

Power Retouche

correct lens-distortion

sharpen without artefacts ... & more...

Photo-retouching plug-ins

How to do anti-aliasing with our Photoshop plugin

Power Retouche Anti-aliasing Filter removes edge line roughness and jagged edges in graphics and also removes pixelations in entire photos. A breakthrough in edge detection and pixelation-detection enabled us to create an amazingly simple anti-aliasing plugin filter that actually detects aliasing - and changes only aliased edges and pixels.

- **Windows** version is for all versions of Photoshop, Elements, Fireworks, Paint Shop Pro, Corel Draw, Illustrator and other software that supports Photoshop plug-ins. See [list](#).
- **Mac** version is for all versions of Photoshop and Elements and all OS versions.



Anti-aliasing Filter - Tutorial

Benefits of the plugin

- Give your photos and graphics a more natural and less digital look.
- Filter edge-line roughness and pixelation (this is known as "anti-aliasing").
- Smooth jagged edges on text and graphics or in entire photos.
- Remove jaggies in down-scaled photos and images in web design.
- Get rid of harshness from your sharpened small images - like web images.

The anti-aliasing filter plugin works with these image modes (Windows and Mac)...
8 & 16 bit / channel: RGB, Grayscale, Duotone, CMYK, Multichannel, Lab.

Anti-alias filter controls

This is the anti-alias plug-ins control panel (Windows). The controlpanel and preview area can be changed by dragging the sides.

The filter has only four controls:

1. Amount
2. Max trail-off size
3. Edge include
4. Jag include



Example -

filtering rough edge-lines

aliasing aliasing

The anti-aliasing filter plugin is one of a kind for filtering edge-line roughness.

The Anti-aliasing control-group

Amount %

This determines the strength of the anti-aliasing, not how much will be filtered. The amount of pixels - and which - selected for filtering is determined by the plug ins second group of filter-controls "Jaggie definition".



Max trail-off size

This determines how far the anti-aliasing may (not "will") span. Along nearly vertical or horizontal edges or curves you will typically want a longer trail-off for a smoother impression, so this is what the plugin will give you. Where the jaggie-step is one to one (45°) the trail-off will never be more than one pixel. The trail-off will change according to the curve or direction of the object. This ensures smooth edges with minimum blurring. (See illustration below).

Tips:

1. To preserve some crispness set max trail-off low.
2. To ensure symmetric anti-aliasing in concave areas, like the inside of a U (see below), you might want to set the max trail-off size to half the size of the area. If f.ex. the lowermost white at the inside of the U is 6 pixels wide, the best trail-off size to preserve perfect symmetry is 3. In most cases this does not matter much since the asymmetry will be unnoticeable, but the option is there.
3. Size 3 - 6 are the most useful for general purposes.


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**Illustrating
Max trail-off size**

If you write text in Photoshop, you already have a superb anti-aliasing, but as you will know it only works for text - and only for text written in Photoshop. If you scan text or graphics (or cut out text, like we did with the word "rainforest" below) you will need a separate anti-aliasing filter. Since the effect of anti-aliasing letters is well known, we will illustrate our principle with the lower part of an O.



Smoothing scans

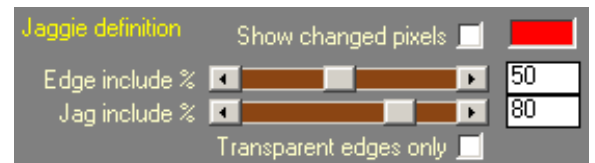
We had to send a letter abroad and received a letter from the translator. However it did not look nice when we scanned it. Here's the word "e-mail" scanned - before and after being anti-aliased 100% at trail-off size 2. For illustration we used the same unaliased type for the word "Antialiased" as for "raw scan" and applied our plugin to that at the same time.

電子メール
raw scan

電子メール
Antialiased

The "Jaggie definition" control-group - Tune the anti-aliasing filter

This group of controls is most useful when anti-aliasing jaggies (jagged edges) within images. It is not so relevant for Black/White situations like the above text with clear cut edges.



Edge include

This uses the PowerRetouche edge-detection to determine if the adjacent pixels are an edge or not. If not an edge of some sort, there is probably no point in anti-aliasing it.

Jag include

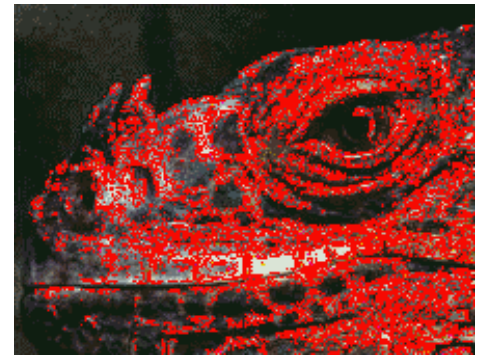
This is more complex than edge-detection. It will analyze the pixels and evaluate if they form a jag. The higher the settings, the more will be included.

Show changed pixels

Enable this checkbox to display a mask on all changed pixels in the preview. It will not be included in the output.

This helps set the Edge and Jag sliders correctly and also gives a clear impression of where the plugin does something - and hence what it does.

Click on the colored rectangle to change the color of the mask.



Transparent edges only

This will only be enabled if you are working in layers. Use it if you have a layer with a cut out object surrounded by transparency. Such objects and masks are f.ex. created if you make a selection, copy it and paste it in a new layer. It can also be made with the transparency editor for masking. Checking this option will anti-alias the edges between opaque and transparent, but will otherwise not anti-alias the opaque object nor the transparent pixels. It will only alias the opaque edges bordering on transparency. This is an ideal partner with the Powerretouche Transparency Editor.

Example of Transparent edges only

The word "Rainforest" was cut out from a picture of an iguana. To get a poor result with lots of jaggies, we did not use our plug-ins for the next steps, but instead relied on Photoshop. We used Photoshop's anti-aliasing on the original text, but when selecting the text and moving the selection to an other layer, the aliasing reappears.

Here's how to do it in plain Photoshop without plug-ins: First create a new layer on top of the iguana and fill it with white. Then write the text in black and merge the text layer with the white layer (but not the iguana layer). Use the magic wand selection tool on the text and then select similar to capture the entire text. The selection was then moved from the text layer to the Iguana layer by selecting the Iguana layer - make the above white/text layer invisible for ease. Press ctrl-C (or apple-C) to copy the text. Then paste the selection in a new window to get a new layer with letters only surrounded with transparency. Below you can see the result - it was saved as a gif with transparency intact. The problem is the text loses the anti-aliasing - it's jagged. You could do the same with far better results using the PowerRetouche Transparency plugin because it would preserve much of Photoshop's original anti-aliasing, but here we wanted the jaggies for illustration. (Please consult the [Transparency plugin tutorial](#) on creating masks).

In this case we have to use the anti-alias filters "Transparent edges only" option, because we don't want to anti-alias the Iguana also.

Before anti-aliasing - notice the jagged edges.

The areas surrounding the letters are transparent, not white

Transparent edges only. Anti-aliased at 100%. Max trail-off 6.



Anti-aliasing entire photos

This will remove the harsh appearance aliasing causes. It gives a richer impression, softer without blur, by creating more intermediate hues along jagged edges.



Original

See the whole image as uncompressed TIFF [here](#)



Antialiased

See the whole image as uncompressed TIFF [here](#)

The above image was filtered twice. We set Effect to 100%, Edge Include to 100% and Jag Include to 100%. Max Trail-off Size was set to 2 in the first run and to 1 in the second.

The following Iguana picture was only filtered once.



Before anti-aliasing



After anti-aliasing

If you wish to see before and after examples of the Iguana on a large image that is not jpeg-compressed, you can do so [here](#). It will open in a new window.

Photo credits

Iguana photo by courtesy of [Laurence Acland](#)