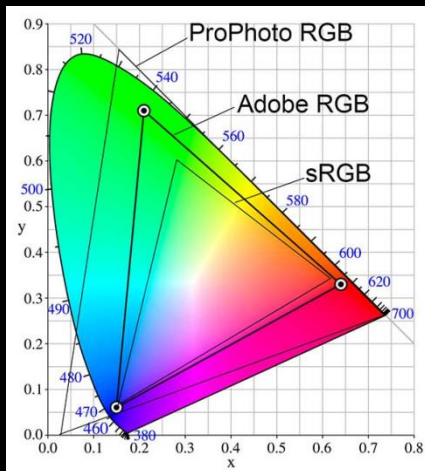


PRINTING

Elements, Photoshop and Affinity

Printing - Basic Terminology

- ICC (International Color Consortium) Profiles
 - Every paper and printer combination needs a specific ICC profile to account for the inherent color and tonal characteristics of different papers. The purpose of the profile is to instruct the printer how to interpret the colors and make the most accurate print.
- Colour Space



sRGB was created in 1996 by HP and Microsoft for use on monitors, printers and the Internet. It's the default colour space in most digital devices.

The sRGB gamut (range of colours that can be reproduced) is the **best colour space to use for images that will be viewed online or on computer monitors or TV sets, or printed outside the home.**

Adobe RGB was developed by Adobe Systems in 1998 to encompass most of the colours achievable on professional colour printers. It covers a slightly wider colour gamut than sRGB, mainly in the cyan-greens. **This makes it the preferred colour space for photographers.**

In Camera

- **Camera settings – for Printing**
 - Set your camera to shoot in Adobe RGB. The default for most cameras is sRGB.
 - NB this setting will only apply to Jpeg images and RAW images will not have a colour profile assigned.
 - Also if you don't have a printer for which ICC profiles are available you will probably get better results shooting your jpegs in sRGB.
 - **Camera Setting – PDIs**
 - If you only ever produce images for the internet or for digital projection you can leave the camera set to sRGB.
 - **Processing your image for Printing**
 - Set your processing software preferences to use Adobe RGB
 - Set your RAW converter to output Adobe RGB
-

Printers

- ICC profiles not available - eg home desktop printers
 - Use papers produced by the printer manufacturer as profiles for these will be “built-in” and will probably give the best results
 - When printing use “Printer Manages Colour”
 - Set the appropriate paper in the printer dialogue box
- **If ICC profiles are available for your printer**
 - If using the printer manufacturer’s papers ICC profiles for these will have been installed when you installed the printer
 - If you want to use other papers, eg Permajet, Fotospeed, Hahnemühle or Canson for example, visit the relevant website and download the generic profiles for your printer
 - **Or** use the custom profiling services (usually free) available on the web sites.
 - They will also have instructions on how to install and use the profiles.

Getting ICC Profiles

- Permajet
 - <https://www.permajet.com/Login>
 - Fotospeed
 - <https://www.fotospeed.com/profiles.asp?SeriesID=9&TextID=1>
 - Hahnemühle
 - <https://www.hahnemuehle.com/en/digital-fineart/icc-profile.html>
 - Other Papers
 - Make sure ICC profiles are available for any new papers you might buy
 - Visit the maker's web site and look for ICC Profiles
-

Installing ICC Profiles

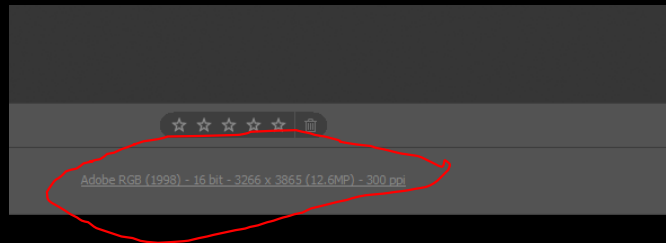
- Installing profiles using Windows:
 - 1. Extract the downloaded Zip file by right clicking the zip folder and selecting “extract all”.
 - 2. Right-click on the unpacked ICC Profile and select "Install Profile". The installation will only take a few seconds. You can also install your profile manually by moving it to the proper folder listed below.
 - Windows - C:/windows/system32/spool/drivers/color
- Using Mac - Double-click on the downloaded Zip file, move the extracted ICC Profile to the proper folder listed below
 - Mac OS 8-9x - System Folder > Color Sync Folder
 - Mac OS X – [Go to] > [Computer] > [Macintosh HD] > [Library] > [ColorSync] > [Profiles]
- Note: Please restart your graphics application (e.g. Photoshop) if it was open during the profile installation.

Setting Colour Preferences In Processing Software

- Elements
 - Click on Edit in Menu bar, then Colour Settings then set “Always Optimise for Printing” – sets working colour space as Adobe RGB
 - Photoshop
 - Click on Edit, then Colour Settings then set “RGB” to Adobe RGB (1998) - sets working colour space to Adobe RGB
 - Affinity
 - Click on Edit, then Preferences, then click on Colour, then set “RGB Colour Profile” to Adobe RGB (1998)
 - In each case close the dialogue box – you may have to exit the application and relaunch for the setting to take effect
 - NB Default colour space for Lightroom is ProPhoto RGB
-

Setting Your RAW Converter To Output Adobe RGB

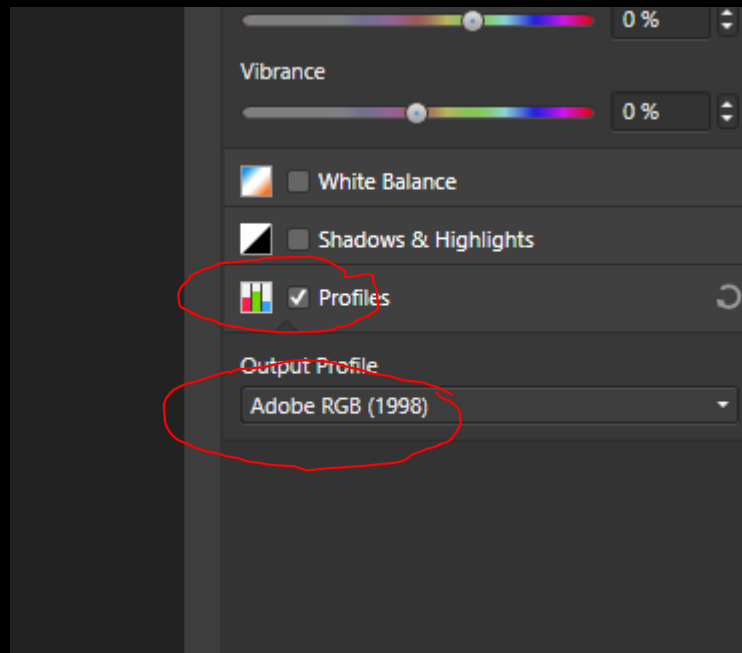
- Elements
 - Do Nothing – if you have set the Colour Settings to “Always Optimise for Printing” the image will open as Adobe RGB
- Photoshop
 - At the bottom of the Camera Raw (ACR) converter click on:



- In the dialogue box that appears in “Colour Space” set Profile to Adobe RGB (1998)

Affinity

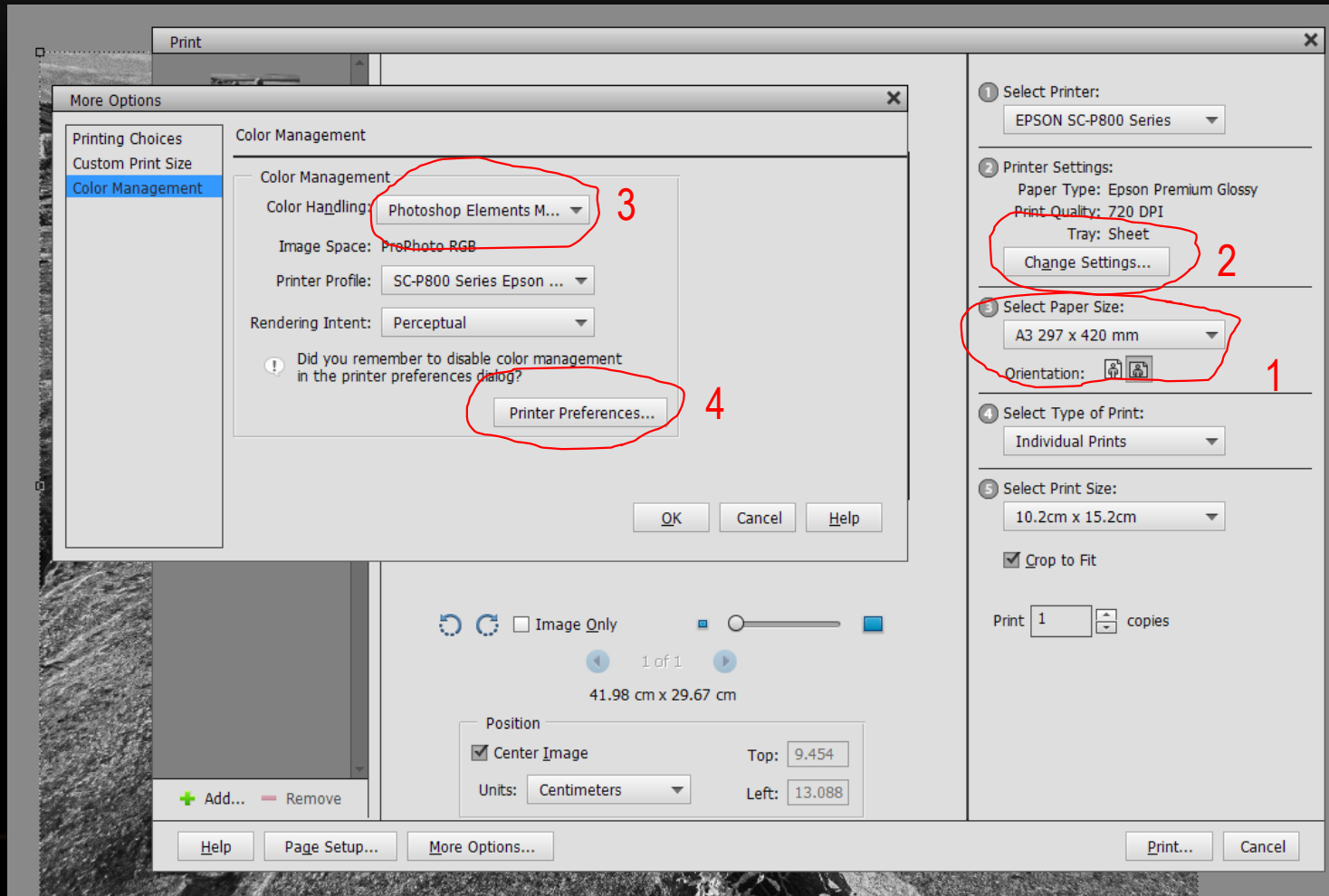
- In the Develop Persona (where RAW images open) at the bottom of the right hand panel
 - tick the “Profiles” and set Output Profile to Adobe RGB (1998)



Prepare The Image

- Process the image as desired
- When complete resize the image to fit your paper – leave a reasonable margin for handling and mounting
- In Elements, Photoshop and Affinity click on “File” from the menu bar then “Print”
- Then complete the various dialogue boxes (see following slides) you will need to
 - Select your Printer
 - Set your software to control printing
 - Set the appropriate ICC for your paper
 - Set the Printer Preferences to suit including using the paper setting recommended for the ICCProfile – eg for Permajet Oyster an Epson printer needs to be set to Epson “Premium Semi Gloss”
 - Switch off Colour Adjustments

Printing In Elements 1 – Epson Printer



Printing In Elements 2 – Epson Printer

The image shows two overlapping dialog boxes from the Epson SC-P800 Series Properties. The 'Current Settings' dialog is on the left, and the 'More Options' dialog is on the right. Red circles and numbers highlight specific settings in the 'More Options' dialog.

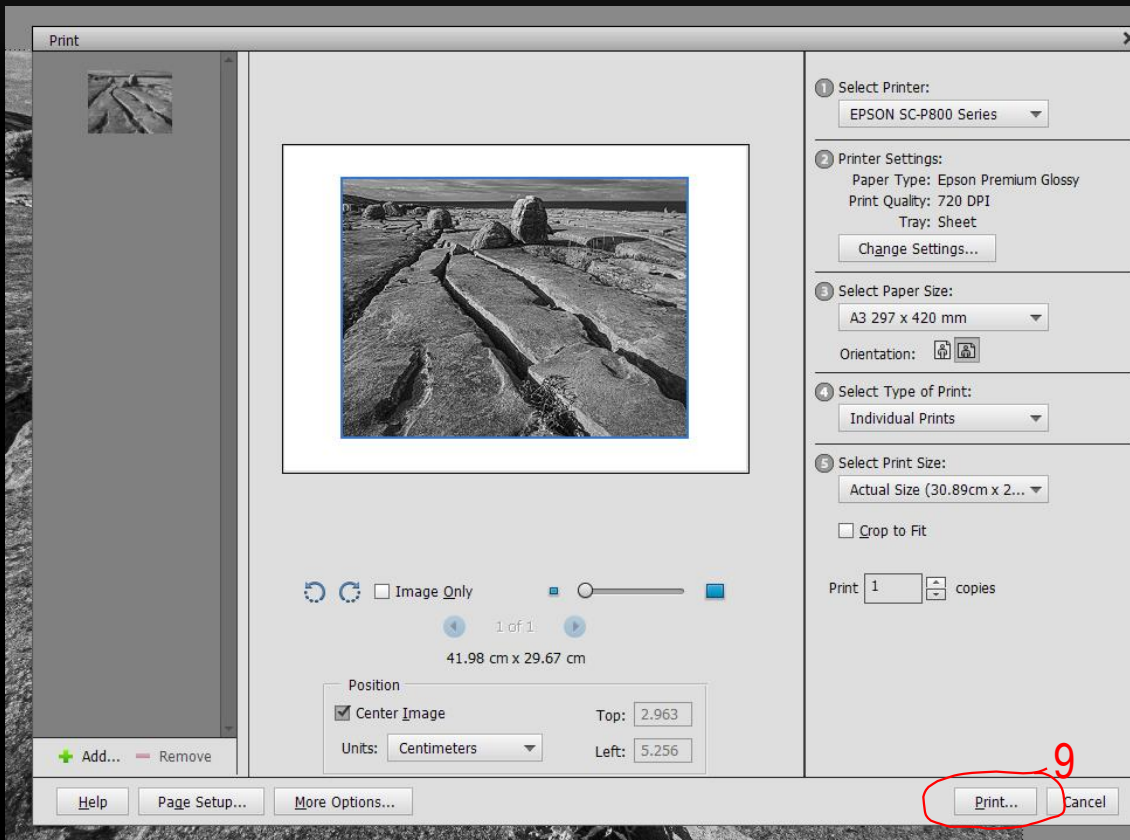
Current Settings Dialog:

- Main:**
 - Media Type: Epson Premium Glossy
 - Print Quality Level: LEVEL 5 (Max Quality)
 - Print Quality: SuperPhoto - 2880x1440dpi
 - High Speed: On
 - Color: Color
 - Source: Sheet
- Page Layout:**
 - Orientation: Landscape
 - Rotate 180°: Off
 - Mirror Image: Off
 - Copies: 1
 - Size: A4 210 x 297 mm
- Job Settings:** Off
- Color Correction:** Color Adjustment: Off (No Color Adjustment)
- Always show Current Settings.
- Close

More Options Dialog (EPSON SC-P800 Series Properties):

- Current Settings | Save/Del...
- Media Settings:**
 - Media Type: **Epson Premium Glossy** (5)
 - Ink: Photo Black Ink | Paper Config...
 - Color: Color
 - Print Quality: **Max Quality** (6)
 - Mode: **Off (No Color Adjustment)** (6)
- Paper Settings:**
 - Source: Sheet
 - Size: **A4 210 x 297 mm** (7) | User Defined...
 - Borderless
- Print Preview
- Layout Manager
- Ink Levels:** MK PK LK LLK C VM LC VLM Y
- Reset Defaults | Version 6.75
- OK** (8) | Cancel | Help


Printing in Elements 3 – Epson Printer



Printing in Photoshop 1 – Epson Printer

Photoshop Print Settings

35.57 cm x 41.28 cm



Match Print Colors Gamut Warning Show Paper White

Printer Setup

Printer: EPSON SC P800 Series

Copies: 1 **Print Settings...** 2

Layout:

Color Management

! Remember to disable the printer's color management in the print settings dialog box.

Document Profile: ProPhoto RGB

Color Handling: Photoshop Manages Colors

Printer Profile: AP1_ROBINSON_EPSON800_OEM_OYSTER_E...

Normal Printing

Rendering Intent: Perceptual

Black Point Compensation

Description

Position and Size

Position

Center Top: 3.369 Left: 1.552

Scaled Print Size

Scale: Height: Width:

100% 34.66 26

Scale to Fit Media Print Resolution: 300 PPI

Cancel Done Print

Printing in Photoshop 2 – Epson Printer

The image shows the Photoshop Print Settings interface for an Epson printer. The main dialog is 'EPSON SC-P800 Series Properties', which is divided into several sections:

- Current Settings:** Shows the printer model and various settings.
- Main:** Includes 'Media Type' (Epson Premium Semigloss), 'Print Quality Level' (LEVEL 5), 'Print Quality' (SuperPhoto - 2880x1440dpi), 'High Speed' (On), 'Color' (Color), and 'Source' (Sheet).
- Page Layout:** Includes 'Orientation' (Portrait), 'Rotate 180°' (Off), 'Mirror Image' (Off), 'Copies' (1), and 'Size' (A3 297 x 420 mm).
- Job Settings:** Includes 'Off' and a printer icon.
- Color Correction:** Includes 'Color Adjustment' (Off (No Color Adjustment)).
- Media Settings:** Includes 'Media Type' (Epson Premium Semigloss), 'Color' (Color), 'Print Quality' (Max Quality), and 'Mode' (Off (No Color Adjustment)).
- Paper Settings:** Includes 'Source' (Sheet), 'Size' (A3 297 x 420 mm), and 'Borderless' (unchecked).
- Ink Levels:** A bar chart showing ink levels for MK, PK, LK, LLK, C, VM, LC, VLM, and Y.
- Buttons:** 'Reset Defaults', 'OK', 'Cancel', and 'Help'.

The 'Printer Setup' dialog on the right includes:

- Printer Setup:** 'Printer' (EPSON SC-P800 Series), 'Copies' (1), 'Print Settings...', and 'Layout'.
- Color Management:** 'Remember to disable the printer's color management in the print settings dialog box.', 'Document Profile' (ProPhoto RGB), 'Color Handling' (Photoshop Manages Colors), 'Printer Profile' (API_ROBINSON_EPSON800_OEM_OYSTER_E...), 'Normal Printing', 'Rendering Intent' (Perceptual), and 'Black Point Compensation' (checked).
- Description:** A section for printer details.
- Position and Size:** 'Position' (Center, Top: 3.369, Left: 1.552), 'Scaled Print Size' (Scale: 100%, Height: 34.66, Width: 26), and 'Scale to Fit Media' (unchecked).
- Buttons:** 'Cancel', 'Done', and 'Print'.

Red circles and numbers 1-8 highlight the following settings:

- Media Type: Epson Premium Semigloss
- Print Quality: Max Quality
- Mode: Off (No Color Adjustment)
- Size: A3 297 x 420 mm
- OK button
- Scale: 100%
- Height: 34.66
- Width: 26

Printing in Affinity – Epson Printer

Current Settings

Main

Media Type: Epson Premium Semigloss

Print Quality Level: LEVEL 4 (Quality)

Print Quality: SuperFine - 1440x720dpi

High Speed: On

Color: Color

Source: Sheet

Page Layout

Orientation: Landscape

Rotate 180°: Off

Mirror Image: Off

Copies: 1

Size: A3 297 x 420 mm

Job Settings: Off

Color Correction

Color Adjustment: Off (No Color Adjustment)

Always show Current Settings.

Close

EPSON SC-P800 Series Properties

Main Page Layout Utility

Select Setting: Current Settings Save/Del...

Media Settings

Media Type: Epson Premium Semigloss 4 Custom Settings...

Ink: Photo Black Ink Paper Config...

Color: Color

Print Quality: Quality 5

Mode: Off (No Color Adjustment)

Paper Settings

Source: Sheet

Size: A3 297 x 420 mm 6 User Defined...

Borderless

Print Preview

Layout Manager

Ink Levels

MK PK LK LLK C VM LC VLM Y

Reset Defaults Version 6.75

OK 7 Cancel Help

Print

Profile: Custom 3 Save As... Properties...

Printer: EPSON SC-P800 Series

Copies: 1 Collate

Range: Document

Fit Type: Scale Scale: 100 %

Include: All Sheets Reverse

Orientation: Automatic

Layout Document Profile: ProPhoto RGB 2

Rasterization Colour Handling: Performed by App

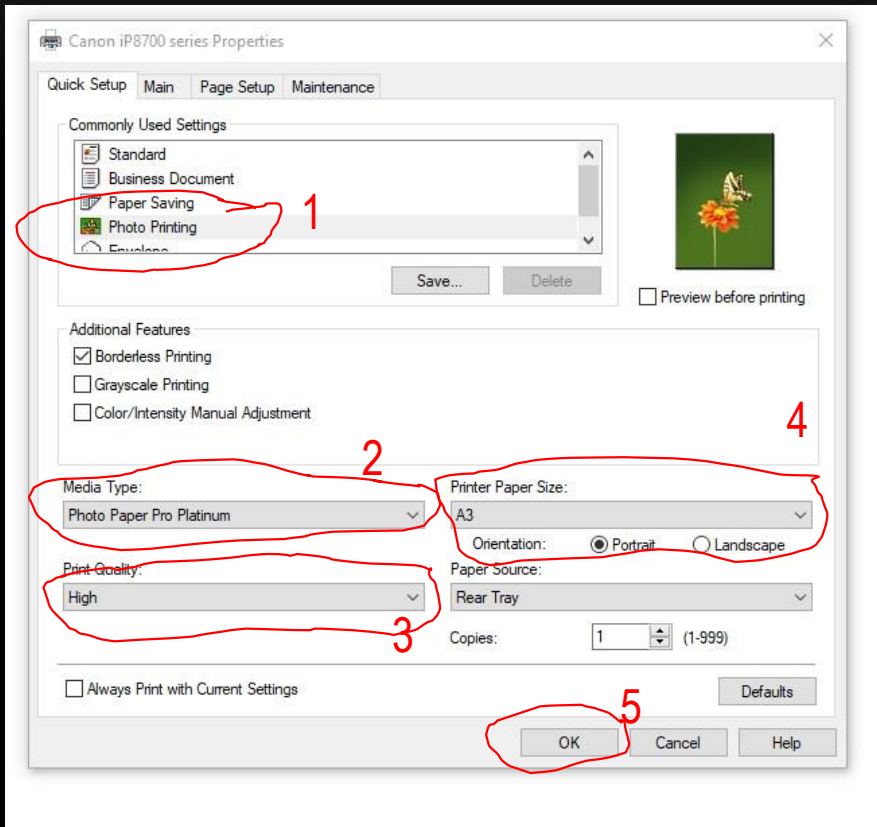
Bleed and Marks Printer Profile: API_OEMSCP800_OYSTER_

Colour Management Rendering Intent: Perceptual

Print To File

OK 8 Cancel

Printer Dialogues – Canon



This Dialogue box appears when:
“Printer Preferences” is pressed Elements,
“Print Settings” is pressed in Photoshop
“Properties” is pressed in Affinity

The steps for the Print dialogue boxes for
Elements, Photoshop and Affinity are as above
whether using Canon or Epson printers

NB Printer dialogues may vary for different models