

# KODAK Proofing Software A simple path to consistent color

# Verifying and Optimizing a Profile in KODAK Proofing Software in KPS 10

## When do you need Verify a Profile?

- After creating a custom media configuration
- Anytime to check for accuracy of the proof's color match
- To verify for G7 compliance









# How long does it take?









Verifying a profile can take approximately 1 hour, depending on the type of spectrophotometer you have.

If you are using a printer with an inline spectrophotometer, all the steps can be performed remotely.

If you are using an offline spectrophotometer, additional active participation is required to measure charts.

When verifying a profile, a special Color Bar containing a profile chart (TC1617 – includes press grays) will be printed for measurement.

For all supported spectrophotometers, the profile chart is 1 page.





# How do I prepare?







## To prepare:

- Create a custom Media Configuration and Proofer Profile using KPS v8.5 or higher.
- Create a custom ICC DVL with your custom Media Configuration and Proofer Profile. The best color performance can be achieved by using an ICC DVL. You can also use Profile Pairs; but this will not yield the best color performance. (See the Instructions below, "Creating DeviceLink Profiles in KPS")
- It is best to verify the color of your new Media Configuration + DVL immediately after creating it.
   You can also verify the color, at any time in the future.
- If you are verifying the color of an existing Media Configuration, you will need to do the following first:
  - Load the proper media into the printer, ensuring that you have enough media to complete the process—including calibration.
  - Ensure that you have an adequate supply of ink.
  - Run a nozzle check test, and clean if needed.
  - If your printer has been idle for a long time or is newly installed; it is recommended to "warmup" the printer first. Run a series of fully inked proofs for a day or two; perform normal head cleaning cleaning cycles at the start and end of each day, and as needed. If nozzle performance is intermittent; continue the "warm-up" for another day.







#### 1. Media – choose the right Media

- 1. Color of Media
  - 1. Paper color should be close as possible to the target white point.
  - 2. Check paper manuf. for compatibility with your color target. Best results with Epson Media on Epson Proofer.
  - 3. Choose the right Measurement Condition some color targets/media require a specific measurement condition.
- 2. Color Gamut requirements. Check paper manuf. for compatibility with your color target. Best results with Epson Media on Epson Proofer.

#### 2. Media Configuration Settings tips

- 1. 30min drying time for all prints is ideal.
- 2. Total Ink Limit should not be set too high (most Semi-Matte media types are never higher than 1.0, for P75/P95 usually not higher than 0.8)
- 3. Paper Feed use the new method in KPS v8.5 or higher.
- 4. For Optimum color results create a new custom Media Configuration. Kodak Factory Media Configs are not for color-critical work.

#### 3. Spectrophotometer tips

- 1. White calibration tile should be clean.
- 2. Spectrophotometers that require hand measurement can be frustrating and inconsistent. Recommend using an inline Spectrophotometer.
- 3. Inline devices
  - 1. Use the White backing strip supplied by the Manufacturer.
  - 2. Ensure Matching white tile installed (White tile serial number must match the Spectro serial number).

#### 4. Printer checklist:

- 1. All nozzles should be firing/printing on a nozzle check pattern.
- 2. Inkjet Printers that sit unused for long periods of time should be "warmed-up" first. (see "How Do I Prepare" slide).
- 3. Stable Ink color might shift after changing cartridges
- 4. Newly installed printers must completely change out all of the installer ink kit (1 or 2 full days of printing).

#### 5. Check the prints

1. Ensure that all prints are not showing banding of any kind. Color patches should have consistent color across the patch.





# Where are the Profiles located in KPS?







## To locate the Profiles in KPS

#### Go to the Kodak Proofer Administrator

- 1. Select your Proofer by its name on top
- 2. Select the "ICC Profiles" Tab
- 3. The Profiles will be in the list

*Note*: All Profiles created by KPS are automatically signed for Certified Process for Color Confirmation

Controller P9000lated P6000_n	npi 7Violet_mpi	7s_mpi	5v_mpi		Koda
Settings Maintenance			Color Bars	Reports Media Types	
Name	Origin	Туре Са.	En	Custom Media 1_2019_04_02_022827.icc	
CGATS21_CRPC3.icc	Custom	output N	Yes	Description	
CGATS21_CRPC4.icc	Custom	output N	Yes	Created By: Kodak Proofing Software	
CGATS21_CRPC5.icc 3	Custom	output N	Yes	Color Course CNIV/	
CGATS21_CRPC6.icc	Custom	output N	Yes	Color Space: CMYK	
CGATS21_CRPC7.icc	Custom	output N	Yes	Connection Space: Lab	
Custom Media 1_2019_04_02_022827.icc		output Pr	Yes	Madia Configuration: Custom Madia 1	
EuroscaleCoated.icc	Custom	output N	Yes	Media Configuration: Custom Media 1 Media Type: Custom Media 1	
EuroscaleUncoated.icc	Custom	output N	Yes		



# **Profile Verification - Introduction**

- This presentation uses an Epson printer equipped with the SpectroProofer inline spectrophotometer option (which can be an automated process) as an example. The steps are similar for other printers.
- Recommend Creating a Custom Media Config + ICC DVL using KPS v8.5 or higher.
- KPS v10.0 or higher also uses the latest Kodak ICC profile Gray Balance correction technology, for color target data sets that contain extra gray balance information (G7TVI).

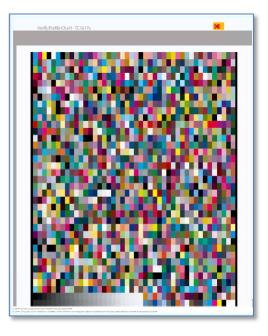


### Introduction

- The basic steps are:
  - Create the Profile Verification chart (Color Bar= VerifyProfileTC1617x)
  - Export the color bar
  - Create a new Layout to use the Profile Verification Color Bar
  - Output the color bar using the new layout
  - Measure the color bar

	Controller	SIM_P9570_2	SIM_P9570_1	5000V_h	v 7570_hv	,
Settings	Maintena	nce	ICC Profiles	Color Ba	rs Reports	Media Type
Name			Origin	Enabled	Description	
75_ESPPP	_12THq_GL06C1_TC	1617_30M2newO	Customer	Yes		
75_ESPPP	_12THq_GL06C1_TC	1617_30M2new	Customer	Yes		
75_ESPPP	_12x12THq_GL06C1	TC1617_30M2	Customer	Yes		
	_12x12THq_GL06C1		Customer	Yes		
Disable	Enable Expor	t Export PI	F Import	Delete E	Edit New	

New Color Bar		
		2
Name:	75_ESP240_12x12THq_GL06C1_TC1617_m2	
Spectrophotometer:	Inline M2	
Artwork: (	Default VerifyProfile TC1617x	
Comments:		
		Next Cancel





#### Step 1 - Create a Custom Color Bar

器 к	odak Proofer Admin	istrator - KPSHV				– 🗆 X
File	Help					
?	Controller	5IM_P9570_2	( <b>1</b> SIM_P9570_1	5000V_hv	7570_hv	Kodak
	Settings	Maintenance	ICC Profiles	Color Ba	ars Reports	Media Types
	Disable Enab	ile Export Exp	port PDF Import	Enabled	Description	
Back	up is required (no back	up ever completed)				Connected

- Launch the KPS Administrator and Click on the **Color Bars** Tab.
- Select your Proofer by its name on top
- Click on **New** to create a new Color Bar

**Note:** The Color Bar for the Profile Verification must be created from the *"Default VerifyProfile TC 1617x "* Artwork





#### Step 2: Name the new Custom Color Bar

💦 New Color Bar		×
		?
Name:	75_ESP240_12x12THq_GL06C1_TC1617_m2 🔶 1	
Spectrophotometer:	Inline M2 🔶 2	
Artwork:	Default VerifyProfile TC 1617x 🛻 3	
Comments:		
	4 - Next Cancel	)

- 1. Name: Enter a name that describes the color bar
- 2. Spectrophotometer: Select the Spectrophotometer plus the measurement condition
- Artwork: Select the "Default VerifyProfileTC1617x" Artwork
   Note: You must select this Artwork
- 4. Click Next



#### **Step 3: Color Bar – Patches Tab**

Patches	Color Targets	Settings	
Patches	Gaps		
Number of Patches 1628	Width 0 in		
Number of Rows 37	Height 0 in		
Number of Columns 44	First Patch Location		
Change			
	Left Edge 1.531 in		
Patch Size	Left Edge (1.531 in		
Width 0.295 in	Rotation		
Height 0.472 in	Rotate		
Image Size			
Width 16.055 in			

- Leave the default Image Size
   settings
- Click on the Color Targets
   Tab



## **Step 4: Color Bar – Color Targets**

Pato	:hes	Color Targets	Settings
Tolerances and L*a*b* Targets			
Characterization Standard	GL2006_C1.icc GenericGray-Ou GL2006_C1.icc JapanStandard NoColorManage PSOcoated_v3. PSOuncoated_v SWOP2013C5.i USSheetfedCoa	 utput.icc icc ement.icc .icc /3_FOGRA52.icc cc	+/-
<b>Setting Ta</b>	rget Labs from K	CC Profile Performing requested action, please wait	>

 Characterization Standard: The Target ICC Profile you are looking for may already be in the list.

**Note:** If you require a different one, you can import the profile as follows:

- 1. In the KPS Administrator
- 2. Select your proofer name
- 3. Select the ICC Profiles Tab
- 4. Click the Import button



#### **Step 5: Color Bar – Settings Tab**

twork: Default VerifyProfile TC1617x	Spectrophotometer: Inline	0
Patches	Color Targets	Settings
	Spectrophotometer Measurements  Snapshot Color Values on Next Reading Convert Black-backed to White-backed Convert UV Filtered to Unfiltered Align to Spectral Standard	
	Drying Time Use Ambient Air and Wait (min) ☐ Use Inline Spectro with Forced Air Forced Air Dries Row For (seconds) Forced Air Dries Maximum of (Rows) 12 ◆	
		Save Cancel

- Leave the default settings
- Click Save

**Note:** The settings are not applicable to the Profile Verification process.

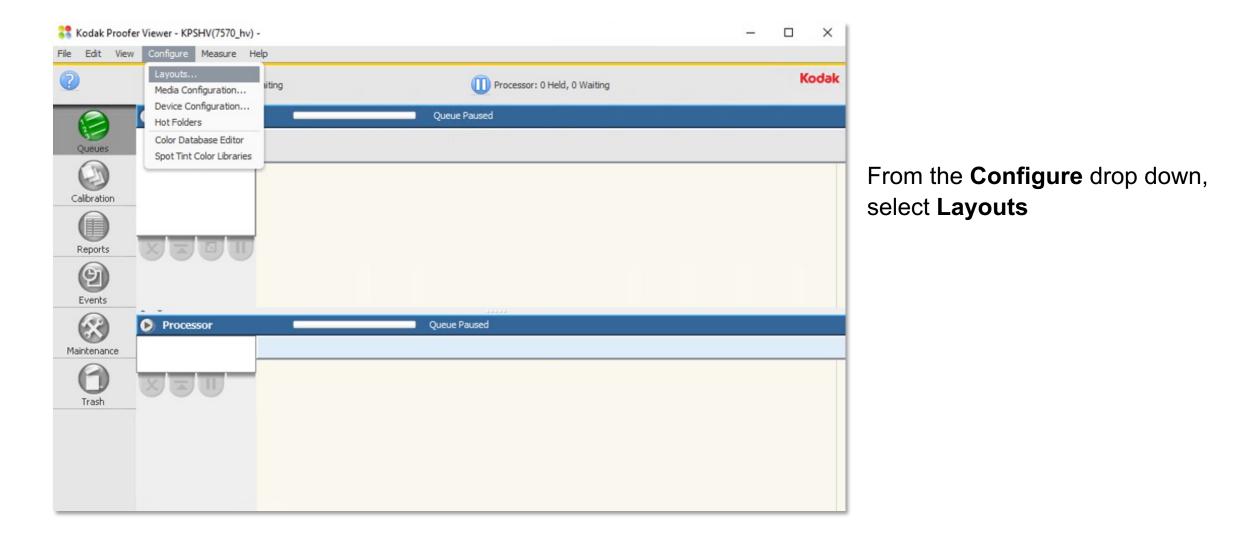


## Step 6: Export the new Color Bar

器 К	odak Proofer A	dministrator - K	(PSHV				-		<		
File	Help										
?		Controller	SIM_P9570_2	SIM_P9570_1	5000V_	· ·	_hv	Koda	ək	Choose a convenient location this file is only temporary.	on, as
	Settings	Mainte	enance	ICC Profiles	Color Ba	ars Repo	orts Med	ia Types			
17						器 Save As					×
	75_ESPPP 75_ESPPP 75_ESPPP	_12THq_GL06C1_ _12x12THq_GL06 _12x12THq_GL06	TC1617_30M2newO TC1617_30M2new C1_TC1617_30M2 C1_TC1617_isis2m2 06C1_TC1617_m2	Customer Customer	Enabled Yes Yes Yes Yes	<ul> <li>75_ESPPP</li> <li>75_ESPPP</li> <li>75_ESPPP</li> <li>75_ESPPP</li> <li>75_ESPPP</li> <li>75_ESPPP</li> </ul>	_12x12THq_m2_20 _12x12THq_m2_20	C1617_30M2n 23_03_01_23 23_03_01_23 23_03_01_23	ewO. 4106 4106 4106	df	
Back	Disable up is required (r	Enable Ex	port Export	PDF Import	Delete	File Name: Files of Type:	P75_ESP240_12 PDF	x12THq_GL060	С1_Т(	C1617_m2.pdf Save Cancel	



#### Create a new Layout to use the new Profile Verification Color Bar





#### Step 1: Create a Layout to use your new Profile Verification Color Bar

Layout Editor - KPSHV(7570_hv)	_						
File 75_ESP240_12x	I2THq_GL06C1_TC1617_m2 Roll Length Cut media	0			e "Certified I onfirmation"		-
24 in	Width Use sheet length ea: 31.76 in high by 23.76 in wide Hold in Proofer Queue Hold in Processor Queue			5	our Spectroph or Bar Name.		and
Color Bar Use color bar Measuring spectrophotometer: Inline M2	Print Mirror Image d Process for Color Confirmation Caption Options Positions		ł	button an	Color Bar "Po nd change it to or Bar" and "	o "Sheet" fe	or
Print Label With: Dymo LabelWrite		Mark Positic	ons				×
Color Bar: P75_ESP240_12x1	12THq_GL06C1_TC1617_m2						?
Scatter 🤇	Grid O Tiled O Double-Sided	Mark	1 per	Position	Use offsets		Size
Sheet Margins O in Top O in Left	Oversize Proofs	Caption Color Bar Label	Proof Sheet	Aut  Automatic Automatic	X         0 in         Y         0 in           X         0 in         Y         0 in           X         0 in         Y         0 in	W         7 in           W         16.4 in           W         3.438 in	H 0.5 in H 19.92 in H 0.562 in
0 in Bottom 0 in Right	Allow rotate to fit		Proof Sheet		Marks relative to		
0.25 in Horizontal 0.25 in Vertical	Close sheet after percentage full (%): 85 Close sheet if next proof doesn't fit Close sheet after time expires (minutes): 30				Color Bar Rotation 0° •		
	Check Save Save As	Cancel					



#### **Process the Profile Verification Color Bar through your Workflow**

Two methods:

- 1 Kodak Prinergy Workflow
- 2 KPS "Open Connect" Hot Folder Workflow



## Method 1 – Prinergy Workflow (part 1)

Create a new process template in Prinergy to process your new Profile Verification Color Bar

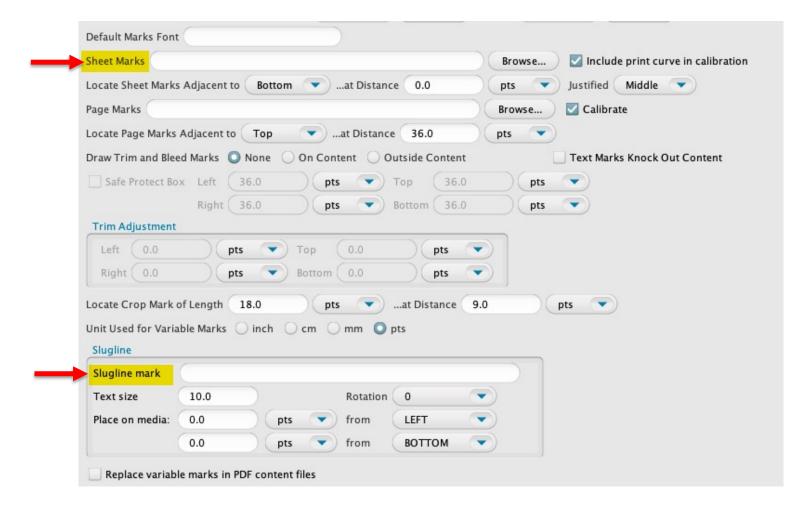
- **Layout:** Choose the newly created Layout from the previous step (slide 19)
- **ColorConvert:** Use the proofer profile and DVL profiles

Media									
Media Configuration 75_ESPPP_12x12THq_m2 Thickness 0.0 inch 💌									
Layout for Kodak Proofers 75_ESP240_12x12THq_GL06C1_TC1									
Size Cut sheet I Min Width 0.0 Inch I Min Height 0.0 Inch I Control Inch I Control I C									
Max Width 23.26381 inch 💎 Max Height 11.0929 inch 💌									
Duplexing None Sront Shift Along Width 0.0 inch Along Height 0.0 inch	Match Colors								
Back Shift Along Width 0.0 inch 🔹 Along Height 0.0 inch 🔹	Match Colors in Page Content								
Layout is 90° Different Than Media Center and crop page to media size	Assumed Source or DeviceLink Profile O Exactly as App	lied Durir	ng Refining 🔷 As	s Defined B	elow, if not se	t in Refining	Exactly as D	efined Belo	w
PDF Box to Use Trim Box 🔹	* Input Device Conditions WPAULKPRIMARYVAraxiHomeV	CreoArax	(i\data\VCC-Profiles\)	75_ESPPP_	12x12THq_m2	_20 🔻 D	etect pages R	efined with	n ColorFlow warn 🔹
	Rendering Intent Perceptual								
Note: In the Preserve Colors section, make sure Preserve White and Black Colors for Graphics is unchecked.	Process CEPS Data Process Marks Color Preserve Colors Preserve White and Black Colors for Graphics Oestination WPAULKPRIMARYVAraxiHome/CreoAraxi/data	Preserve	Any CMYK Pure E						
	Extra Margin for Marks and Bleed	Left	0.0	inch	🔹 Тор	0.0	inch		
<b>Note</b> : In the Marks section, make		Right	0.0	inch	Botton	0.0	inch		
· · · · · · · · · · · · · · · · · · ·	Bleed for Unassigned Pages	Left	0.125	inch	Тор	0.125	inch		
sure the Extra Margins for Marks and		Right (	0.125	inch	Botton	0.125	inch		
Bleed are all set to 0.0.	Crop Distance Beyond Bleed for Pages		10.0		Top	(10.0			
DIEEU dIE dII SEL LO U.U.			10.0		<b>K</b>	10.0	inch	-	
		(agric)		INNI	Dottoin	(100			



## Method 1 – Prinergy Workflow (part 2)

Note: In the Marks section, make sure Sheet Marks and Slugline mark are not assigned.





## Method 2 - Open Connect

Create a new Hot Folder in KPS to use your new Profile Verification Color Bar

- **Layout**: Choose the newly created Layout from the previous step (slide 19)
- **ICC Settings**: Use the proofer profile and DVL profiles

essor Presets			
Media Configuration: 75_ESPPP_12 Halftone Handling: None Color Handling: Custom	x12THq_m2		
Layout: 🗹 75_ESP	240_12x12THq_GL06C1_TC1617_m2		
	Simulation Color Space	ce Advanced	
	ICC Handling:	DeviceLink	
	Simulation ICC Profile:	GL2006_C1.icc	
	Simulation DeviceLink:	75_ESPPP_12x12THq_m2_2023_03_08_015910 GL06C1_2023_03_08_2110	
	Rendering Intent:	Absolute	



## Step 2: Process the Profile Verification Color Bar through your Workflow

This step can be done using either the Kodak Prinergy Workflow or the KPS "Open Connect" Hot Folder Workflow.

In this step your DVL is applied to your new Profile Verification Color Bar.

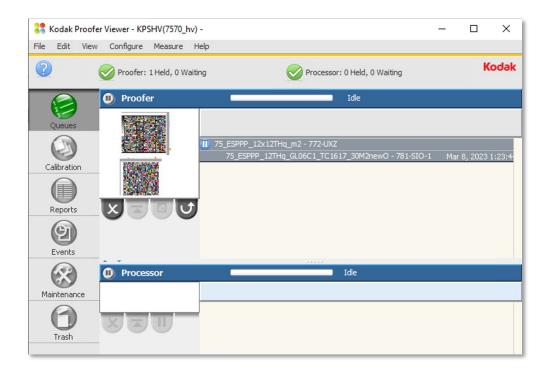
#### Note:

The Profile Verification Color Bar must be the first file sent to the Layout you have created earlier.

You do NOT need to print and measure this image for the following reasons:

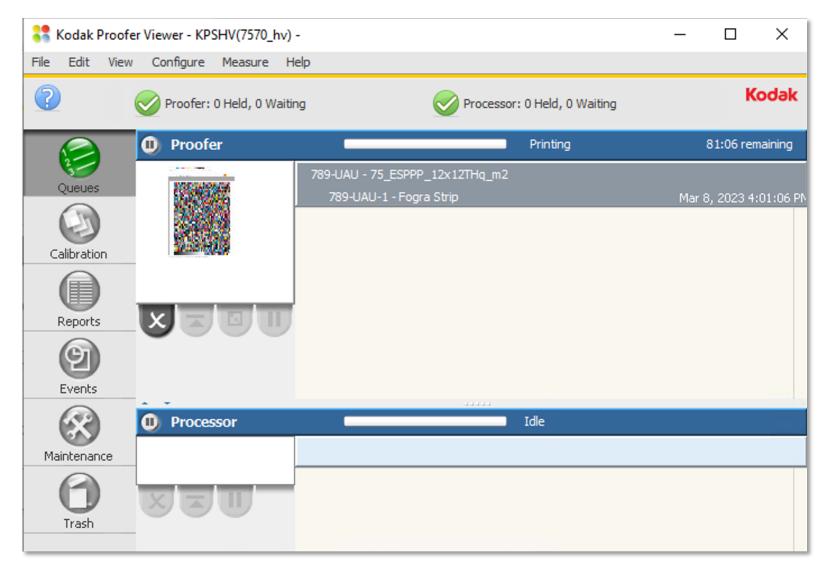
- The page is too long for the Inline Spectro
- To save ink and paper for the Off-line Spectro

After it is completed, it will automatically be in the "paused" state. Then you can delete it and proceed to Step 3 - Print the Profile Verification Color Bar.





## **Step 3: Print the Profile Verification Color Bar**



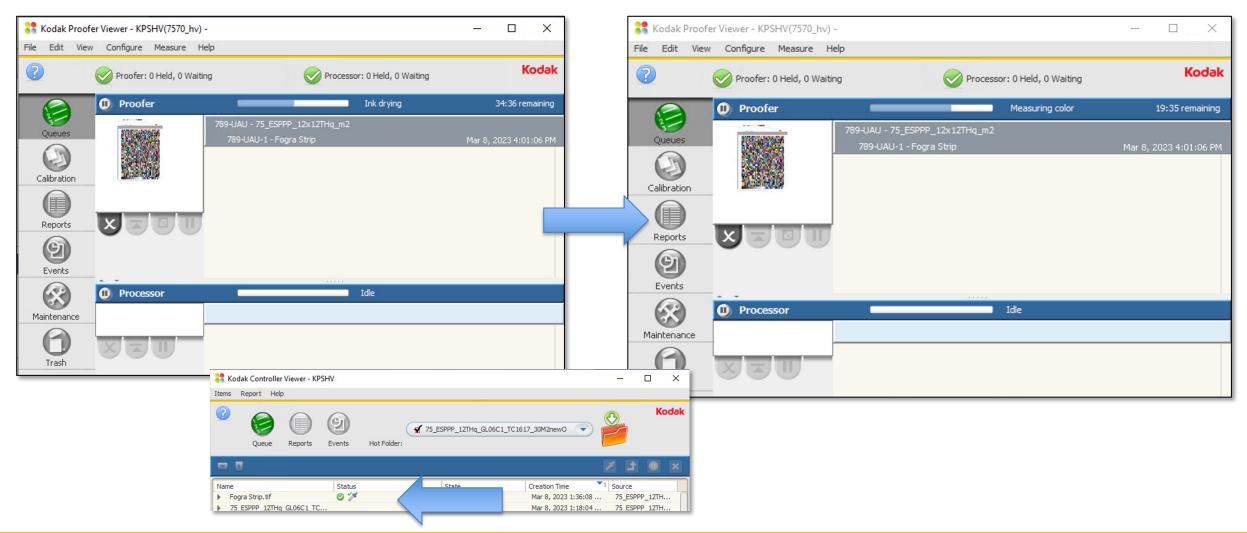
You can now Print the Color Bar using any image (recommend using a very small one to save media).

It will be convenient to save this small image for this purpose somewhere on your KPS Controller; to be used every time you want to Verify the Color of your custom setup.



### **Step 4: Dry then Measure the Profile Verification Color Bar**

This can be done automatically using your inline spectrophotometer, or manually with an offline device.





## **Step 5: Create a CPCC Color Report for Profile Verification**

器 Kodak Proofer	Viewer - KPSHV(7570_hv) -	_	$\Box$ ×
File Edit View	Configure Measure Help		
2	Proofer: 0 Held, 0 Waiting	Processor: 0 Held, 0 Waiting	Kodak
	Report	Parameters	
Queues Calibration Calibration Calibration Calibration Calibration Calibration Calibration Calibration Calibration	Color Confirmation Report By Proof Id Color Confirmation Summary Report Hot Folder Job History Report Precision Color Calibration Details Report Precision Color Calibration Summary Report Proof Id Color Confirmation Status Report System Summary Report	Select or Type Proof Id 3 789-UAU-2	4
Trash	Report Engine has mined data up to: 3/8/2023 4:0	1 PM Cancel	Run

In the KPS Proofer Viewer:

1. Click the "**Reports**" Tab

- 2. Select "Color Confirmation Report By Proof Id,"
- Select the Proof ID for your Profile Verification Chart (should be the first one in the list),
- 4. Click "Run".



## **Step 5: The CPCC Color Report for Profile Verification**

Color Confirmation Report			http://graphic	s.kodak.com	Kodak
	Color C	onfirm	mation Re	port	·
Color Bar Details	Proof	ld:		756-YFB-2	
	Color	Bar Name Bar Targe r Name:	-	75_ESPPP GL2006_C1 7570_hv	_12THq_GL06C1_TC1617_30M2new .icc
Measurement Details	Measu Printer Media	d:	ation Name:	3/8/2023 9 3/8/2023 8 75_ESPPP_	
	Spectr	o Type: o Serial # o Firmwa	: re Version:	Inline M2 004124 X-Rite ILS3	0EP v16127
	Paper			N N	
	Scalin Width: Height			100.00% 100.00%	
Name 75_ESPPP_12x12THq_m2 75_ESPPP_12x12THq_m2	2023_03_08_015910.ic	0	s for Color Con	Sin	tegory nulation bofer
Summary Pas		dE00	Status	Limit	
	Average Maximum Substrate KSolid CMYSolid 95th Percentile Press gray avg wΔL*: Press gray avg wΔL*: Press gray avg wΔL*: Press gray avg wΔL*: Black avg wΔL*: Black max wΔL*:	3.69 0.80 1.16 0.81 1.49 1.53 w∆L* 0.32 0.92 w∆Ch 0.48 1.11 w∆L* 0.44 1.10	passed passed passed passed passed passed passed passed passed passed passed passed passed passed passed	4.00 1.50 5.00 3.50 4.20 3.00 Limit 1.50 3.00 Limit 1.50 3.00 Limit 1.50 3.00 Limit 1.50 3.00	000000000000000000000000000000000000000

- The Report can be opened using various free tools including the Microsoft Edge application or Acrobat Reader.
- The CPCC/Profile Verification report contains all the necessary parameters to send to GraCoL for color certification. Note that all parameters must pass in order to be certified.

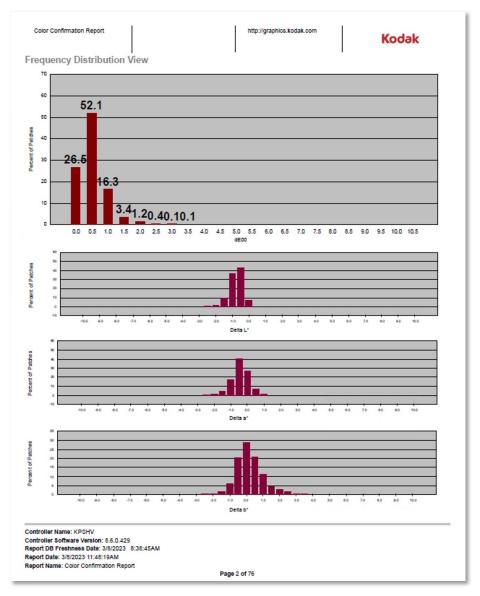
Summary	Passed Certifie	ed Process	for Color Confi	irmation	
		dE00	Status	Limit	
	Average	0.76	passed	1.50	
	Maximum	3.69	passed	4.00	
	Substrate	0.80	passed	1.50	
	KSolid	1.16	passed	5.00	
	CMYSolid	0.81	passed	3.50	1
	RGBSolid	1.49	passed	4.20	
	95th Percentile	1.53	passed	3.00	
		waL*	Status	Limit	
	Press gray avg w∆L*:	0.32	passed	1.50	
	Press gray max w∆L*:	0.92	passed	3.00	
		w∆Ch	Status	Limit	
	Press gray avg w∆Ch:	0.48	passed	1.50	
	Press gray max w∆Ch:	1.11	passed	3.00	1
		WAL*	Status	Limit	
	Black avg w∆L*:	0.44	passed	1.50	
	Black max wol.*:	1.10	passed	3.00	

Controller Name: KPSHV Controller Software Version: 8.5.0.429 Report DB Freehness Date: 3/8/2023 8:38:45AM Report Date: 3/8/2023 11:46:19AM Report Name: Color Confirmation Report

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#### **Step 5: Create a CPCC Color Report for Profile Verification**



#### Some useful data

- The histograms are a useful tool to analyze the performance of your Media Config + profile performance.
- The histogram on the top is showing that 26.6% of the colors are between 0 and 0.5 dE00, 52.1% of the colors are between 0.5 and 1.0 dE00, etc.
- If you add them up....

(26.6 + 52.1 + 16.3) = 95% of the colors are less than 1.0 dE00.



# Troubleshooting

What to do if your custom color setup does not achieve the results you are looking for?





#### Here are the most common areas of trouble...

#### 1. Media Quality

- 1. Color of Media
  - 1. White point should be close to that of the target white point.
  - 2. White Point not compatible with Media type. check paper manuf. For compatibility. Best results with Epson Media on Epson Proofer.
  - 3. Proper measurement Condition some color targets/media requires a specific measurement condition.
- 2. Color Gamut not compatible with Media type. check paper manuf. For compatibility. Best results with Epson Media on Epson Proofer.

#### 2. Improper Media Configuration Settings

- 1. TIL too low or too high (most Semi-Matte media types are never higher than 1.0, for P75/P95 never higher than 0.8)
- 2. Paper Feed try choosing again with the new chart in KPS v8.5 or higher; and re-create the custom Media Config + profiles.
- 3. For Best color results create a new custom Media Configuration. Kodak Factory Media Configs are not for color-critical work.

#### 3. Spectrophotometer issues

- 1. Difficulty with hand measuring devices
- 2. Inline devices
  - 1. Use White backing strip supplied by the manufacturer.
  - 2. Ensure Matching white tile installed (White tile serial number must match the Spectro serial number).

#### 4. Printer performance

- 1. If your Inkjet Printer has been unused for a long period of time it should be "warmed-up" before creating your custom Media Config + Profiles (see "How Do I Prepare" slide).
- 2. Partially clogged printer head(s) may cause inconsistencies, leading to higher color differences.
- 3. Recently changed ink cartridge(s) might cause the color to shift during the setup process.
- 4. Newly installed printers must completely change out all of the installer ink kit (1 or 2 full days of printing).





# **Optimizing DeviceLink Profiles in KPS**

\* Requires a KPS Commercial or Packaging license

Under normal conditions, an optimized DVL is not necessary. The best performance will be achieved by creating a good profile from the start. It is recommended to follow the troubleshooting instructions first, to create the best ICC DVL.





#### **Optimizing a Kodak ICC DVL.**

Help	Administrator - KPSHV				- 🗆 ×
	Controller SIM_F	99570_2 SIM_P95	<b>b</b> ( 70_1 50	00V_hv 7	Koda 570_hv
Settings	Maintenance	ICC Profiles	Color Bars	Reports	Media Types
75_ESPP2 75_ESPP2 75_ESPPP	B DVL Filename Proofed Char data	.dvl _07 _07 _01	Des Cre Col Col Col Col Col Col	eription eated By: Kodak Prod for Space: CMYK nnection Space: CM	

You can use your Profile Verification measurement data to optimize a Kodak ICC DVL (this algorithm only works with ICC DVLs created by Kodak Software).

If you measured your Profile Verification chart using Kodak ColorFlow Software you can export your measurement data and select it, using the "Browse..." button.

In the example shown the KPS measurement data is automatically selected. KPS can Optimize your DVL with one click of the "OK" button. The optimized DVL will appear in the profiles list, with a new date on the end of the name.

You will need to repeat the Profile Verification procedure to verify the color performance of the new Optimized DVL.



# **Creating DeviceLink Profiles in KPS**

\* Requires a KPS Commercial or Packaging license

ICC DeviceLink profiles are a powerful application of the mathematics of device profiles. They effectively combine two device profiles to create a one-way link with a single rendering intent, and can be used to align color on different output devices.

A DeviceLink uses a color lookup table to transform CMYK input values in the source color space to CMYK output values in the destination color space.





### **Step 1: Create new DeviceLink Profile**

💦 Kod	ak Proofer Administrat	or - MPILABD7050								– 🗆 X
File H	lelp									
?	Controller	P9000lated	<b>Þ</b>	🛱 7Violet_mpi	🛱 7s_mpi		5v_m	ai		Kodak
	Settings	Maintenar	ice	ICC Profiles		Col	or Bars		Reports	Media Types
	Name AdobeRGB1998.icc AnalogMatchprintEr AnalogMatchprintEr Approval_Conversio Approval_Source.icc CGATS21_CRPC1.icc CGATS21_CRPC3.icc CGATS21_CRPC3.icc CGATS21_CRPC3.icc CGATS21_CRPC5.icc CGA	A.icc n_to_CMYK.icc : : : : : : : : : : : : : : : : : :		Origin         Custom         Kodak         Kodak         Custom         Custom </td <td>Type display output out</td> <td>Ca N N N N N N N</td> <td>En           Yes           Yes</td> <td></td> <td>Description</td> <td></td>	Type display output out	Ca N N N N N N N	En           Yes           Yes		Description	
Backup	) is required (no backu	p ever completed)				Ena		Delete	Sign Export	Import New

#### Launch the Kodak Proofer Administrator:

- 1. Select the Proofer
- 2. Select the ICC Profiles Tab
- 3. Click on New



### **Step 1: Create Simulation DeviceLink Profile Dialogue Box**

💦 Create Simulation Devi	iceLink Profile for Process Color		×
Minimum Highlight Do	ot Pr ight Adjustment	roofer Separation Control         Full Reseparation         Black Strength       Heavy         Start Black (%)       0         Maximum Black (%)       100         Total Ink Limit (%)       400	×
			Browse
Media Configuration	Custom Media 1		
Proofer Profile	Custom Media 1_2019_04_02_022827.icc	<b>`</b>	
		OK	Cancel



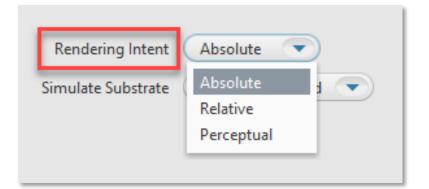
## Step 1: Simulate

	<mark>ihlight Adjustme</mark> i ihlight Adjustmei		
	Jht Bump Jht Minimum Do	t	
Cyan (%)	$\bigcirc$	Cyan (%)	
Magenta (%)		Magenta (%)	
Yellow (%)		Yellow (%)	
Black (%)		Black (%)	

Simulate option	Press characterization data
No Highlight Bump	Select characterization data that reflects a press run without flexographic highlight dot adjustments.
Highlight Bump	Select characterization data that reflects a flexographic press run with plates imaged for a highlight bump. For the best results, the characterization data should reflect the number(s) that you type in the Minimum Dot on Plate (%) area in the Cyan, Magenta, Yellow, and Black boxes. For example, type 8.0 in the Minimum Dot on Plate (%) boxes when you are using the sample characterization file named IT874_Highlight_Bump_8.cgt.
Highlight Minimum Dot	Select characterization data that reflects a flexographic press run with plates imaged for a highlight minimum dot. For the best results, the characterization data should reflect the number(s) that you type in the Minimum Dot on Plate (%) area in the Cyan, Magenta, Yellow, and Black boxes.



## **Step 1: Rendering Intent**



Defines how to transform the file. Rendering intents are available only when **ICC Handling** is set to **ICC Profiles**. Select one of the following options:

**Relative**—transforms colors without simulating a paper tint. The **Relative** rendering intent clips out-of-gamut colors.

**Absolute**—transforms colors and simulates a paper tint. The **Absolute** rendering intent compresses out-of-gamut colors and maps them to the edge of the gamut. This setting is recommended for all Certified Process for Color Confirmation work.

**Perceptual**—transforms colors without simulating a paper tint. The **Perceptual** rendering intent compresses all colors to map them to the smaller color space. Use **Perceptual** for imposition media.



#### **Step 1: Simulate Substrate**

Rendering Intent	Absolute 🔹	
Simulate Substrate	Leave Unchanged 🔍	)
	Leave Unchanged	
	Edit CMYK	
	Edit L*a*b*	
Simulation Source	No Paper Tint	tion text file or l

When the **Rendering Intent** list displays **Absolute**, you can choose to define a substrate in the inkjet proofer color space (not the press color space). The software will override the substrate definition in the characterization data with the new substrate definition.

- **Leave Unchanged**: turns off the override, and uses the substrate definition in the characterization data.
- Edit CMYK: lets you define the substrate in CMYK tint percentages. Type a percentage from 0 to 100. Changes will be spread to colors near the white point.
- Edit L\*a\*b\*: lets you define the substrate in L\*a\*b\* color space. In the L\* box, type a number from 0 to 100. In the a\* box and the b\* box, type a number from -128 to 127. Changes will be spread to colors near the white.
- **No Paper Tint:** Sets the White Point CMYK value to zero; while leaving all other colors around the white point unaltered.



#### **Step 1: Proofer Separation Control**

Proofer Separation Cont	rol
Full Reseparation	<b></b>
	2
Black Strength	Heavy
Start Black (%)	0
Maximum Black (%)	100
Total Ink Limit (%)	400

- Black Strength: To specify the relative quantity of black vs cyan, magenta, and yellow used to generate the neutral gray component of colors. As you increase the strength, colors can contain more black.
- Start Black: Specify the start point on the neutral axis for black ink. For example, if you set the start point value to 20%, tones less than 20% will print with CMY inks only
- Max Black: Specify the maximum allowable percentage of black ink used in the black separation
- Total Ink Limit: Specify the maximum sum of tint values of all the inks



## Step 1: Simulation Source, Media Configuration and Proofer Profile

Simulation Source	CGATS21_CRPC6.icc	Browse
Media Configuration	Custom Media 1	
Proofer Profile	Custom Media 1_2019_04_02_022827.icc	
		OK Cancel

**Simulation Source**: Select an ICC Source Profile or a CGATS5 File of spectrophotometer measurements of the IT8.7/4 chart printed on the press or proofer that you want to simulate.

*Note*: The supplied CGATS files are located in the Proofer Client > Docs folder (D:\Program Files\Kodak\Proofer Client 10.x.x.x\Docs)

Media Configuration: Select a media configuration to use with the DeviceLink

**Proofer Profile**: Select proofer profile on which to base the DeviceLink



#### **Click OK to Save the Settings**

Simulation Source	CGATS21_CRPC6.icc	Browse
Media Configuration	Custom Media 1	
Proofer Profile	Custom Media 1_2019_04_02_022827.icc	
		OK Cancel

Save As		×	
		?	
Name		Origin	
Custom N	/ledia 1_2019_04_02_0228	Custom	
Name Ax	_Custom Media 1_2019_04_0	2 022827	
	Сок	Cancel	

Give a name to the DeviceLink Profile and Click OK to Create the DeviceLink Profile



#### The DeviceLink Profile will appear in the ICC Profiles List and it will be signed for

#### **Certified Process for Color Confirmation**

Settings Maintenance		ICC Profiles		Color Bars			Reports	Media Types	
Name		Origin	Туре	Ca	En		Ax_Custom Media 1_2019_04_02_0	22827.dvl	
Ax_Custom Media 1_2019_04_02_022827.dvl		Custom	devicelink	Si	Yes	1	Description		
CGATS21_CRPC1.icc		Custom	output	N	Yes		Created By: Kodak Proofing Software		
CGATS21_CRPC2.icc		Custom	output	N	Yes				
CGATS21_CRPC3.icc		Custom	output	N	Yes		Color Space: CMYK		
CGATS21_CRPC4.icc		Custom	output	N	Yes		Connection Space: CMYK		
CGATS21_CRPC5.icc		Custom	output	N	Yes		Mark Carlo Carlo Mark		
CGATS21_CRPC6.icc		Custom	output	N	Yes		Media Configuration: Custom Media 1 Media Type: Custom Media 1		
CGATS21_CRPC7.icc		Custom	output	N	Yes				
Custom Media 1_2019_04_02_022827.icc		Custom	output	Pr	Yes		Ink Type: Epson <sup>®</sup> UltraChrome <sup>™</sup> HDX Ink (Photo Black		
EuroscaleCoated.icc		Custom	output	N	Yes	1	Mode)		
EuroscaleUncoated.icc		Custom	output	N	Yes	1	Resolution: 720x1440		
GenericGray-Output.ic	c	Custom	output	N	Yes		Certified Process for Color Confirmation: Yes		
GenericGray.icm		Custom	input	N	Yes		Certified Process for Color Committation. Tes		
JapanStandard.icc		Custom	output	N	Yes		Characterization File: CGATS21_CRPC6.icc		
NoColorManagement.	icc	Custom	output	N	Yes		Simulate Minimum Dot: No Highlight Adjustment Rendering Intent: Absolute		
Null_CMYK_CMYK_Lin	k.dvl	Custom	devicelink	N	Yes				
PSOcoated_v3.icc		Custom	output	N	Yes				
PSOuncoated_v3_FOG	RA52.icc	Custom	output	N	Yes	9	Simulate Substrate: Leave Uncha	anged	

