INTRODUCTION TO GRAPHICS

Fixing Low Contrast & Low Color Saturation

Information Sheet No. XXXX

Inkjet prints made straight from unprocessed digital camera images can look dull and insipid, so it's useful to know a quick and easy way to make things better.

Just like processing film in conventional photography, digital files need to be processed and prepared carefully before they are printed out, and they are just as intolerant of errors and sloppy workmanship. Despite the comprehensive rescue tools available in the digital workflow, once an image has been badly processed and re-saved, the quality has gone forever. This tutorial takes you through the five key stages of image processing: setting highlights and shadows; image brightness; color correction; color saturation; and sharpening your image for print out.

In practice, it's a good idea to run through the first four stages with every image you intend to keep, but the final sharpening phase should only be carried out immediately before printing. Badly prepared images will never print out properly and will never show the fine details and sensitive colors present in the original image file. In camera aliasing, filters cause a drop in image sharpness and, in turn, help to minimize the size of color palette used to render the image.

This has a useful impact on image compression, with smaller data created for storing low color image files. Despite the loss, all this can be put back in your imaging application without too much aggravation. Never be tempted to improve the look of your raw files by experimenting with the contrast or sharpening settings on your digital camera – it's much better to leave them on low or turned off altogether.

Finally, if you are ever in doubt about your sensitive image-enhancing skills, make sure you duplicate the background layer you are working on, leaving your original image untouched.

The raw file

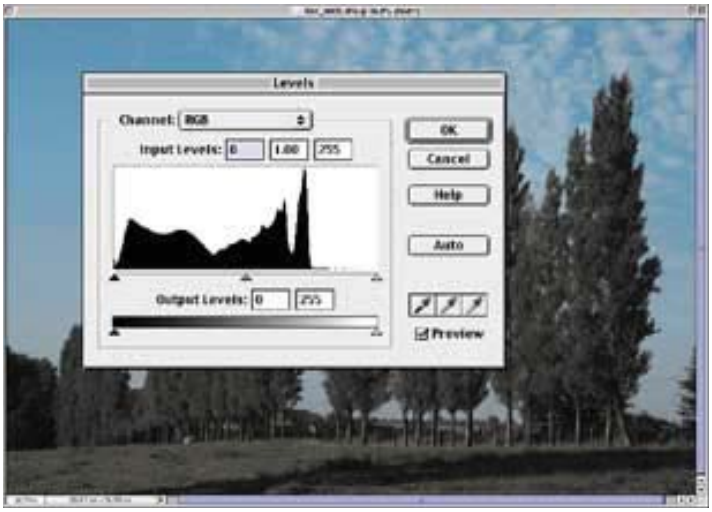
Transferred directly from the camera and opened in Elements, the raw file looks flat and lacks the vivid color of the original scene. The greens should be varied and bright and the blue sky looks muddy. These problems are easily rescued using the Levels dialog.

Avoid the auto fix

It's tempting to fire off the Auto Enhance & Auto Contrast command if you want to

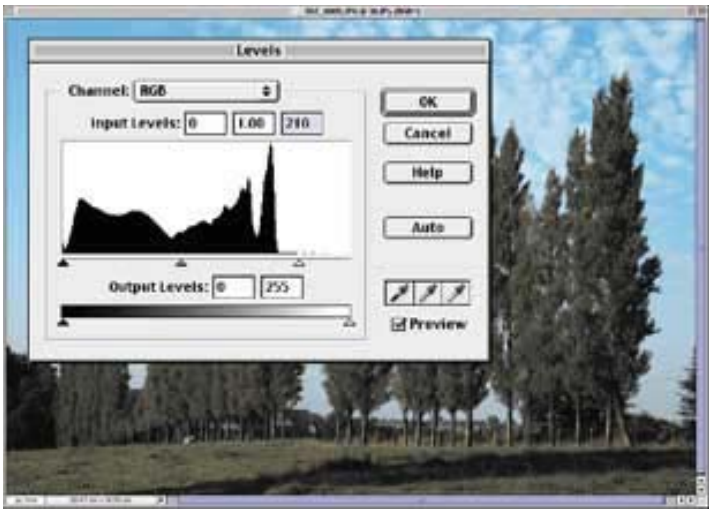
see quick results, but your image will lose quality immediately. Shadow areas will start to spread out and there may be highlights where you least expect them. With this example, the sky has become too bright.

Analyzing the Levels histogram



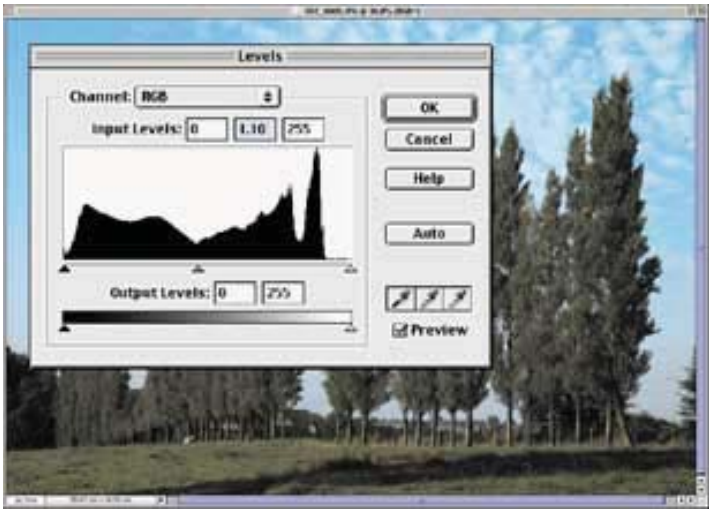
A better way to alter image contrast is to use Levels, found under Enhance & Adjust Brightness/Contrast8Levels. The black mountain shape of the histogram shows peaks at the shadow and midtone end, but little at the highlights.

Setting highlights and shadows



There's a decent black shadow already, so the first step is to set new highlight point. Pick up the triangular slider at the far right of the Input Levels and move it left until it sits at the foot of the black mountain. If you go too far, pull it back to the right.

Correcting brightness



Next, make the image brighter or darker using the Levels midtone slider. Move it to the right to make your image darker and to the left to make it brighter. You can also enter numerical values in the centre blue Input Levels text box. This image was brightened slightly from 1.00 to 1.10.

Auto Color correction

Once image brightness is set correctly, you can turn your attention to color balance. As with the Auto Contrast command, the Enhance > Auto Color Correction command has made things worse with a red cast visible in the midtone areas. A much better option is the Color Variations dialog.

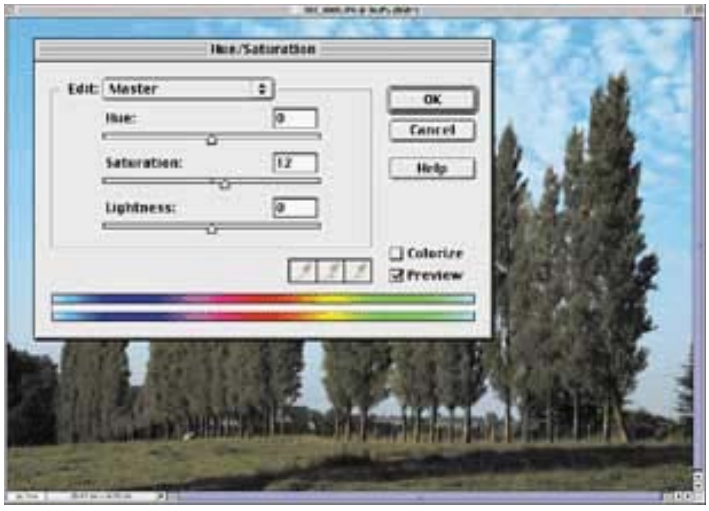
Better Color Control

Enhance & Adjust color & Color Variations gives you better control over color change. Make sure the Midtone option is selected and reduce the Color Intensity from its default midway position. This image, taken in early morning, was bluish, so the Decrease Blue thumbnail was clicked once.

Fine focus

The final stage in the fixing process is to tweak image sharpness before printout. Don't use the pre-set sharpening filter on a digital camera, as it can't be removed once an image has been recorded. This example shows an unsharpened image with blurred detail and soft edges.

Improving Color Saturation

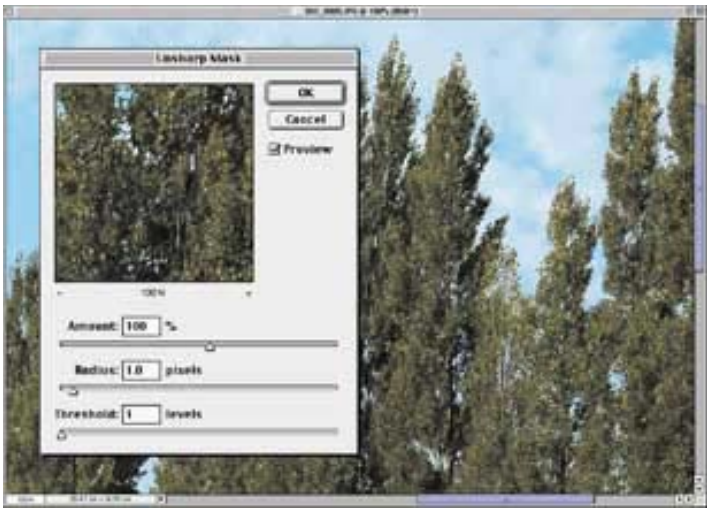


Washed-out colors can be enhanced using the Saturation slider. Do Enhance>Adjust Color>Hue/Saturation and move the saturation to the right. Don't go beyond +10 for this adjustment, or your image will look pasteurized and overcooked. Don't touch the Lightness slider, or you'll get a crude result.

The Sharpen More filter

Surprisingly, Photoshop Elements has four sharpening filters, designed to increase contrast at shape edges. This gives the impression of increased sharpness, but it can be taken too far. This example shows the destructive effect of two applications of the Sharpen More filter.

The Unsharp Mask Filter



A much better option is the USM filter, with variable controls for the quantity and range of sharpening. A good starting point is Amount 100, Radius 1.0, Threshold 1.0. Any more than this and you'll start to cause damage, especially if your raw file was saved in camera as a low quality JPEG.

Ready to print

The end result is brighter, cleaner and more like the original scene. Badly prepared images look even worse after printing because inkjets can't cope with excessive shadow areas or highlights. As your picture is perfect, any color imbalance in the print should be tackled using the printer software.