



Using EFI Dot Film

On Epson Stylus Pro x600 series printers

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1 System configuration

This article applies to the following system configuration:

Software:

Colorproof XF v3.0

Lintool or Color Manager (option)

Dot Creator (option)

Note: The programs may change in future software releases!

Miscellaneous:

An optional film measurement device is recommended for measuring the percentage value of the dot gain.

2 Topics

This document provides information about how to use the print media EFI Dot Film on Epson printers. In order to achieve acceptable results a specific procedure needs to be followed. This procedure consists of the following two steps:

- Creating a simple EPL without completing the linearization.
- Creating a visual correction curve (vcc) in order to compensate the dot gain.

2.1 Creating a simple EPL file

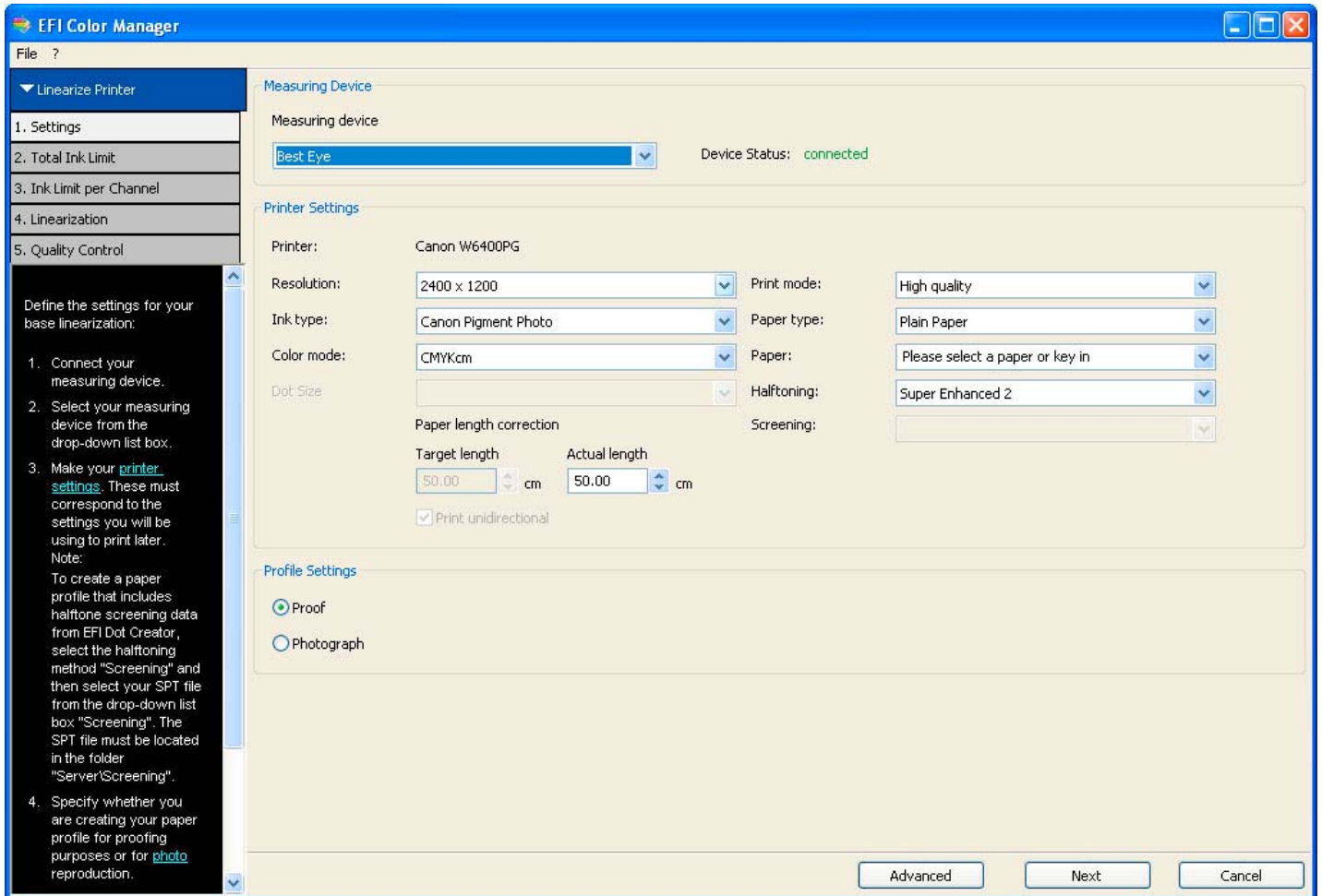
2.1.1 General explanation

The EPL is a linearization file which describes how the media behaves relative to the inks.

EFI Dot Film is not a media used for four color output. It is mainly used for simple black output. As a result, the linearization file needs to be different from the standard EPL files for inkjet printers which describe four or more color output. The EPL used for EFI Dot Film needs only a linear gradation curve; it is not necessary to limit the inks per channel. Therefore, you can abort the linearization process after the first step. Even if the linearization process is cancelled, an EPL file is created and saved to the "Working" folder.

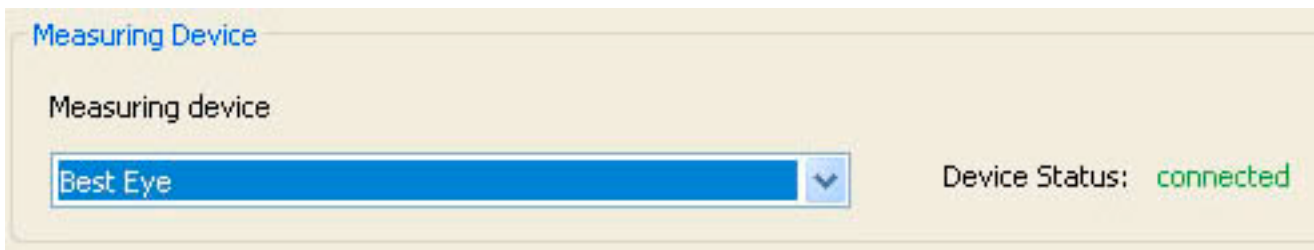
2.1.2 Appliance within Colorproof XF

Launch Colorproof XF and open Lintool or Color Manager. Start the tool “Create paper profile”. The following screen appears:

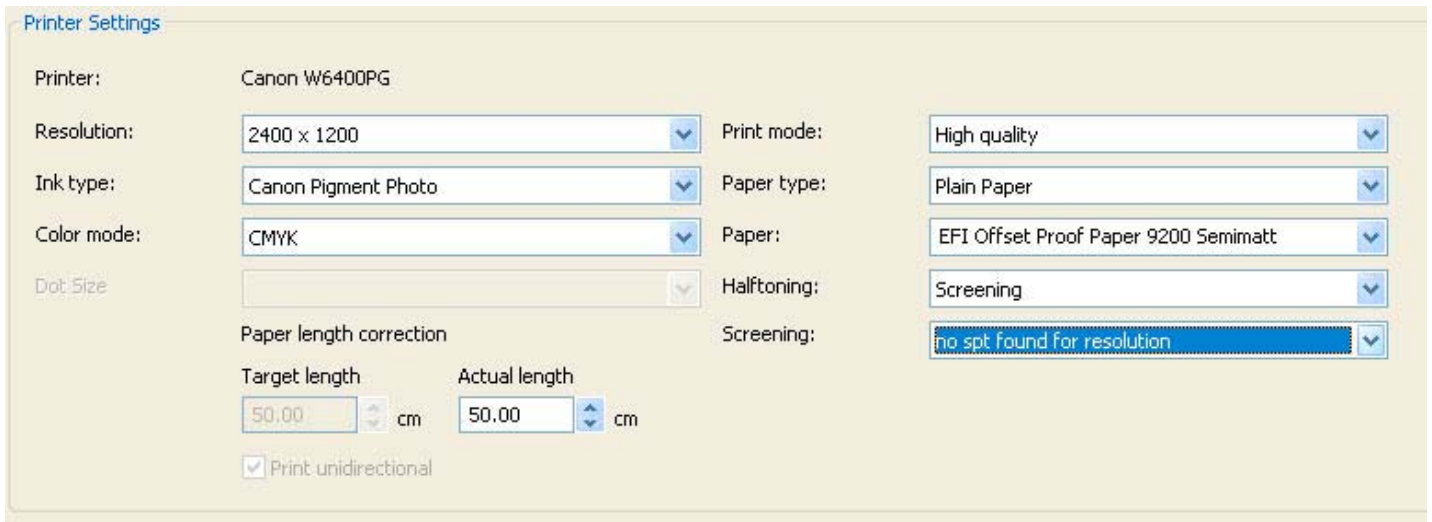


Please follow the next steps:

- 1) Select your measuring device



2) Select your desired settings



Printer Settings

Printer: Canon W6400PG

Resolution: 2400 x 1200 Print mode: High quality

Ink type: Canon Pigment Photo Paper type: Plain Paper

Color mode: CMYK Paper: EFI Offset Proof Paper 9200 Semimatt

Dot Size: [] Halftoning: Screening

Paper length correction

Target length: 50.00 cm Actual length: 50.00 cm

Print unidirectional

Screening: no spt found for resolution

3) TIP

For the Epson printer we recommend the following settings:

- Resolution = 1440 x 720 dpi
- Color mode = CMYK
- Ink type = depends on your printer model
- Print mode = Super
- Paper type = EFI Dotfilm
- Paper = Type in a paper name
- Screening = select self created spt file

4) Settings for base linearization

Please select "Proof". It is not necessary to go into the advance settings.

5) Print chart

Click the "Print" button. You do not need to print the target. However, this step is necessary in order to create the EPL file. In the "File" menu, select "Save Base Linearization" and save the EPL file. Although this EPL file only contains a linear gradation curve, it provides all the settings necessary for it to be detected as an EPL file by Colorproof XF.

2.2 Creating a printout

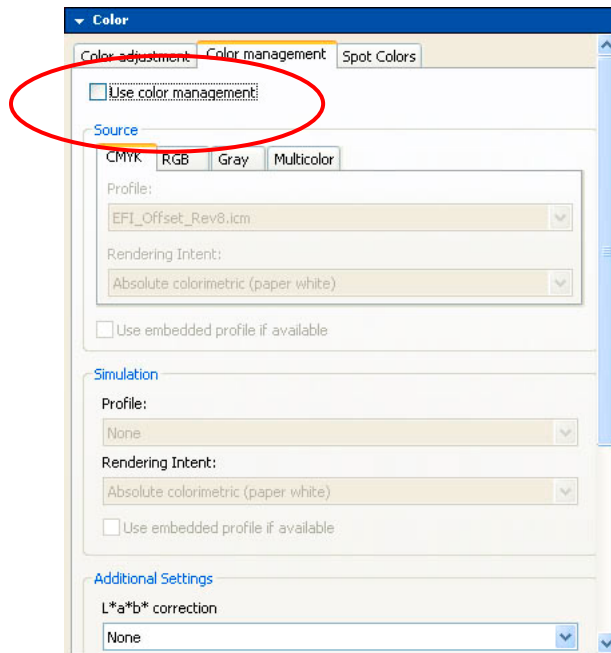
2.2.1 General explanation

The next step is to print out a grayscale wedge using the standard EPL which was created in the previous step. You can use this grayscale wedge to create a correction curve based on a comparison of the target and the actual values.

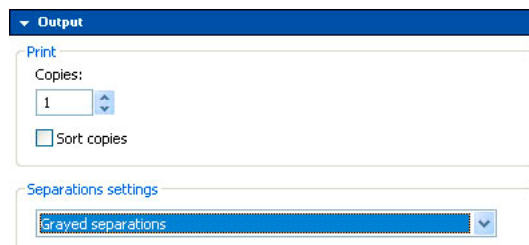
2.2.2 Implementing in Colorproof XF

To implement in Colorproof XF, proceed as follows:

- Copy the EPL file from the folder “EFI\Client\Working” to the following location:
“EFI\EFI Colorproof XF Profiles\new folder”.
- Start Colorproof XF and go to System Manager.
- Create a new output device and select one of the Epson printers (Stylus Pro 4000, Stylus Pro x600).
- On the quality tab, select the correct ink type. The paper name you created previously should be selectable in the drop-down list box paper name. If it is not, please restart the Server!
- Name the new printer and click on save.
- Create a new workflow.
- Highlight the blue color bar. On the Color Management tab, DEACTIVATE the Color Management.



- Highlight the output bar. From the drop-down list box “Separations settings”, select “Grayed separations”. This ensures that the job will be separated and not printed as one four-color job.



- Save the workflow and print a grayscale wedge.

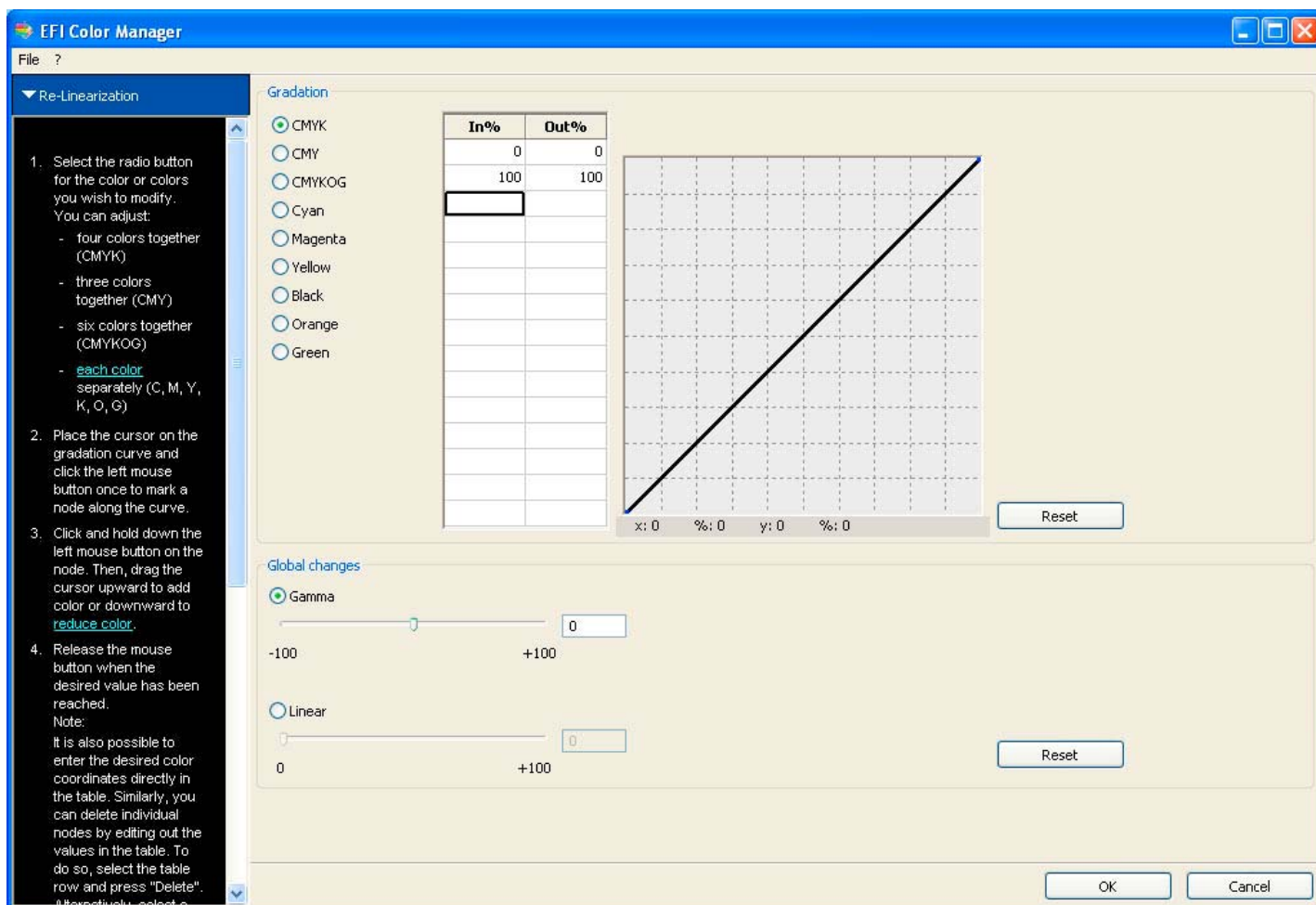
2.3 Creating a visual correction curve

2.3.1 General explanation

As the EPL file contains only a linear gradation curve, the printer behaviour needs to be adjusted with a visual correction curve (.vcc). You can create a visual correction curve in the EFI Lintool or Color Manager (option).

2.3.2 Implementing in Colorproof XF

Please launch Colorproof XF and open the Lintool or Color Manager. Click on “Re-linearization by measurement”. The following screen appears:



This tool enables you to adjust the gradation curves of different channels.

Activate the radio button “CMYK”. This option will align all four color channels at once, thus creating an overall gradation curve.

To get an idea of how you need to adjust the curve, you need to measure the grayscale wedge. To do this, it is recommended to use a measuring device which is capable of measuring transparent films and delivers percentage values.

The next step is similar to former imagesetter calibration. You measure the grayscale wedge and then type the measured values in the table for the visual correction curve. For example, if the device measures an area coverage of 50% = 62%, you would type these values in the

table. In this way, you form a gradation curve which can be adjusted to any amount of dot gain.

3 General recommendations

Please note that recommendations made in this document are limited to the following printers:

- Epson Stylus Pro 4000
- Epson Stylus Pro 7600
- Epson Stylus Pro 9600

Furthermore, it is not recommended that you use high screen rulings of 150 lpi, since variations in printer reproducibility make it very difficult to print without a moiré and also to maintain register accuracy.

Screen rulings of up to 130 lpi are the most you can ask of an inkjet printer. Even this depends on the printer itself.

Regarding the best resolution, we have discovered that there is a connection between the resolution and the resulting density. Please see the following table:

Resolution	Density
720 x 720	D 2.1
1440 x 720	D 3.2
2880 x 1440	D 2.5

4 Executive Summary

This article explains how the Dot Creator option can be used in conjunction with Epson Stylus Pro 4000 and Epson Stylus Pro x600 series printers and EFI Dot Film media. There are three things that need to be done:

- Create a linear EPL without any ink limitation per channel.
- Print out a grayscale wedge and measure it to calculate the dot gain.
- Create a visual correction curve in order to compensate for the dot gain.

Please note that it is not recommended that you use Dot Creator for screen rulings of more than 130 lpi. All EFI tests so far have been based on a screen ruling of 50 lpi.