



Roto Toon Quickstart Guide

So you wanna make a cartoon...?



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Toonamation

Get started with Roto Toon filter

So, you want to turn your newly captured footage into a cartoon, eh? There are many instances where tooning an image can really work well artistically, but the sought-after effect is typically that of tooning a person. Here's a handy guide to start you off running with ToonIt! in any supported host app.

This tutorial is set up for use in After Effects (Mac/Win), Final Cut Pro (Mac), Motion (Mac) and Premiere Pro (Win). Follow along! You can download our finished movie and the source footage at http://www.anarchyunderground.net/tutes/toonit_quickstart.zip.

step 1: evaluate your footage

ToonIt! will do its darned best to 'toonify' your footage with a minimum amount of tweaking when you first apply it. The results of this toon'ing, however, are largely based on the quality of your footage. As with most things graphic, the better your source material, the better your final results.

Visual information is brought out by good lighting, attention to composition, and the quality of the capture. For instance, capturing directly to a hard drive when shooting will produce much better results than capturing off a DV tape. You will get a cleaner image with less image grain. The better your results, the less initial tweaking you'll have to do to get a good, solid toon.

step 2: import footage

First, load your footage up in a sequence or composition. If you are using our example footage, please import the QuickTime movie '[tabitha_original.mov](#)'. This footage is a 9.0 second clip at NTSC DV resolution (720 x 480).

In After Effects, drag the source footage from the Project Window down onto the 'New Composition' button. Doing this will create a new composition set up to match your footage exactly.

In FCP, Motion or Premiere Pro, create a sequence set to your footage size. If you are using our footage, create a 720x480 sequence with a Square pixel aspect ratio at 30 frames a second. If you are importing your own footage, set the sequence to match the footage settings, then drop it into the sequence Timeline.

Our original footage of Tabitha.



step 3: apply roto toon

Once done, select the clip down in the Timeline. With that selected, apply ToonIt!. In After Effects or Premiere Pro, choose ToonIt! Roto Toon from your Filter menu's Digital Anarchy submenu. In FCP or Motion, go to the Video Filters bin, then the Digital Anarchy subfolder.

Et voilà! Roto Toon is now applied to your footage and will generate an image with its default settings. The initial result looks quite nice, but we'll need to make the image less detailed.



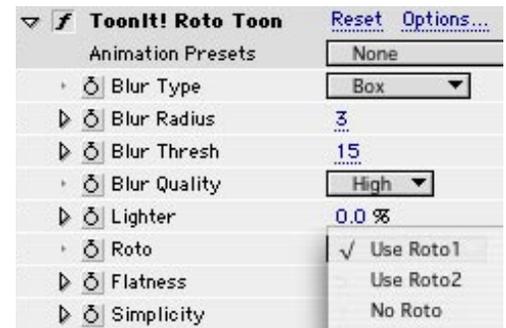
Default settings of Roto Toon on Tabitha.

step 4: roto1 vs. roto2

Roto Toon contains three separate tooning algorithms to generate different stylizations. Both of these effects produce wonderful toon looks. The choice really comes down to which one most suits your needs for your particular project.

'Roto1' is the most visually refined effect, smoothly separating out the color segments and keeping the color flashing/noise to an absolute minimum.

'Roto2' uses a different color detection algorithm, and gives you more definition between the lows, highs, and midtone colors. This option is more detailed than 'Roto1' and can produce a very nice tooning effect on its own. Leave your effect set to 'Roto1'.



TECH NOTE: We are showing After Effects parameters. However, ToonIt! settings look/work exactly the same in FCP, Motion and Premiere Pro.



'Roto1' setting typically has a refined, smooth gradation of color.



'Roto2' setting is a little more detailed. Notice the comparative definition of the face.

step 5: drop the detail

Roto Toon has a variety of methods to drop the detail in an image. 'Roto1' uses the 'Flatness' and 'Simplicity' parameters to control its look.

'Flatness' spreads the color fields across the frame, making highlights and shadows stand out while reducing the image depth. The higher this is, the more 'flat' the footage appears.

'Simplicity' controls the amount of color detail left in the frame. The higher this is, the less detail you'll be able to make out in fields of color.



'Flatness' 20, 'Simplicity' 25 (param limit). The color fields are slightly flatter in this version. You will see more difference in the value changes depending upon your footage.



'Flatness' 10, 'Simplicity' 20.



Let's set 'Flatness' to 10 and 'Simplicity' to 20. Together, these parameters will reduce the amount of color segments (or, areas of color) in the frame. The higher these numbers go, the more the footage starts to resemble a cel-shaded toon.

Don't bother to set 'Flatness' higher than 20. The speed hit isn't worth the small level of detail that you will gain.

Set the 'Flatness' or 'Simplicity' too high, and you'll begin to blur the colors too much, resulting in the blurry haze of a cartoon colorist who has inhaled too much turpentine...

step 6: soft vs comic outlines

Roto Toon comes with built-in cartoon outlines, giving you more control than attempting to manage 20 animators and 20 ink & painters high on caffeine and a deadline. (Ok, we're done with the jokes!)

By default, Roto Toon uses the 'Soft' outline option. This option generates soft lines with mild gradients for shading. This effect is nice, but we are going for a less 'refined' look. This means we need 'Comic' outlines instead.



Default 'Soft' settings for Roto Toon.



New 'Comic' settings for Roto Toon.

Uncheck the 'Soft' checkbox and turn on 'Comic'. Leave 'Sensitivity' set to 50% and change 'Comic Strength' to 75%. You could bop the Comic Thickness down to 1.

This will give you a good, thick smattering of outlines akin to a traditionally inked graphic novel.

<input checked="" type="checkbox"/> Soft	<input type="checkbox"/> Soft
▶ <input type="checkbox"/> Soft Strength 0.0 %	▶ <input type="checkbox"/> Soft Strength 0.0 %
▶ <input type="checkbox"/> Soft Thickness 2	▶ <input type="checkbox"/> Soft Thickness 2
▶ <input type="checkbox"/> Soft Outline Quality High	▶ <input type="checkbox"/> Soft Outline Quality High
<input type="checkbox"/> Comic	<input checked="" type="checkbox"/> Comic
▶ <input type="checkbox"/> Comic Sensitivity 50.0 %	▶ <input type="checkbox"/> Comic Sensitivity 50.0 %
▶ <input type="checkbox"/> Comic Strength 50.0 %	▶ <input type="checkbox"/> Comic Strength 75.0 %
▶ <input type="checkbox"/> Comic Thickness 2	▶ <input type="checkbox"/> Comic Thickness 1
▶ <input type="checkbox"/> Comic Antialias 75.0 %	▶ <input type="checkbox"/> Comic Antialias 75.0 %
▶ <input type="checkbox"/> Comic Outline Quality High	▶ <input type="checkbox"/> Comic Outline Quality High

Our before/after settings for Soft vs Comic.

step 7: color the outlines

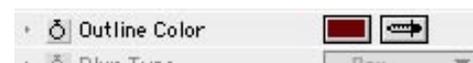
The Outline Color pot allows you to change the overall color of the generated edges in your tooned footage. By default outlines are black, but you can change the color of all the edges and shadows generated by the outline effects.

Experiment by choosing a different color for the lines. We tried a deep red. Keep the 'Comic' checkbox on.

For the sake of this tutorial, let's leave Outline Color set to the default black. It's an interesting stylization but not conducive to our project.



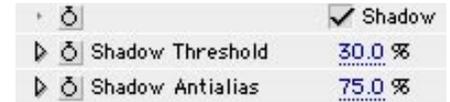
Experiment with the cartoon edge color.



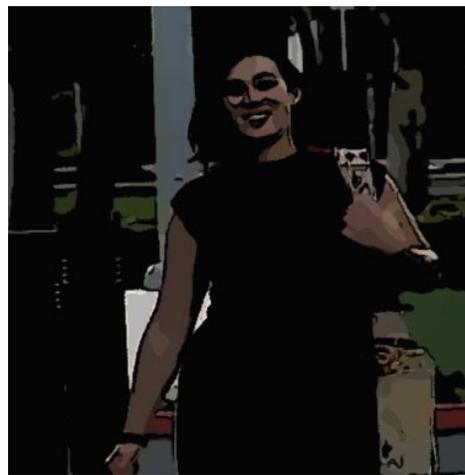
step 8: shadowy figure

Within the Outlines parameters, you'll notice an unchecked 'Shadow' option. 'Shadow' will analyze the darkest parts of your image and fill them in with smooth fields of the selected Outline color, defaulting to black. 'Shadow Threshold' sets how much of the image is actually filled in with shadow.

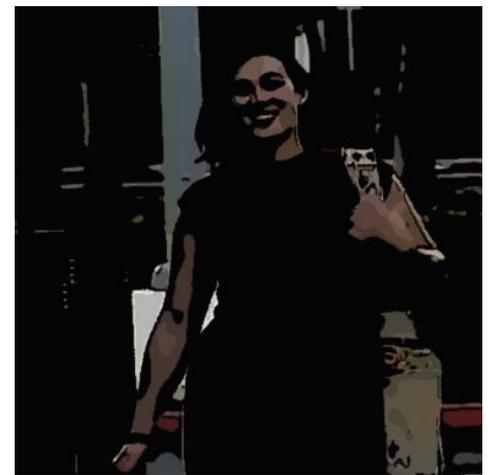
This is a very good setting if you want a deep Ink & Paint look. It's not what we want for this tutorial so after you've played around a bit, please leave this option off.



'Shadow' turned off.



'Shadow Threshold' 20.



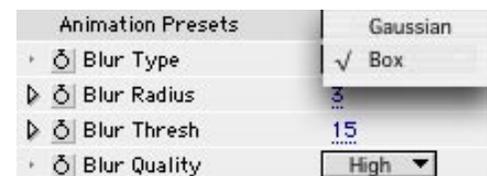
'Shadow Threshold' 30.

stop 9: blur controls

Now go back up the parameter list to the 'Blur' section. Blurring in the Roto Toon filter is a little different than creating a blurry looking image.

The Roto Toon algorithms need information prior to running their rotoscoping magic on your footage. Setting up the Blur allows the algorithms to control the amount of detail that gets rendered in the resulting frame. This process details out how the individual fields of color interact with one another pre-toning. Like a filter for the filter!

You have two choices of blurring: 'Box Blur' and 'Gaussian Blur'. We feel that 'Box Blur' generally gives the best-looking results so that option is set as the default. However, Gaussian is present as an alternative if you don't feel that the default settings are getting the results you'd like.



'Blur Radius' sets how much the footage is actually blurred prior to the roto-scoping, and acts just as a normal Box or Gaussian Blur filter would. Raising this value will result in less defined edge areas, especially in areas with shading.

The 'Blur Threshold' determines how much of the footage is affected by the blur. This value can focus the blurring down to only a few details. The higher this value is, the more of the frame will be affected.

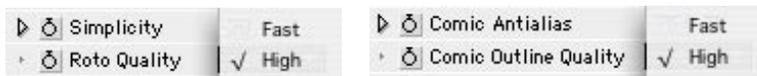
Experiment with a few settings. The defaults are 'Radius' at 3 and 'Threshold' at 15. Keep 'Radius' at 3 and change 'Threshold' to 30. Now raise 'Radius' to 20 and lower 'Threshold' back to 15.



'Box Blur' with 'Blur Radius' at 3 and 'Blur Threshold' at 15 (default settings).

step 10: final quality check

Your cartoon is almost finished! Go back through your parameters and set any of the 'Quality' parameters back to High if you changed them while working.



Toggle the 'Quality' settings to work faster or render at a higher quality.

Once done, render it all out and amaze your friends! To view our results, just play the movie in your download folder called '[tabitha_toon.mov](#)'.

talk to us! Have questions about this ToonIt! tutorial? Just contact Marco at marco@digitalanarchy.com. Thanks for reading!



'Box Blur' with 'Blur Radius' at 3 and 'Blur Threshold' at 30.



'Box Blur' with 'Blur Radius' at 20 and 'Blur Threshold' at 15.