

INPUT PROFILING WITH A COLORCHECKER

by Bruno Vandermeulen - KU Leuven

Within the framework of EuropeanaPhotography, KU Leuven organized a content seminar in Leuven, Belgium (April 2012). During the seminar, the partners visited the digitization facilities at the Central Library. The university's workflow on digitizing photographic materials was discussed and commented.

The ColorChecker from X-Rite is an industry standard color reference chart used for color control and evaluation. The ColorChecker Passport comes with calibrating software, is easy to use and to implement in a workflow. This factsheet will guide you step by step through the different stages of **creating a custom input profile** and applying this to your RAW images.

KU LEUVEN

What you need

- a SLR camera set to RAW shooting mode
- ColorChecker or ColorChecker Passport
- ColorChecker Passport Camera Calibration Software (included when you buy the ColorChecker Passport)
- Photoshop, Lightroom or Aperture

How to proceed

Step 1 Photograph your chart

Step 2 Convert to DNG

Step 3 Close Photoshop

Step 4 Open the ColorChecker Passport Camera Calibration Software

Step 5 Relaunch Photoshop and save a preset

Step 6 Apply the preset

Step 1 Photograph your chart

Photograph the ColorChecker under identical circumstances as those under which you will digitize your originals.

You can photograph from normal distance, but make sure the target covers at least 20% of your image. This will be your reference image.

Rename it accordingly (example KU Leuven):

20130402_UB_D800_60mm, with the date, location, camera and lens as a combined filename.

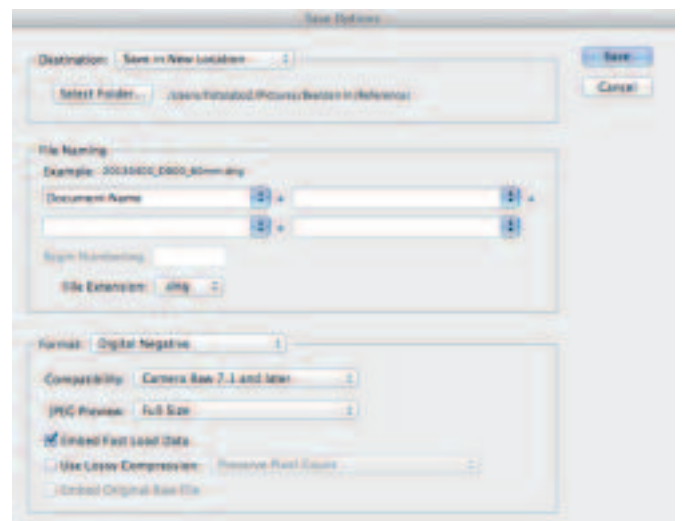
This way you can keep track of all reference images.



Step 2 Convert to DNG

In order to work with the ColorChecker Passport Camera Calibration Software, you have to convert the RAW image to the DNG format. When opening your reference file in Photoshop, Adobe Camera Raw automatically opens.

Save your image (lower left corner).
Select your Destination and Format (Digital Negative).



Step 3 Close Photoshop

Close Photoshop: this is an important step as Photoshop can only implement the newly created profile when starting up from scratch.



Step 4 Open the ColorChecker Calibration Software

Open the ColorChecker Passport Camera Calibration Software and read the instructions.

Drag and drop your reference file (DNG format) into the main window. The software will automatically detect the edges and individual patches. Click on the tab Create Profile (below right).

Give your profile the same filename as your reference image. The profile will be saved in the appropriate location so Photoshop can access it.

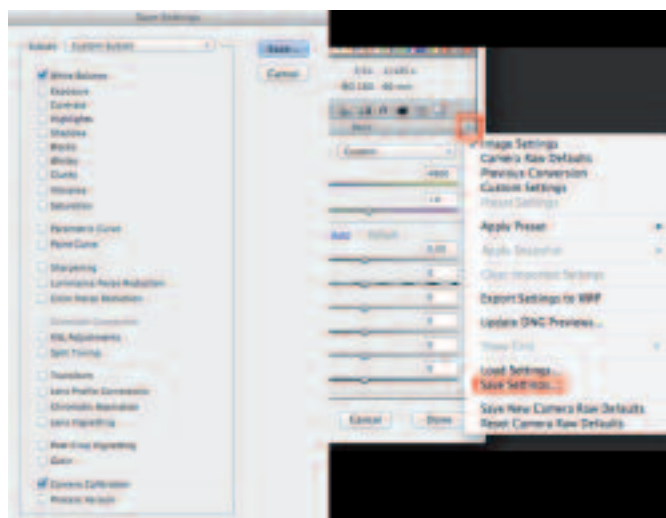


Step 5 Relaunch Photoshop and save a preset

Relaunch Photoshop and open once again the reference image file.

Adobe Camera Raw will open automatically. Select the Camera Calibration Tab (camera icon on the right) and select the camera profile you just created in the Camera Profile window.

Apply a custom white balance on the second lightest grey tone.



Now everything is set to create a preset including camera profile and white balance. Click on the menu icon at the right hand side of the tool tab, select Save Settings, select the individual settings in the newly opened window (e.g. White Balance and Camera Calibration).

Step 6 Apply the preset

When opening several images in Camera Raw, you can apply your preset on multiple images. Select the preset tab on the right side of the tool tab and click on your newly created preset.



As long as you don't change anything in your digitization setup (lights, camera, lens combination) you can apply the preset to all the images taken that day or week for a perfect color and white balance. You can also save other adjustments like contrast, highlight and shadow tones, tone curve, etc. in custom presets and develop a range of presets depending on the type of material you digitize.



www.europeana-photography.eu
www.digitalmeetsculture.net/heritage-showcases/europeana-photography/

DIGITAL CULTURE
www.digitalmeetsculture.net

Project coordinator
Institute for Cultural Studies – KU Leuven
Fred Truyen
fred.truyen@arts.kuleuven.be

Technical coordinator
Promoter s.r.l.
Antonella Fresa
fresa@promoter.it