

# USING EFI DOT FILM ON EPSON STYLUS PRO 4000 AND X600/X800 SERIES PRINTERS

EFI Dot Film is a transparent media that is often used to output grayscale separations for offset and silk-screen printing. This document describes how, by performing a few simple steps, you can enhance the quality of monochrome output on your Epson Stylus Pro printer.

## Creating a halftone screen file

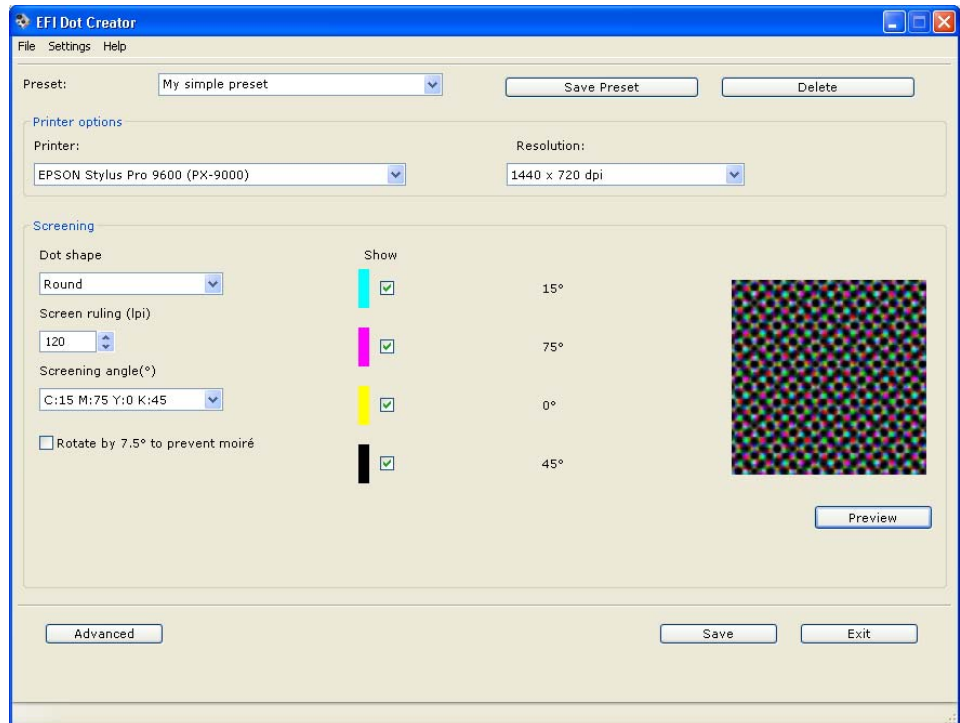
The first step is to create a halftone screen file with the desired screening information. You do this in Dot Creator.

**NOTE:** If you do not have a license for Dot Creator, you can proceed straight to the next section to create a base linearization file. However, in this case, you cannot embed screening information.

### TO CREATE A HALFTONE SCREEN FILE IN DOT CREATOR

#### 1 Start Dot Creator.

Dot Creator window



## 2 Create a halftone screen file.

- **Select your Epson Stylus Pro printer and a printer resolution.**

A resolution of 1440 x 720 dpi is recommended.

Please observe the following relationship between printer resolution and resulting density:

Printer resolution	Maximum possible achievable density
720 x 720 dpi	2.1
1440 x 720 dpi	3.2
2880 x 1440 dpi	2.5

- **Select a dot form, screen ruling and screening angle.**

It is recommended that you do not select screen rulings higher than 130 lpi. Screen rulings above this are prone to display moiré patterns in the printout.

**NOTE:** All the tests carried out at EFI so far have been based on 50 lpi.

## 3 Save your screening file.

## Creating a base linearization

Base linearization files are normally created for four or more printer colors. However, monochrome printing works best with a base linearization that has been especially created for black ink only. You do this in LinTool/Color Manager.

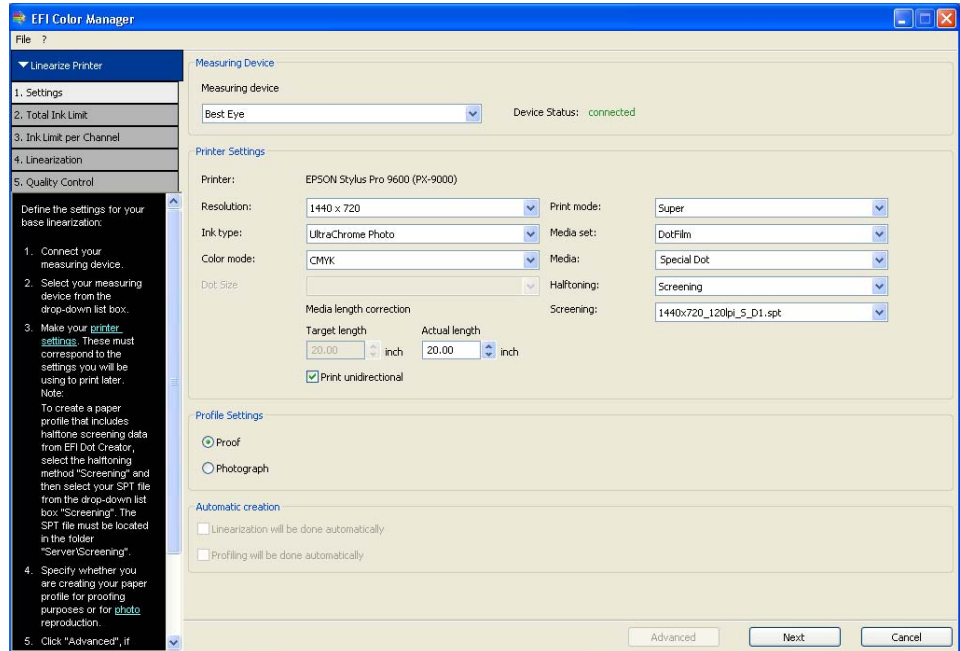
---

### TO CREATE A BASE LINEARIZATION IN LINTOOL/COLOR MANAGER

- 1 In EFI XF, ensure that your Epson Stylus Pro printer is set up as the linearization device.
- 2 Make sure your measuring device is connected to the computer.

3 Start LinTool/Color Manager and select the tool Create Base Linearization.

Base linearization settings



4 In the Settings window, select your measuring device.

5 Make your printer settings. The following settings are recommended:

Resolution	1440 x 720 dpi. <b>NOTE:</b> If you have previously created a halftone screen file in Dot Creator and want to embed the screening information in the base linearization, you must select the same resolution that you used to create the SPT file.
Ink type	Depends on the printer.
Color mode	CMYK
Print mode	Super
Media set	DotFilm
Media	Define any media name.
Halftoning	Select the type of halftoning. <b>NOTE:</b> If you have previously created a halftone screen file in Dot Creator and want to embed the screening information in the base linearization, you must select Screening.
Screening	Select the SPT file you created in EFI Dot Creator.

6 Select Proof as the profile setting.

7 Click Next.

**8 Click Print.**

You have to click Print in order to create a base linearization. However, you do not actually need to output the chart and can cancel job processing in EFI XF at this point if you wish. The EPL file is automatically saved to the folder ...\\EFI\\EFI XF\\Client\\Working.

**NOTE:** Although the base linearization created in this way contains only a linear gradation curve, it provides all the settings necessary for it to be correctly detected by EFI XF.

## Implementing the base linearization in EFI XF

In the steps below, you are required to output a grayscale control strip. The file FilmLinearization\_v1.2.tif is provided with this document for this purpose. Make sure that EFI Dot Film is inserted in the printer before you start.

---

### TO OUTPUT A CONTROL STRIP IN GRAYSCALES

- 1 Create a new subfolder in ...\\EFI\\EFI XF Profiles. Then copy the EPL file from the Working folder to it.
- 2 Start EFI XF and go to System Manager.
- 3 Set up a new output device for your Epson Stylus Pro printer:
  - On the Quality tab, make sure that you select the same ink type that you used to create the EPL linearization file in LinTool/Color Manager.
  - From the drop-down list box Media name, select the name you defined in LinTool/Color Manager.

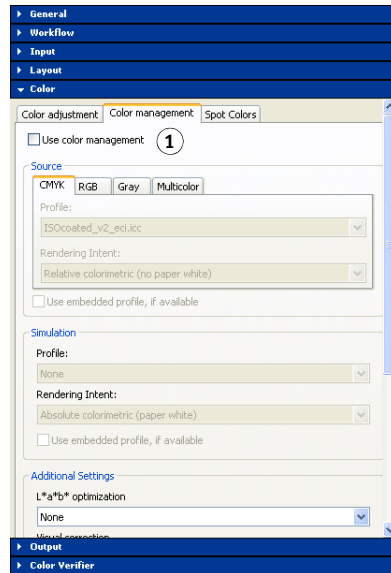
**NOTE:** If the media name is not displayed, try restarting the Server.

**4 Create a new workflow:**

- On the Color bar, click the Color management tab and deactivate the check box Use color management.

**Color bar**

- 1 Deactivate color management.

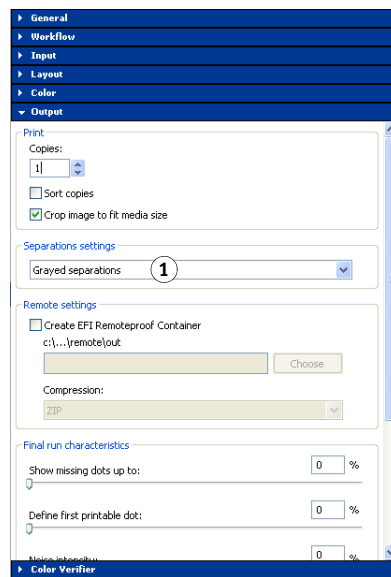


- On the Output bar, select Grayed separations from the drop-down list box.

This ensures that the print job will be output as four color separations and not printed as one four-color job.

**Output bar**

- 1 Select Grayed separations.

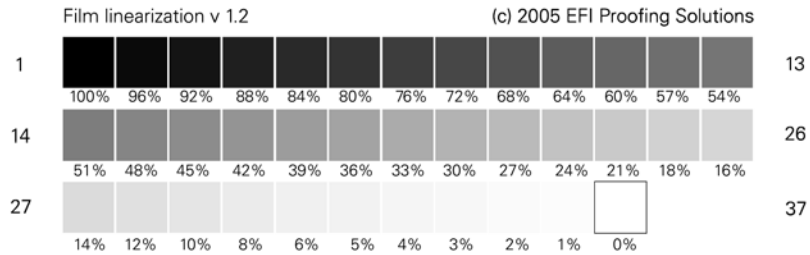


- 5 Save the workflow.

- Go to Job Explorer and load and print out the file FilmLinearization\_V2.1.tif via the workflow you have just created.

EFI XF outputs four grayscale separations — one each for CMYK.

**Black separation of FilmLinearization\_V2.1.tif**



## Creating a visual correction curve

As the base linearization file contains only a linear gradation curve, you need to adjust it to compensate for different amounts of dot gain. To do this, you require a measuring device, preferably one that is capable of measuring transparent film and that can display area coverage values as a percentage.

---

### TO CREATE A GRADATION CURVE IN LINTOOL/COLOR MANAGER

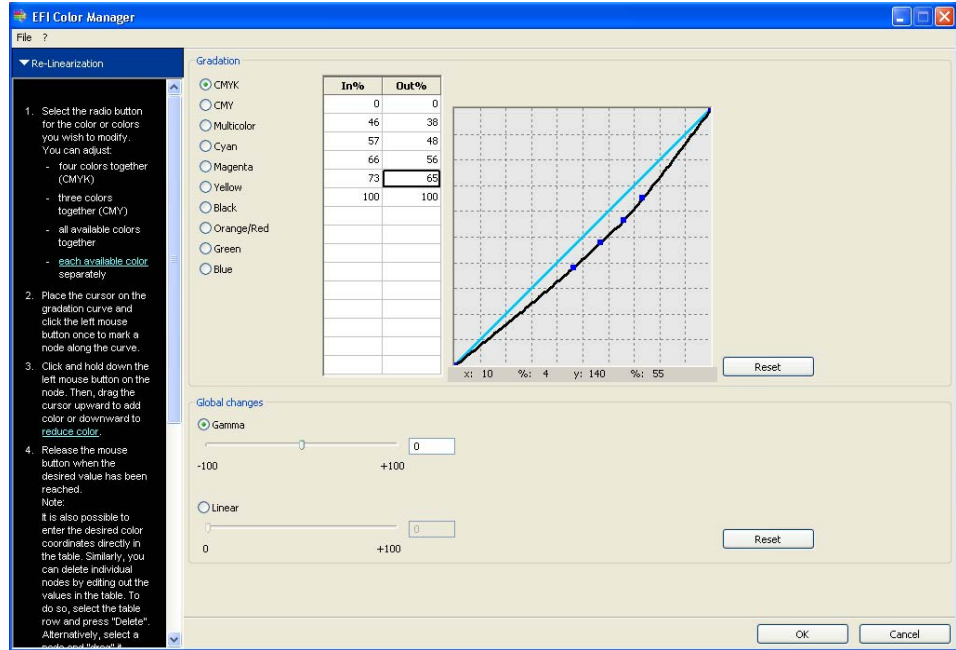
- Start LinTool/Color Manager and select the tool Visual Re-Linearization.
- Select the radio button CMYK. This will align all four color channels at once, thus creating an overall gradation curve.
- Take the printed black separation of the file FilmLinearization\_V2.1.tif and, using a measuring device, measure any chosen number of color patches.

Typically, you will find that the measured area coverage values are higher than the percentage values printed on the chart. If plotted, the result would be a convex curve.

**4 Enter the actual and target values in the visual re-linearization table.**

For example, if you measured the color patch for 48%, type 48 in the Out column. Then type the measured area cover percentage in the In column, e.g. 57. Repeat this step for other measured values to define further interpolation points. The result is a concave curve. The values along the curve cancel out the measured values to create a linear result.

**Visual re-linearization**



**5 Click OK to save your visual correction file.**

**NOTE:** Visual correction files must be saved to ...\\EFI\\Server\\Profiles\\Balance. Otherwise they cannot be loaded in EFI XF.

**6 Load the visual correction file in EFI XF.**

- In System Manager, highlight the workflow.
- On the Color bar, click the Color management tab and select the visual correction file from the drop-down list box.

**NOTE:** If the visual correction file is not displayed, try restarting the Server.

**7 Reprint and re-measure the file FilmLinearization\_V2.1.tif to check that the gradation curve is correct.**