



# Epson colour profiling

Last issue, **David Kilpatrick** tested Epson's Pro Stylus 3800 A2+ desktop printer. Here, he runs a series of tests for colour consistency, using the printer with Epson's own papers, as well as those in the Harman Photo range

**W**hether you intend to make proofs on inexpensive paper before going ahead with high value A2+ prints, or just want to mix paper types and get identical results, using paper type selection and colour profiles correctly helps get consistency from any Epson printer.

All inkjet prints tend to show casts in their neutral tones. By using three black inks

(the K3 inkset) the latest Epson pigment-ink printers, including the popular 2400 and the new compact A2+ 3800, eliminate unwanted neutral-tone casts caused by colour management errors. They substitute black and grey inks for a mix of CMY and K in the neutral tones, and this avoids minor shifts.

However, the rest of the spectrum needs colour management to ensure matched prints.

I tested a range of Epson papers including Professional Gloss, Professional Semigloss, Enhanced White Matt, and Professional Lustre, along with the new Harman Photo Matt FB Mp baryta-base white and warmtone versions. Epson's installer places profiles for all the Professional 3800 paper range on your machine. Harman provide a free downloadable profile, which requires manual installation.



Above: My colour test target, a sewing thread colour sampler, made from a subtle buff-coloured board. When unfolded the colours of the threads are like new, a whole spectrum of deep, saturated, pastel, earthy and glowing shades. Laying the test prints out on the Epson, it was remarkable how the neutral black of the paper tray looked exactly like the tray itself.

To test consistency between this range of papers, I used the recommended Photoshop workflow. The first step when you have a Photoshop image opened is to do Page Setup. This involves selecting the printer, which in turn gives access to a range of paper sizes.

It is important not to skip the paper size selection, as it includes choices for the regular sheet feeder, rear manual sheet feeder and flat

platen feed. If you don't pick the right paper source, you will be locked out from selecting some paper types. Epson Ultra Smooth Fine Art, Velvet Fine Art, and Water Color Radiant White must only be fed as single sheets via the rear feed. If you don't select the right Page Setup paper size and feed, you cannot select these paper types when printing.

Harman Photo Matt FB Mp papers require Water Color Radiant White paper-type selecting, so they must be given a Page Setup for the rear feeder, and fed individually that way.

Using Print with Preview, Photoshop is allowed to manage colour, and the paper profile is selected. Epson profiles have rather obscure names – Professional Semigloss is P3PP, for example. It's not difficult to work out what the abbreviated profile names mean when you have all the paper types to hand. After selecting this, I chose Perceptual rendering, which is usually the best compromise, then clicked Print, which takes you to the actual printing dialogue with its list of printer settings and media options.

Before selecting a paper type, it's a good idea to go directly to Colour Management and turn this off – No Colour Management. This may sound wrong, but it means no colour management will be done by the printer driver; it will be left to Photoshop and the selected ICC colour profile. Then, return to Print Settings, where you select the paper type and can opt for higher quality or faster printing.

There is a further menu item present called Paper Configuration. This is not what you expect, and deals with manual adjustments to platen feed and clearances, drying times between ink passes and so on. Don't touch it, as the paper selection you have just made has already performed these adjustments.

Finally, hit Print, and the image will be spooled and printed. If there seems to be a delay, check the Stylus 3800 LCD info screen – it may be changing from Photo Matt Black ink to Photo Gloss Black, depending on the paper you are using. It does this automatically.

### My test shot

It is the 50th anniversary of my colour test target. Unlike a Munsell Color Checker, this one can't be replaced every year or so. It's a lovely 1957 sewing thread colour sampler from Cartier-Bresson – not the man himself, but his family's industrial empire, which gave him the wealth and independence to become a great photojournalist. It is made from a subtle buff-coloured board, and when unfolded the colours of the threads are like new, a whole spectrum of deep, saturated, pastel, earthy and glowing shades. What better test target to shoot on the Epson 3800, which adds a perfect neutral reference with its silver and black?

Natural window light was used, measured at 6200K from a mixed sky of white and blue with no direct sun. A Raw conversion from the Sony A100 capture was fine-tuned on a calibrated 20ins Mac cinema screen (Pantone Spyder 2 Pro).

### The test prints

All the paper types were tested as A4 output, cut down from A2 or A3+ sheets where necessary. The correct profiles were used, but I also tested the Harman papers using an Epson profile, and checked out the difference between Professional Semigloss and Professional Lustre by swapping profiles round. These two papers look very similar but are not.

Laying the test prints out on the Epson, it was remarkable how the neutral black of the paper tray looked exactly like the tray itself. The silver colour, with more variation in shading, was most accurate on the Enhanced White Matt (EWM), which uses a UV brightener, and drifted towards a warmer colour on Professional Gloss.

Enhanced White Matt was also the lightest overall print, and Professional Gloss the darkest. The Harman papers with their own profile were very accurate indeed. Using the Water Color Radiant White profile for the Harman matt – since they need that paper type selection – showed the importance of having the right custom profile. Results were still very good, but shadows that little bit more blocked up, and some ink-lay was visible on the paper surface in the densest blacks. With the Harman profile, this was absent.

Generally, the papers agreed as closely as you could possibly expect with the original Cartier-Bresson thread booklet when laid out among them. Allowing for the three-dimensional, naturally lit view of the test shot it would be hard to get any closer to an accurate representation of most colours. The blue of the Cartier-Bresson logo was lighter and more cyan in all prints, and the orange threads at the bottom of the second row didn't really match the richness of the original. Any overall shift was towards slight warmth, by far the best bias. Blue or green casts are destructive especially for portrait prints; a little excess yellow or magenta rarely hurts.

The prints closely agreed with each other, with a tendency for gloss and semigloss to be darker and warmer, matt materials to be cooler and lighter. The differences were very small. The Professional Lustre paper ends up, when printed, with more of a matt look than the similarly-textured Semigloss. It would be better for black and white, resembling typical white fine lustre fibre-based papers in sheen. The Semigloss is more like a modern colour paper as normally used for wedding albums or smaller portrait prints.

Epson has provided, with a suite of papers specifically labelled and packaged for 3800 users, a solution to consistency across many paper types and surfaces. Harman Photo has successfully followed Epson standards to make its new papers equally compatible. The entire solution works 'out of the box', and all you need to master is the correct sequence of settings using Photoshop Print with Preview. **f2**