



EPSON SureColor P7300/P9300/P7500/P9500 Series HT Driver

This document describes the supported features and options of the EPSON SureColor P7300/P9300/P7500/P9500 Halftone (HT) printer driver for Fiery XF.

The Halftone driver is part of a group with the existing Contone drivers CT and RGB and co-exists with them.

Driver type	Technology	Color space	Best use
Contone	EPSON HTM SDK	RGB	Photo / art printing using original media or Dashboard supported media
		CMYK (CT)	Proof printing using original media or Dashboard supported media
Halftone	Fiery XF native	CMYKV, CMYKOGV	Printing using special media

For the Contone drivers and the printers in general, please refer to the following documents:

- PDS EPSON Surecolor P73X0 P93X0 CT RGB.pdf
- PDS EPSON SureColor P9500 P7500 Series CT RGB.pdf

Technical specifications

Item	SC-P73x0/P93x0, SC-P75x0/P95x0
Printer width	24 / 44 inches
Ink set SC-P73x0/P93x0	Epson UltraChrome PRO10 10 color: C/VM/Y/PK/MK/LC/VLM/GY/LGY/V
Ink set SC-P75x0/P95x0	Epson UltraChrome PRO12 12 color: C/VM/Y/PK/MK/LC/VLM/GY/LGY/GR/OR/V
Print resolution	300 x 300, 300 x 600, 600 x 600 1200 x 1200 2400 x 1200 2400 x 2400
SpectroProofer	Available ILS30EP
Borderless	Supported

Preparation

Before using the Epson SureColor HT printer driver in the FIERY RIP software, please make sure you have

- Fiery Command WorkStation package: 7.2.0.516 or higher
- Fiery Color Profiler Suite: 5.9.1.32 or higher

They have been updated to support the new color modes introduced by this printer driver.

Supported Options

- **Print direction**
 - Uni-directional
 - Bi-directional
- **Media suction**
 - Use printer default
 - -1
 - -2
 - -3
 - -4
- **Printer dryer**
 - 0..100 Minutes
- **Auto cut**
 - Autocut On
 - Autocut Off
 - Print horizontal line
- **Borderless**
 - On
 - Off
- **Black Overcoating**
 - Ignored by Halftone driver
- **Measurement settings for verification (ILS30)**
 - M0 - UV included
 - M1 - D50 UV included
 - M2 - UV cut
- **Paper Edge Quality**
 - Standard – Best speed and media use
 - Add top margin – Improves print quality at top of image
 - Optimize media edge print quality – Uses only one print head for highest quality
- **Ink density adjustment**
 - Range is -80% .. +100% => factor 0.2 .. 2.0 (20%..200%)
 - Default value is 0% (no adjustment)
 - Values above 0% are only applied for 2400x2400 dpi
 - Set this value in Server Manager before you start Color Tools to create a calibration – in this case the value will be embedded in the new EPL file which you create.
 - Each time you choose a calibration in Server Manager or Job Editor, the adjustment value will be set from the calibration's EPL.

Color modes

Color Mode	Comment
CMYKOGVcmkk	SC-P75x0/P95x0
CMYKVcmkk	SC-P73x0/P93x0 (for test also SC-P75x0/P95x0)

Ink types

Ink types define which kind of black ink is to be used:

Ink type	Black ink
EPSON UltraChrome PRO Photo Black	Photo Black
EPSON UltraChrome PRO Matte Black	Matte Black

Media types

Media types address some settings at the printer, such as head gap and adjustments. In the Halftone driver there is no constraint between media types and print modes. But:

- There is a knowledge article about settings and adjustments for best print quality:
<https://communities.fiery.com/s/article/Print-quality-on-EPSON-P75x0-95x0-models-is-bad-looks-blurred>
Make the settings and adjustments. Not doing them is one of the causes of severe grain.
- Wrong media type can cause the head to touch the media or too much head distance. Best quality requires the best match. For non-original medium, please try various media types and choose the best.
- Generally, the HT driver is more sensitive to adjustments than the CT/RGB drivers.
- Media type in Fiery XF and on printer must match. Else the adjustments of the wrong media type are used which is one of the causes of severe grain.

Print modes

This is the list of print modes. Standard settings in **bold**:

Resolution	Print mode	VSD	1Hd	Pass	Matte	Comments
300x300	Draft	1	-	1	ok	Lowest quality and gamut
300x600	Speed	1	-	4	ok	Low gamut
600x600	Normal	1	*	6	ok	Productivity print modes
	Quality	1	*	8	ok	1Hd: Normal changes to Quality
1200x1200	High Quality 1	5	*	12	ok	Lowest grain for photo printing. Second highest ink amount 1Hd, matte paper: High Quality 2 changes to High Quality 1
	High Quality 2	5	*	16	ok	
	Dot Proof	7	*	12	poor	Between High Quality and Proofing Only SC-P75x0/P95x0 HT driver Generally not for matte media
	Proofing	8	*	12	poor	Best text sharpness at 1200dpi Generally not for matte media
2400x1200	Max Quality	6	*	24	ok	Good text sharpness with less grain
2400x2400	Max Quality	6	1	36	ok	Maximum detail. Highest ink amount possible Only HT driver

VSD: A set of drop sizes

1Hd: '-': not supported, '*': Paper Edge Quality setting, '1': Always one head

NOTE: Dot Proof and Proofing are not suitable for most matte media. Uncoated paper, e.g. ZP80 seems to work though.

Dot sizes

This is the list of Dot Size choices by VSD. Standard settings in **bold**:

VSD	Dot size	Comment
1	Variable	"Variable Small Large" has the potential of less banding "Variable Medium Large" and "Large" reduce mist in high head height applications.
	Variable Small Large	
	Variable Medium Large	
	Large	
5, 7, 8	Variable	The modes don't have a medium dot.
	Small	The small dot seems to be useful for Proofing mode on uncoated media (ZP80).
	Large	
6	Fixed	1 bit per pixel

Ink density adjustment

The ink density adjustment GUI works like in the CT drivers. Differences:

- In the HT driver it adjusts the working point of the linearization, as a factor.
- Values above 0% are ignored for all resolutions except 2400x2400.
- 2400x2400 special behavior: The default ink density equals 2400x1200 resolution. This measure is for ease of use with most media types. But positive ink density adjustment values up to +100% are applied, so that special applications with extra high ink demand such as backlit printing can be covered with 2400x2400.

Creating a calibration set

The following is a walk-through of what can be done and what makes sense to look into.
Our example paper is Fiery Proof Paper 81500BA Matt.

Ink density adjustment

We start with full amount:

Ink density adjustment

0 %

Start Color Tools

The screenshot shows the 'Color Tools' application window. The left sidebar has 'Settings' selected. The main area is divided into several sections:

- Printer Settings:** Printer: EPSON SC-P7300 (EPSON SC-P73x0), Printer type: EPSON SC-P73x0 HT, Ink type: EPSON UltraChrome PRO Matte Black.
- Calibration:** Measuring device: EFI ES-2000. Calibration intent: Photo or production (selected).
- Media Settings:** Media type: Singleweight Matte Paper, Media name: Fiery Proof Paper 81750BA Matt. Media feed adjustment: Target (mm): 500, Actual (mm): 500.
- Output Settings:** Resolution: 1200 x 1200, Print mode: High Quality 2, Print direction: Bidirectional, Halftoning: Error diffusion (SE1). Color mode: CMYKcmk, Dot size: Variable.

Buttons at the bottom include 'Advanced', 'Cancel', and 'Next'.

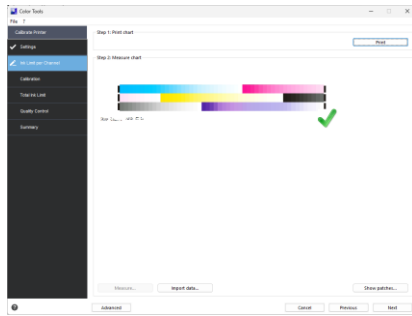
In Advanced, set some light ink in solid:

The screenshot shows the 'Color Tools' application window with the 'Light in Solid' calibration step selected in the sidebar. The main area displays:

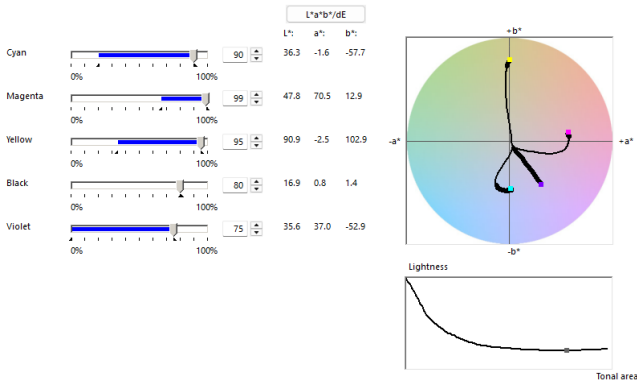
- Three radio buttons for ink density: Light Cyan (10%), Light Magenta (10%), and Medium black (10%). 'Medium black' is selected.
- A graph showing a curve from 0% to 100% ink density.
- A 'Reset' button.

Buttons at the bottom include 'OK' and 'Cancel'.

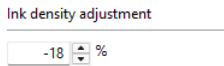
Print the first chart



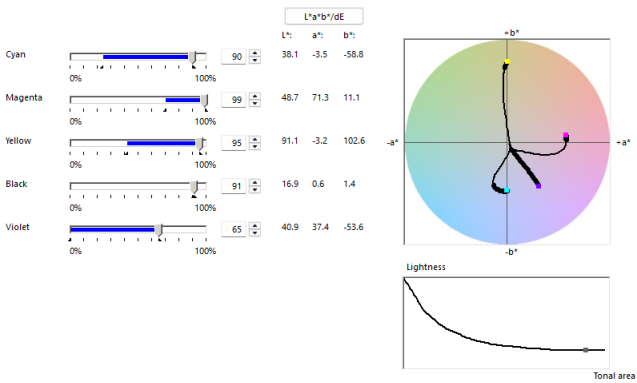
Look at the Advanced dialog:



Ouch, too much ink! We can reduce all inks to $\leq 82\%$ without losing much.
 So we abort, close Color Tools and start from scratch, with adjustment to 82%.

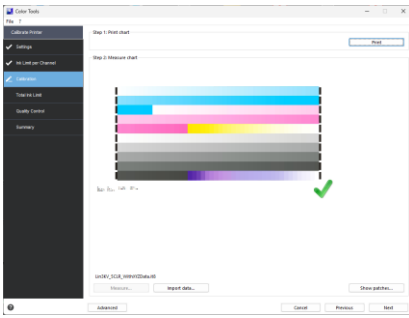


Better:

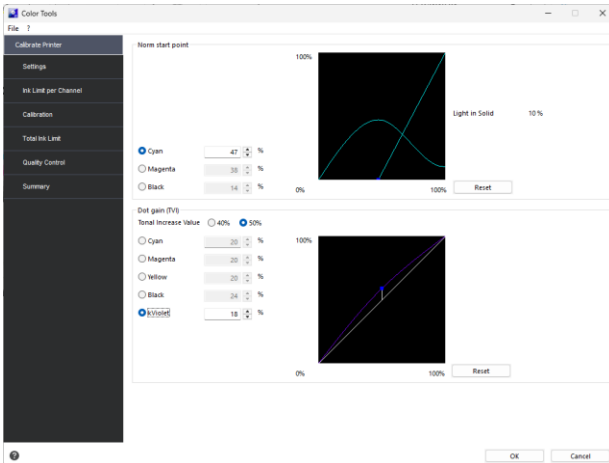


Let's set 90/100/95/80//65.

Print the second chart



Open the Advanced dialog:

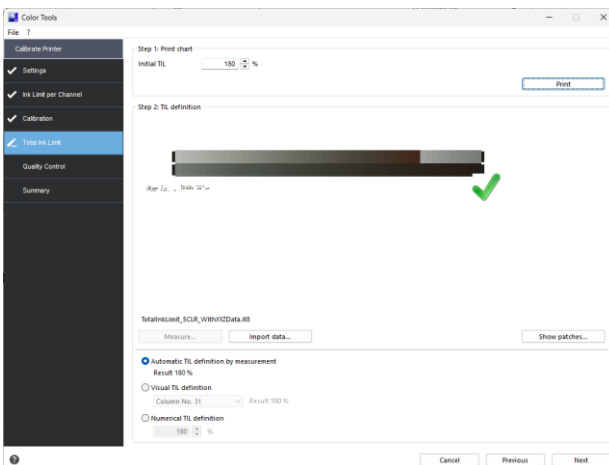


Norm start point note: Please use plenty of light inks. The actual light ink amount is less than shown in the preview. Don't worry about Total Ink Limit.

Setting Dot Gain values from experience...

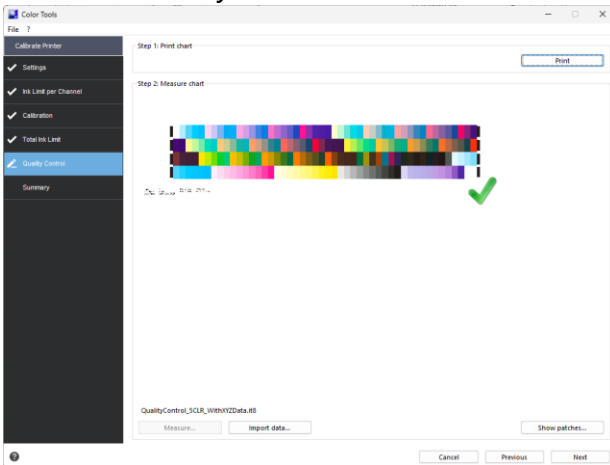
Print the Total Ink Limit (TIL) chart

Set the initial TIL to somewhat less, e.g. 180%



Actual print is somewhat corrugated. Set numerical TIL definition to 160%.

Print the Quality Control chart



Print looks still a bit too corrugated.

Go a step back and set numerical TIL definition to 150%. Print Quality Control chart again. Looks OK.

Create ICC profile in Color Profile Suite

After measurement, enter “Edit profile settings”:

Ink Saving: Makes a lot of sense for difficult media or print mode (low TIL). Setting “Low” already helps.

Black generation: EPSON’s Light Gray ink is a game changer here – you should make sure that black is used from the beginning. Default setting uses CMY inks for very light gray areas. The setting of Ink Saving Low is a good start.

Black blending: Again Light Gray helps a lot – set it to Low.

Supported ControlStrips

Not all ILS30 control strips selectable in XF may be printed or measured correctly. Use these control strips:

- Fogra MediaWedge V3.0 XE 3Z (EPSON Px5x SpectroProofer ILS30).tif
- Fogra MediaWedge V3.0 XE 2Z (EPSON Px5x SpectroProofer ILS30).tif
- Fogra MediaWedge V3.0 XE 1Z (EPSON Px5x SpectroProofer ILS30).tif
- JapanColor 54ControlStrip_EPSON_Px5x_ILS30EP_2lines.tif
- JapanColor 54ControlStrip_EPSON_Px5x_ILS30EP_1line.tif
- IDEAlliance ISO 12647-7 Control Wedge 2013 (EPSON Px5x ILS30EP 3rows).tif
- IDEAlliance ISO 12647-7 Control Wedge 2013 (EPSON Px5x ILS30EP 2rows).tif

FAQ

Question	Answer
I observe too much grain. What shall I do?	<p>On the printer, choose the best media type and make the print adjustments. See also the chapter Media types</p> <p>Make sure the media type in Fiery XF is the same as on the printer panel</p> <p>Choose the Matte Black ink type for matte media. This activates matte-specific print mode variants.</p> <p>Enable light in norm ink (first advanced dialog)</p> <p>Move the norm start point to some higher percentage (third advanced dialog). You can enable plenty of light ink because it is gradually taken out up to the TIL point.</p>
On matte paper, I see irregular horizontal stripes, especially in black	<p>Many matte media have this issue to some extent. Light inks can conceal it.</p> <p>Proofing and Dot Proof print modes are developed for semimatte and glossy media and yield poor results on most matte media. In CT/RGB drivers they are not even available. In HT driver we offer them because they work with e.g. ZP80.</p>
Why is my first profile with the HT driver not perfect?	<p>For best results you need to play with the settings. If the material is difficult, expect to spend a few days for various print modes and other settings.</p>
The dark areas have bad artifacts. What shall I do?	<p>Set <i>numerical TIL definition</i> to lower value and redo the following steps.</p>
The gamut is poor. What shall I do?	<p>There is a trade-off between print speed and gamut because of ink drying time. Try slower print mode.</p> <p>Ink saving profile is also worth trying, in combination with TIL tweaking.</p> <p>If the material can handle very high ink amounts, try a suitable print mode.</p> <p>There is a trade-off between gamut and accuracy. Calibration intent <i>Proof</i> reduces the gamut to just covering the reference profile, e.g. ISO Coated. This yields best accuracy for proofing workflows. Either start with Calibration intent <i>Photo or production</i> or set the channel ink limits manually.</p>
I have artifacts near paper white. What shall I do?	<p>Try Dot Gain: 20 for most inks, 22 for black and 18 for violet is a good start. 0 seems also a good choice.</p> <p>Review the channel ink limits. In most print modes, 100% does not add value. It is not uncommon to have values less than 60% for some ink, typically cyan. A too high channel ink leads to curves that start too flat and end very steep.</p> <p>Ink density adjustment can improve the working point of Color Tools for better accuracy (if the highest channel ink is somewhat below 90%).</p>
Can I create an EPL in Color Tools and create my own ICC profile?	<p>Yes</p>
Can I take my calibration sets to another Fiery XF?	<p>Yes</p>
Can I use Fiery XF without Epson Edge Dashboard	<p>Yes</p>
Can I use EMX files	<p>No</p>

Can I take a generated EPL and create my own ICC profile?	No
If the media setting on the printer was created only at the printer (using Easy Media Setup), not by Dashboard: Can I create an EPL in Color Tools and create my own ICC profile?	No. The HT driver deals only with generic media types.

Change History

Version	Date	Description	Updated by	Affected XF Versions
V1.0	21-May-26	First release	Kai Stark	Fiery XF 9.0.1