Getting Your Gray Balance in Check With G7
Wide Format Series

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Why all this fuss about G7?

Let me use Don Hutcheson’s words from his session at EFI Connect
Why all this fuss about G7?

Standardized definition how B&W / grayscale printing should look

B&W are the backbone of defining color printing

Lightness/darkness/contrast
Gray balance

Any printing process using G7 will have a more balanced output

Simple method for any printing device
After this webinar, you will...

- understand what G7® is and does
- understand the value of using G7 curves on your Fiery® system
- understand that the G7 process can be used with traditional specifications (FOGRA, Idealliance, or ISO)
- learn how to take advantage of the full-gamut of your printer
- know how to use a G7 curve *with or without* your ICC profiles
- understand the G7 Certification options

Let’s take a poll first...
What was the problem?

What was G7 trying to solve?
What *was* the problem?

The color of our traditional press inks

<table>
<thead>
<tr>
<th>Press A ink</th>
<th>Press B ink</th>
<th>Press C ink</th>
</tr>
</thead>
<tbody>
<tr>
<td>Density = 1.32</td>
<td>1.32</td>
<td>1.32</td>
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</table>

The density of all inks is 1.32.
What is the problem?
The color of our inkjet inks

<table>
<thead>
<tr>
<th>Display</th>
<th>Density</th>
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<tbody>
<tr>
<td>VUTEk</td>
<td>1.32</td>
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<td>Epson</td>
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What is G7...

...and how can it help me?
What is G7?

Where are you going?
What is G7?

Where are you going?

Tokyo
New York
Paris
Tokyo
What is G7?

What Specification are you trying to conform to?
What is G7?

What Specification are you trying to conform to?

- GRACoL®
- Fogra 52
- Japan Color
What is G7?

How are you getting there?

New York

Paris

Tokyo
What is G7?

How are you getting there?

- Flying
- Driving
- Riding

New York
Paris
Tokyo
What is G7?

How are you getting there?

- Flying
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- Riding

GRACoL®
Fogra 52
Japan Color
What is G7?

How are you getting there?

GRACoL®
Fogra 52
Japan Color
What does “G7” stand for?

Gray balance

What are we trying to control?
What does “G7” stand for?

Gray balance

CMYK & RGB

What are we trying to control?
What does “G7” stand for?

Gray balance

CMYK & RGB

What are we trying to control?

Based on L*a*b* measurements
G7 benefits

• Easily controls neutrals
• Enables shared neutral appearance
• Offers fast recalibration (of neutrals)
• Enables full-gamut printing
Getting Your Gray Balance in Check With G7

Questions?
Please use the Q & A Window
Getting Your Gray Balance in Check With G7

Poll results...
## G7 compliance levels

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Tonality

A single word describing contrast & lightness

Light tonality

Medium tonality

Dark tonality
Gray balance defined

Neutral gray with no color bias

Cool gray  Neutral gray  Warm gray
Shared neutral appearance

Digital

Inkjet

Offset
Shared neutral appearance
Fixing grays improves colors too
Fixing grays improves colors too

Original photo

Adjusted with curves only

copyright © 2016 HutchColor
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Fiery proServer and Fiery XF

[Diagram showing the interface of Fiery proServer and Fiery XF, including user accounts, workflows, and output devices.]
Fiery proServer and Fiery XF

<table>
<thead>
<tr>
<th>Users</th>
<th>Workflows</th>
<th>Output Devices</th>
</tr>
</thead>
<tbody>
<tr>
<td>admin</td>
<td>EFI Linearization</td>
<td>Linearization device</td>
</tr>
<tr>
<td>guest</td>
<td>My New Workflow</td>
<td>My New Output Device</td>
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Expanded gamut printing (G7 Extreme)

- Traditional (GRACoL – ISO Coated)
  - 100% red = 97% magenta + 89% yellow
Expanded gamut printing

• Traditional (GRACoL – ISO Coated)
  ▪ 100% red = 97% magenta + 89% yellow

• Expanded gamut
  ▪ 100% red = 100% magenta + 100% yellow
How can G7 help me?

• Control gray balance
• Faster recalibration
• Ability to use entire printer gamut
Fiery XF G7 demo

How it’s done!
Background

• Construct a normal calibration (.epl) file
• Build a G7 curve (.vcc) on top of the calibration
• Profile utilizing both files
  – Profiles not needed for G7 Extreme
  – (Possibly...
Procedure details

1. Construct a normal calibration (.epl) file
2. Do not build an ICC Media Profile
Procedure details

3. Create an Output device, selecting your new .epl file and connect to a Workflow.
Procedure details

4. Confirm your Output Device settings

- Your calibration file is selected
- No ICC Media profile loaded
- No Visual correction file loaded
Procedure details

5. Print P2P file through this workflow with Color Management turned off.
6. Measure P2P target and use any approved method to generate G7 values
Procedure details

7. Transfer values to Visual correction module of Color Tools program and save as .vcc curve.
Procedure details

8. OR – Export EFI .vcc curve directly out of Chromix Curve 3 or 4 program
Raw data in Curve3
After calibration
9. Copy .vcc file to Balance folder
Procedure details

10. Select Visual correction curve on Media pane of Output device
Procedure details

11. Print ICC Profile target using these settings with color management off
Procedure details

12. Build ICC Media profile
13. Save ICC Profile to My Profiles folder
14. Use Profile Connector program to link .epl file with .icc profile
15. Ensure both files are in My Profiles folder
Procedure details

16. Select Media name for your Output Device
17. Turn on color management
G7 Certification

I want to learn more!
G7 Certification - Professional

- Certified in the G7 methodology for proofing and printing equipment in-house
- Certified G7 Experts are required to be onsite to conduct and review calibration data to qualify a print facility for the first time
- Valid for 2 years
- A G7 Professional must be employed with an Idealliance Member or Network Subscriber company to maintain their G7 Professional status
G7 Certification - Expert

- Certified in the field of color management, process and quality control for proofing and printing equipment
- Authorized by Idealliance to train in the areas of color and print related issues
- Valid for 2 years
- Must remain employed with an Idealliance Member or Network Subscriber company
We learned...

- what G7® is and does
- the value of using G7 curves on your Fiery® system
  - Lower Delta-E values
  - Fast gray balance relinearization
  - Produce full-gamut output (G7 Extreme)
- the G7 process steps for use in Fiery proServer and Fiery XF
- about the G7 Certification options
Session resources

• help.EFI.com
  – G7 and Fiery XF How-To Guide.pdf
  – Implementing a G7 Curve in Fiery proServer and Fiery XF using CHROMiX/HutchColor Curve4

• Video of Don Hutcheson at EFI Connect explaining G7

• https://www.idealliance.org/g7spec
Recorded World of Fiery sessions

• Don’t forget the existing Wide Format sessions - view here
Additional World of Fiery sessions

- March 8 - Color Process Control and Verification in Fiery proServer and Fiery XF
- May 3 - Is Your RIP Working Hard Enough?
- Today - Getting Your Gray Balance in Check With G7

- EFI webinar calendar
- Have your say on the next sessions
Questions?
Getting Your Gray Balance in Check With G7

Thank you!