



# Hans Weichselbaum

The Shadow/Highlight Fixer



Coconut Harvest - BEFORE



Coconut Harvest - AFTER

The holidays are over and we have a few more GByte of images on our hard drives. How are we going to handle that flood of information? The answer is DAM, short for Digital Asset Management.

Currently there is no shortage of software competing for our attention. Just in the last two months two major new players have come on the market: Apple's Aperture and Adobe's Lightroom. This is in addition to Adobe Bridge, Portfolio 8, iPhoto 6, iView 3, ACDSee Pro, Photo Mechanic 4.4, and many others. All of them promise to take care of your image archiving needs.

The fierce competition works in our, the

consumers', favour. If one programme comes up with a new feature, we can be sure that the others will take it up in one of their next releases. All we need to do is wait until our favourite programme has caught up. That doesn't mean that we shouldn't take notice of the newcomers. I love the way Aperture handles Versions and Stacks. Once its shortcomings have been ironed out, it will be a strong contender. Both Aperture and Lightroom could revolutionise our workflow in a year's time.

An in-depth review of DAM software is certainly on my agenda for this year, although for now I will stick to my trusted iView 3.

But for this month's column I decided to have

a look at Adobe's Shadow and Highlight tool. We first saw this in Photoshop CS, now more than two years ago, however not many people use this tool to its full potential.

**TWO OR EIGHT SLIDERS**

When you open the Shadow/Highlight tool for the first time (Image > Adjustments > Shadow/Highlight ...), a small box with two sliders comes up. Click on the 'Show more options' box to bring up the complete arsenal of eight sliders and two more boxes for Black & White clipping.

Figure 1 shows the default settings and my second recommendation is to pull the Amount slider for the Shadows down to zero and then

click on 'Save as Default'. That way the tool will always start up with no visible change to your image.

I also set the Black & White clip boxes to zero and set my clipping later with the Levels command, but that is a matter of personal preference.

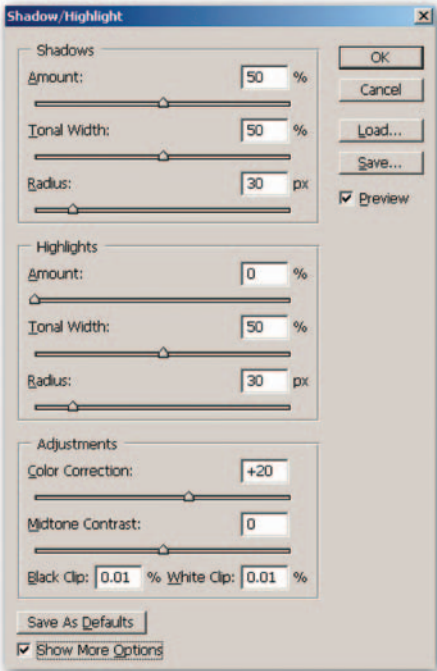


Figure 1 - The Default Settings

## EXAMPLES

When do we use this tool? As the name suggests, it provides a fast and easy method of correcting areas in your image which are either over or under-exposed. A typical situation is a backlit subject where we should have used a fill-in flash. On the other hand, images taken with flash often have the foreground overexposed.

The tool can also be used to good effect on an otherwise well-exposed image to brighten up shadow areas, or darken interesting areas in the sky to bring out features that would have been lost. Often we can start with a good-looking image and give it a different feel, as I will show in my second example.

Unfortunately, this tool is not available as an adjustment layer and has to be applied directly to the image pixels. Of course, one can get around that restriction by working on a duplicate layer.

My first example, the coconut harvest, took

# Epson 4800 Extended Test

## Part 1



In our issue 148 Adrian Barrett briefly described his experience with the baby in Epson's professional wide format printer range.

Distributor Aarque Graphics offered The Photographer's Mail an opportunity to better explore this printer and TPM's managing editor Tim Steele was just the man for the job. This article is part one of a two part exploration of the printer.

Cards on the table, it's no secret that I'm a big fan of Epson's products, with particular emphasis on their inkjet Photo printers. From a very good experience with their first Photo model, through the generations of product which have followed it, I have had an overwhelmingly positive experience with these devices. The company simply keeps improving the quality and longevity of their print output and the printers have become increasingly user friendly and more capable.

Some months ago I reviewed the R1800 and R2400 A3 printers in TPM and you may recall that I was particularly impressed with the 2400, with its Ultrachrome K3 inkset. So the opportunity to extend this experience with the 4800 model was far too good to turn down. While you were at the beach enjoying another golden New Zealand summer I was

laboring over a hot printer in pursuit of the elusive perfect print.

The 4800 is the A2 capable baby of the pro range which steps up to the 7800 and 9800 models which can output up to 61cm and 112cm wide respectively.

It's a big beast requiring two to lift and manoeuvre it from car to desk but once ensconced in my home office its size seemed to dwindle, sitting comfortably on a regular 600 wide office desk.

If you're familiar with Epson's printer software interface you'll be on familiar ground as the 4800 is no more difficult to drive than its smaller siblings. In addition to excellent sales and technical support, Aarque thoughtfully provides buyers with profiles for all Epson materials sold. This makes perfect output so much easier to achieve ensuring the optimum match between printer settings and paper.

The 4800 uses eight large ink cartridges available in either 110ml or 220ml sizes. The larger size cartridges provide greater endurance between changes and improved economy of operation. These are intelligent cartridges which cannot be incorrectly fitted and are sealed and chipped so that they may be removed and reinserted while still retaining



place more than 25m off the ground. No use for a fill-in flash. The camera meter did the best in that situation by retaining all the shadow details, but clipping the highlights in the sky. However, the main subject remains under-exposed, even after pulling the shadows up during RAW conversion. That's where the Shadow/Highlight correction kicks in.

The 'Amount' slider is the most important control. It will determine how much of an adjustment is applied to the shadows or highlights. In this case I adjusted shadows and highlights to 25 and 20 percent, respectively.

Unless you are short of screen space, I recommend you have the Histogram palette open and watch what is happening to the tonal range. (The Histogram palette was also introduced in Photoshop CS). The 'start' state of the histogram will be shown in grey, while the after-correction state is solid black:



Fig.2 – Histogram before and after

We see the heavy concentration of dark pixels before the adjustment being shifted more to the middle. We also notice the clipped highlights. Needless to say, clipped shadows or highlights cannot be rescued with this tool.

After pulling up shadows and taking back highlights, the image tends to become soft, losing on contrast. That's where the last slider comes in. It allows to increase (or decrease) the contrast of the midtones, similar to an S-curve adjustment in Curves. In my example I pulled the Midtone Contrast up to +20.

The second last slider 'Colour Correction' is a simple saturation adjustment, but not as strong as the familiar Hue/Saturation command. It only works on the areas where the adjustments were applied, which most often will benefit from a saturation boost. For B&W images this slider is replaced with a 'Brightness' control.

Last but not least we have two sliders each for 'Tonal Width' and 'Radius'. The first controls

the tonal range being affected by the tool. A small range would affect the tonal range of say, 0 to 20, compared with a larger 0 to 80 range for the shadows. Remember, the total tonal range stretches from 0 to 255 on the histogram.

The Radius setting determines the size of the area to be adjusted. This is the size of the 'local neighbourhood' in which pixels are compared. Too large a range will lighten (or darken) too much of the image. Best results are obtained when the setting is roughly the size of the problem area.

One difficulty with this tool is that one tends to get a 'halo' along high-contrast edges, not unlike the halos created by heavy Unsharp Mask sharpening. This is something to watch out for. On the other hand you will notice that even strong shadow/highlight adjustments do not lead to excessive gaps and spikes in the histogram. This tool does a better job in spreading the tones across the entire tonal range without the dreaded 'combing', typical for heavy-handed Levels or Curves adjustments.

The second example, the idyllic island scene, is an image which doesn't seem to need any help. However, after running through the Shadow/Highlight tool we get a very different image. I used fairly extreme settings to prove the point. In a situation like this I often cannot decide which version I prefer, when comparing the preview with the original. Simply click on OK, then immediately go to Edit > Fade Shadow/Highlight, which brings up a slider that allows you to fade the previous action to between zero and full strength. That allows you to settle anywhere between the extremes.

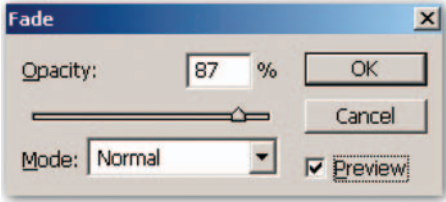


Fig.3 – Fade Shadow/Highlight

Summarising, we can say that the Shadow/Highlight adjustment is worth the price of an upgrade on its own, if you still have Photoshop 7 or earlier. The only drawback is that it doesn't work as an adjustment layer - hopefully this will be fixed in future releases.

"We first saw this in Photoshop CS, now more than two years ago, however not many people use this tool to its full potential."



Island Scene - BEFORE



Island Scene - AFTER  
Photos Hans Weichselbaum

memory of the quantity of ink remaining in each. I would use the larger cartridges for economy even though these protrude further forward of the printer than the smaller units which hide below folding covers on either side of the printer. Like the 4800's smaller siblings, it's possible to replace an empty cartridge in mid-print with no visible signs on the print providing the operation is carried out swiftly, say within three minutes.

For optimum results, the 4800 must be configured with either Photo Black (PK) or Matt Black (MK) ink cartridges depending on whether gloss or matt paper stocks are being used.

A significant amount of ink is used in the process of change over of these black cartridges as around 40ml is held in the lines between cartridge and print head so frequent changes would become expensive. If I owned the 4800 I would more than likely leave it configured for the paper type most frequently used and outsource the rest of my output to my favourite commercial lab.

The first part of this test utilised the Photo black ink and a range of Epson glossy, semi gloss and semi matt paper stocks in both roll and sheet format. Rolls up to 40cm wide can

be used and these load and transport easily. The printer has a built in cutter which slips easily and precisely through smooth paper stocks. For heavier or textured stocks which might snag the tiny moving blade it is possible to select cutter off, transport the paper forward and cut manually.

A large paper tray will handle most stocks up to A2 sheet. I tested with A3+, A3 and A4 materials in this tray without a single jam or print interruption. Sheets may also be fed directly into the printer where weights are heavier or material might be more subject to damage, such as canvas.

Like the less expensive 2400, the 4800 produces superb output with the Photo black ink on Epson's Premium Glossy Photo Paper. These look like lab prints and it's no wonder that so many professional photographers have embraced these as their printer of choice while retaining their lab relationship for larger, more specialist printing. If you're an Epson user and you have not yet experienced the Premium Semi-Matte and Premium Semi-Gloss papers then I strongly recommend that you try these as I developed a preference for these over the benchmark Premium Glossy product. These surfaces look great under glass and are slightly

easier to handle than the full gloss equivalent. I'm convinced that having a printer such as this is a valuable learning tool for any photographer. In the month available for this test I learnt more about prepping files for print, scaling and output resolution and the use of Photoshop's final adjustment layers than I'd learnt in the previous two years. The 4800 will improve your technique as well as your output.

I also quickly found the limits of my digital SLR's files and determined to explore the RAW capture facility that I've previously sworn to be completely unnecessary. In addition to being a highly revealing test of your digital camera, it is quick to reveal flaws in your scanner, scanning technique or scanning provider's work. It's a scenario well known to those of you who enjoy 2 channel hi-fi, improve any one component in your system and it reveals hitherto unheard deficiencies in the other components.

I also discovered that there is no need to over-prepare files to ridiculous resolutions as the printer does a wonderful job of what must be interpolation to print at very high resolutions such as 1440 dpi. Initially I prepped everything to 300dpi minimum but found that 250dpi provided the same quality with slightly more

manageable file sizes to work with. It appears incredibly economical in operation, producing an enormous quantity of large prints while on test with hardly any apparent movement in the front panel bar graph indicating ink remaining. Cartridges are not cheap, and there are eight of them to replace, but for my use this would be an annual exercise and could be budgeted for. The 4800 is your next step up if you're presently enjoying either an Epson R1800 or R2400. It produces prints large enough for exhibition and sale and its asking price of \$3495 plus GST seems entirely reasonable when compared to that of the 2400. Epson's growing reputation for print longevity has been well documented by Wilhelm Research International and this provides the icing on the cake by assuring users and print buyers that the prints which look so good today will also do so well into the future. More next month.

*In our next issue, Tim explores the 4800 with Matt Black ink and a range of matt, textured and canvas output surfaces from Epson. He also talks to Epson 4800 owners about their experience with the printer.*