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How to Use Your 500 Series Device for G7 Process Control

Solid Tone and Gray Balance Control with 528/530

General

This document describes how to use X-Rite 500 Series instruments for the support of the G7 process. This document does not describe the G7 process. For more information about the G7 guidelines and for G7 definitions, please refer to the G7 guidelines from IDEAlliance (www.G7Global.org).

G7 Measurement Tool Recommendation

G7 recommends using a spectrophotometer or spectro-densitometer for measuring press sheets and prints; the 528 and 530 color handheld spectrophotodensitomters from X-Rite are perfectly suited for use in a G7 workflow.

G7 Data Files

X-Rite is pleased to offer data files with the G7 solid tone and gray balance reference values for the 528 and 530 instruments. These files can be loaded into the instrument for offline verification.

The G7 solid ink reference data for the 528 and 530 instruments represent the G7 L*a*b* standards for the following parameters: D50/2°, unpolarized, white backing.

Data files and nomenclature

File name	Color name	Ink	Paper grade	Backing
G7_P1w08	G7-C-1-w	**C**yan	Paper grade **#1 & #2**	**w**hite
	G7-M-1-w	**M**agenta	Paper grade **#1 & #2**	**w**hite
G7_P3w08	G7-C-3-w	**C**yan	Paper grade **#3**	**w**hite
	G7-M-3-w	**M**agenta	Paper grade **#3**	**w**hite
G7_P5w08	G7-C-5-w	**C**yan	Paper grade **#5**	**w**hite
	G7-M-5-w	**M**agenta	Paper grade **#5**	**w**hite

Reference Values for Paper grade #1 & #2: G7_P1w08

Name	Note	Ref No	L*	a*	b*
G7-C-1-w	Cyan Solid	Ref_01	55	-37	-50
G7-M-1-w	Magenta Solid	Ref_02	48	74	-3
G7-Y-1-w	Yellow Solid	Ref_03	89	-5	93
G7-K-1-w	Black Solid	Ref_04	15	0	0
G7-R-1-w	Red Overprint (M+Y)	Ref_05	47	68	48
G7-G-1-w	Green Overprint (C+Y)	Ref_06	50	-68	25
G7-B-1-w	Blue Overprint (C+M)	Ref_07	24	17	-46
G7-W-1-w	Substrate	Ref_08	95	0	-2
G7-HC-1-w	25/19/19 Gray Balance	Ref_09	75.70	0	-1.5
G7-HR-1-w	50/40/40 Gray Balance	Ref_10	57.50	0	-1
G7-SC-1-w	75/66/66 Gray Balance	Ref_11	39.50	0	-.5

Reference Values for Paper grade #3: G7_P3w08

Name	Note	Ref No	L*	a*	b*
G7-C-1-w	Cyan Solid	Ref_01	57	-37	-45
G7-M-1-w	Magenta Solid	Ref_02	48	72	-3
G7-Y-1-w	Yellow Solid	Ref_03	88	-5	88
G7-K-1-w	Black Solid	Ref_04	19	0	0
G7-R-1-w	Red Overprint (M+Y)	Ref_05	47	67	43
G7-G-1-w	Green Overprint (C+Y)	Ref_06	50	-64	27
G7-B-1-w	Blue Overprint (C+M)	Ref_07	25	20	-44
G7-W-1-w	Substrate	Ref_08	93	0	0

Reference Values for Paper grade #5: G7_P5w08

Name	Note	Ref No	L*	a*	b*
G7-C-1-w	Cyan Solid	Ref_01	57	-38	-41
G7-M-1-w	Magenta Solid	Ref_02	48	70	-4
G7-Y-1-w	Yellow Solid	Ref_03	85	-6	85
G7-K-1-w	Black Solid	Ref_04	19	1	1
G7-R-1-w	Red Overprint (M+Y)	Ref_05	53	58	37
G7-G-1-w	Green Overprint (C+Y)	Ref_06	50	-46	17
G7-B-1-w	Blue Overprint (C+M)	Ref_07	34	12	-29
G7-W-1-w	Substrate	Ref_08	90	0	4

G7 Solid Ink Control Guidelines

Use X-Rite ColorMail Express software to load the G7 reference values into your 528 or 530 instrument. ColorMail Express is included with all X-Rite 528 and 530 instruments.

Load G7 data to instrument:

1. Install ColorMail Express
2. Save the G7 Reference File (e.g. G7_P1w08.mif) to your computer desktop
3. Connect the instrument to the computer and launch ColorMail Express
4. Drag the G7 Reference File file from the location it was saved to in step 2 into the instrument displayed on your software

Use G7 data with 528/530 "Match" mode:

For simple ΔE evaluation, you can use this ease to use mode:

1. Select the "Match" mode in the main menu
2. Press the up arrow until "Options" is selected. Press "Enter"
3. Press the down arrow until "Active Group" is selected. Press "Enter"
4. Press the down arrow until the GRACoL references are selected. Press "Enter"
5. Press the "Previous" (aka: "Middle") key
6. Take a reading. The instrument displays the closest G7 standard and views ΔE

Use G7 data with 528/530 "Compare" mode:

For more usability on the shop floor, you can "assign" the G7 standards in the "Compare" mode.
With this mode, you can display ΔL, Δa, Δb, ΔE or other parameters:

1. Select the "Compare" mode in the main menu
2. Press the up arrow until "Options" is selected. Press "Enter"
3. Press the down arrow until "Clear References" is selected. Press "Enter"
4. Press the "Previous" (aka: "Middle") key
5. Press the down arrow until "References" is selected on the left hand side of the display. Press "Enter."
6. "Ref 01" will be highlighted. Press "Enter." The named list of GRACoL standards from the G7 reference file will be displayed on the right of the instrument. Scroll up or down to highlight the particular standard that you wish to apply to "Reference 01", and then press "Enter."
7. Press the "Previous" (aka: "Middle") key twice. You should now see ΔE highlighted on the right side of the screen. Press "Enter."
8. Scroll down to ΔLab. Press "Enter"
9. Press the "Previous" key to jump to the left side of the screen, scroll down to "Ref 02," and press enter. Press the up or down keys to highlight the standard that you wish to associate with "Reference 02," and repeat the procedure as begun in step 7 above. (Note: Typically, the G7 references are assigned to the reference numbers as shown in the previous table)
10. After the last standard is assigned, press the "x" key to return to the main menu. Now, scroll up to "Compare" press "Enter"
11. Take a reading. The instrument should select the closest G7 standard to the reading, and display ΔL, Δa, Δb and ΔE.
    Note that the instrument does not display the name of the standard, only the number assigned. This is why it is recommended to enter the standards in a sequence that can be easily remembered.

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