

Power Retouche

correct lens-distortion
sharpen without artefacts ... & more...

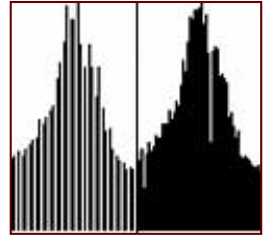
Photo-retouching plug-ins

A Photoshop plugin to repair posterized histograms

When ever you edit an image, you run the risk of it's histogram becoming chopped up in bands. This is called "posterization" and happens when ever you edit levels, brightness or contrast.

We offer a solution for this with the Histogram Repair plugin.

- Power Retouche **Photoshop** plug-ins are also for Paint Shop Pro, Corel Draw, Illustrator, Fireworks and other graphic software or photo software (Mac & Win) see [list](#)



Histogram repair plugin



Benefits of the plugin

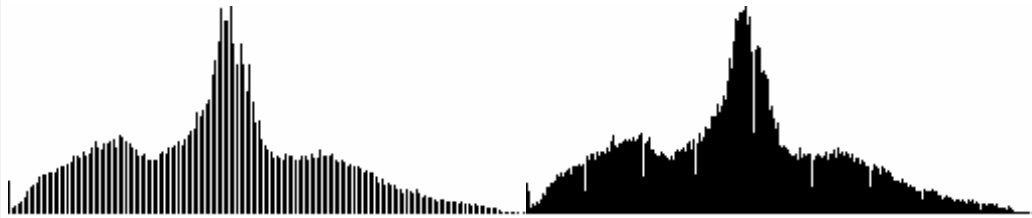
- Repair a posterized histogram.

The Histogram Repair plugin works with all image modes (Windows and Mac)...
8 & 16 bit / channel: All image modes: RGB, CMYK, Lab, Duotone, Grayscale, HSB, HSL

Histogram Repair controls

The Histogram Repair plugin has no control panel.
It's effect is applied instantaneously and it is a very fast plugin.

Example -



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The Histogram Repair plugin is indispensable for repairing a posterized histogram.

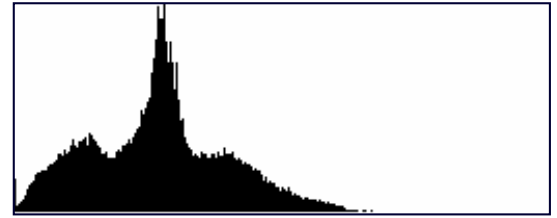
The left image shows before applying the filter. The right image shows the result of filtering.

Examples - 8 bit images

Original Photo



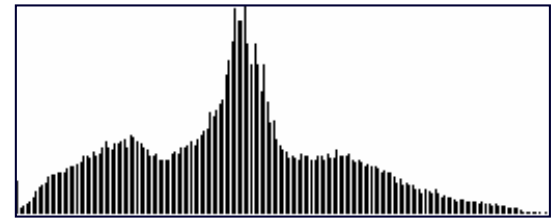
This picture of Jan Esmann is of course underexposed. As you can see from it's histogram, all the values are in the lower left. The simplest way to improve exposure is to stretch the distribution of values to fill the entire range.



Levels Adjusted



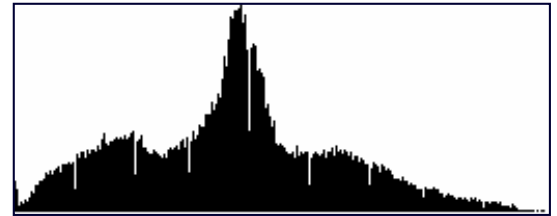
After stretching the histogram by adjusting levels we get this histogram. Notice the vertical white lines indicating, that there are a lot of missing values. This is because the original only has about 140 levels to begin with and when they get redistributed over 255, then the gaps are inevitable. Photoshops level adjustments do not interpolate the missing values like the Power Retouche Contrast Editor does. Such a histogram is called posterized. Power Retouche offers a solution for that.



Histogram Repair



After running Histogram Repair we get this histogram. As you can see, the white bands are almost gone because the plugin has interpolated the missing value. Since the shape of the histogram is preserved, the original image does not change.



Examples - 16 bit images

Do 16 bit images need histogram repairing?

Do 16 bit images need histogram repairing?

No, not if the image was originally photographed or scanned at 16 bit, but if it was made into 16 bits by converting an 8 bit image, then it most certainly does. Using the same 8 bit underexposed image, we will focus on a special problem with converting 8 to 16 bit, which few are aware of.

Problem reading histograms for 16 bit images

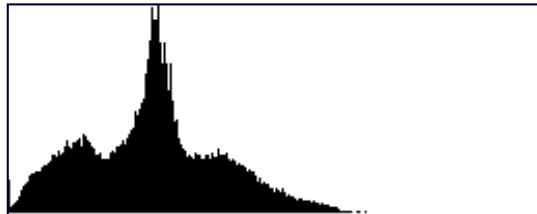
When Photoshop displays the 16 bit image's histogram, Photoshop converts the image to 8 bit, so it looks exactly like the 8 bit images nonposterized histogram. But this is not true! Since the original only had 256 levels and a 16 bit image has 32768, converting an 8 bit image to 16 bit will produce posterization gaps each of 128 levels. **These huge gaps will not show in the histogram.**

Fixing Conversion from 8 to 16 bit

Original Photo



Using the same 8 bit underexposed image, we convert from 8 bits to 16 bits and check the histogram. It looks just like the smooth 8 bit images histogram and this might trick you to believe it is not posterized. But it is really peppered with gaps 128 levels wide and is in fact still an 8 bit image since it only contains 256 levels.



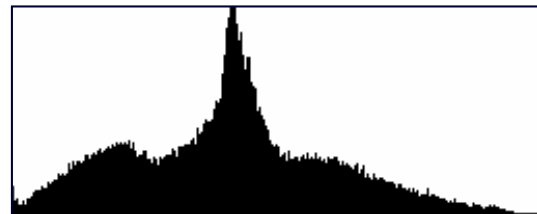
Histogram Repair

If you use Histogram Repair just after converting from 8 to 16 bit, you will get a true 16 bit image with 32768 levels. Both the image and the histogram will appear identical, so there's no point in illustrating this.

Levels Adjusted



Because we ran Histogram Repair before adjusting levels, the image had become a true 16 bit image and its histogram will truly be non-posterized. If you do levels adjustment on such an image, the histogram will remain intact. Of course with this drastic level adjustment, it will be peppered with gaps of size 1 level, but in a 16 bit image, gaps size 1 are insignificant (that's the whole point of using 16 bits).

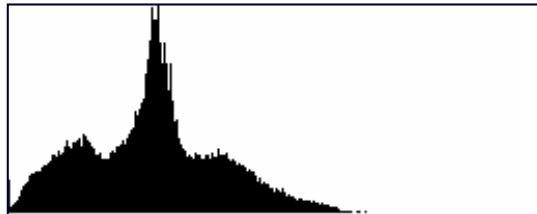


Fixing Posterization in a 16 bit image

Original Photo



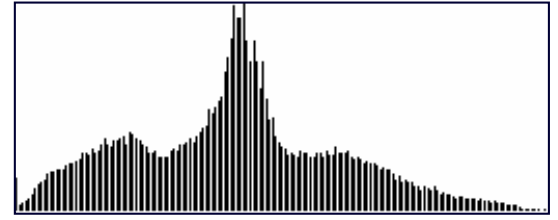
Still using the same 8 bit underexposed image, we will now show that even if you don't use Histogram Repair to fix your conversion from 8 to 16 bits and end up with a posterized 16 bit image, you can still fix it with Histogram Repair plugin.



Levels Adjusted



If you stretch the histogram, **without first using our Histogram repair plugin**, you will get the same posterized histogram as you get with the 8 bit image. But again, remember Photoshop resamples the 16 bits to 8 bits and shows an false 8 bit histogram for a 16 bit image. Apparently the gaps are only 1 level wide, but in reality they are almost 256 levels wide.



Histogram Repair



After running Histogram Repair we get this histogram. As you can see, the white bands are gone because the plugin has interpolated the missing value. Since the shape of the histogram is preserved, the original image does not change. So you can use the Histogram Repair plugin to repair after editing 16 bit images just as with 8 bit images.

