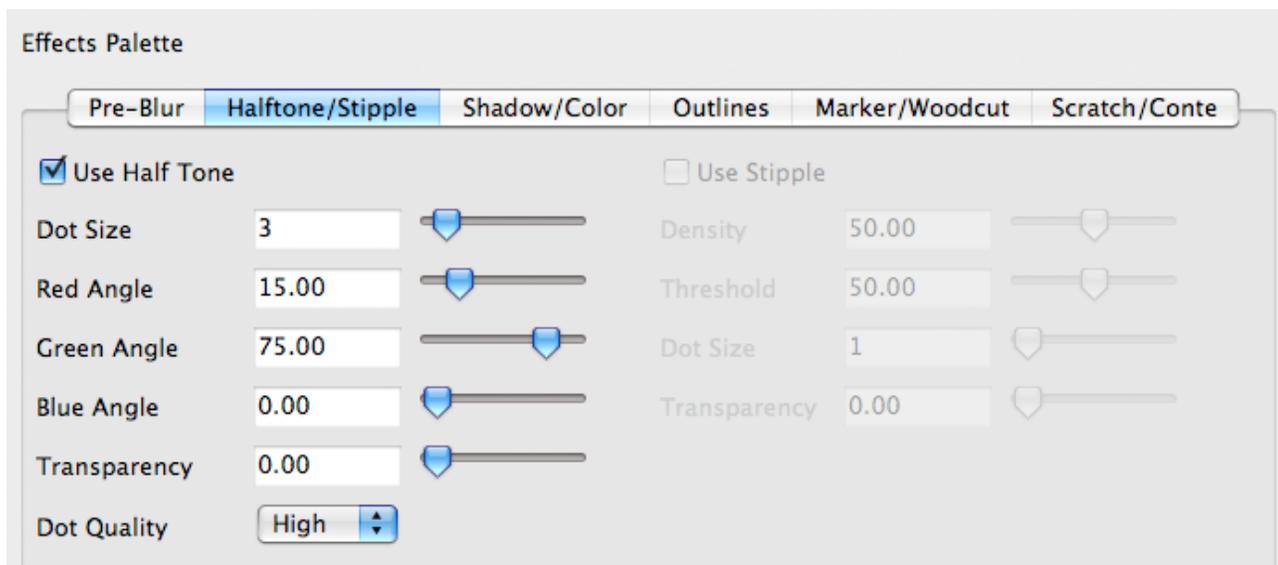


Outline Blur Radius at 30.

Halftone/Stipple tab > Halftone Effect

This group of parameters sets and defines a stylization called Halftone. 'Halftone' is the printing technique that simulates continuous tone imagery through the use of equally spaced dots of varying size.

The traditional halftone process creates a basic optical illusion, in which these tiny halftone dots are blended into smooth tones by the human eye. The effect aims to replicate this illusion to give the appearance of something that has been printed. This is a great effect if you're trying to replicate the look of old 70's comics or newspaper.



Use Halftone checkbox

Checking this will activate a Halftone stylization to be rendered along with the toon rotoscoping. The dots will actively size and position themselves based on the luminance of the frame.



Halftone on. Dot Size at 3 (the default).



Dot Size at 1.

Dot Size

Determines the size of the halftone dots. The default is 3. Increasing this value makes the dots larger.

Red/Green/Blue Angle

Individually determines the 'printing' angle of the separate halftone dot colors. This is really just a stylization choice.

Transparency

This sets the opacity level of the Halftone effect. The higher the value, the more transparent the dots are. The lower the value, the more opaque they are. As the value gets higher, the dots get lighter and the halftone effect is less pronounced. At 100, the dots disappear and the source image is at its normal hue and brightness.



Original image.

Dot Quality popup

Determines the quality of the Halftone effect, or basically the amount of detail that is affected by any setting. The popup menu has two options, a Fast Quality and High Quality. Set it to Fast for faster results while making your parameter tweaks. Always set it to High prior to rendering the cartoon.



Halftone on. Red/Green/Blue Angles set to defaults.



Shifting the R/G/B Angles by 5 degrees changes the look of the image.

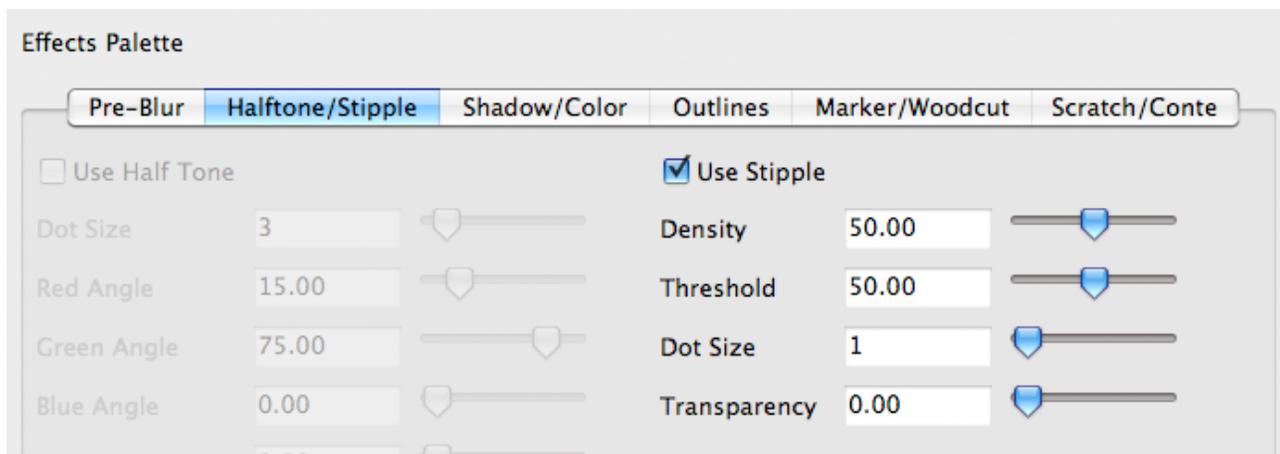
Halftone/Stipple tab > Stipple Effect

These parameters set and define a stylization called Stipple. ‘Stippling’ is the technique of using small dots to simulate varying degrees of solidity or shading. Traditionally, this technique produces shaded line art illustrations in drawing or painting, in addition to being a printing and printmaking technique.

In ToonIt!, our Stipple params create varying densities of noise to simulate that look. Stipple acts as a black grain that represents darks of an image with circular dots of different sizes and densities.



Original image.



Use Stipple checkbox

Check this to enable stippling. This option will use varying densities of noise to shade the image. Turning on Stipple activates Density, Dot Size, Threshold and Transparency.



Density at 60%. Other params default.



Density at 80%.

Density

Determines the amount of shading will be used in the image. This visually defines the stylization. The default is 50%. Increasing this value gives more contrast and heavier noise.

Threshold

Sets how much of the image is affected by the stippling. The default is 50%.

Lowering the Threshold gives the stippling a lot of definition; it makes the noise more refined and shaped towards the initial subject. Raising the Threshold makes the dots stick together. If you raise the Main Blur group a bit and boost the Threshold to above 30, the noise will appear to flow more over the image, not holding as true to the original shapes. This can be an interesting stylization for the right image.



Threshold at 30%. Other params default.



Threshold at 50%.

Dot Size

Determines the size of the Stipple dots. The default is 1. Increasing this value makes the dots larger.

Transparency

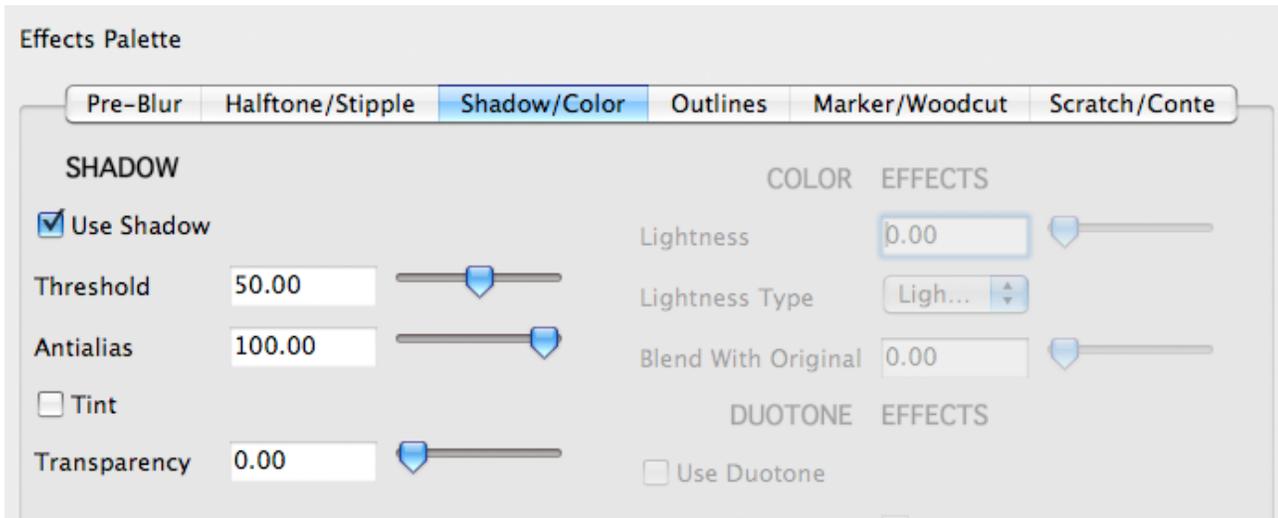
This sets the opacity level of the Stipple effect. The higher the value, the more transparent the dots are. The lower the value, the more opaque they are.

Not a WYSIWYG view

For Stipple, what you see in the Preview Window is not accurate to what renders out. To get an accurate representation, you need to set the Preview at 100%. Otherwise, ToonIt is compressing the preview of the dots so it can draw a preview. The preview will still be a lot lighter and less dense than the render. In fact, when you first activate the Effect, you might not see anything appear in Preview, but rest assured, it is there.

Shadow Effect

These parameters create an effect that we call 'Shadow'. Shadow fills in the dark areas of the image with the Outline color (usually black). This can quickly create a dramatic effect.



Use Shadow checkbox

Check this to enable the Shadow effect. This will find the shadows of the image and fill them in with the Outline Color. Turning on Shadow activates three parameters: Threshold, Antialias and Tint Foreground.

Threshold

Sets how dark the color has to be, for it to be replaced by the Shadow. Usually only the darkest areas will be filled by shadow. As you increase the threshold, lighter areas start getting filled with the Shadow.



Threshold at 20. Other params default.



Threshold at 30.

For images with dark backgrounds, this makes it easy to create a dramatic effect by turning the entire background black.

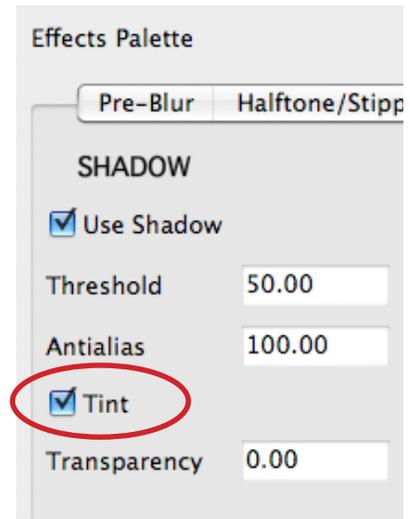
Antialias

A percentage slider for the final result antialiasing to help tone down any jagged edges. The default is 75%.

Use Tint checkbox

Check this to enable the Tint effect. Tint acts as an extreme Lightness parameter. (See Color Effects for more about Lightness.) Tint leaves the footage colors but wipes out darks. It was built to fill in the missing darks within Shadow outlines.

If Shadow Threshold is set to 0, the Tint effect will be applied to the whole image. If Threshold is at any other value, then the Shadows will show but its darkness will be affected by the Tint overlay.



Tint overrides all other color effects, except the Halftone checkbox.



Shadow and Tint Foreground turned on. Threshold at 20. Other params default.



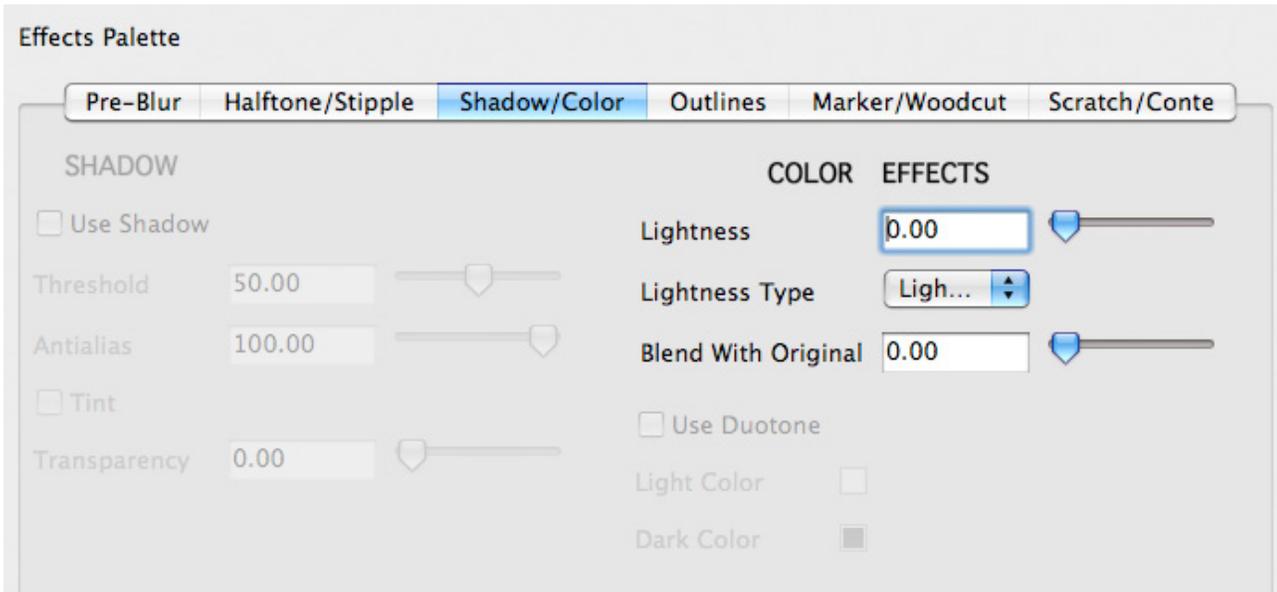
Shadow and Tint Foreground turned on. Threshold at 0. This makes Tint apply itself to the whole image, not just the Shadow areas.

Transparency

This sets the opacity level of the Shadow effect. The higher the value, the more transparent the shadows are. The lower the value, the more opaque they are.

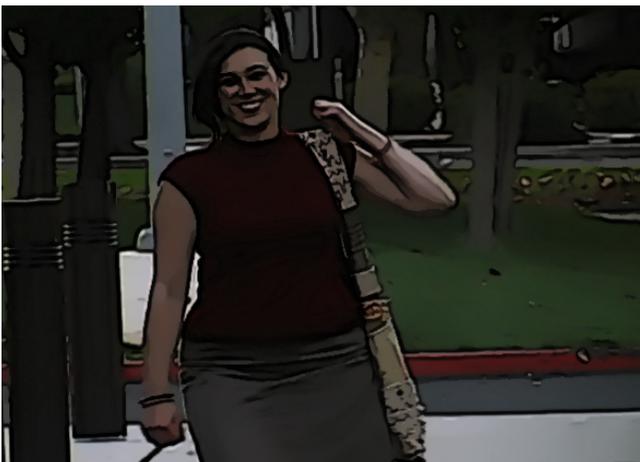
Shadow/Color tab > Color Effects

In this group, there are settings that lighten up the footage and an option for merging the cartoon with its original image.



Lightness

Lightness is a combination of effects intended to lighten flesh tones without making colors desaturated. Lightness still leaves in the darks of your footage. This can make your cartoon effect look like the Sunday comics, especially after outlines are overlaid.



Lightness at 0.



Lightness at 50. The footage is lighter/brighter.

Lightness will raise the brightness of the frame via a percentage value to take care of any unwanted color blending in the tooning process. The more analogous two colors are, the more likely they'll get blended by the roto process. By raising the Lightness (or brightness), you separate out those colors a bit.

This parameter is also a good way to fix your footage if it looks too dark. Kind of a low-level Brightness filter without any mid-tone control.

Lightness Type

There are two Lightness Types, Lighter 1 and Lighter 2. Each provides a different algorithm for lightening the footage.

Lighter 1 is the default Lightness Type based, in part, on altering the gamma.

Lighter 2 uses a different nonlinear lightening algorithm not involving gamma. It can produce an attractive, lightly shaded, comic book look, especially when used in conjunction with the Duotone Effect.

Blend with Original

This control is a minor one, but fun to use. Blend with Original is a percentage slider that will fade the results back into the original image.



Blend with Original at 20%.

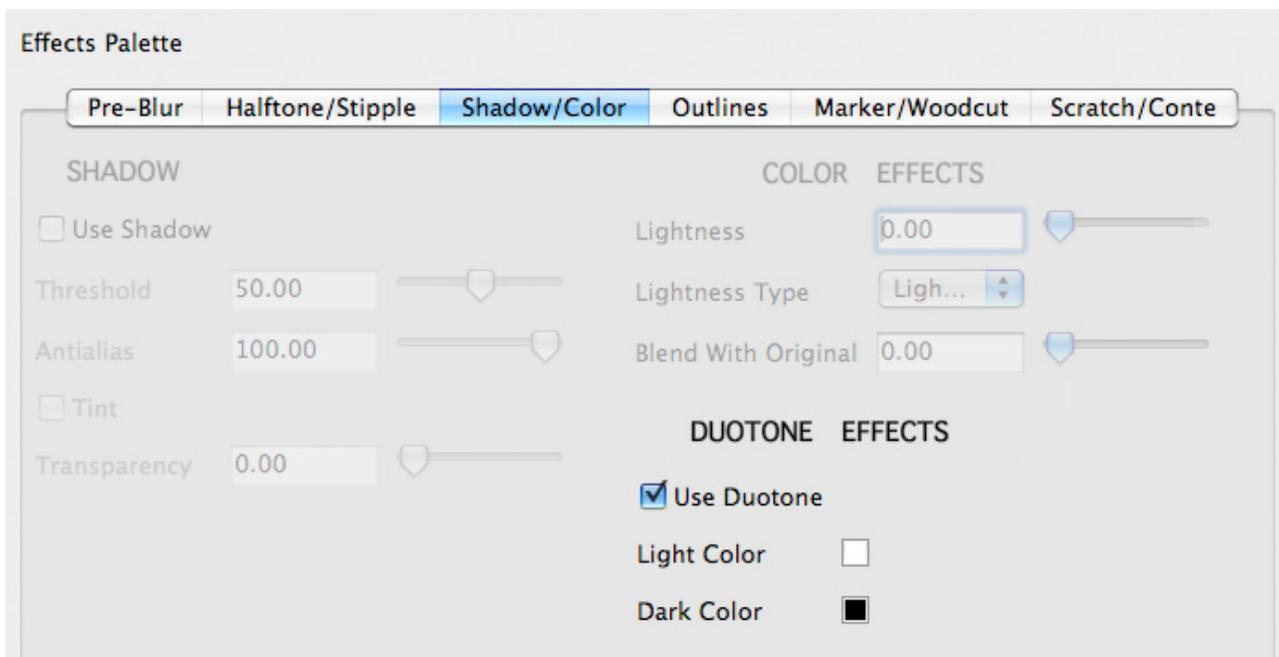


Blend with Original at 70%.

Shadow/Color tab > Duotone Effects

This group of parameters sets and defines a stylization called Duotone. Duotones are the result of creating a grayscale image from two different colors. For instance, in printing, outputting an photograph by the duotone method produces a richer, longer tone scale than is possible using only one ink color.

Duotones can provide a very pleasing effect. While they may be built to have more or less color in different parts of the image, they are still monochromatic in nature, as both colors are composed of the same grayscale image.



Original image.



Duotone at defaults.



Duotone with Light Color set to gold.

How It Works

Duotone gives you the option of converting output of any Roto effect to a two color image. Light colors in the image are mapped to a user-selected Light Color and dark colors are mapped to a user-selected Dark Color. This is somewhat conceptually similar to Photoshop's Gradient Map, but applies a different algorithm to remap the colors.

Use Duotone checkbox

Checkmark this option to turn on the Duotone settings. Uncheck this if you want to have full color fields.

Light Color, Dark Color

The Light Color well sets the color of the lightest tone. The default is white. The Dark Color well sets the color of the darkest tone. The default is black.

Creating grayscale images

The Light and Dark Colors can be white and black (default), white and gray, gray and black, or gray1 and gray2 to produce a grayscale image.

Alternatively, one of the Light or Dark colors can be set to white, gray, or black to render Roto as a monochromatic image (still represented by RGB). Duotone conversion takes place before Halftone and Outline Effects are applied. Either the Dark or Light Color selected for Duotone may be the same as the Outline Color, but this is not required.



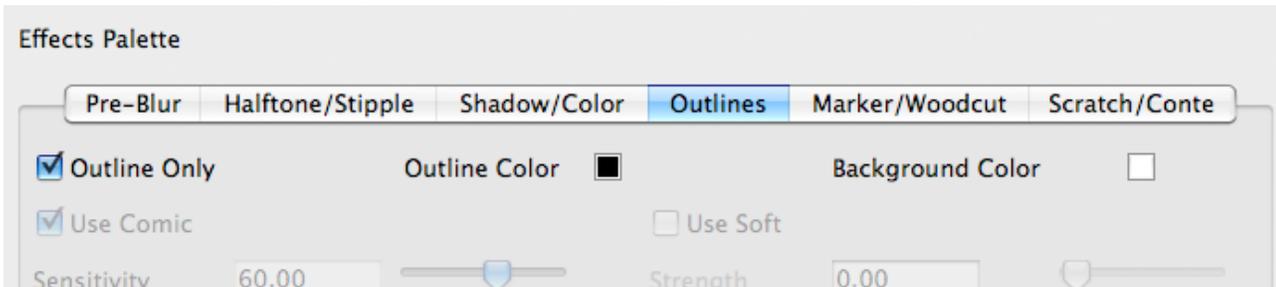
Light Color set to dark gray, Dark Color set to light gray.



Light Color set to gold and Blend with Original at 40%.

Outlines tab > Outlines Only

The Outlines section is the edge detection algorithm. Outlines are interesting because they can be used on their own to create drawing effects, or they can be used in combination with all of the color effects.



Outlines Only checkbox

This checkbox will turn off the color portion of your image, leaving you with just the outlines. This really creates a line drawing effect. There are two colors that make up Outlines Only. By default, Outlines Only renders outlines against a white background. You can use the Outline Color and Background Color to change that.



Original footage, courtesy of Artbeats stock footage, www.artbeats.com.



Outlines Only applied. All params defaults.

Keep Comic or Soft active

Use Comic and Use Soft are the two outline styles available (there's more info about both styles on the following pages). To have the outlines visible, at least one of these options need to be checked. With both Use Comic and Use Soft unchecked, Outline Only does not produce an effect and leaves the Preview Window blank.



Original image, courtesy of Artbeats stock footage, www.artbeats.com.



Outlines Only with Comic Outlines.



Outlines Only with Soft Outlines.

Outline Color

The coloration of the cartoon edges. The default color is black.

Background Color

The solid color against which the cartoon edges are composited. The default color is white.



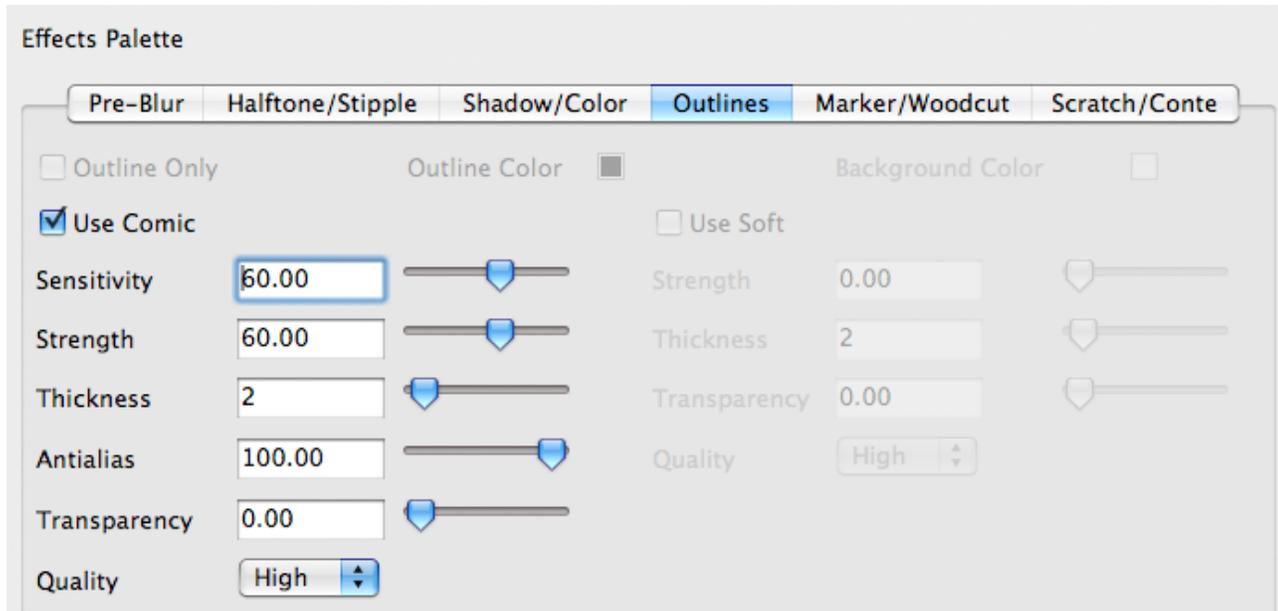
Outline Color set to a reddish-brown color that we eyedroppered from the source footage.



Outline Color set to dark red. Background Color set to light gray.

Outlines tab > Comic Outlines

This group of parameters sets and defines a stylization called Comic. You can think of 'Comic' as looking like the penciled and inked edges of a graphic novel; black lines with no direct shading. The stylization varies depending upon how you set up the Comic parameters.



Use Comic checkbox

Checking this activates the Soft Outline edge detection and its controls. This produces comic-book style edges that are hard edged and black and white.



Comic turned on.



Comic turned off. This removes the dark lines that are typically present.

Sensitivity

Determines how much detail will be picked up by the edge algorithm. Raising this will increase the amount of edge detail, adding in the color of Outline Color.

By default, this parameter is set to 60%. Lowering the value considerably, like to 10 or 20%, may cause the parameter to have no effect. Raising the value to 100%, will saturate the image in the Outline Color because so much edge is added.

The higher the Sensitivity, the denser the comic outlines will appear in the dark areas. For instance, in our example below, notice how the color of the woman's shirt changes with Color Sensitivity. The lines start filling in around the darker parts of the image as the value goes higher.



Sensitivity at 80. Other params default.



Sensitivity at 90.

High Sensitivity levels can also produce strange artifacts as it picks up edges in gradients. This usually happens in darker regions where there isn't much detail. The artifacts look like squiggly lines in areas that clearly shouldn't have lines.

Strength

Determines how heavily the Comic lines are drawn. Increase this for a heavier woodblock/linotype effect. The default is 50%.

This works very closely with Sensitivity. Generally Strength will make lines darker and thicker, while Sensitivity will cause more lines to appear. However, high Strength values will also cause more lines to appear and high Sensitivity values will make lines darker. It's usually at higher values where the functionality crosses over.



Strength at 70. Other params default.



Strength at 90. Linotype/woodblock stylization.

Thickness

Sets how thick the Comic lines are drawn. This can have some interesting effects if you really crank up the value. You can start getting a brush painting or woodcut sort of look depending on other parameter settings.



Comic Thickness at 1. Other params default.



Comic Thickness at 2. Lines are a little thicker.

Antialias

A percentage slider for the final result antialiasing to help tone down any jagged edges.

Transparency

This sets the opacity level of the Comic effect. The higher the value, the more transparent the comic lines are. The lower the value, the more opaque they are.



Quality popup

Determines the quality of the Comic Outlines effect, or basically the amount of detail that is affected by any setting. The popup menu has two options, a Fast Quality and High Quality. Set it to Fast for faster results while making your parameter tweaks. Always set it to High prior to rendering the cartoon.



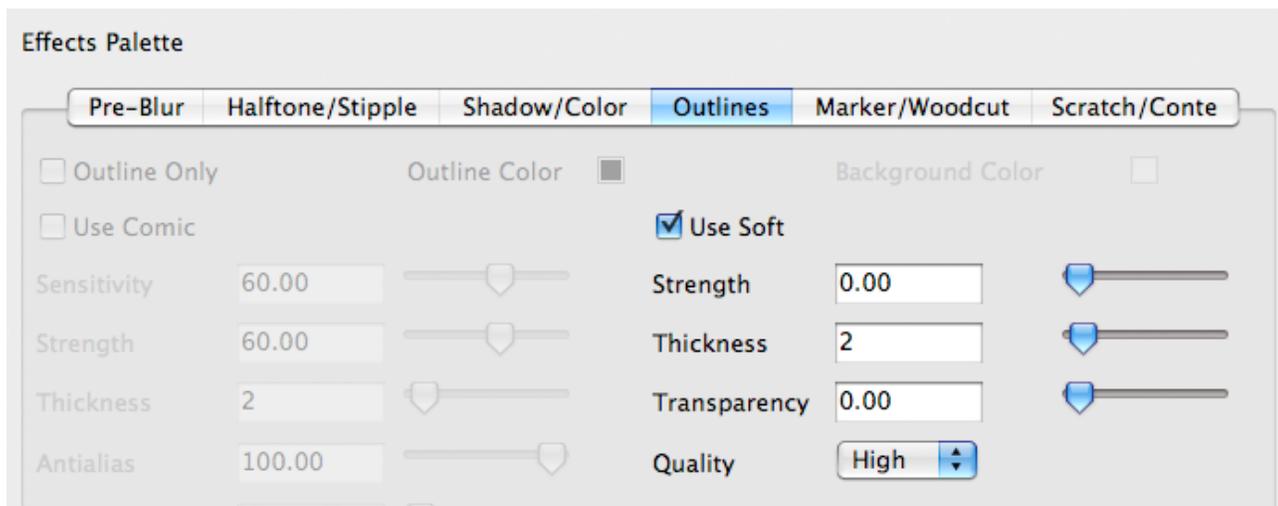
Along with the varying render speeds, the Quality setting will determine how precise and defined the Comic effect looks. For instance, Soft Outlines at Fast Quality won't look as defined as the ones at High Quality.

Outlines tab > Soft Outlines

Soft is the other primary Outline type. Whereas Comic produces black hard edges, the Soft group has by comparison more gray values and levels of shading mixed into its black lines. It produces a slightly softer look to the lines, as if there was a bit of charcoal shading added, and thus the name 'soft'.

Use Comic is active by default, whereas Use Soft needs to be turned on. You can use the two options together however their results will mostly overlap each other and the increased render time probably isn't worth the minor style enhancements.

These parameters determine the detail level of ToonIt's edge detection, which outlines the cartoon fields.



Soft turned on.



Soft turned off. This removes the dark lines that are typically present.

Use Soft checkbox

Checking this activates the Soft Outline edge detection and its controls. This option generates a combination of light and dark outlines, with less distinct edges getting lighter outlines and more obvious edges getting darker, more solid outlines.

Strength

The Soft Strength parameter determines the amount of shading. A high value produces more shading and that makes the lines look darker overall. If Strength is set to 60, the line quality gets a lot darker. A low value produces less shading, so if Strength is set to 10, the outlines look significantly lighter.

This is similar to the Comic Outlines' Sensitivity control. As you increase either options, more lines become visible, creating a more detailed look.



Strength at 10.



Strength at 100.

Thickness

Thickness sets the thickness of the edges. Edges also become darker.

If Quality is set to High, the final effects are more detailed than with Fast Quality turned on. The lines might be a bit more aliased in the lower Quality setting.

Transparency

This sets the opacity level of the Outline effect. The higher the value, the more transparent the outlines are. The lower the value, the more opaque they are.

The default setting is 0, which makes the lines fully opaque.



Thickness at 3.



Thickness at 10.



Transparency at 0 (default).



Transparency at 70.

Quality popup

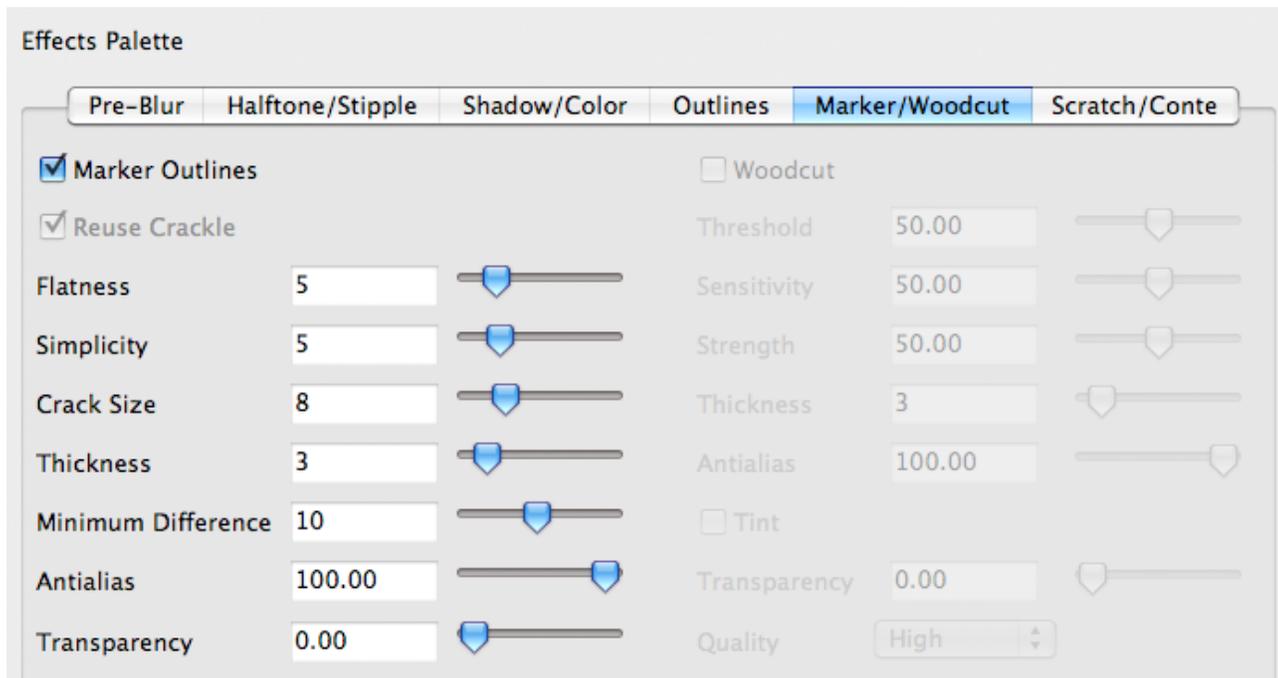
Determines the quality of the Soft Comic effect, or basically the amount of detail that is affected by any setting. The popup menu has two options, a Fast Quality and High Quality. Set it to Fast for faster results while making your parameter tweaks. Always set it to High prior to rendering the cartoon.



Along with the varying render speeds, the Quality setting will determine how precise and defined the Soft effect looks. For instance, Soft Outlines at Fast Quality won't look as defined as the ones at High Quality.

Marker/Woodcut tab > Marker Outlines

Marker Outlines is an interesting group because it produces two main effects. By default, Marker creates an 'etch-a-sketch' sort of look. In combination with its Reuse Crackle checkbox and the Crackle Style, Marker produces a stained glass effect.



Use Marker Outlines checkbox

Checking this activates the Marker Outline edge detection and its controls. This option generates an 'etch-a-sketch' sort of look with black squiggly lines following the edges of the cartoon color fields.



Original image, courtesy of Artbeats stock graphics, www.artbeats.com.



Black Marker lines outline the colored cells.

Flatness

Flatness sets how much coloration will be in the image. The higher the flatness value, the less gradations of color you'll see and the regions of color will be larger.

In the case of Marker Outlines, this means the cells get larger. A 'cell' is each region that is surrounded by an outline. Lower Flatness values mean more cells and more detail.



Flatness at 5.

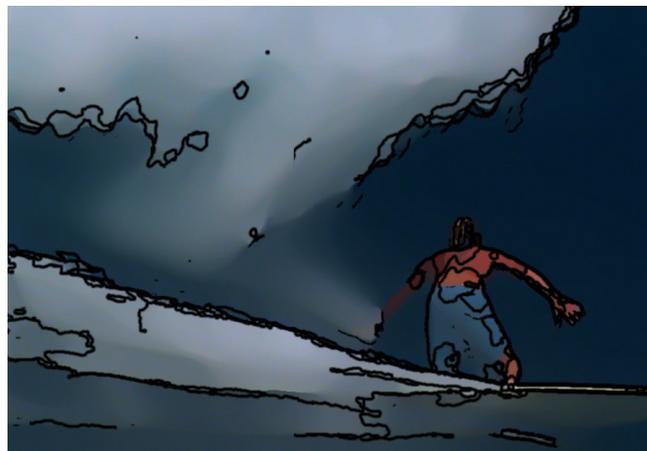


Flatness at 25.

Simplicity

Simplicity works in conjunction with Flatness. Both Flatness and Simplicity produce larger regions of similar or single colors.

The higher the Simplicity, the less color detail that will be shown in the underlying image. This results in larger cells or regions of color. Lower Simplicity gives more color detail and smaller color cells.



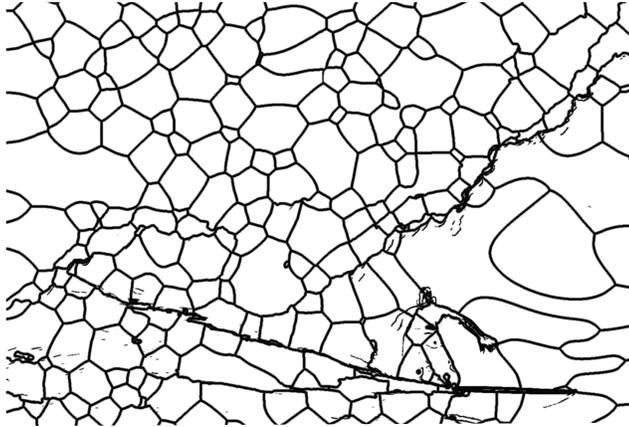
Simplicity at 5.



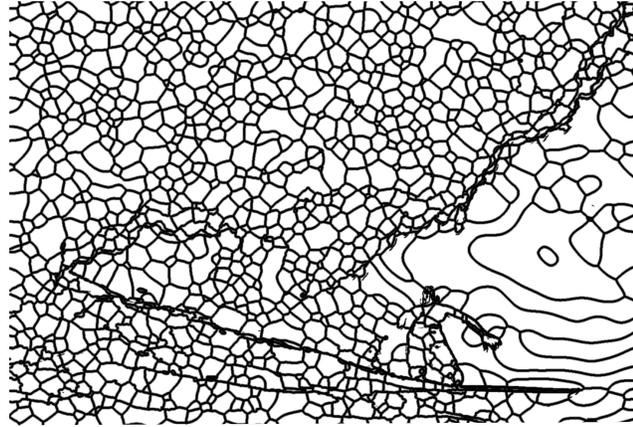
Simplicity at 25.

Crack Size

This is the most direct way of changing the cell size. Lower values cause smaller cells, higher values cause larger cells. Works in tandem with Flatness and Simplicity to control the cell size.



A large Crack Size will result in large cells. Flatness and Simplicity can also effect the size.



Low Crack Size values produce smaller cells and a denser, more detailed effect.

Thickness

As you can imagine, this sets the thickness of the cell lines. High values make the lines thicker.



Thickness at 2.



Thickness at 7.

Antialias

A percentage slider for the final result antialiasing to help tone down any jagged edges. The default is 75%.

Minimum Difference

This is really the most interesting parameter for Marker Outlines. To get very distinct cells, set this to 1 or 2. This will cause the cells to be densely arrayed and create a Stained Glass look. When Reuse Crackle is turned on, this control is especially important.

Use Flatness and Simplicity in conjunction to get larger cells. Higher values result in outlines going off in random directions, producing an etch-a-sketch look that is like not-quite random, modern art scribbblings.



Minimum Difference at 1.



Minimum Difference at 2.



Minimum Difference at 5.



Minimum Difference at 8.

Transparency

Sets how opaque the outlines are. At 0, the lines are fully opaque. At higher than 0, the outlines will blend with the background. Setting Transparency to 100 will turn off the outlines, because they will be fully transparent.



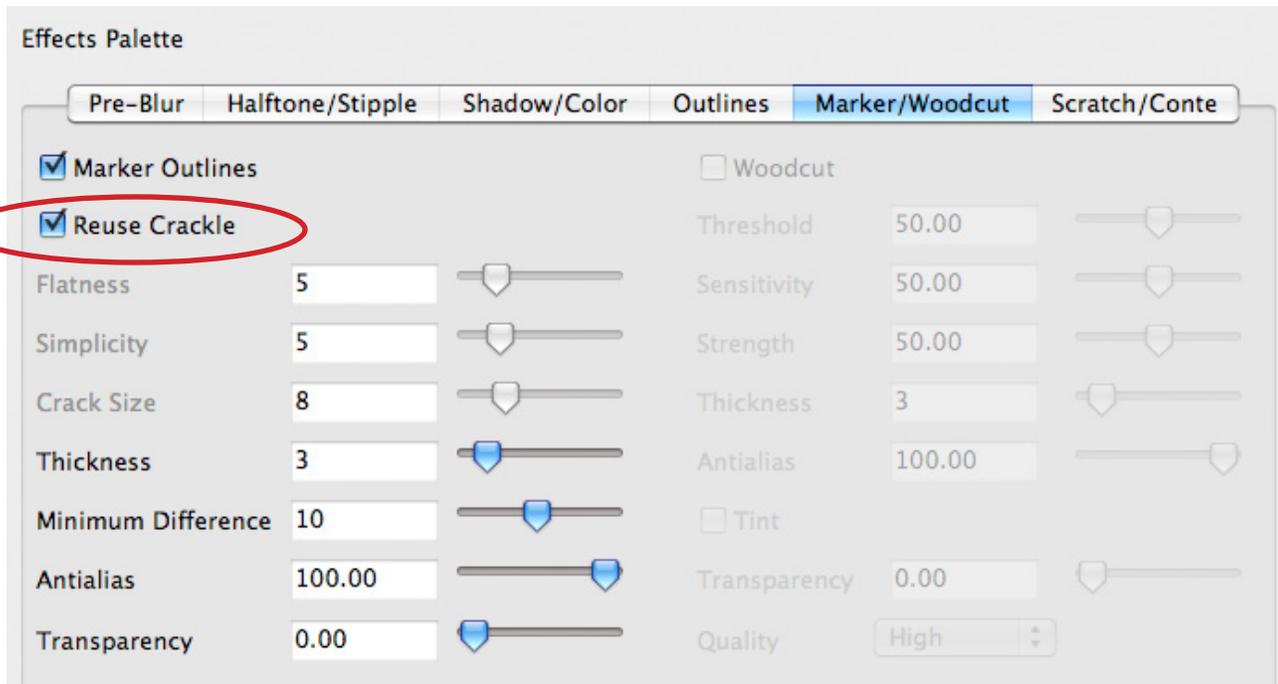
Transparency at 0 (default).



Transparency at 50.

Marker/Woodcut tab > Marker + Reuse Crackle

We mentioned in the previous section, Marker Outlines, that this Effect group is a special case. It works differently when paired with the Crackle Style, which is chosen from the Style Selector panel. Let's reexamine Marker Outlines in the context of its Reuse Crackle checkbox.

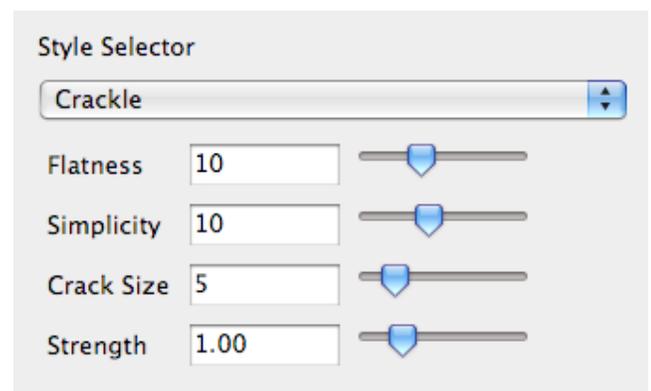


Reuse Crackle checkbox

This option tells the Crackle Style to be factored in when calculating Marker outlines. The Marker parameters that remain active are Thickness, Minimum Difference, Antialias and Transparency.

When Reuse Crackle is on, the Marker controls Flatness, Simplicity, Crack Size are grayed out. This is because the Crackle style has the same parameters which replace the Marker settings.

Reuse Crackle is turned on by default. This renders the image a bit faster and causes the lines to exactly match the Crackle edges, which produces a stained glass look. If this option is turned off, then the Marker lines will not match up with the Crackle color cells.



NOTE: Crackle has to be active in the Style Selector popup for Marker Outline's Reuse Crackle to work.

Create a Stained Glass effect

The Stained Glass look is a combo of Crackle and Marker Outlines. For the stained glass look, Marker creates the edges that separate the glass pieces to create 'cells' of color. Crackle creates the color cells.

Adding lines to the Crackle edges makes for a pretty realistic stained glass effect for many images. You can turn the Marker Outlines off and just use Crackle by itself, but adding the lines really helps to make the look believable.



Original image.



Marker Outlines on, Crackle Style off.



Marker Outlines off, Crackle Style on.



Marker Outlines and Crackle both on.

Thickness

Sets the thickness of the lines. High values make the lines thicker. With Reuse Crackle in play, the lines wrap around the colored cells, so the thickness of the lines can make a stylistic difference.



Not thick.

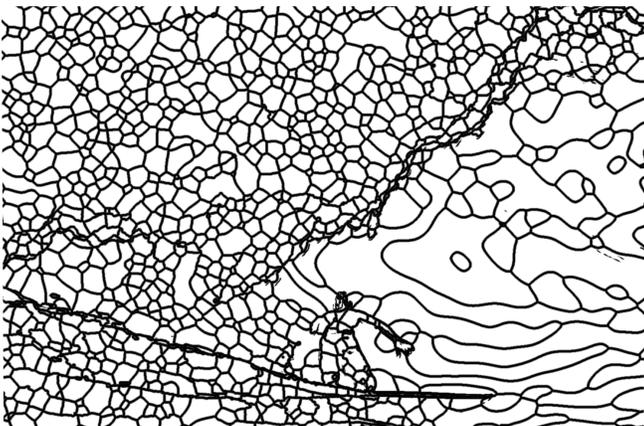


Thick.

Minimum Difference

This is the most interesting parameter for Marker Outlines, especially with Reuse Crackle turned on. To get very distinct cells, set this to 1 or 2. This will cause the cells to be densely arrayed creating that Stained Glass look.

Use Flatness and Simplicity to get larger cells. Higher values result in outlines going off in random directions, producing an etch-a-sketch look. Very much like not-quite random, modern art scribbblings.



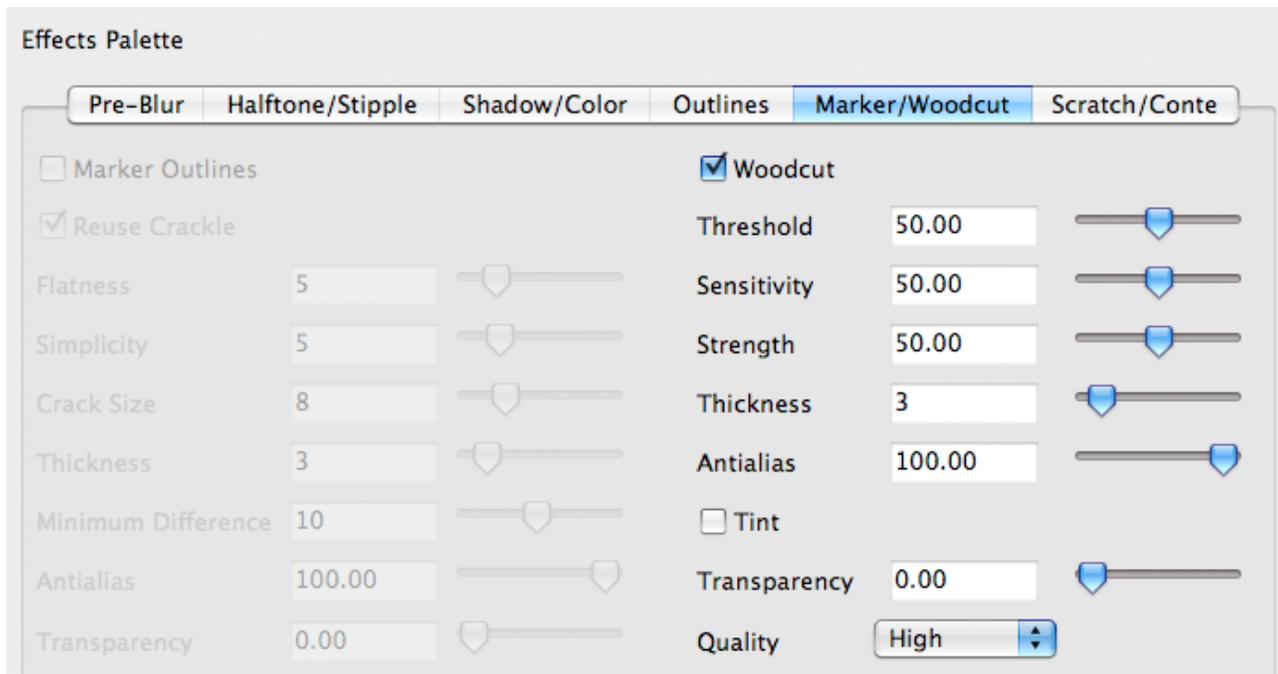
A low Minimum Difference is best used for creating a stained glass look with Crackle.



A high Minimum Difference can create a chaotic line drawing.

Marker/Woodcut tab > Woodcut Outlines

Woodcut Outlines creates the effect of a high contrast woodcut plate. This stylization has broad light areas and details gouged into black areas. This effect can look a lot like the flat color style of the popular Sin City graphic novels. (We are referring to Frank Miller's graphic novels, not the Sin City film.)

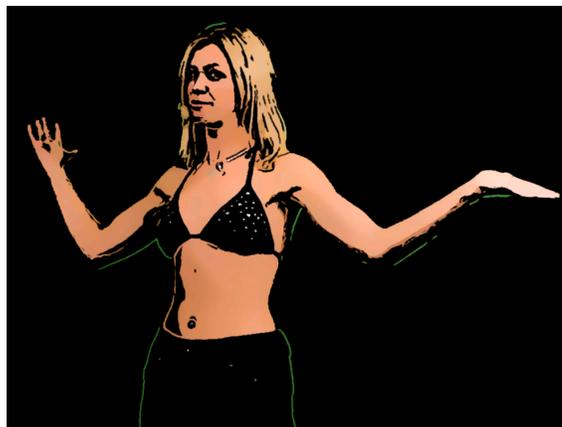


Use Woodcut checkbox

Checking this activates the Woodcut Outline edge detection and its controls. This produces a high contrast stylized line effect using the Outline Color.



Original image.



Woodcut Outlines turned on.

How It Works

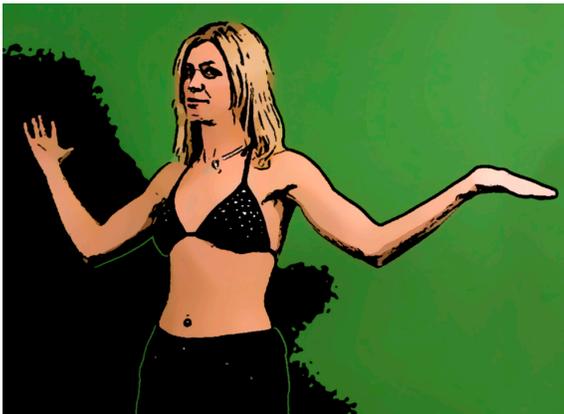
Woodcut Outlines overlays a light background-colored palette over the dark outline-colored parts of the foage. At the same time, a dark outline-colored palette overlays the light background-colored parts.

Basically, Woodcut will add light outlines into the black threshold area and black outlines into the light threshold area. The light outlines are set by the pixels of the underlying color image. The dark outlines are set by the Outline Color control.

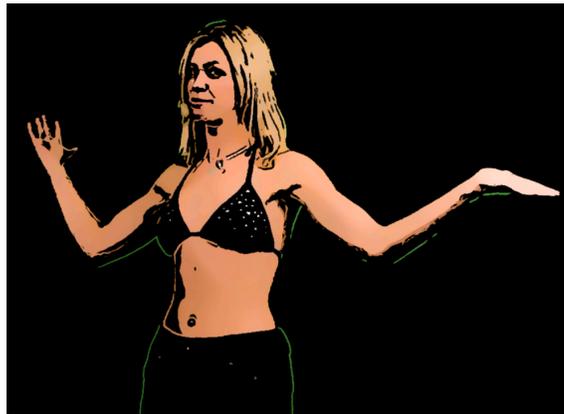
Threshold

Sets the relative overall size of light and dark regions. Threshold determines how dark the color has to be for that color to be replaced by the Woodcut effect. Default value is 50%. Value range is 0 to 100.

By default, only the darkest color areas will be filled with woodcut. As you increase the Threshold, lighter areas start getting filled with the shadow. For images with dark backgrounds, you can easily create a dramatic effect by turning the entire background black.



Threshold at 25.



Threshold at 50 (default).



Threshold at 65.



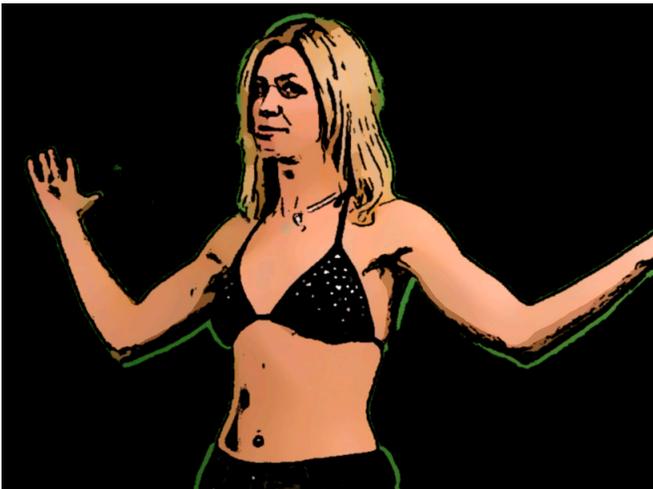
Threshold at 75.

Sensitivity

Determines how much detail will be picked up by the Woodcut edge algorithm. Sensitivity adds in the color of the Outline Color parameter.

The default is 50%. Value range is 0 to 100. Lowering the value considerably, like to 10 or 20%, may cause Sensitivity to have no effect. Raising the value will increase the amount of edge detail. At 100%, the image will get saturated in the Outline Color because so much edge is added.

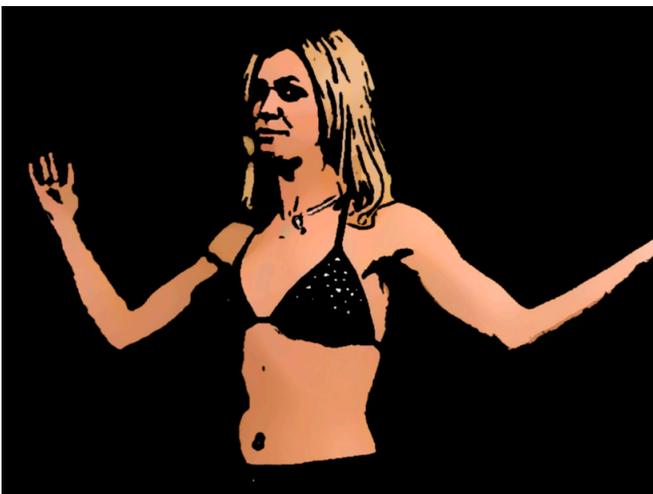
The higher the Sensitivity, the denser the Woodcut lines will appear in dark areas. High Sensitivity values can also produce strange artifacts as the algorithm picks up edges in gradients. This usually happens in darker regions where there isn't much detail. The artifacts look like squiggly lines in areas that clearly shouldn't have lines.



Sensitivity at 10.



Sensitivity at 50 (default).



Sensitivity at 80.



Sensitivity at 100.

Strength

Determines how heavily the Woodcut lines are drawn. Increase this for a heavier woodblock/linotype effect. The default is 50%. Value range is from 0 to 100.

As described earlier, Woodcut Outlines overlays light lines over the dark parts of an image, while overlaying dark lines over the light parts. It uses the Comic Outline color for its line color.

With high Strength values, more lines take the color of the Outline Color and fewer take on the color of the underlying image. Low Strength values decrease the outline colored lines and allow in more background colored lines.



Sensitivity at 40. Threshold at 70.



Strength at 70. Threshold at 70.

Strength may color in opposite

For outlines drawn over darker parts of an image, Strength works as described above. It will make those outlines look darker and thicker, and higher values will cause more lines to appear.

However, for some images, Strength will produce the opposite effect and make the image look lighter. That is because Strength works the opposite way for outlines drawn over lighter color areas. In these situations, higher Strength means fewer dark outlines and more light outlines, with more of the background color showing through.



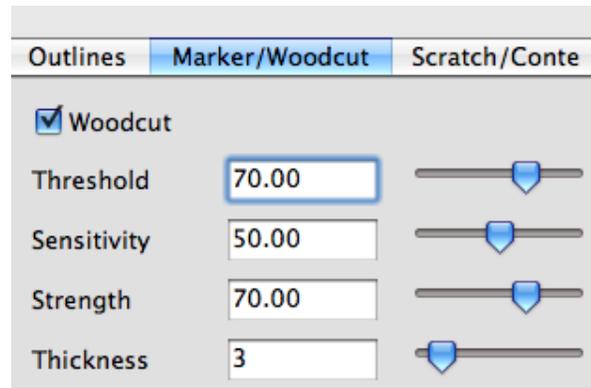
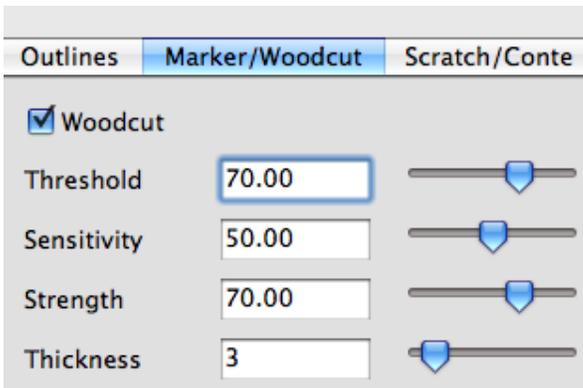
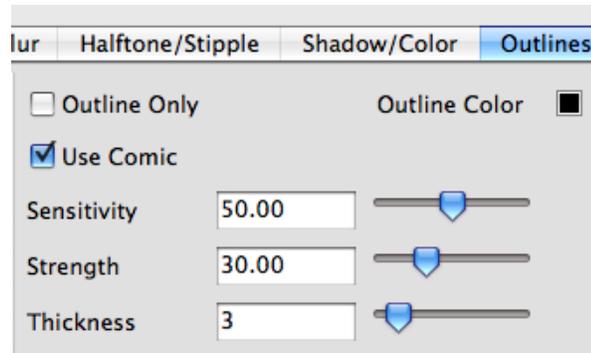
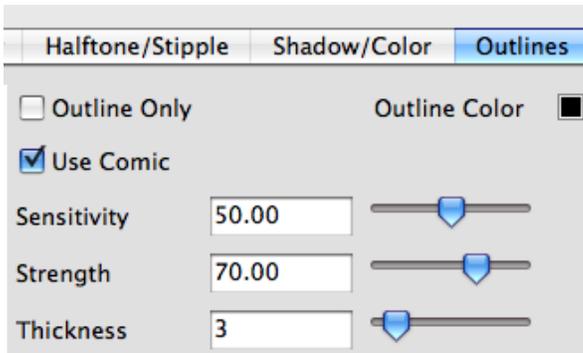
Strength at 100. Threshold at 70.

If you want to restore thicker dark outlines over light color areas, but still keep some nice light outline detail, you can do so with the Comic Outlines controls. Start by giving the same settings to both Woodcut Outlines and Comic Outlines. Then slowly scale back Comic Outlines' Strength for fine-tuned control to gradually decrease dark outlines and increase light ones.



Woodcut and Comic Outlines at same settings.

Comic Outlines > Strength is lowered.



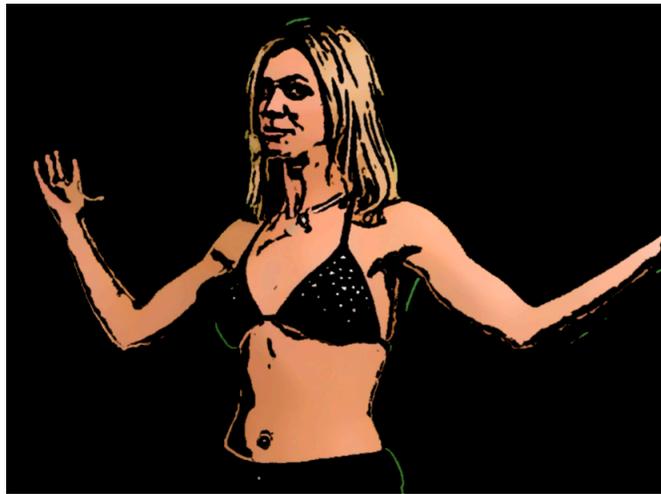
Strength and Sensitivity

Strength works very closely with Sensitivity. Strength makes the Woodcut lines dark and thick, while Sensitivity causes those lines to appear.

High Strength values will cause more lines to appear and high Sensitivity values will make lines darker. As Sensitivity and Strength go down, the light outlines get more frequent and thicker and the black outlines get less frequent and thinner.



Sensitivity at 35. Strength at 35.

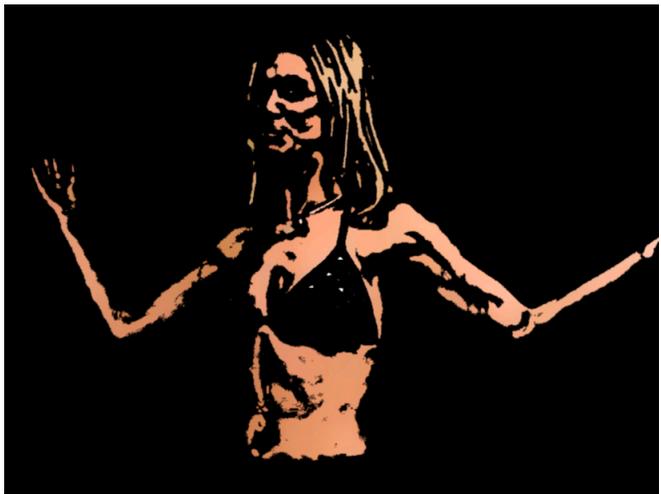


Sensitivity at 70. Strength at 75.

Antialias

Antialias is a percentage slider for the final output that helps to tone down any jagged edges. Default value is 100%. Value range is 0 to 100.

An Antialias of 0% is very slightly faster, but otherwise the render speed is the same as at higher values. Sometimes Antialias of 100% can look a bit blurry. If this is the case, just pull down the setting a bit.



Sensitivity at 90. Strength at 85.

Quality popup

Determines the quality of the Woodcut effect, or basically the amount of detail that is affected by any setting. The popup menu has two options, a Fast Quality and High Quality. Set it to Fast for faster results while making your parameter tweaks. Always set it to High prior to rendering the cartoon.



Thickness

Sets how thick the Woodcut lines are drawn. The default is 3. Value range is from 1 to 30. Thickness can have some interesting effects if you really crank up the value, adding to the brush painting or woodcut look depending upon how other parameters are set.



Thickness at 2.



Thickness at 6.

Use Tint checkbox

Tint acts as an extreme Lightness parameter. Tint leaves the image's colors, makes those look super-bright, and wipes out the darks. Turned off by default.

If Threshold is set to 0, the Tint effect will be applied to the whole image. If Threshold is at any other value, then the Shadows will show but its darkness will be affected by the Tint overlay.



Tint on, Threshold at 0.



Tint on, Threshold at 70.

Transparency

This sets the opacity level of the Woodcut effect. The default is 0%, which is fully transparent. Value range is from 0 to 100. The higher the value, the more transparent the Woodcut lines are. The lower the value, the more opaque they are.



Transparency at 20.



Transparency at 50.

Experiment with Woodcut

Woodcut is fun to mix with other ToonIt controls. You can get some interesting effects by mixing Woodcut with other effect groups, like Duotone and Halftone.



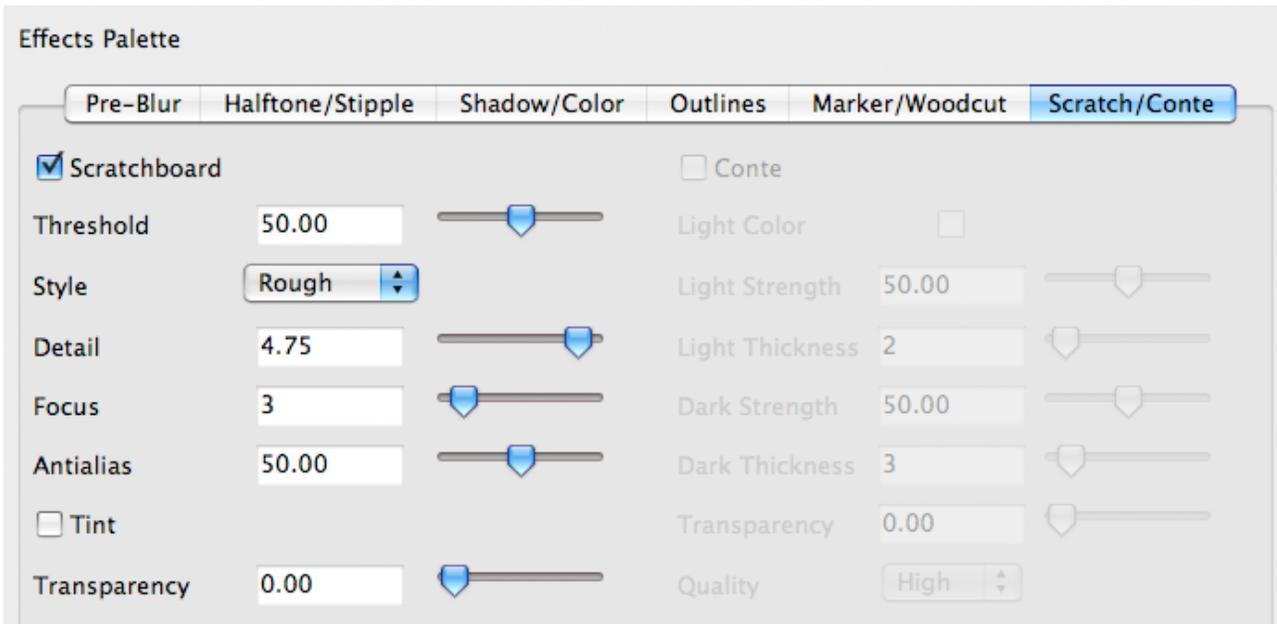
Woodcut with Tint and Halftone.



Woodcut with Duotone.

Scratch/Conte tab > Scratchboard Outlines

Scratchboard Outlines looks like the scratchboard printmaking technique. This is when you over-paint a background, generally with a dark color, and then scratch selected parts away to create a high contrast image. The effect also has a granular or film grain feeling, with granule size, density and contrast all being adjustable.



Use Scratchboard checkbox

Checking this activates the Scratchboard Outline edge detection and its controls. This produces a granular high contrast effect.



Original image, courtesy of Artbeats stock footage www.artbeats.com.



Scratchboard Outlines turned on.

Threshold

Sets the relative overall size of light and dark regions. Threshold determines how dark the color has to be for that color to be replaced by the Scratchboard lines. Default value is 50%. Value range is 0 to 100.

By default, only the darkest color areas will be filled by shadow. As you increase the Threshold, lighter areas get filled with the shadow. For images with dark backgrounds, you can easily create a dramatic effect by turning the entire background black.



Threshold at 40.



Threshold at 70.

Style popup

Style sets the look and feel of the Scratchboard granules (or 'particles'). The popup has two settings: Rough and Smooth. Rough causes the granules to be a bit larger, more frequent, and more randomly placed, giving the effect a more grungy, noisy feel.



Threshold at 50, Style at Rough (defaults).



Threshold at 50, Style at Smooth.

Detail

Detail controls the granule frequency. Default setting is 4.75. Value range is 0 to 5. Lower values create less granules. The value is set high by default in order to populate the Scratchboard effect.



Detail at 4.



Detail at 5 (default).

Focus

Focus controls the granule size. Default setting is 3. Value range is 1 to 30. Higher values make the granule size larger, which can cause a very stylized effect.

For low settings of Focus, Scratchboard Outlines frequently looks better with the Outline Blur group active and Use Main Blur turned off.



Focus at 3 (default).



Focus at 8.

Antialias

Antialias is a percentage slider for the final output that helps to tone down any jagged edges. Default value is 50%. Value range is 0 to 100.

An Antialias of 0% is very slightly faster, but otherwise the render speed is the same as at higher values. Sometimes Antialias of 100% can look a bit blurry. If this is the case, just pull down the setting a bit.

Use Tint checkbox

Turned off by default. Tint Foreground acts as an extreme Lightness parameter. Tint leaves the footage colors but wipes out darks. It was built to fill in the missing darks within Shadow outlines.

If Threshold is set to 0, the Tint effect will be applied to the whole image. If Threshold is at any other value, then the Shadows will show but its darkness will be affected by the Tint overlay.



Tint on, Threshold at 30.



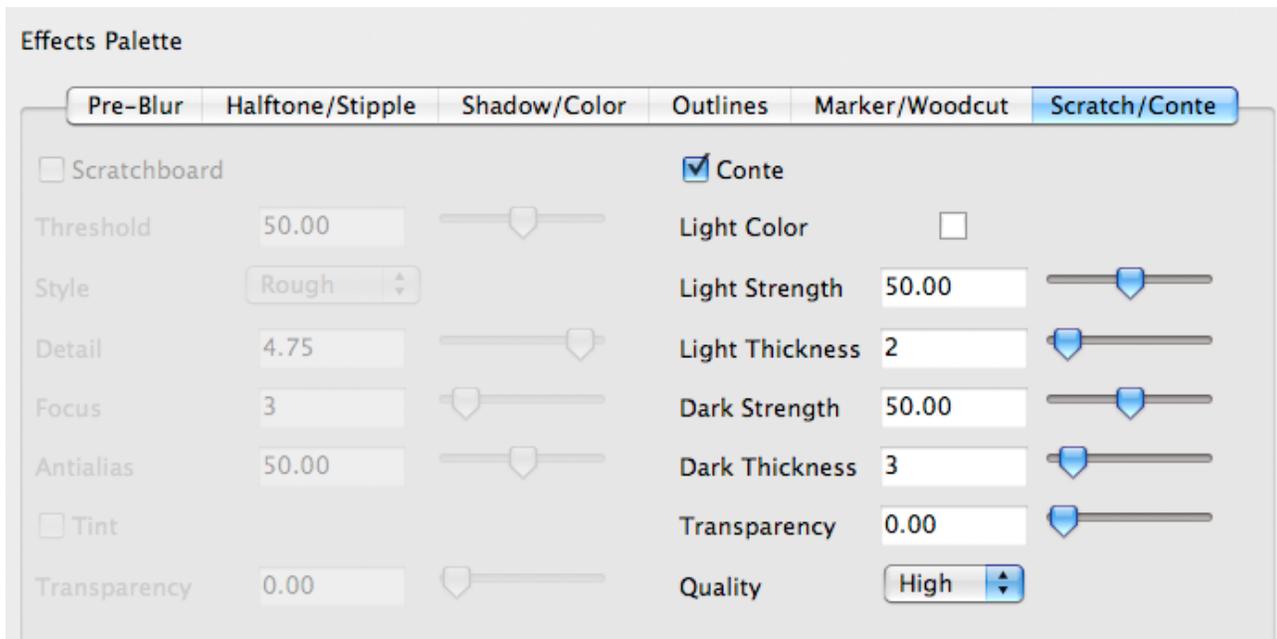
Tint on, Threshold at 60.

Transparency

This sets the opacity level of the Scratchboard effect. The default is 0%, which is fully transparent. Value range is from 0 to 100. The higher the value, the more transparent the Scratchboard granules are. The lower the value, the more opaque they are.

Scratch/Conte tab > Conte Outlines

Conte Outlines creates an effect of drawing with two colors of artist's chalk, called conte crayon. Traditionally these colors are white, black, reddish, or brownish though any outline color can be used.



Use Conte checkbox

Checking this activates the Conte Outline edge detection and its controls. This produces an artistic chalk effect.



Original image.



Conte Outlines turned on.

How It Works

Conte adds a light-colored outline as counterpoint to a dark-colored outline, both in the style of the Soft Outlines group. The two outlines appear in different, generally non-overlapping, locations on each frame. When rendered together, the outlines create an effect similar to traditional conte chalk drawing.

Light Color

Two outline colors, a light and a dark, are combined to make the Conte effect. These colors that real conte crayons come in are white, black, reddish, or brownish.

Light Color is the color that you select for the light-colored outline. The default color is white. The dark-colored outline takes on the color set by the Outline Color parameter, which is in the Color Effects group. By default, this is black.



Light Color at medium gray. Outlines Only color at black (default)



Light Color at white (default). Outlines Only color at reddish brown.

Light Strength, Dark Strength

These parameters determine the amount of Conte shading present in the image. Light Strength sets the amount of the light-colored tones. Dark Strength sets the amount of the dark-colored tones.

Default setting for each is 50. Value range for each is 0 to 100. Higher values increase the amount of chalk-like shading, which typically adds more contrast to the cartoon.



Light Strength at 50, Light Thickness at 2.
Dark Strength at 50, Dark Thickness at 3. (defaults)



Light Strength at 20, Light Thickness at 2.
Dark Strength at 100, Dark Thickness at 3.



Light Strength at 100, Light Thickness at 2.
Dark Strength at 20, Dark Thickness at 3.



Light Strength at 20, Light Thickness at 4.
Dark Strength at 100, Dark Thickness at 5.

Light Thickness, Dark Thickness

These parameters determine the thickness of the major Conte edges. Light Thickness sets the thickness of the light-colored tones. Dark Thickness sets the thickness of the dark-colored tones.

Default setting is 2 for Light and 3 for Dark. Value range for each is 1 to 100. Higher values make the lines thicker. Values above 10 or 15 will cause a ghosted shadowy effect around the major edges.



Light Thickness at 20.



Dark Thickness at 10.

Transparency

This sets the opacity level of the Conte effect. The default is 0%, which is fully transparent. Value range is from 0 to 100. The higher the value, the more transparent the Conte lines are. The lower the value, the more opaque they are.



Light Thickness at 20.



Dark Thickness at 10.

Quality popup

Determines the quality of the Conte effect, or basically the amount of detail that is affected by any setting. The popup menu has two options, a Fast Quality and High Quality. Set it to Fast for faster results while making your parameter tweaks. Always set it to High prior to rendering the cartoon.



Style Controls

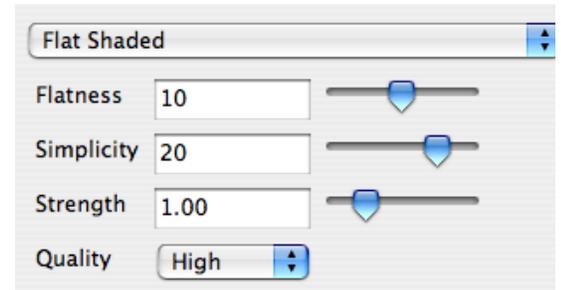
There are 12 groups of parameters that set the type of algorithm used by ToonIt to create the cartoon or paint style. The parameters give you the options that control the appearance and behavior of the style selected.

Some of the Styles are very simple and only have 1 or 2 settings. Other Styles do some pretty high-level thinking and have six associated parameters. No matter how many options there are to tweak, we make their settings easy to use and understand.



Flat Shaded Style

The most cartoon like of the group. Blends the original colors of the image into smooth fields or color regions. This creates large areas of very similar or single colors, creating a cel-shaded cartoon look. Uses Flatness and Simplicity parameters.



Flatness & Simplicity

These two controls are pretty tightly intertwined. They both control the color regions in the image and how distinct the edges are between those regions.

Flatness refers to how 'flat' a color region is. The flatter it is the less color variation there will be in that region. Cartoons tend to be very flat with distinct solid regions of color. As Flatness is increased the image starts to become more posterized.

TIP: The slider only goes up to 42, however this parameter can go up to 100 if you type in the value. However, going much above 25-30 can result in a significant speed hit, especially above 60.

Simplicity controls how much the color regions, especially the edges of the regions, blend together. At lower values, the edges are very distinct resulting in a slightly posterized look with more detail. As the value is increased and the regions blend together, a more continuous-tone look is achieved with limited color variation and low detail.



Flat Shaded. This setting gives the smoothest imagery.



Flat Shaded, Flatness at 1.



Flat Shaded, Flatness at 20. The shadows and highlights are subtly more visible; look at her brighter forehead and darker hair.

Strength

Strength controls the definition between the dark, mid-tone and highlight segments. This affects the visual strength of the overall effect.

Strength is a parameter that you should change very incrementally. The default is 1. The functional range is really from about .5 to 1.5. Above that it starts producing wild artifacts which usually will be undesirable.

The higher this value is, the more distinct the darks and lights will be from each other. At lower values, the darks and lights becomes more blended together, and the image gets brighter overall and loses more contrast.



Flat Shaded, Simplicity at 2.



Flat Shaded, Simplicity at 25. Notice how detail in the foliage is lost, and the woman's face looks slightly blurred.

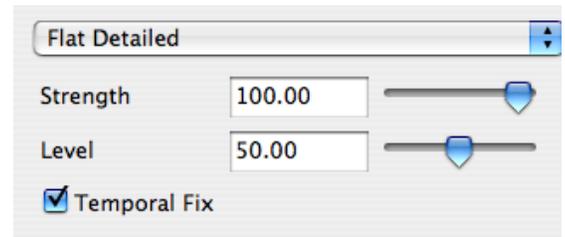
Quality popup

Determines the quality of the Flat Shaded effect, or basically the amount of detail that is affected by any setting. The popup menu has two options, a Fast Quality and High Quality. Set it to Fast for faster results while making your parameter tweaks. Always set it to High prior to rendering the cartoon.



Flat Detailed Style

This Style gives your image a cel-shaded look just as Flat Shaded does. Its results preserve more overall detail and more dark/light contrast, which gives the cartoon a slightly more photographic look. The two main parameters to control Flat Detailed are Strength and Level.



Temporal Fix

Temporal Fix preserves minor details such as highlights and fine edges after the rotoscoping algorithm has been run. By default, this checkbox is on.

Strength

Strength controls the definition between the dark, mid-tone and highlight segments.

The higher this is the more contrast there is between regions, causing a bit more of a posterized look. Lower values create softer detail, with darks and lights more blended together, resulting in a more photographic, 'graphic novel' look. The default is 100.



Flat Detailed. This rotoscoping style preserves more detail in your footage.



Strength at 100%.



Strength at 10%. There is less of a contrast between lights and darks, which makes the footage look lighter overall.

Level

Level controls how pronounced the light and dark areas are. It is sort of a threshold control, adjusting how large the darker areas are. If Strength is set to 0, Level has no effect. The default is 50.

If Level is low, then the shadows are smaller and narrower. If Level is high, the shadows become larger and more pronounced.



Level at 90.



Level at 10. The footage looks washed out because the shadow range is narrower.

No Roto Style

Bypasses the initial rotoscoping algorithm. Gives you a rougher set of color fields with higher detail, but no controls to customize that. You will rely on the parameters in the Effect Controls section.

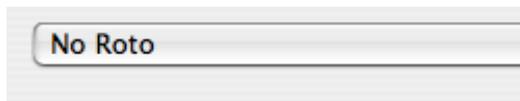
With this option, there are no parameters that you can make adjustments to. It's the WYSIWYG or 'what you see is what you get' option. You'll notice that most of the original detail in the woman's skin and hair are kept, but the plugin smooths out those details, especially around her eyes.

Roto Toon renders optional outlines against a non-plain background created from the image. No Roto could be used to apply outlines over the original image (not a plain background). It was also intended to allow you to apply Main Blur, Lighten, Halftone, and Duotone in any combination to the image with no other effects added. You can use No Roto with or without Outlines.

Choosing a Style other than No Roto, like Gouache or Airbrush, causes some manipulation to happen the source image. With the other Styles, Main Blur, Lighten, Duotone, Halftone, and Outline are intended to be optionally available for simultaneous use.



No Roto. Higher level of detail, but no way to customize the results because all cartoon rotoscoping options are left out.



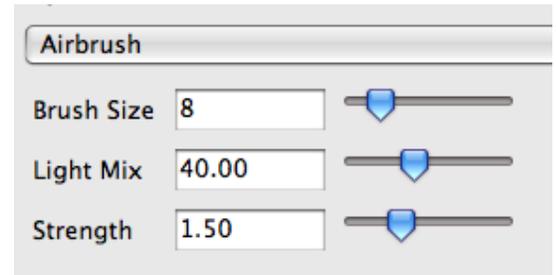
Airbrush Style

Airbrush renders an image as smooth and glossy with shiny highlights and rich darks, giving it a 3D feel.

Brush Size

Controls the size of the drops. Smaller drops will appear to be like drops of paint. Larger drops tend to overlap and interact with each other making it look more like ink or colored water.

Default setting is 8. Visible value range is 0 to 46. **NOTE:** This parameter goes to 100 if you type in the value.



Original image, courtesy of Artbeats Stock Footage, www.artbeats.com.



Airbrush applied. Brush Size at 8 (default).



Brush Size at 3.



Brush Size at 30.

Light Mix

Light Mix adjusts the relative balance of lights and darks. Default setting is 40. Value range is 0 to 100.

A high setting for Light Mix produces an image with many glows and highlights, but few darks. A low setting for Light Mix produces an image with lots of darker areas and few shiny highlights.



Light Mix at 20.



Light Mix at 70.

Strength

Strength plays a similar role to how it affects the Flat Shaded style. Default setting is 1.5. Value range is 0 to 5.

Increasing Strength makes the lights lighter and the darks darker. Decreasing Strength does the opposite; lights are darker and darks are lighter.



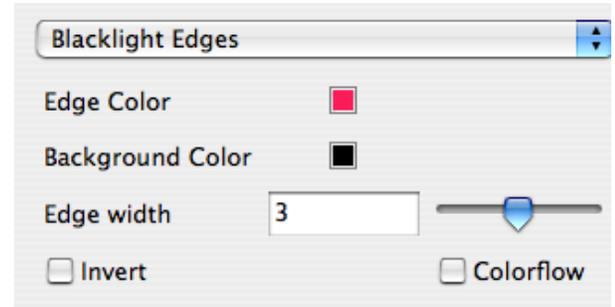
Strength at 1.5 (default).



Strength at 4.

Blacklight Edges group

Blacklight Edges uses edge detection to create a fun, customizable set of neon-colored edges in your footage. This creates a very stylized look as if the edges have been placed under a blacklight. The effect maps a specialized color gradient to the edges of the cartoon.



No Effects Palette controls

Blacklight Edges is different from most of the Styles in that you can't combine it with the left-side Effects Palette. When Blacklight is selected, all the Effect controls are grayed out except for Pre-Blur > Main Bur.



Original image, courtesy of Artbeats Stock Footage, www.artbeats.com.

Blacklight Edges applied.

Edge Color

Blacklight Edges maps a color gradient to the edges it detects in your footage. Edge Color chooses the appearance of those edges. Default color is red.

Background Color

Sets the color that is mapped to the edges. The color will be arranged in a varying gradient on the edges, with its complementary color directly at the extreme outside of the edges. Default color is black.

Edge Width

Sets the width of the rendered edges. Higher values make thicker edges. Default value is 3. Value range is 0 to 5.

Invert checkbox

Inverts the colors. If you have red outlines on a black background this will give you cyan outlines on a white background.



Edge Color at yellow.



Background Color at blue.



Edge Width is 5.



Invert applied to default red & black.

Colorflow checkbox

Colorflow is a somewhat tricky effect to describe. It basically washes the entire image with green, red, or blue, depending on the color of the outline.

To some degree, the wash color will be the complementary color of the outline (opposite side of the color wheel). However, since it's limited to three colors, it's not exactly complementary. If you have red outlines, the wash is cyan; if you have yellow outlines, the wash is blue; and so on.

This only works with colors that have 100% in the Brightness component of HSB colorspace (bright saturated colors). Dark areas of the image stay dark, but lighter areas really pick up the color of the wash. The outlines themselves are not usually affected by the wash, but occasionally can be.



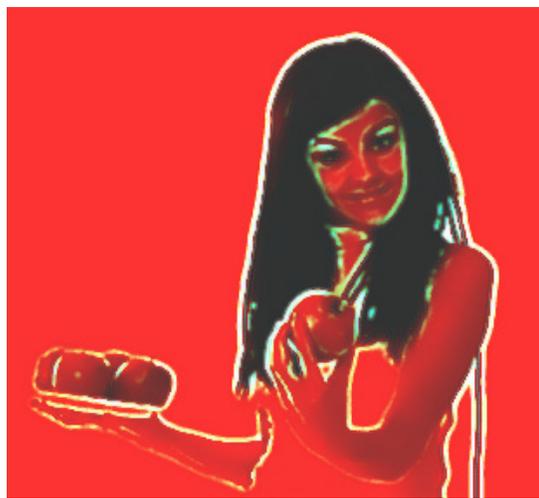
Blacklight Edges image.



Colorflow applied.



Blacklight Edges image.

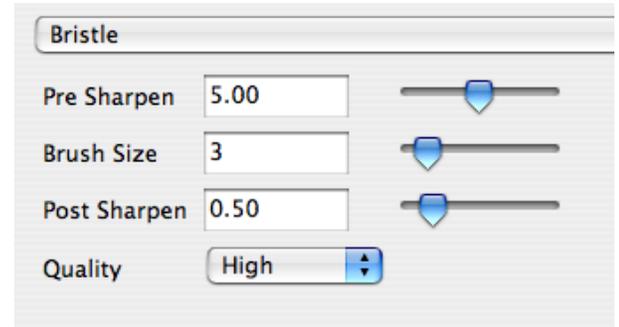


Colorflow applied.

Bristle Style

The Bristle effect looks as if paint has been applied at the end of a thick bristle brush, obscuring where one dab ends and next begins. It creates an effect that can vary from a pointillism style to smooth brush strokes.

Bristle is related to the Gouache style but differs in that the paint looks locally textured. Their Radius and Strength settings behave in similar fashion.



All of the parameters rely heavily on one another. It's not possible to say, for instance, that Pre Sharpen creates a specific effect. The following descriptions are guidelines. The effect will change depending on the settings of the other controls.



Original image.



Bristle applied.

Pre Sharpen

Sharpens the underlying image before the effect is applied. Default value is 5. Value range is 0 to 10. At small Brush Sizes, a high Pre Sharpen creates a pointillism type of effect. At large Brush Sizes, Pre Sharpen creates a textured brush stroke of sorts.

Brush Size

The size of the brush strokes or paint dabs. Default value is 3. Value range is 0 to 25.

Lower values result in the pointillism effect. Higher values get into a more traditional painterly style. Depending on the Sharpening settings, high Brush Size values can create blurred, mushed up colors which can look quite interesting with outlines.



Pre Sharpen at 9, Brush Size at 3.



Pre Sharpen at 9, Brush Size at 8.

Post Sharpen

Applies sharpening to the processed image. This creates contrast and can make the brush strokes look more textured and 3-dimensional.

Default value is 0.5. Value range is 0 to 4. Higher values create more texture and contrast.



Post Sharpen at 4, Brush Size at 3.



Post Sharpen at 4, Brush Size at 8.



Pre Sharpen at 5, Brush Size at 20,
Post Sharpen at 1.5, Comic Outlines on.



Pre Sharpen at 2, Brush Size at 14,
Post Sharpen at 3, Soft Outlines on.

Quality popup

Determines the quality of the Bristle effect, or basically the amount of detail that is affected by any setting. The popup menu has two options, a Fast Quality and High Quality. Set it to Fast for faster results while making your parameter tweaks. Always set it to High prior to rendering the cartoon.



Crackle Style

Crackle resembles the Crystallize filter built into Photoshop. The difference is that with Crackle, the cracked regions occur only within similarly-colored areas, but not between or across them. This keeps the overall image structure and gives a more sophisticated result.

Crackle is also stained glass look that is designed to work with the Marker Outlines Effect.

How It Works

Crackle produces a cracked paint look. It takes the same Flatness, Simplicity, and Strength controls as the Flat Detailed style. Then it applies a different algorithm to produce the Crackle look.

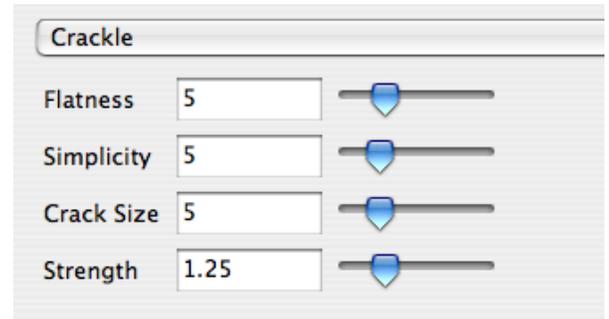
The image doesn't entirely get reduced to crackle 'cells'. Within the cells, some of the detail from the original image will remain. This is especially true for larger cell sizes. Crackle tries to reduce each cell to a homogenous tone, but in regions where there is a lot of contrasting detail, that homogenization is not always possible.

Use Marker Outlines for Stained Glass

When used with Marker Outlines, an excellent Stained Glass look is achieved.

Using regular Outlines with this effect doesn't really work very well. The cracked cells don't usually correspond to the same areas normal outlines do, so the resulting combination can look a little off. It's not always the case, but generally Crackle is better with either no outlines or with Marker Outlines.

Flatness, Simplicity and Separation all interact together to create the size of the cracked cells. These are the same controls as Marker Outlines, which has a checkbox that allows you to just use the Crackle controls.



Original image, courtesy of Artbeats Stock Footage, www.artbeats.com.



Defaults for Crackle. Notice how the image is divided up into 'cells' or regions.

Flatness

Flatness sets how much coloration will be in the image. Default value is 10. Value range is 0 to 30.

At high values, there are less gradations of color and larger regions of color. This means the 'cells' get larger. A 'cell' is each region that looks like a chunk of cracked paint. Since the cells are larger, you'll see less detail in the image.

Lower Flatness values mean more cells and more detail.



Flatness at 2.



Flatness at 25.

Simplicity

Simplicity works in conjunction with Flatness. Default value is 10. Value range is 1 to 25. The higher the Simplicity, the less color detail that will be shown in the underlying image. This results in larger cells or regions of color.



Simplicity at 1.



Simplicity at 20.

Crack Size

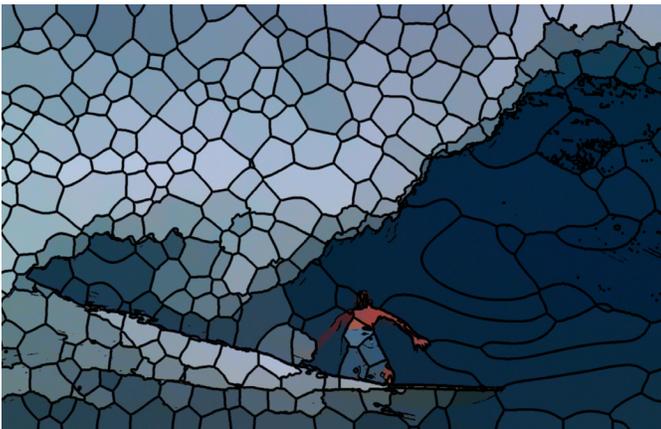
This is the most direct way of changing the cell size. Default value is 5. Value range is 1 to 25. Lower values cause smaller cells, while higher values cause larger cells. Works in tandem with Flatness and Simplicity to control the cell size.



Crack Size at 5 (default).



Crack Size at 2. Marker Outlines on.



Crack Size at 10. Marker Outlines on.



Crack Size at 20. Marker Outlines on.

Strength

Strength controls the definition between the dark, mid-tone and highlight segments. It's essentially adjusting the contrast for each individual color region independently from the other color regions. The default is 1.

This is a parameter that you should change very incrementally. Default value is 1. Value range is 0 to 5, but the functional range is really from about 0.5 to 1.5. Above that range, Strength starts producing wild artifacts which, while interesting, are typically undesirable.

The higher Strength is, the more distinct the darks and lights will be from each other. At lower values, the darks and lights becomes more blended together, and the image gets brighter overall and loses more contrast.



Strength at 1 (default).



Strength at 1.5.



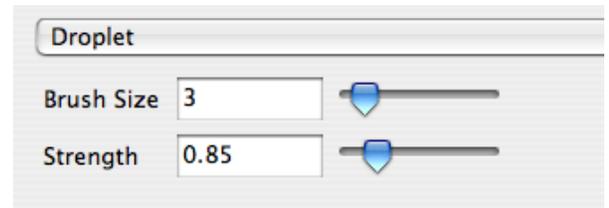
Strength at 2.



Strength at 5.

Droplet Style

Droplet simulates an expressionistic style of painting. It produces renderings that look like blobs of paint which have been dropped on a canvas, each spreading out in relatively circular fashion without blending. With higher settings, Droplet gives the feeling of viewing an image behind distorted glass.



Droplet has only two relatively simple controls, Brush Size and Strength. You will get the best results when Strength is around its default setting of 1.0. The bulk of work in Droplet should be performed by adjusting Radius.



Original image.



Droplet applied.

Use without Main Blur

Turning off Main Blur can sometimes result in a better effect for Droplet. You can do this by setting the Pre-Blur> Main Blur> Radius or Blurring setting to 0.

Droplet changes the borders between different colored-regions of an image, adding rounded bumps where blobs of paint appear to have been extruded and intruded. These changed borders frequently don't align with the Outline types, so you'll probably want to turn off the Outline effects.

Again, Droplet can work and look better if Main Blur is turned off... not always though, so adjust to taste.

Brush Size

Controls the size of the drops. Default value is 3. Value range is 1 to 50. Smaller drops will appear to be like drops of paint. Larger drops tend to overlap and interact with each other making it look more like ink or colored water.

NOTE: The slider identifies the value as going up to 50, but this control goes to 100 if you type in the value.



Brush Size at 10.



Brush Size at 30.

Strength

Strength controls the definition between the dark, mid-tone and highlight segments. It's essentially adjusting the contrast for each individual color region independently from the other color regions. The default is 1.

This is a parameter that you should change very incrementally. Default value is 0.85. Value range is 0 to 5, but the functional range is really from about 0.5 to 1.5. Above that range, Strength produces wild artifacts which, usually, will be undesirable for those not on acid.

The higher this value is, the more distinct the darks and lights will be from each other. At lower values, the darks and lights becomes more blended together, and the image gets brighter overall and loses more contrast.



Strength at 0.85 (default).



Strength at 1.5.

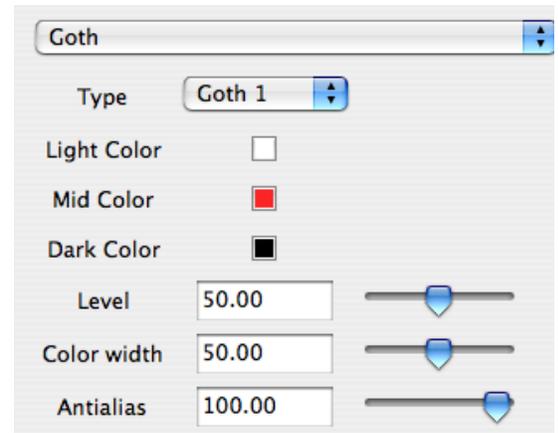


Strength at 2.5.

Goth Style

Like Blacklight Edges, Goth creates a very stylized look. The Goth effect is all about reducing an image into three color values – dark, light and midtone – then mixing them into a high contrast image. Goth makes use of the internal color roto-scoping to create a high contrast effect for your footage. This group of parameters chooses color behavior.

Goth runs the internal roto-scoping algorithm to flatten the entire image into three colors, a dark, a light, and a midtone. You can change the algorithm used, the midtone color, and how much or little the image is affected. This produces a very high contrast effect for extreme stylization.



No Effects Palette controls

Goth is different from most of the Styles in that you can't combine it with the left-side Effects Palette. When Goth is selected, all the Effect controls are grayed out except for Pre-Blur > Main Bur.

Type popup

This popup selects which Goth algorithm will be used.

Goth 1 has a heavy low color. This is the default. Goth 2 allows for more of the midtone to leak through the final result.



Original image, courtesy of Artbeats Stock Footage, www.artbeats.com.



Type at Goth 1.



Type at Goth 2.

Light Color

Color well that sets the color of the lightest tone. The default is white.

Mid Color

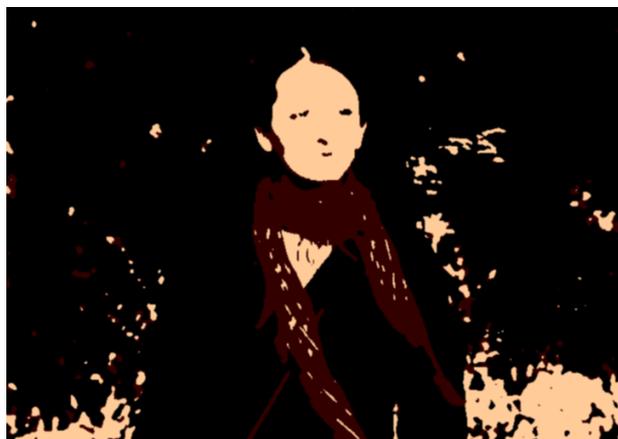
Color well that sets the color of the midtone. The default is red.

Dark Color

Color well that sets the color of the darkest tone. The default is black.



Light Color at gray, Mid Color at green, Dark Color at blue.



Light Color at beige, Mid Color at maroon, Dark Color at black.

Color Width

Sets how wide the midtone color appears in the final render. A higher value will fill more of the frame with the midtone color.



Color Width at 10. Mid Color is maroon.

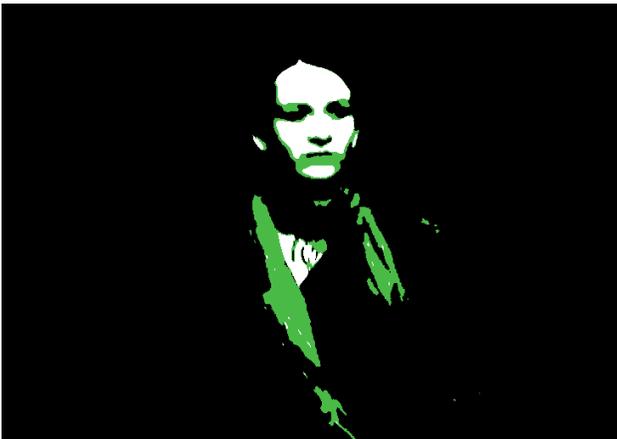


Color Width at 90. Mid Color is maroon.

Level

Sets the threshold or ‘depth level’ of the Goth effect. At a high value, the image will fill with white. At a lower value, the image will fill with black.

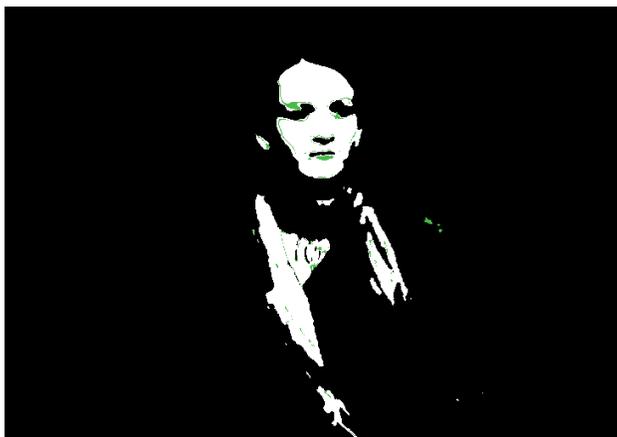
The Blur Quality setting determines the amount of detail that is affected. The subject’s edges won’t hold as true to the original image at a lower Fast Quality than at the High Quality setting.



Level at 20. Color Width at 50.



Level at 70. Color Width at 50.



Level at 20. Color Width at 30.



Level at 70. Color Width at 100.

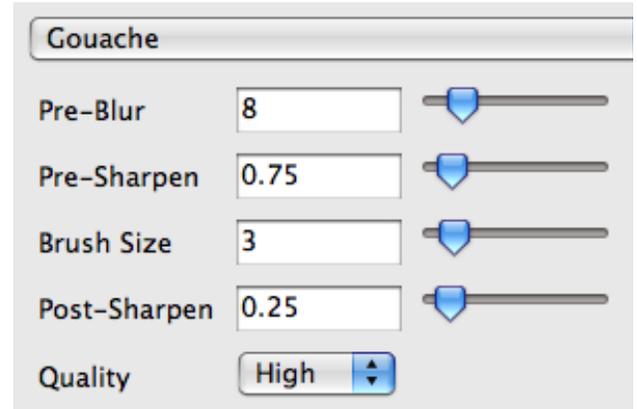
Antialias

A percentage slider for the final result to help tone down any jagged edges.

Gouache Style

Gouache simulates the smooth, brushwork style of gouache painting. Traditional gouache is a thick water-based paint, similar to watercolor but more gummy.

Gouache has a smoother look, Bristle has a rougher look, like putting on paint using the side of a sable brush vs. the end of a bristle brush. Both can produce effects that look cool and art-like. Bristle and Gouache have a different number of color segments.



Original image.



Gouache at defaults. Some high-res images may not look this painterly.

Pre-Blur

Gouache uses its own specialized blur, with the Pre-Blur control acting similar to the Main Blur > Radius control. It sets the amount of pre-blur, much like setting the radius of any Blur filter in Photoshop. This affects how much detail will be apparent in the image. The more blur, the less detail in your Gouache effect.

Default value is 8. Value range is 1 to 50. At a high value, less detail will be apparent in the image because the color areas will blur together more. At a low value, there will be more color detail because there's less blur.



Pre-Blur at 3.



Pre-Blur at 40.

Pre-Sharpen

Presharpen creates a light segmentation effect, like small, almost perfectly blended dabs of paint. This tends to set the look of the Gouache brush strokes.

Default value is 0.75. Value range is 0 to 10. Lower values will be softer. Higher values will result in a more defined, harder edge brush stroke.



Pre-Sharpen at 3.



Pre-Sharpen at 8.

Brush Size

Sets the size of the brush strokes. Default value is 3. Value range is 1 to 25. Low to mid values usually produce the best looking paint dabs. High values look like less defined brush strokes.



Brush Size at 3.



Brush Size at 20.

Post-Sharpen

Contrast of the colors within the brush stroke. Post-Sharpen controls the definition between the dark, mid-tone and highlight segments. Similar to Strength in styles like Flat Shaded and Droplet.

This is a parameter that you should change very incrementally. Default value is 0.25. Value range is 0 to 4, but the functional range is really from about 0.5 to 1.5. Above that range, Strength produces may produce very sharp looking results.

The higher the value, the more distinct the darks and lights will be from each other.

With Main Blur

Gouache is usually run without Main Blur. You can do this by setting the Pre-Blur> Main Blur> Radius to 0 or Main Blur> Blurring to 0.

If you do use Main Blur, doing so will add extra smoothness. The Main Blur> Radius controls paint dab size. Strength increases difference of the rendered output from the Pre-Blur results and can make the dabs appear rougher and more prominent.



Post-Sharpen at 1.



Post-Sharpen at 4.

Quality popup

Determines the quality of the Gouache effect, or basically the amount of detail that is affected by any setting. The popup menu has two options, a Fast Quality and High Quality. Set it to Fast for faster results while making your parameter tweaks. Always set it to High prior to rendering the cartoon.



Heat Vision Style

Heat Vision generates a burst of rainbow colors that map themselves to the tonal values of the image. This creates the look of a Heat Vision display.



No Effects Palette controls

Heat Vision is different from most of the Styles in that you can't combine it with the left-side Effects Palette. When Heat Vision is selected, all the Effect controls are grayed out except for Pre-Blur > Main Bur.



Original image.



Heat Vision applied.

Offset

Offset changes how the colors are mapped to the tonal ranges in the image. It basically takes the color gradient and shifts it one way or the other. Default value is 0. Value range is -180 to 180.



Offset at -70.



Offset at 100.

Poster Paint Style

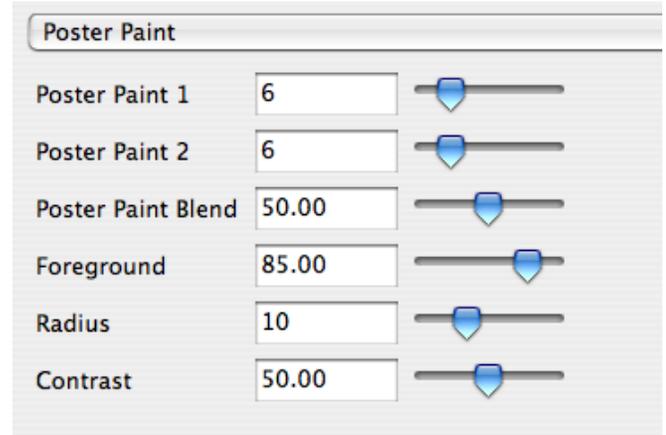
Poster Paint is like a Posterize effect with several important enhancements.

Posterization is a generally less attractive way of creating a cartoon effect, as compared to the Flat-Shaded style. However, it does create a specific stylization, which might be what you're looking for.

How It Works

Poster Paint combines the results of two different posterize algorithms. This makes its results more naturalistic when dealing with images with changing or extreme lighting conditions. By combining two posterize variations, you get that style plus the ability to add in additional detail.

Poster Paint also makes an educated guess about what parts of the image are foreground versus background. This allows it to selectively blur objects in the background, making them less noisy and distracting.



Original image.



Poster Paint applied.

Poster Paint 1

Poster Paint 1 sets the number of levels in the first posterize algorithm. If you set Poster Paint Blend to 0, you'll see what Poster 1 looks like by itself. It creates a slightly lighter posterize than Poster 2.

Default value is 6. Value range is 2 to 25. High values set more levels of posterization.

Poster Paint 2

Poster Paint 2 sets the number of levels in the second posterize algorithm. If you set Poster Paint Blend to 100, you'll see what Poster 2 looks like by itself.

Default value is 6. Value range is 2 to 25. High values set more levels of posterization.



Poster Paint 1 at 2.



Poster Paint 1 at 20.



Poster Paint 2 at 2.



Poster Paint 2 at 20.

Poster Paint Blend

Poster Paint Blend controls the proportion of Poster 1 and Poster 2 output in the render. Default value is 50. Value range is 0 to 100. The lower the value, the more of Poster 1 will come through. The higher the value, the more of Poster 2.



Poster Paint Blend at 10. Poster 1 comes through.

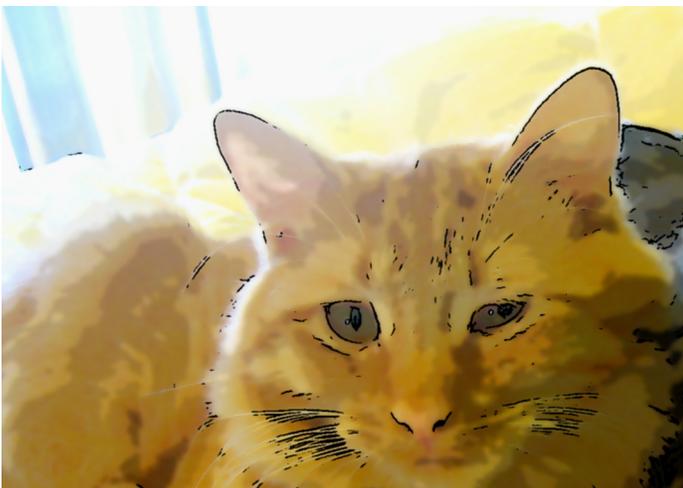


Poster Paint Blend at 90. Poster 2 comes through.

Foreground

Foreground adjusts the sensitivity of the complexity analysis. When Foreground is at 100, all parts of the image are treated as foreground and nothing is blurred. When Foreground is at 0, everything is treated as background and blurred, producing a rendered look that looks something like No Roto with Main Blur turned on.

Default value is 85. Value range is 0 to 100. This parameter is fairly sensitive and is generally best left at its default.



Foreground at 10.



Foreground at 85.

Radius

Radius adjusts the radius of the background blur. This can be used to compensate for larger images. Default value is 10. Value range is 1 to 50.

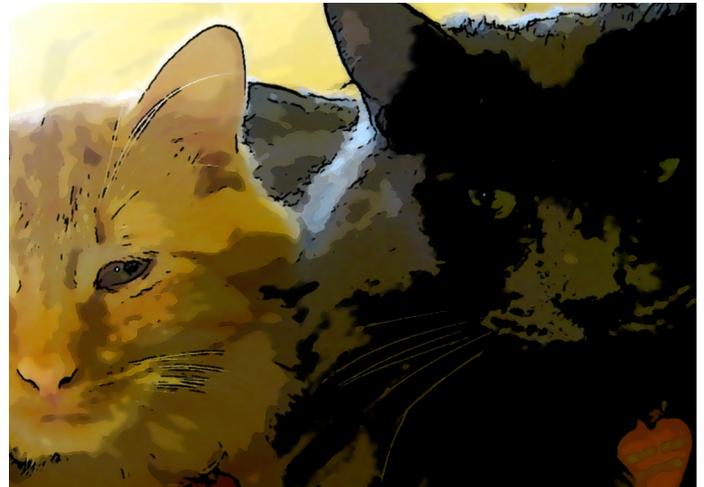
NOTE: The slider identifies the value as going up to 50, but this control goes to 100 if you type in the value.

Contrast

Contrast increases the spread between color minimum and color maximum, ranging up to full black through full white. Default value is 50. Value range is 0 to 100.



Contrast at 1.



Contrast at 100.