# G7 Calibration with Media Manager & Curve3



onyxgfx.com

## G7 Calibration with Curve3 and Media Manager Basics:

Curve3 is a software program designed for calculating G7 gray balance calibration curves using CMYK processing colors. Since Media Manager does not natively calculate the G7 calibration curves, Curve3 is an important part of a complete G7 certified workflow. (NOTE: These instructions also generally apply to the older Curve2 software)

In Media Manager, you print and read in a G7 P2P swatch and export the readings. You import those readings into Curve3. Curve3 calculates calibration curves, which you then export. You then import the curves into Media Manager. To verify if you are within G7 tolerances, you can print a new P2P swatch and have Curve3 evaluate the output.

For best results, it is important that the media you are calibrating uses the Coated or Uncoated ink restriction preset, so little or no ink limiting is needed. After you have calibrated, moderate to excessive ink limiting can alter the G7 gray balance and cause your output to not be within tolerance.

This document assumes users have their own copy of the Curve3 software, as well as a basic working knowledge of it.

## **Creating a G7 Media Model**

1- Create or edit an existing media. At the calibration step, click the "Advanced..." button.





1

2- In the Tweak Linearization window, click the blue plus button.

esired Target	Swatch Measurements	Linearization Table			
				<u></u>	Build
Name:	MediaModel (Basic)		<b>(+</b> )_		Cancel
Percen	t: Target D	ensity:	Advanced	d Readings	Options
2.504			Edit:		Help
2 200			Cyan		Cvan
2.000			Percent	Density	Magenta
1 800			10	0.070	✓ Yellow
1.000			20	0.079	M Black
1.000			30	0.264	
1.400			40	0.373	
1.200			50	0.499	
1.000			60	0.645	
0.800			70	0.821	Display
0 600			80	1.042	@ Percent
0.400			90	1.340	O Value
0.400			95	1.538	
0.200					
0.000	20 30 40 50 60 7	70 80 90 100			
			NFactor	Scale	
View as:		Chart Range:	· · · · · · · · · · · · · · · · · · ·		
Density	,	2.504 🌲	R	leset	

3- Enter a name for the new media model. Select "Curve2/G7 P2P Target" selection and click Print.



4- Select your desired color device. The "Based on:" setting should be set to <Default Calibration>. Click Print.



5- The Tweak Linearization window will now show blank curves. Click on the "Read Advanced Swatch..." button when the P2P swatch is printed and ready.

Desired Target	Swatch Measurements	Linearization Table			
			1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 -	<u></u>	Build
Name:	C2 (Advanced)	•		3	Cancel
Percent	:: Target D	ensity:	Read Advanced S	Swatch	Options
2.504			Edit:		Help
2.200			Cyan	-	Cyan
2.000			Percent Der	nsity	Magenta
1.800					✓ Tellow ✓ Black
1.600					100
1.400					
1.200					
1.000					
0.800					Display
0.600					<u>Percent</u>
0.400					U <u>v</u> alue
0.200	+ 1				
0.000 10	20 30 40 50 60 7	70 80 90 100			
			NEactor	Scale	
View as:		Chart Range:			
Density		2.504	Reset		

6- You will see a screen like below. Click "Read Swatch..." to use your color device to read in the swatch. Then click on the "Curve2 Options..." button. (Do NOT click the Build button)

uild Profile - C2							
Enter a spectral	reading for ead device to read	ch patch on th I the patch val	e swatch or p ues. Press Bi	oress Read Swa uild to generate	atch to use a the profile.		Read Swatch
Reading	s:						Build
Patch	Expected	Measured	L*	a*	b*		Cancel
A1			13.5946	-8.9664	-7.1870		Curve2 Ontions
A2			91.7269	-6.8001	-7.0143		
A3			87.7777	-12.9655	-12.7248	1	Help
A4			81.6085	-22.3858	-21.4019		- Bostie
A5			75.9999	-29.6464	-29.4062		Show Spectra (Check the box above to see the spectral curves of
A6			71.0971	-34.7752	-35.9483	1	
A7			67.4180	-38.2776	-40.8150		
A8			64.0976	-41.1068	-45.1897	1	
A9			61.5486	-42.4229	-48.4221		
A 10			59.0360	-42.8260	-51.3424	1	selecteu patches.)
A11			57.0510	-42.7541	-53.5857	1	
A12			55.7841	-42.2720	-54.9515	1	
A13			54.5954	-41.3551	-56.1491	1	
A14			90.5124	4.0922	0.7689	1	
A15			85.4032	9.9465	3.0925	1	
A16			77.5059	19.5825	9.6239		Import
A17			70.6904	29.9634	15.8111	1	
A18			65.2289	38,4242	21,1064	-	Export



7- Click the "Export Measurements..." button to export a .txt file that will be imported into Curve3. Leave this window open while you use Curve3. See page 9 for some basic Curve3 instructions.

After the curves file from Curve3 have been exported, click the "Import..." button to select that .txt file. Leave the "Ignore 100% target ink values" box checked. Then click OK.

Build Options		? ×
Ink Options Measurement Device		
Instructions: 1) Read swatch measurments 2) Export Measurements 3) Import Measurements in Curve2 tool 4)Generate and export Curve2 file 5) Import Curve2 file below Export Measurements		
Import		
	OK Cancel	Help

8- In the Build Profile window, click "Build".

Build Pro	Build Profile - C2						
Enter a spectral	reading for ead device to read		Read Swatch				
<u>R</u> eading	s:						Build
Patch	Expected	Measured	L*	a*	b*		Cancel
A1			13.5946	-8.9664	-7.1870	ĵ.	Curve2 Options
A2	1		91.7269	-6.8001	-7.0143	1	
A3	1		87.7777	-12.9655	-12.7248	1	Help
A4	1		81.6085	-22.3858	-21.4019	1	
A5			75.9999	-29.6464	-29.4062	1	
A6			71.0971	-34.7752	-35.9483	1	Charles Charles
A7			67.4180	-38.2776	-40.8150	1	Snow Spectra
A8			64.0976	-41.1068	-45.1897	1	(Check the box above to
A9			61.5486	-42.4229	-48.4221	1	see the spectral curves of
A10			59.0360	-42.8260	-51.3424	1	selected patches.
A11			57.0510	-42.7541	-53.5857	1	
A12			55.7841	-42.2720	-54.9515	1	
A13			54.5954	-41.3551	-56.1491	1	
A14			90.5124	4.0922	0.7689	1	
A15			85.4032	9.9465	3.0925	1	
A16			77.5059	19.5825	9.6239	1	Import
A17			70.6904	29.9634	15.8111	1	
A18			65.2289	38.4242	21.1064	-	Export



9- The new targets from Curve3 will show up in the Tweak Linearization window. (Note the values will not match, since ONYX displays the control points as target densities)



10- Click Build to close the Tweak Linearization dialog and complete the calibration process. (Remember the warning about ink limiting)

To verify if your new G7 calibration is within tolerance, see the next section.



## Verifying a G7 Media Model in Curve3

11- To verify your new G7 calibration, you need to create a new temporary media model to print a P2P swatch with the your new G7 calibration settings applied to it.

Once verification is complete, the new temporary media model can be deleted.

As before, click "Advanced..." to open the Tweak Linearization dialog, then click on the blue plus button.



12- Enter a name for the temporary media model and select "Curve2/G7 P2P Target" and click Print.

ſ	New Target Densities		
	Target Density Name:	C2-Verify	
	Basic density curves	NFactor; 2	
	🔘 Advanced Grayscale (req	quires colorimeter)	
	Ourve2/G7 P2P Target (re	requires spectrophotometer)	
	E F	Print Cancel	



13- IMPORTANT: Select your previously created G7 media model from the "Based on:" menu. (Do NOT leave selection at <Default Calibration> this time) Click the Print button.

Device:	Layout
Eye One iSis on USB	<ul> <li>Page Size:</li> </ul>
Based on:	36 Inch Roll 👻
C2	→ 35.60 X 600.00 in
	Copies: 1
	Orientation:
	Landscape
	Portrait

14- Read in the swatch as before and click on the "Curve2 Options... button".

Build Profile - C2							
Enter a reading for each patch on the swatch or press Read Swatch to use a spectral device to read the patch values. Press Build to generate the profile.							Read Swatch
<u>R</u> eading	s:						Build
Patch	Expected	Measured	L*	a*	b*	•	Cancel
A1			13.5946	-8.9664	-7.1870	1	Curve2 Ontions
A2			91.7269	-6.8001	-7.0143		Carrez optimisti
A3			87.7777	-12.9655	-12.7248		Help
A4			81.6085	-22.3858	-21.4019		-13-540
A5			75.9999	-29.6464	-29.4062		
A6			71.0971	-34.7752	-35.9483		Chan Creater
A7			67.4180	-38.2776	-40.8150		Show Spectra
A8			64.0976	-41.1068	-45.1897		(Check the box above to
A9			61.5486	-42.4229	-48.4221		see the spectral curves of
A10			59.0360	-42.8260	-51.3424		selected pateries.)
A11			57.0510	-42.7541	-53.5857		
A12			55.7841	-42.2720	-54.9515		
A13			54.5954	-41.3551	-56.1491		
A14			90.5124	4.0922	0.7689		
A15			85.4032	9.9465	3.0925		
A16			77.5059	19.5825	9.6239		Import
A17			70.6904	29.9634	15.8111		
A18			65.2289	38.4242	21.1064	-	Export



7

15- Export the new .txt file with a unique name. Import this file into Curve3 to see if the calibration is within G7 tolerances. (See Curve3 documentation on how to do this). In Media Manager, click Cancel twice.

Build Options	? ×
Ink Options Measurement Device	
Instructions: 1) Read swatch measurments 2) Export Measurements 3) Import Measurements in Curve2 tool 4)Generate and export Curve2 file 5) Import Curve2 file below Export Measurements Import Curve2 File:	
☑ Ignore 100% target ink values	
E	OK Cancel <u>H</u> elp

16- Make sure the temporary media model is selected in the drop down.

Click the red minus button to delete it. Click Yes for the warning. Select the original G7 media model and click Build.







#### **Basic Curve3 Instructions**

• See the Curve3 documentation of how to set up Runs and import measurements. Once you have imported the P2P measurements from ONYX, go to the Create Curves tab to view the adjustment curves.

• The default settings in Curve3 should normally give you acceptable results. It is recommended, however, to use the "highlight & shadow weighted" selection for the control points. See the Curve3 documentaion for further explanation of the other settings.

• To export the curves, in the bottom right of the window select CGATS and then click the "Export..." button. This exported .txt file is what is imported in step 7 above.

