

DSCL – The Technical bit!

Colour management – what is it?

There are three main areas of colour management that you need to consider:

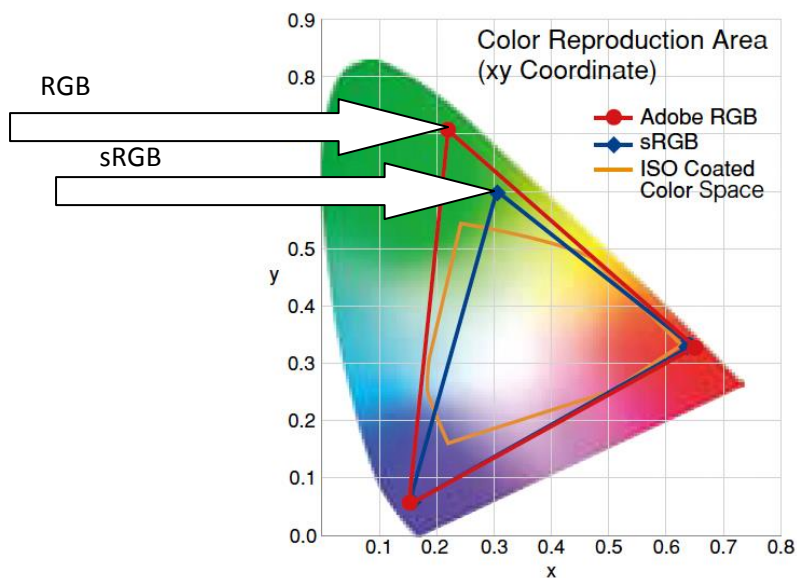
1) Monitor Profiling

This is the first step to an accurate workflow.

As a photographer or artist it is vital to make adjustments based on a set of known information/data, so with a simple and yet accurate calibration you can ensure your subtle image adjustments are within a realistic printable gamut.

Visible colour gamut's vary according to monitor specification, considering that your average monitor is rarely able to represent much more than 50% of the Adobe RGB 1998 colour space, colour amendments can be way off the mark if things are un-calibrated.

The professionals' choice of brand Eizo will ensure the colour space available is not only maximised but also clear to you via a detailed specification to show what is going to be visible.



Many professional users work predominantly in the RGB colour space as (shown above) it covers a broader range of available colours when compared to sRGB.

Often the argument is that you shoot sRGB in your camera so why change/interpolate the colour information when it arrives in the computer?

The answer is don't! You are better having a consistent workflow that maintains the integrity of the colours captured/expected and if it that means you work in sRGB throughout then so be it.

Ideally we would recommend the RGB colour space due to size, however this principle does not currently apply to ProPhoto as it is not within a monitor or printer gamut to date.

Often Mac products tend to improve the accuracy initially when compared to a basic PC monitor; however a calibrated monitor is still the only accurate choice.

To make an accurate profile you must allow your monitor to warm up for an average of 30 minutes prior to calibration, this is true of nearly all LCD monitors, with the exception of the latest Eizo CG range which are ready to go in 7 minutes.

Whilst LED monitors are becoming more accessible, they still require the same considerations as LCD, such as screen uniformity and awareness of external lighting conditions.



Different monitor profilers allow differing levels of control, some allowing you to measure screen uniformity, varying colour patch information from 118 – 462 colour patches, typically a monitor profiling device will create a useful profile and the price dictates what level of control you wish to have.

2) Soft-proofing...why bother?

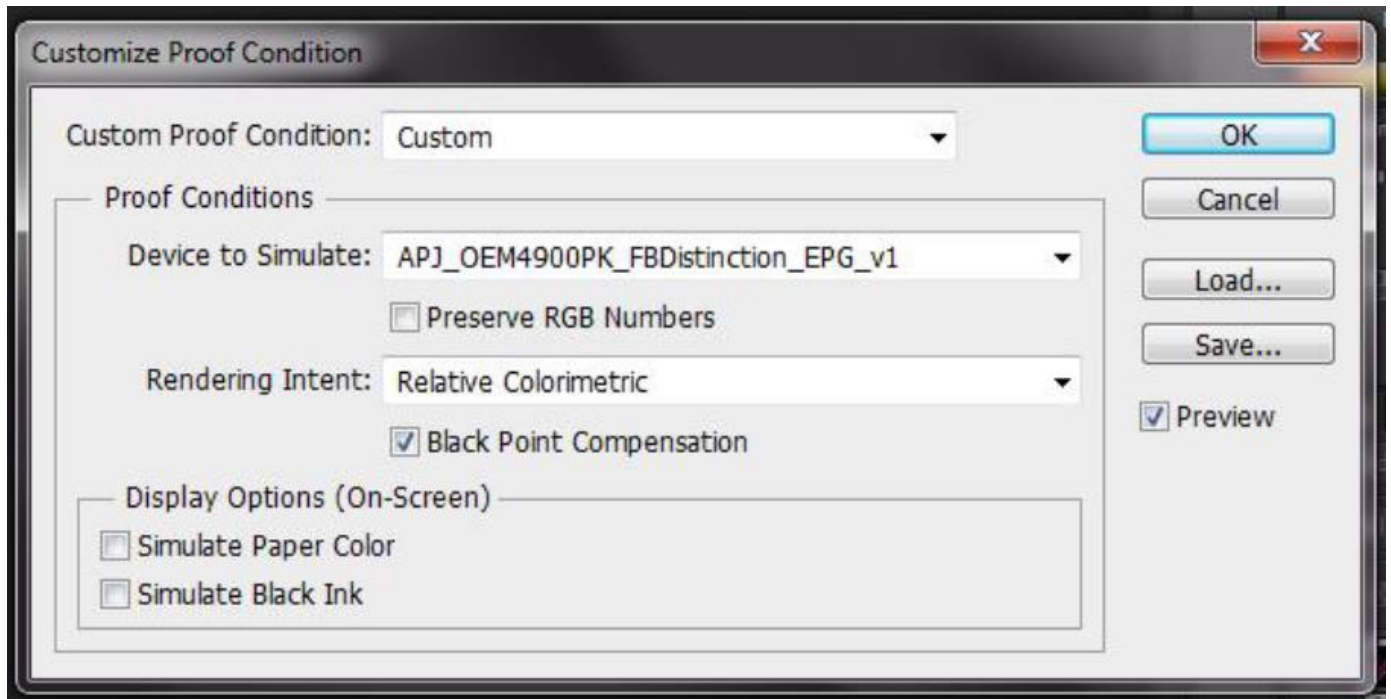
A soft proof really does help you understand the reality of a print prior to committing to a printed result but consider the following:

- You need a colour accurate display otherwise it is guess work
- You need a printer profile/s to give you something to assess
- Ideally a discernible eye for detail helps

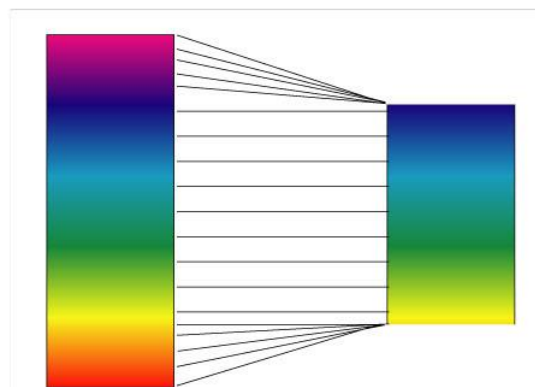
The soft-proof feature is available on a variety of software packages, we will focus on Photoshop as it is the most widely used.

Normally under the patch 'View/Proof setup/custom' (CS2-CS6) you will be presented with a number of options as follows:

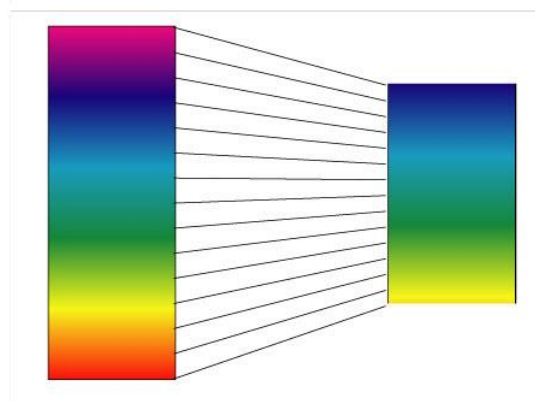
- Device to simulate
- Preserve RGB numbers
- Rendering Intent
- Black point compensation
- Simulate paper colour and black ink



- 1) Device to simulate:
This is your chosen device profile, typically a printer profile.
- 2) Preserve RGB Numbers:
We recommend you leave this un-ticked as it would (in theory) send the colour to the printer without colour management applied.
- 3) Rendering Intent:
This decides how the printer handles out of gamut colours (via compression) and can either be subtle or severe in the application. Perceptual is widely considered a photographers intent as it handles colours with subtlety and less extremity, see below:



**Relative
Colorimetric**



Perceptual

- 4) Black Point Compensation:
This tells your computer how to handle the monitor black vs. the printed black and ensures a smoother transition of the grey tones into black.
(Often this appears different due to light/brightness perception).
- 5) Simulate paper colour + Simulate Black Ink:
This compresses the screens dynamic range so that it becomes closer to a print and helps convert the image on screen to match the paper colour temperature.

In a nutshell – Soft-proofing is not a definitive answer and is to be used as a guide, mainly to understand which paper is more likely to suit your images.

The standard setup is:

The paper profile in 'Device to simulate', 'Rendering Intent' as Perceptual, 'Black point compensation' ticked and 'Simulate paper Colour' ticked.

3) Printer profiling

Due to DSCL investing in the latest RIP technology, this should rarely be a consideration; however the relevant profiles do aid your soft-proofing process.

With a RIP the printer goes through a linearization process, ensuring you get the maximum colour delivery, without over inking or excessive saturation of tonal ranges. You can be confident of consistent colour accurate profiles that are manufactured with professional X-rite hardware and over 50 years of profiling knowledge, ensuring you get nothing but the finest quality results.

This is a general overview of the colour management experience, we appreciate this is a broad and extensive subject, so please consider this as a starters guide.

The information is not to ensure you buy expensive monitors or hardware (although it will help), it is to make sure you have the best of what you have.

We would love feedback on areas you consider important and will look to publish further amendments to this section as questions arise, in a hope to become a practical solution for photographers and artists.

Our integrated partnership with PermaJet ensures we have access to the latest developments and equipment to colour management.

Links to be placed where you feel relevant:

Monitor profiling: <http://www.permajet.com/Products/000900420003>

Eizo CG Monitors: <http://www.permajet.com/Products/000900450005>

Eizo SX + Flexscan Monitors: <http://www.permajet.com/Products/000900450006>

Essential Accessories: <http://www.permajet.com/Products/Essential-PermaJet-Accessories>