

Epson's Guide to optimize Print Quality with the Epson SC-S30600

Introduction

The SureColor SC-S30600 and have been designed to meet the requirements of the indoor and outdoor Signage market. Typical applications for the signage market include everything from billboards, soft signage and high end point of sale materials such as backlit displays and high quality vehicle wraps.

For that requirement Epson has designed a range of print quality modes to address each of those applications, from basic outdoor signage to high end indoor signage.

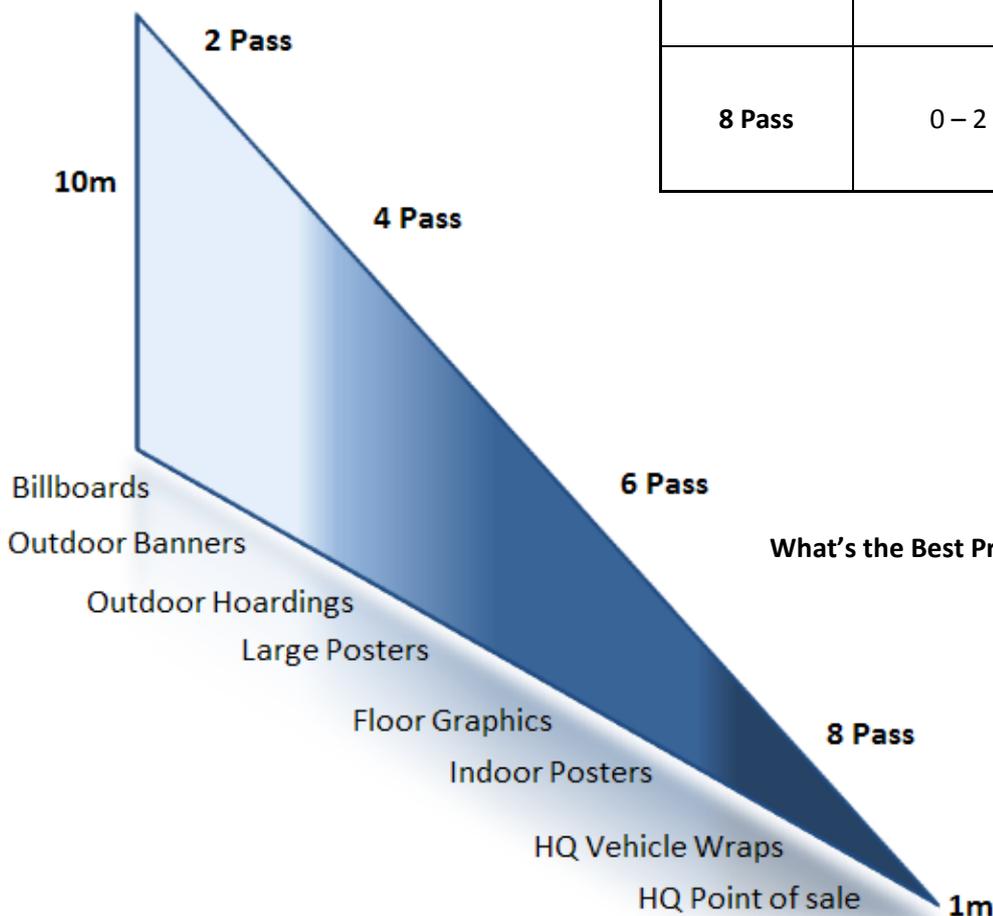
The aim of this guide is to assist you with achieving the very best results when using the SureColor SC-S30600 by combining the most appropriate print modes and the best setup practices, to achieve the right results, for the chosen application.

What are these print modes?

Print Modes	Print Resolutions
2 Pass	720 x 720 dpi
4 Pass	720 x 720 dpi
6 Pass	1440 x 720 dpi
8 Pass	1440 x 720 dpi

When should I use them?

Print Modes	Viewing Distance	Application
2 Pass	10 meters +	Billboards, outdoor banners.
4 Pass	5 – 10 meters	Outdoor posters, Hoardings.
6 Pass	2 – 5 meters	Large format posters, displays, floor graphics.
8 Pass	0 – 2 meters	HQ Vehicle Wraps, Backlit displays, Small decals.



What's the Best Print Mode for my Customer?



What can I expect with these print modes?

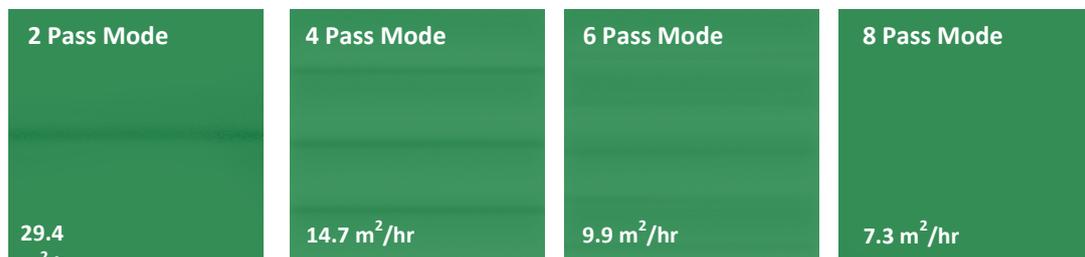
The Epson SureColor SC-S30600 have been designed to offer the highest quality at 8 pass mode and therefore you can use this print mode with the expectation of high quality results such as smooth gradients, uniform solid colors and sharp halftones.

When printing at 2 pass mode, offering 29.4 m²/hr, it should be possible to observe banding between each pass of the print head.

When printing 4 pass and 6 pass modes, a gradual improvement will be observed. There should be an unevenness in tone on close inspection, the extent of which will depend on the actual image itself. For example large expanses of solid color will show more imperfections than a busy halftone image.

The degree of unevenness can be minimised or accentuated by the dynamics. Choice of substrate, setup of the printer, quality of the color profile, setup of the RIP software.

The illustration below is intended as a guide to expected results.



What Can I do to Optimise my SureColor SC-S30600?

The SureColor SC-S30600 User Guide offers a great deal of useful tips and techniques for setting up the printer. However, there are some settings that will have an immediate effect on overall print quality.

Setting the best Print head gap or Platen Gap

The first step in improving print quality on any Epson SureColor printer is to set the best platen gap parameter. There are two considerations to make at this stage, quality and reliability. The closer a printhead is to the substrate surface the better the overall quality. If the substrate gets too close to the print heads because of substrate deformation (caused by reaction to heat or moisture) it can result in head strikes. Head strikes are not always as dramatic as they sound, so if you observe 'flecks' of ink across the printout, it may be due to incorrect Platen Gap setting.



To resolve head strikes across the substrate surface, first increase the platen gap setting.

In addition, consider lowering the heater temperatures, increasing the media suction and media tension.

THICKNESS (mm)	GAP	TYPE
0,1 > 0,3	1,50	vinyl, polyester
0,31 > 0,75	2,00	banner, canvas
0,76 > 1	2,50	others

Print head Alignments

Before Head Alignments



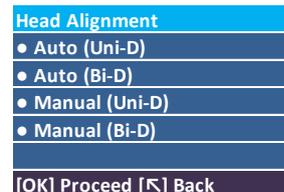
To perform head alignments, using the printer control panel, select **Media Setup>Customize Settings>RIP Settings** (or Media 1, 2, 3, etc)>**Head Alignment**



Use the Printer control panel to access the media setup menu.



Input the correct media thickness for your substrate.



For the simple operation, choose 'Automatic' for either the Bi-D or Uni-D mode.

Substrate feeding

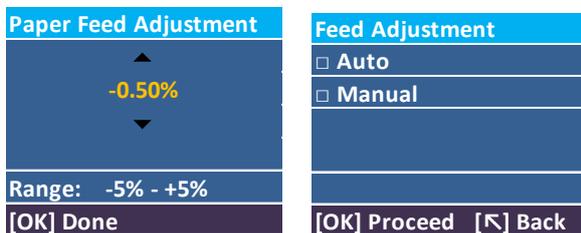
Because all substrates feed through the printer with slightly different efficiencies it is highly recommended to perform substrate feed adjustment on each media you use.

Heavy dark or light bands at regular intervals. Known as white banding or dark banding are a common result of poorly configured paper feed settings.



It is possible to perform these adjustments while the printer is in operation to correct any issues while in production.

To perform paper feed adjustments use the menu on the printer and navigate to the following location. **Media Setup>Customize Settings>Media 1, 2 , 3,>Paper Feed Adjustment**. If a RIP is being used, these settings can be adjusted through the RIP software interface.



Setting the best 'Media Tension'

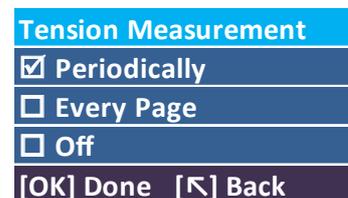
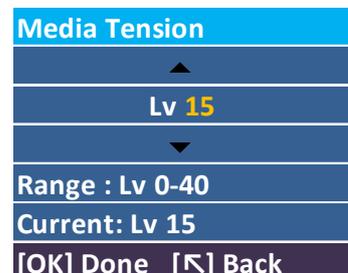
Depending on the substrate loaded in the printer, you can adjust the media tension applied. You can also set the frequency of tension measurement to ensure the SureColor SC-S30600 always keeps a consistent tension on the substrate.

You can choose from 0 (no tension) to 40 (high tension). If you are unsure of the best tension setting, follow this generic rule.

- Thin media = **low tension**
- Medium media = **medium tension**
- Thick and/or heavy media = **high tension**

Media Type	TENSION
Thin Film	5-10
Polyester, Vinyl	15-20
Banner, Canvas	25-35

'Tension Measurement' set to 'Periodically' is recommended and will be performed every 5m. The measurement will be evaluated against the 'Media Tension' setting. If the Tension Measurement is turned to 'Off', the substrate system will roll more media than needed to avoid tension.



"I've done that, but I'm still not happy with the results, what else can I do?"

It's important to realize that there are 3 critical elements involved in producing a high quality print. The printer itself, the substrate setup and the quality of color profiles being used.

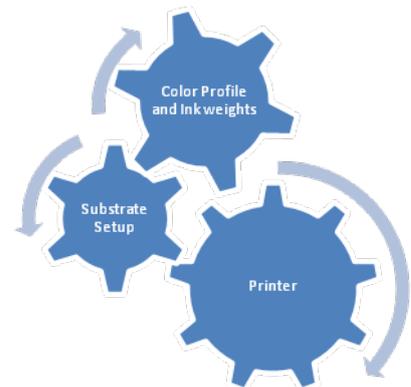
Quick Tips

- If using a commonly used or widely available substrate, search the Epson Media Qualification site. Epson are currently developing a comprehensive library of quality colour profiles which include optimal substrate settings. If they carry the Epson approved stamp, you can use them with confidence. <http://epson.color-base.com/>

EPSON MEDIA
QUALIFICATION
PROGRAM

- If you cannot find your substrate on the Epson Media Qualification Program, enlist the support of your media reseller. It's quite common for media manufacturers to supply quality profiles for the key software vendors and printer manufacturers.

- Consider investing in the colour management process. Either by bringing in an expert or by investing in the required equipment and software. Many printers consider colour management a wise long term investment for their business. It reduces wasted prints, ensures accurate repeat work and gives predictable results across all output devices.



- If your prints look over inked or under saturated, this is a strong sign that improvements to the colour profiles are required.
- Take the time to setup the substrates used frequently. Running the 'Substrate Setup' on the SureColor printers through the control panel will result in the best possible setup for each substrate.

- If using a media without pre provided optimal printer settings, produce some test prints showing 100% swatches of solid colors such as Cyan, Blue and Greys. Based on the evaluation of ink saturation, ink drying and effect on the substrate adjust and set best heater settings. Profile's provided by the Epson Media Qualification Program include 'technical profile information'. And covers heater settings and ink limits

Information

General

Creation: 06-01-2012

Last modified: 06-01-2012 11:47

Creator: Color Concepts Netherlands

Heater temperatures: Pre-Heater: 40°C
Print-Heater: 42°C
Post-Heater: 45°C

Ink restrictions: Cyan: 54
Magenta: 65
Yellow: 57
Black: 65

Example of 'Technical Profile Information from Epson Media Qualification Program.

Always perform the required printer maintenance as outlined in the user guide. This will ensure your print head is kept in optimum condition while printing and protect the overall lifetime of the product.

If the printer is used for heavy production, it is beneficial to perform printer maintenance on a daily basis.

When performing the maintenance, consult the User Guide for the best practices, they will save you time and ensure best possible results.

Always use the recommended cleaning materials

C13T699300	SC-S30600 Ink Cleaner. (Cleaning liquid for printhead maintenance)
C13T724000	SC-S30600 Waste Ink Bottle (For replacing collected waste ink)
C13T724100	SC-S30600 Maintenance Kit. (Wiper cloth, cleaning stick, protective glove)

Thank you for your time and commitment to Epson, we wish you continued success with the Epson SureColor S-Series range of indoor and outdoor signage printers.

