



G7 System Certification Application Data Sheet

Bodoni Systems

the colour experts

The IDEAlliance Print Properties Working Group has established a certification process for G7 Systems. In accordance with this process The G7 System Certification Program is designed to evaluate the ability of a candidate system to calibrate a printing device to meet the G7 greyscale definition using four 1-D Curves within the tolerances outlined in this document. All evaluations are based on the parameters of the G7 Specification (draft 2008). The following information is intended to assist producers and consumers in the use of the vendor system as specified for creating the four 1-D Curves.

Manufacturer

Bodoni Systems Ltd
Unit 19 Orbital 25 Business Park
Dwight Road, Watford
WD18 9DA, UK
Tel: +44 (0)1923 220530
Fax: +44 (0)1923 225654
Web: www.presssign.com



Product

"pressSIGN 6"

Testing Instructions (procedures)

Print the test forme(s)

Add the P2P25 chart (or multiple copies in different parts of the sheet if you prefer) to a test forme, along with an appropriate process control colour bar, and print without any adjustment curves.

Measure the sheet(s)

Create a new Job with the correct parameters:

The screenshot shows the 'New Job' dialog box in the pressSIGN software. The dialog is titled 'New Job' and contains various settings for a new job. The settings are as follows:

- Site:** HQ
- Job Name / ID:** eXact test
- Template:** None
- Standard:** GraCol G7 Coated 2006
- ☐ Target CMYK Lab values adjusted relative to paper
- Ink & Paper:** Coated Corrugated Board
- Coated Corrugated Board has NO wet or dry data. Measure a strip and click Save Dryback
- Press:** Heidelberg XL75
- Colour Bar:** pressSIGN4 CMYK 6 patches per zone
- Press Sheet:** ☐ Dry ☒ Wet
- User:** mac
- Category:** None
- Subcategory:**
- SoftProof:** Browse
- Client:** Default Client
- Full Sheet:** 747.50 mm
- Runlength:**
- Comments:**

At the bottom of the dialog are 'Cancel' and 'OK' buttons.

The standard chosen reflects the desired solid and overprint colour targets and how the print is to be scored. If you have not already done so, please refer to **Chapter 24 - Adding Target Press Standards** starting page 168 of the pressSIGN Manual, for details of how to setup a GraCol G7 standard.

Where applicable, such as on a lithographic printing press, measure the process control colour bar first and adjust the solid inks so that they are within the ΔE tolerance across the sheet. The Full Sheet window in pressSIGN 6 PRO (screenshot at top of following page) shows whether to add or subtract ink to each colour for each measured ink key.

pressSIGN 6 supports all of the currently available handheld and auto-scanning spectrophotometers, along with a number of discontinued models, for direct measurement. The software can also import a number of measurement files exported from various on-press closed loop systems or other applications. Please refer to **Chapter 7 - File Based Measurement Devices**, starting on page 50 of the pressSIGN manual, for further details.

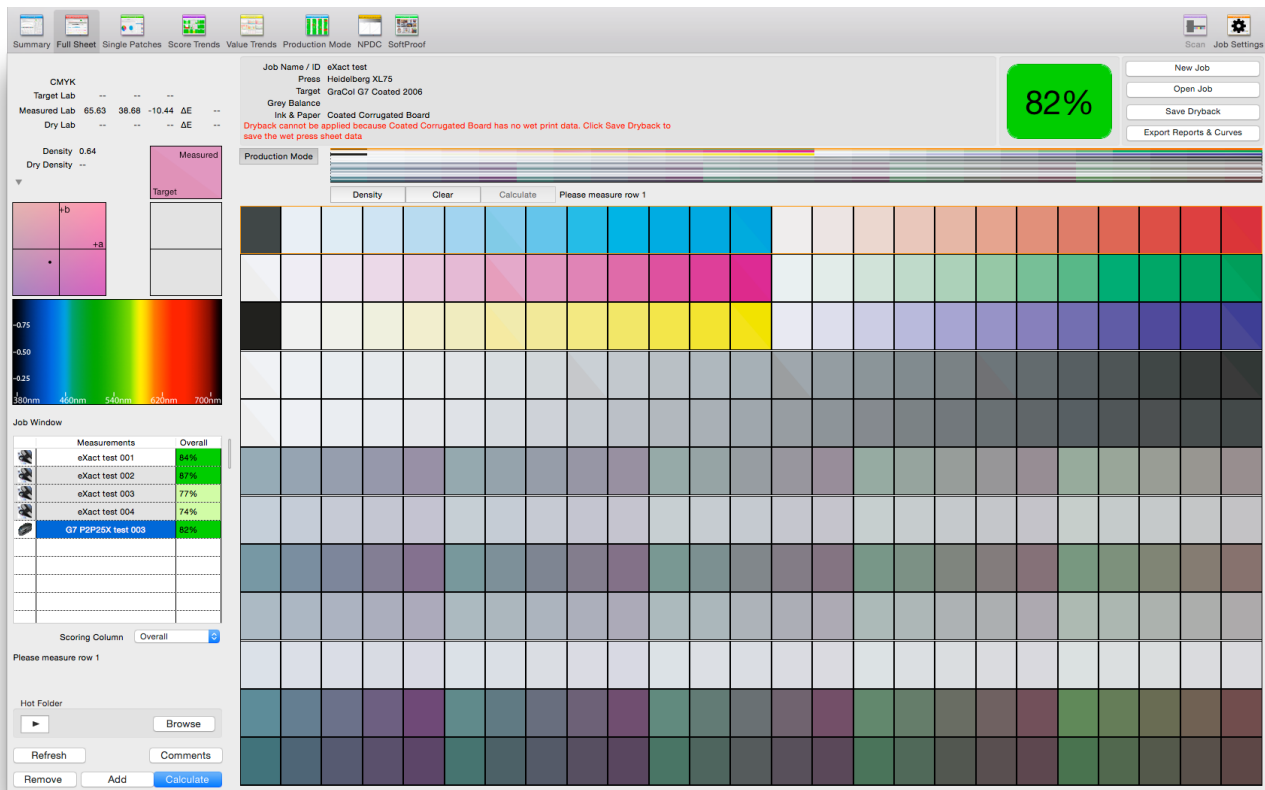


For offset printing processes it is recommended that, once the process inks are an acceptable ΔE , the RGB overprints also be checked for Trapping % and ΔE . If they are out of tolerance then adjustments to press settings or consumables may be required, which can affect the plate compensation required to achieve the neutral print density curve.

Once you are satisfied the press is printing the solids and overprints correctly, update the job with the P2P25 colour bar (as shown in the Job Settings window below) if you are measuring the chart with one of the supported Spectrophotometers.

The screenshot shows the 'Job Settings' dialog box. It is configured for a Heidelberg XL75 press. The 'Site' is set to 'HQ'. The 'User' is 'pc'. The 'Target Standard' is 'GraCol G7 Coated 2006'. The 'Ink & Paper' is 'Coated Corrugated Board'. The 'Client' is 'Default Client'. The 'Press' is 'Heidelberg XL75'. Below these settings, there are icons for the press units: 1 K, 2 C, 3 M, 4 Y, 5 G1, and 6 G2. A note states: 'Assign colours to this job by clicking on one of the unit icons. You can also drag a colour from one unit to another to swap the assignment.' The 'Colour Bar' is set to 'G7 P2P25X (2009)'. At the bottom, there are fields for 'Full Sheet' (747.50 mm) and 'Runlength' (0). The 'Category' is 'None'. There are 'Close' and 'OK' buttons at the bottom.

If you have not already done so, please refer to **Chapter 9 - pressSIGN Colour Bars** starting on page 60 of the pressSIGN Manual, for further instructions of how to add the P2P25 chart definition.



Start with line 1 and measure sequentially. The software automatically selects the next line after each scan. The “active” line to be measured is highlighted with an orange border.

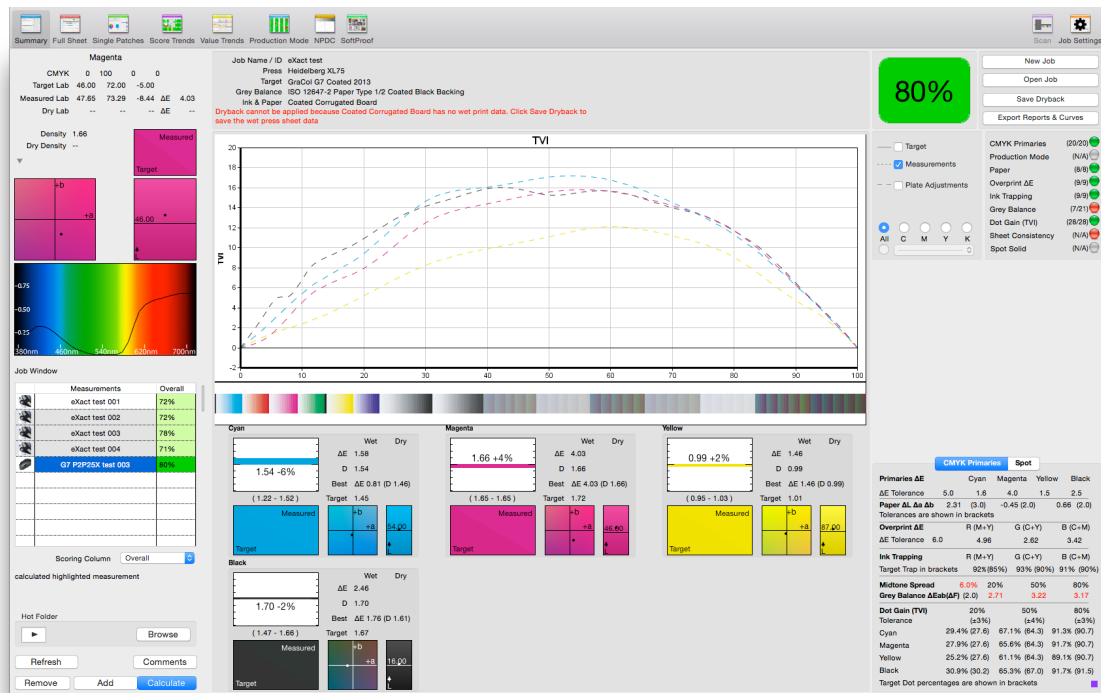
Each patch shows a diagonal split. The lower left half is the target colour and the upper right the measured value. Lines with measurement errors, i.e. noticeably different colours between top and bottom, can be scanned again by simply clicking on the line and rescanning. The software will return the active line to the next that has not already been scanned.

Once you have finished measuring the chart click the ‘Calculate’ button.

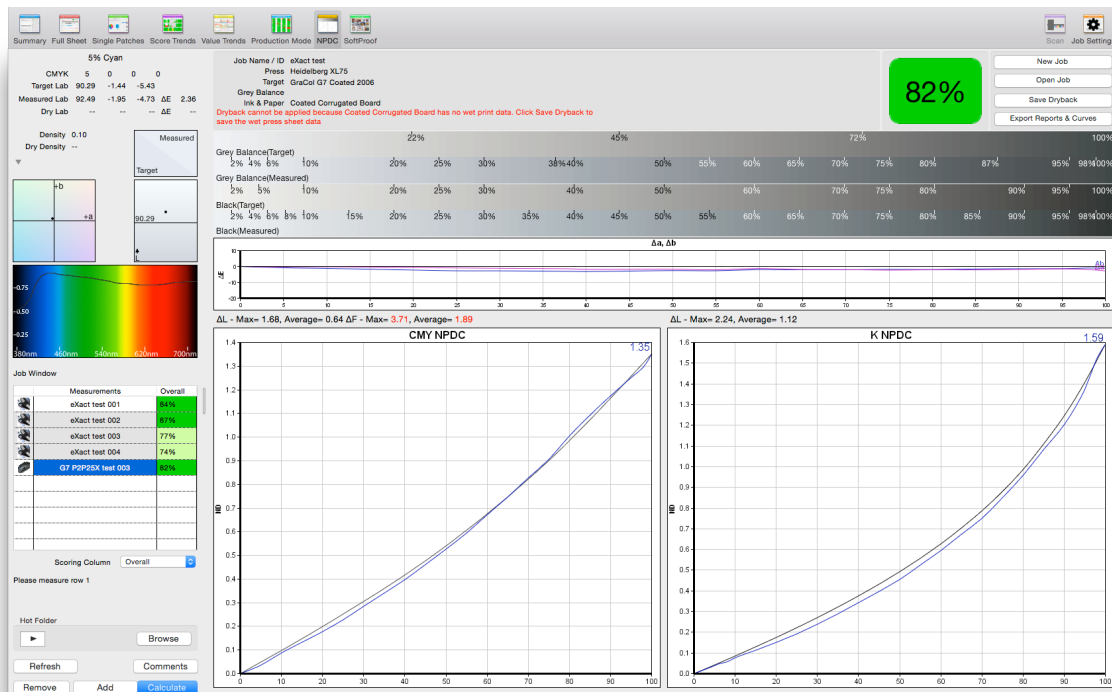
Once the “Calculate” button has been pressed, the software will score all the data against the targets in the chosen Press Standard. An overall percentage will be shown with a colour coded background.

Assessing the Sheet

The “Summary” screen in pressSIGN shows all of the measured data compared to the chosen target with ΔE and TVI values etc, along with a traffic light based scoring system.



The NPDC Panel contains three elements.



Along the top a target and measured tint ramp, for both grey balance and single black, allow a visual assessment of the colour change from 0% to 100%.

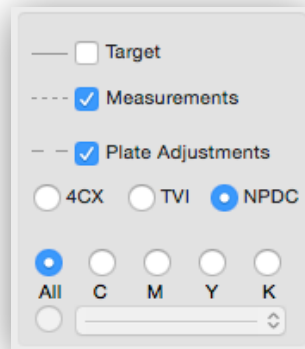
The middle section shows the variation of Δa and Δb for the grey balance patches measured from 0% to 100%, along with the average and maximum ΔL and ΔF for CMY, and ΔL for Black. ΔL and ΔF values out of tolerance are shown in red.

The lower section shows the measured (blue) and target (black) NPDC for CMY and K in separate panels.

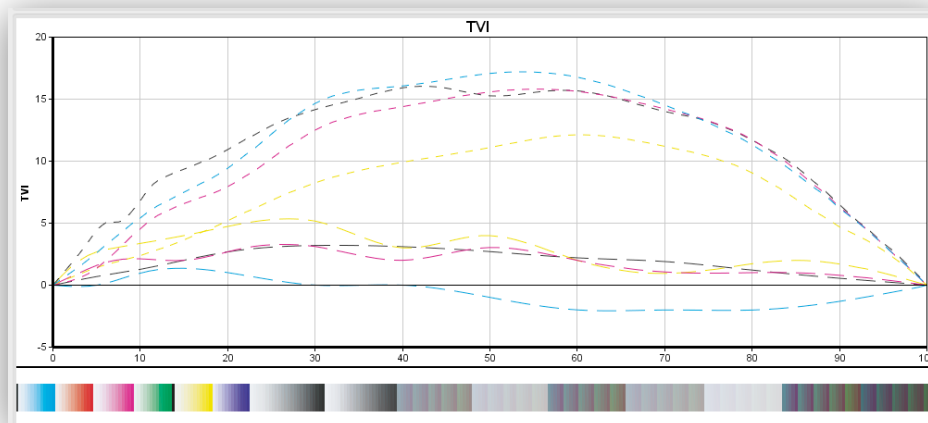
pressSIGN will calculate how to adjust the NPDC to achieve the desired results.

Adjusting Parameters

Any plate correction curves can be previewed by ticking the "Plate Adjustments" box in the Summary screen, as shown below.



After a short calculation process (shown in the software by a progress bar) the plate correction curves will be shown in the TVI graph, as shown below;



After evaluating the printed sheet for consistency, click on 'Export Reports & Curves'

Click on 'NPDC' for the calculation of G7 compatible curves.

Please select the style of curve adjustment you wish to apply.

pressSIGN 4CX curve adjustment is designed to match a target grey balance condition. 4CX

ISO 12647-2 Paper Type 4 Uncoated Black Backing

Calculate the Grey Balance target according to a Neutral Print Density Curve (NPDC) NPDC

TVI curve adjustment adjusts the tint/solid ratio of a target condition. TVI

Cancel Close

Applying parameters to the printing system

The simplest way of applying the plate correction curves is by exporting a file of the curve data and then importing into one of the supported workflows.





Save / Export Data

Job Name / ID eXact test

Export Tint Data

Text File Format
Harlequin RIP

Select which data to Export

Colour		Export
Black		<input checked="" type="checkbox"/>
Cyan		<input checked="" type="checkbox"/>
Magenta		<input checked="" type="checkbox"/>
Yellow		<input checked="" type="checkbox"/>

Only colours with measured solid and tints can be exported

Adjustment (Calibrated) Tint Data Export

Save PDF Job Report

Measurement Report Save PDF Report

email PDF Report

Print Job Labels

Scoring label Print Label

Close


Adobe Curve File
Agfa ApogeeX
Caldera
DeviceLink Profile
EFI Colorproof XF
ElecRoc
Esko
Flowdrive
Fuji XMF
✓ Harlequin RIP
Harmony Curves
Heidelberg Prinect
HP Indigo
inkWIZE AutoCurves
Nexus RIP
Onyx
OpenRIP
Rampage
Tab Delimited Text File
Trueflow

Depending on the workflow, there are several choices for export;

Measured (Actual) Press Tint Data
Target (Intended) Press Tint Data
✓ Adjustment (Calibrated) Tint Data
Harlequin v9 Postscript

Please refer to **Chapter 20 - Exporting Reports and Curves**, starting on page 135 of the pressSIGN Manual (PDF can be accessed from the Help menu in the software) for further details of how to import the curve files into your workflow.

If your workflow does not support the import of a plate correction curve, you can generate a PDF Measurement Report including the measured tints, target tints and plate adjustments, as shown below;

Plate Adjustment Tint Data					
	Dot	K	C	M	Y
	0%	0.0%	0.0%	0.0%	0.0%
	2%	-0.4%	-0.4%	-0.0%	-0.0%
	5%	-1.1%	-1.0%	0.0%	0.1%
	10%	-2.1%	-2.0%	-0.4%	-0.7%
	20%	-3.7%	-6.0%	-0.3%	-2.1%
	25%	-4.0%	-7.3%	0.2%	-2.2%
	30%	-4.0%	-8.0%	0.0%	-2.9%
	40%	-3.6%	-8.0%	1.0%	-3.0%
	50%	-0.5%	-6.0%	5.4%	-0.9%
	60%	5.5%	-3.0%	7.0%	-2.0%
	70%	9.8%	-1.0%	7.2%	-2.9%
	75%	9.5%	-0.4%	6.5%	-3.1%
	80%	8.1%	-0.0%	5.4%	-3.2%
	90%	4.3%	0.2%	2.6%	-2.3%
	95%	2.2%	0.1%	1.3%	-1.3%
	100%	0.0%	0.0%	0.0%	0.0%

The G7 badge, shown in the screenshot above, is only included in the Measurement Report PDF when the NPDC curve option has been selected.

Saving the “pressSIGN” session

All jobs and measurements are automatically saved into a multi-user database.

Analyzing Results

pressSIGN automatically scores any print to the chosen press standard. Additionally, the Measurement Report PDF shows the average and maximum figures of ΔF and ΔL values for the CMY greys and K.

