A guide to soft-proofing in Photoshop

Introduction

A computer display has a far wider colour gamut (spectrum) than photographic paper or printed material. Soft proofing provides a solution to this by simulating the properties of a particular print process.
Soft-proofing provides a preview of the printed output on screen. This process relies on colour output profiles which need to be installed on your system.

Output profiles are intended only for soft-proofing within an application (ie.Photoshop). Embedding or converting an image to one of these profiles will result in the image being printed incorrectly.

We would recommend using sRGB as your working colour space, without a known colour space ICC profiling will not work. The reason we suggest using sRGB is our imaging equipment is designed around that colour space.
Soft-proofing converts the image to the output profile of the desired printer, the image itself is not altered, the pixels displayed on your monitor are mapped so as to match as close as possible the final print. This process can only be achieved with a calibrated monitor.

Accurate monitor calibration can only be performed through instrumentation, using a colour meter and software. Various makes and models are available, once calibrated you should have a neutral monitor.

Installing Output Profiles

Output profiles work, once installed on your computer, different operating systems vary in the method of installation. The name of the profile will usually match the name of the paper or printer, for example "Peak_Fuji_Matt_DPII".

Windows   Copy the profile to your desktop, right click the profile and select "INSTALL PROFILE", this will install the profile in C:\WINDOWS\system32\spool\drivers\color.

MAC OSX   Copy the profile to the following location: /library/colorsync/profiles.

Colour Management

Another important aspect to soft-proofing is checking your "Color Settings..." are correct within Photoshop. From "Edit" choose the "Color Settings..." option.

We would recommend using sRGB IEC61966-2.1 as your RGB working space. In the "Color Management Polices:RGB" select Convert to Working RGB". This will then convert any images captured in a different colour space to your working colour space.

Set the conversion options to:
Engine Adobe (ACE)
Intent   Perceptual

After configuring the colour settings please download and open our calibration image and have the hard copy (our calibration print) to hand.

Ambient light and working conditions

Your viewing environment will influence how you see colours on your monitor. The light level and colour should remain consistent, for example the colour temperature of daylight varies throughout the day and will affect how you see colours on your screen. If you are colour correcting images over a long period of time, it is recommended to take a break and return to re-evaluate the images on screen. This is because when your eyes are tired, you see colours and density differently.
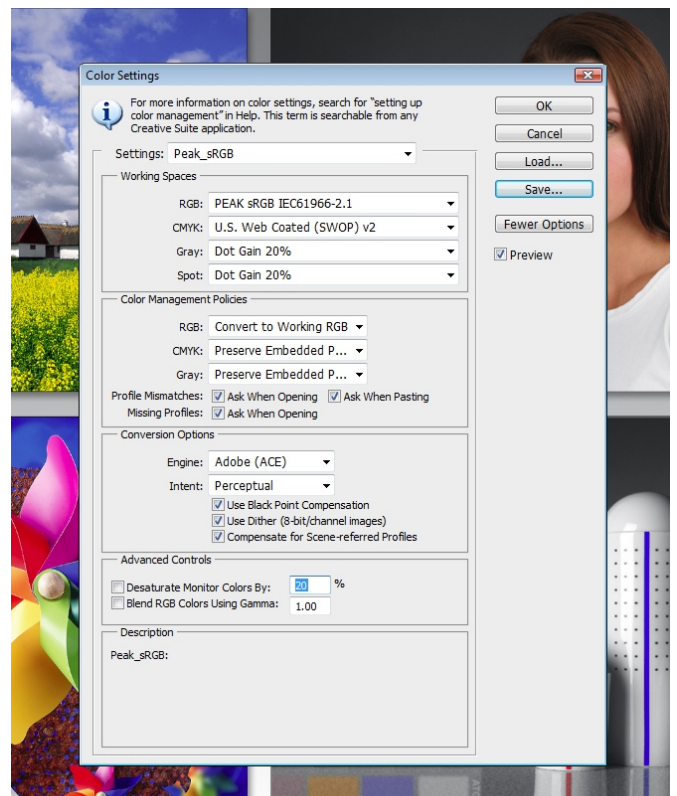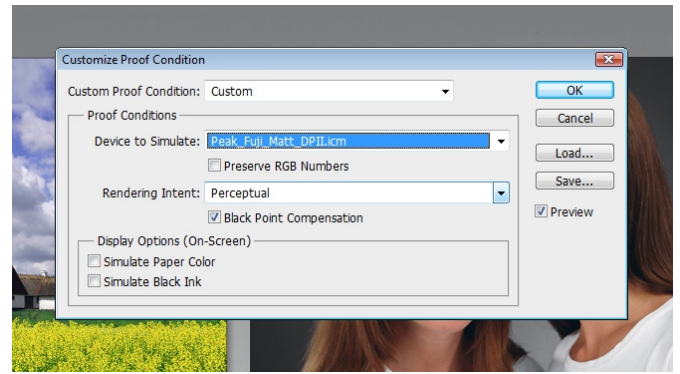
Next.....Customize Proof Condition

Customize Proof Condition

To Set up Photoshop's Soft Proofing first open Photoshop, click on the View menu, select "Proof Setup", then select the "Custom..." option.

Click on the "Device to Simulate" and on the drop down menu select the output profile you have installed, "Peak_Fuji_Matt_DPII".

Do not use the "Preserve RGB Numbers"

Proof Conditions

Click on the 'Rendering Intent' and select 'Perceptual'.

You may want to experiment with rendering intents. Depending on the image and viewing conditions 'Relative Colorimetric' may give a better result than 'Perceptual'.

Tick the 'Black Point Compensation' check box, this option will more accurately scale the black level in your image to the printer's black.

Display Option (On-Screen)

Depending on your viewing conditions you can select 'Simulate Paper Color' or 'Simulate Black Ink'. These settings decrease the amount of visual contrast to compensate for the fact that monitors typically show brighter whites and deeper blacks than the actual print.

'Simulate Black Ink' will allow you to check the shadow detail in your image.

'Simulate Paper Color' will display the image with the difference between your monitor's white level and the paper.

Again, you may want to experiment with these settings, to find the combination that best suits your viewing environment.

Once all the changes have been made click the "Save" button and give this setup a unique name, such as "Peak_Matt".

Soft Proofing

To view the calibration image "soft-proofed", under the View tab select "Proof Colors". You should see the image change as this contains colours that cannot be reproduced on a photographic print. The file name displayed in Photoshop should also change to include the paper profile.

When an image is now soft-proofed in Photoshop the application will simulate on the monitor what will happen when the image is printed. The transformation that will take place is based on the colour from the original working space, to the output colour space, and then finally into the monitors colour space. Please note the pixels within the original file are unchanged.

Depending on the method of calibration, it may still be necessary to adjust the brightness and contrast of your monitor to achieve an accurate match to the calibration print. Due to the vast array of displays, operating systems and calibration devices, one solution does not work for all.

Experimentation is often the key to success.