



INTRODUCTION

An ICC (International Colour Consortium) Profile for your printer, ink and paper combination will tell Photoshop, Lightroom or other image editing application exactly how your printer prints on a particular paper and, when used correctly, ensures that your prints are 100% colour accurate.

In order to make a custom ICC profile, you need to output a special colour patch on each paper type which we will then measure with special hardware and software. It is extremely important that you read and follow these instructions very carefully so we can create the best profile for you.

This PDF will give you all the information that you need to successfully output the colour patches on your inkjet printer. The download that you made from our website will also contain the TIFF file of the colour patch.

This custom profile service is not suitable for inkjet printers driven by postscript RIPs, colour photocopiers, colour lasers or dye-sublimation processes. The profile we create for you will be valid only for the printer, paper, ink and driver settings that the colour patches are output from.

All colour patches need to be output without any existing colour management or colour correction. To do this, you will need to download a special software program from our website called the Adobe Color Printer Utility (also known as ACPU). It is free and is available as versions for both Mac OS and Windows and has been designed purely for outputting colour patches for printer profile creation.

These instructions include guidance for outputting the patches on Epson, HP and Canon inkjets but given the variety of different driver versions and computer operating systems.

We cannot provide detailed instructions to cover every combination and so if you cannot find or access the settings we describe then we recommend that you contact us by email or telephone for technical support:

T: +44 (0)1789 739200 **E:** technical@permajet.com

Please read all instructions carefully, do not hesitate to contact us if anything is unclear.

1. DOWNLOAD ADOBE COLOR PRINTER UTILITY

Adobe Color Printer Utility can be downloaded for free from:

<http://permajet.com/Products/PermaJet-Custom-ICC-Profile-Services>

- OR -

<http://helpx.adobe.com/photoshop/kb/no-color-management-option-missing.html>

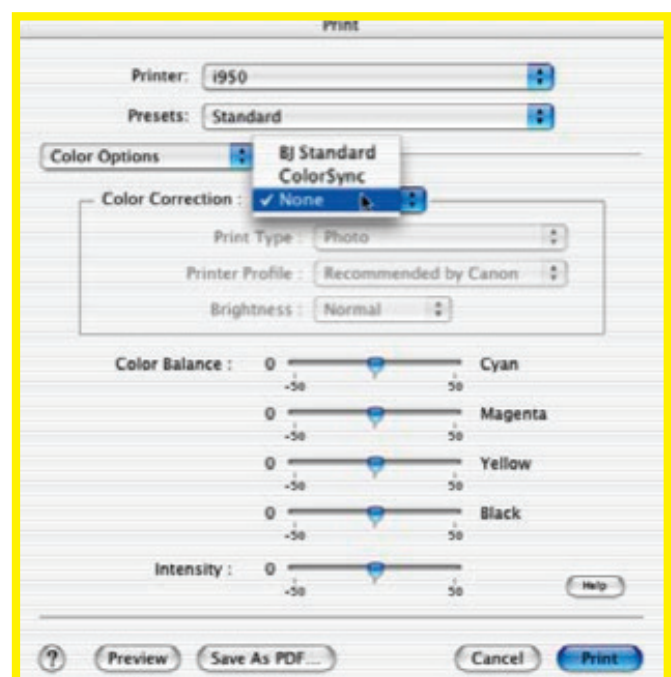
There are instructions on the web page and versions for both Windows and Mac OS.

- After you download the appropriate file, double-click the zip file.
- Follow the instructions below.

If you are running Mac OS.

- Double-click the downloaded “.dmg” file and then drag the Adobe Color Printer Utility.app file to the Applications folder or your preferred folder.
- Double click on the Adobe Color Printer Utility icon to run the application.

NOTE: You may get a message warning you that it is an application downloaded from the internet. If you do and you are prevented from opening the application, go to the Apple menu (top left of your screen), then System Preferences and click on Security & Privacy. Click on the padlock icon, enter your Username and Password and change the “Allow Apps Downloaded From” preference to “Anywhere”. You can change it back after you have opened the Adobe Color Printer Utility application.



If you are running Windows

- Choose to extract all the files from the .zip file. After extraction is complete, drag the Adobe Color Printer Utility to your preferred folder and then double click on the Adobe Color Printer Utility icon to run the application.

2. OPEN THE COLOUR PATCH

- As soon as you run the Adobe Color Printer Utility application you will get a standard open file dialogue window asking you to open a TIFF file. It usually says "Please Select a TIFF file to print".
- The file you need to open is called Patch File (2012).tif and was included in the same download as this PDF. It may still be located in your Downloads folder or wherever you moved it to.
- Find the file by navigating your hard drive in the open file dialogue.
- The file is formatted for A4 paper. If you use larger paper or rolls do not enlarge the file but print it at A4 size (100% - no scaling). The colour patch file must be output without being cropped, enlarged or reduced. We use an automated spectrophotometer to measure the colours and any scaling will cause this to fail.
- *Before printing* the colour patch file, make sure your printer has no blocked ink heads by carrying out a basic nozzle check pattern or cleaning procedures your printer has.
- Go to 'Page Set Up' in the File menu and set the page size of the paper you are using as required. Ensure "borderless" option is NOT selected as this may scale the print. Then go to Print and set your printer driver options.

3. SET THE MEDIA/PAPER TYPE

- In your printer driver you must select the paper or media name from the list that is closest matching to the PermaJet paper that you are printing on. This setting is vitally important because it governs the amount of ink that is used and other variables. Incorrect media type settings can cause the following issues: Pooling of ink or wet ink after printing, ink spreading and fuzziness, unclear type or fine lines, lack of differentiation in shadows, patterns in dark colours. The profile will only be accurate for the setting that you select when the colour patches are printed so it is very important to set the correct media type.

- We have list of the settings that we recommend for our papers and you can find it here:

http://www.permajet.com/Paper_and_Media_Support

NOTE: *If your printer is not included in the list then you will have to choose the closest media type to the type of paper. For example, if you are using PermaJet Oyster satin paper on an Epson printer then a logical choice of media type may be Epson Premium Semi Gloss. If in doubt, then please contact us for advice.*

4. DISABLE PRINTER DRIVER COLOUR MANAGEMENT

- In order to profile a printer all colour management has to be disabled so that we can measure how the printer prints and not how the printer driver tries to improve the print. Each printer driver from the various manufacturers has different options that need to be enabled or disabled when printing the colour patch file.
- If you are using the Mac OS you may find that on many printer drivers the colour management options are greyed out when printing from Adobe Color Printer Utility. This means that driver colour management has been automatically disabled.

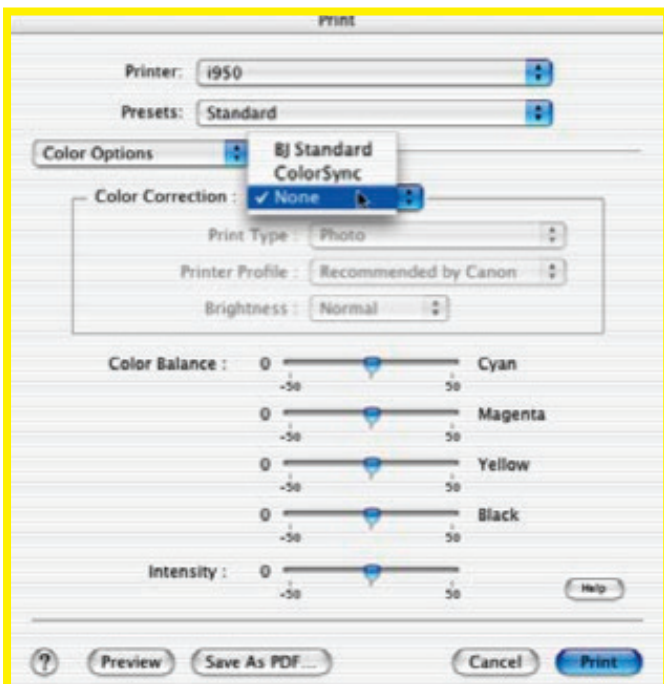
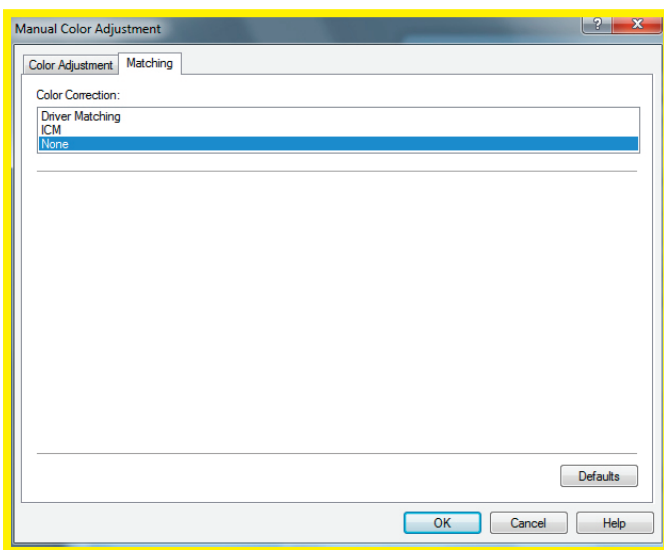
Epson

Under Colour Settings or Mode, select Off (No Colour Adjustment) or No Colour Adjustment. On some Windows systems you may have to click ICM or Custom before the No Colour Adjustment option is available. Remember that the profile will only be valid for the settings that you choose here. What you are trying to achieve are settings that stop the print driver 'enhancing' (i.e. arbitrarily changing) the colour of your print. If you can, save the settings so it is easy for you to recall them later, or at least write them all down. On Mac OS you can save a printer preset by going into the Presets drop down menu in the Print dialogue and selecting Save Current Settings as preset... Failure to follow this section of the instructions is the most common cause of problems when profiling.

Canon

In the printer driver select the media type that is the closest match for the paper that you are using. In the Main tab select Manual under Color/Intensity and click Set and in the Matching tab set Color Correction: None. In some drivers the None option may be elsewhere. Under Effects make sure nothing is checked on. Remember that the profile will only be valid for the settings that you choose here. What you are trying to achieve are settings that stop the print driver 'enhancing' (i.e. arbitrarily changing) the colour of your print.

If you can, save the settings so it is easy for you to recall them later, or at least write them all down. On Mac OS you can save a printer preset by going into the Presets drop down menu in the Print dialogue and selecting Save Current Settings as preset... Failure to follow this section of the instructions is the most common cause of problems when profiling.

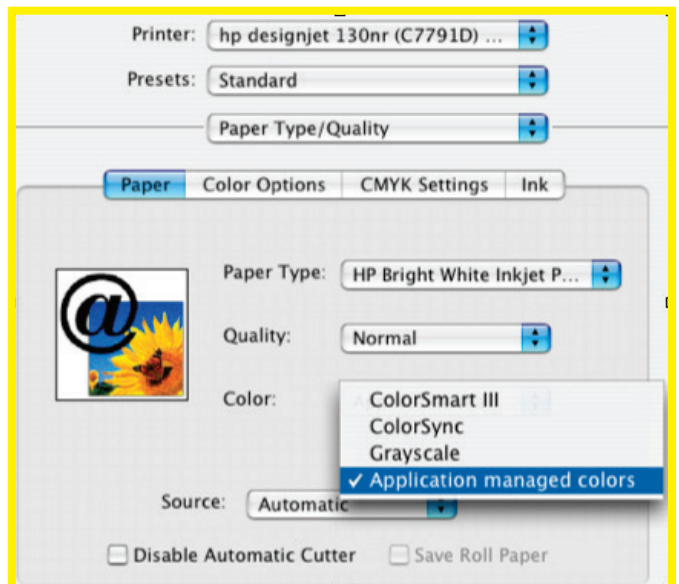
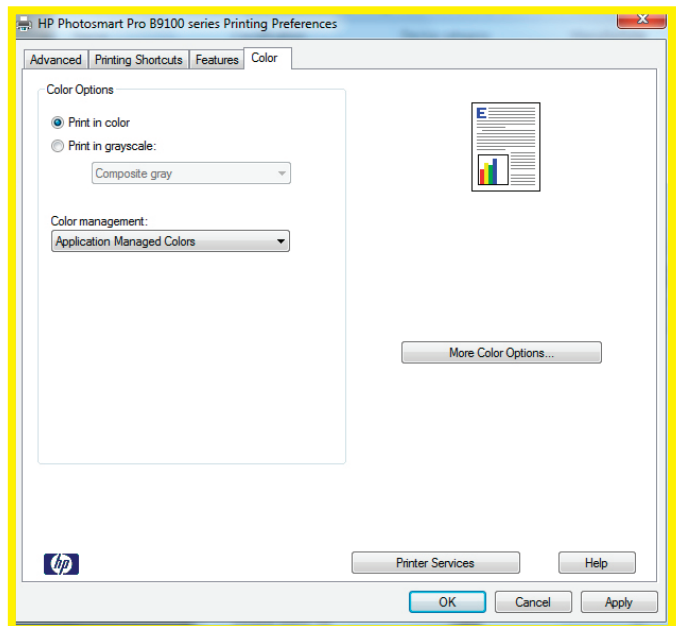


HP

Under Paper Type/Quality in the printer driver's Features tab select the paper type that is the closest match for the paper that you are using. In the Color tab set Application Managed Colors or Managed by Application, you may have to select ICM before you see these choices.

In some drivers you may also find the settings in the Printer Shortcuts tab. Remember that the profile will only be valid for the settings that you choose here. What you are trying to achieve are settings that stop the print driver 'enhancing' (i.e. arbitrarily changing) the colour of your print.

NOTE: If you are in any doubt as to the correct driver settings then please contact us. If you can, save the settings so it is easy for you to recall them later, or at least write them all down. On Mac OS you can save a printer preset by going into the Presets drop down menu in the Print dialogue and selecting Save Current Settings as preset... Failure to follow this section of the instructions is the most common cause of problems when profiling.



5. PRINTING & CHECKING THE COLOUR PATCHES

- Once you have set, checked and saved your printer driver settings make sure you have the paper that you want us to profile correctly loaded in the printer and then click Print.

- When you have printed the colour patches please check you have output the colour patch file at the correct size. On an A4 sheet there should be a white border outside the dashed black line. The correct size of the chart to the dashed line is 19.8 cm by 28.6cm.

NOTE: Prints from Adobe Color Printer Utility often come out a little smaller because it is designed for US and European paper sizes. Do not worry if the patch has printed towards one corner of the paper. As long as we can read the diamond shapes down each side, it should be fine.

- Check that there is no ink pooling, bleeding, spreading, mottling or over saturation of ink on the print.

- Check for any signs of line banding caused by blocked ink heads or other print quality issues. If you do find any of these issues then fix and then re-print.

6. POSTING YOUR PRINTS

- Please wait until the patches are totally dry before placing them in a stiff backed envelope - usually at least 30 minutes to be safe. If you are sending more than one print to us you can write the paper name on the back near the edge. Do not fold the patches. If you have output them on A3 then you can trim them down to A4 but please don't cut into the dotted line.

- Print out and fill in the order form that is on the last page of this PDF. The order form gives us the information we need to name your profile logically and send it to you.

- Place the patches together with the completed form in a suitable stiff backed envelope and post it to the address below. Please ensure you pay the correct postage, usually at least First Class Large:

PermaJet (Profiling Dept)
1A, Black Hill Ind. Estate
Warwick Road
Stratford-Upon-Avon
Warwickshire
CV37 0PT

- Your profile will be emailed to the email address supplied on the form.

7. INSTALLING YOUR PROFILE

- Your ICC profile will be sent to you via email, normally within 48 hours of our receiving the patches.

- When you receive your profile, it needs to be saved (not opened) in a specific directory or folder in order to be recognised by your ICC-aware applications.

If you are running Mac OS

Save the profile from your email application on to your desktop. Then in the Finder (the smiling Mac icon on the left of your dock) hold the Alt key down and go to the Go menu and down to Library. Then open the ColorSync folder, and then Profiles. Drag/copy the profile to into that folder.

If you are running Windows

On most PC systems you can just right-click on the profile where ever you have saved in on your hard disk and select Install Profile from the menu. You can also manually move the file to: C:\Windows\System32\Spool\Drivers\Color

- Your applications may have to be restarted in order to 'see' the new profile.

- It is also a good idea to make a safe copy of your profile - just in case!

- Please do not rename the profile as it will still appear in application menus with the name we gave it.

- You can use your profile in Photoshop, Lightroom, Photoshop Elements and other applications. We can't provide instructions for every application so you may want to consult your software manual for advice.

8. USING YOUR PROFILE IN ADOBE PHOTOSHOP

- Select the printer and paper size in the Page Set Up dialogue as per normal.

- Select Print with Preview from the File menu (for Photoshop CS2 and earlier) or Print (for Photoshop CS3 and more recent versions). Select your new profile under the Colour Management option's Print Space for Photoshop 6 or CS1. For Photoshop version CS2 select Let Photoshop Determine Colors under Color Handling and for Photoshop CS3 and more recent versions select Photoshop Manages Colors. Then select your new printer profile under Printer Profile. Black Point Compensation should be checked on and the Intent can be either Perceptual, Saturation or Relative Colorimetric. Which intent suits you best will depend on your image and the colour space of your printer. Perceptual is a good choice if you are not sure.

- Use the same custom settings in the printer driver as you did for outputting the original colour patches. Remember that the profile will only improve your printed results if you use exactly the same paper, ink and printer driver options.

9. USING YOUR PROFILE IN ADOBE LIGHTROOM

- Go to the Print module and select the printer and paper size in Page Set Up as per normal.
- Click on Print Settings and use the same settings in the printer driver as you did for outputting the original colour patches. Remember that the profile will only improve your printed results if you use exactly the same paper, ink and printer driver options.
- Scroll down the options on the right of the screen until you see the Print Job section.
- Go to the Colour Management options and click on the Profile menu. The first time you use a profile you will have to go to Other... and then find the profile in the list and check the box next to its name. This will bring it into the Profile menu.
- Select the profile and then choose either Perceptual or Relative rendering intent. Which intent suits you best will depend on your image and the colour space of your printer. Perceptual is a good choice if you are not sure.
- Click Print when you have set any other options such as borders and sizing.

10. TESTING & EVALUATION

When you evaluate your first print with your new profile please make sure you look at the print under daylight and not artificial light. Allow a few minutes for the print to dry. Use a special test image rather than one of your own images as they can be better for profile evaluation.

Below are a list of the most common problems and their solutions.

The print has a colour cast, usually magenta.

This is usually an indication that the print has not been printed with the same driver settings as the colour patches were. Double check the driver settings, and especially make sure all colour adjustment is off in the driver. If it is and you still have a cast then it may be that the colour patches were printed incorrectly. Contact us for more advice.

The print doesn't match the monitor.

A print and monitor will never match exactly but under the correct conditions they can appear very similar. Check your monitor is calibrated and if the print appears darker than the monitor it may mean you should recalibrate to a lower luminance level. The most common cause of prints not matching the monitor is the light source the print is viewed under. Make sure you view the print in bright daylight and that you use Photoshop or Lightroom's soft-proofing features. See our support pages and blog for more details.

The prints were coming out fine but now they aren't accurate.

A profile cannot change but the behaviour of your printer can over time. The print head can degrade over time, new printer drivers or software that cause colour shifts, and changes to ink or paper by manufacturers can all contribute to a change in appearance of your prints. In most cases re-profiling will solve any problems.



Profiling Service

Your details:

Name:

Address:.....

.....

.....

Phone:

Email:

Profile details: please fill in all details per profile...

Operating System.....

Image Software and version.....

Printer Model.....

Ink Manufacturer.....

Paper Type.....

Media Setting Selected.....

Printer Model.....

Ink Manufacturer.....

Paper Type.....

Media Setting Selected.....

Printer Model.....

Ink Manufacturer.....

Paper Type.....

Media Setting Selected.....

Send to:
PermaJet (Profiling Dept)
1A, Black Hill Ind. Estate
Warwick Road
Stratford-Upon-Avon
Warwickshire
CV37 0PT

Terms & Conditions:

1. Failure to follow the instructions contained in this PDF may result in an inaccurate profile. **PermaJet** cannot be held responsible for any such inaccuracy.
2. All colour matches between devices are subject to gamut, consistency and capabilities of the hardware or software involved and the lighting conditions that the results are viewed under.
3. Changes to device settings, media, inks or failure to maintain the device may invalidate any profiles created by **PermaJet**.
4. **PermaJet** cannot be held responsible for the failure of any third party software to accurately implement any ICC profile created by us.
5. **PermaJet** cannot be held responsible for any consequential losses due to the use of any profiles created by **PermaJet** or its agent. The customer is responsible for the evaluation and testing.

If you are a user of PermaJet papers, your bespoke profile(s) will be provided absolutely FREE OF CHARGE.

When using paper media from other manufacturers, please refer to the profiling area on our website as we offer a voucher system applicable for each profile we create, see the 'Profiling Circle'.

For my non-PermaJet papers I have enclosed:

Profiling Circle Voucher/s

Signature & Confirmation:

I agree to the terms and conditions stated on this form and have read and understood the instructions for outputting colour patches.

Signed:

Date: