



## Harlequin® SetGold™ v5

**Harlequin® SetGold™** is a wizard-based color utility that creates high quality grey balance or “Golden State” color profiles, optimized for Harlequin® RIPs, in order to satisfy today’s color accurate digital printing and proofing requirements. It’s applicable for use both on proofing printers in a traditional print environment, and on color digital production presses. Color accurate printing and proofing is only possible if devices can be calibrated, and profiles can be optimized for a given

colorant, substrate, screening and resolution combination. Harlequin® SetGold™ incorporates many solutions for color profile making by drawing from the latest Graphic Arts community research with the result of more color accuracy. Using Harlequin® SetGold™ profiles along with Harlequin® ColorPro™ in-RIP color management feature set allows easy control of ink/toner limiting requirements and minimizes challenges in representing neutrals accurately.

### Gray balance & ink limiting

A gray balanced profile is the first step in building an output profile for a new printing device. This procedure, guided by an informative GUI, can determine the correct amount of colorant to apply, gray balance and tonal scale values for a new device. This important step improves profile accuracy and avoids over-inking or use of too much toner and should not be overlooked. This “Golden State” is then captured and calibration tables can be created for up to 4 color measurement device types and/or measurement systems so that any other printer of the same model can be adjusted to this “Golden State”. This means that profiles made by the press or printer vendor in their color labs can be used in the field at a print company and still be highly color accurate.

Output profiles must be built on sound color science principles to produce color accurate proofs or final print color gamuts. Harlequin® SetGold™ profiles retain the environment variables at the time the profile was made:

“Golden State” curve data, calibration and color characterization target data. Harlequin® SetGold™ provides a variety of targets from which to print and collect the data to meet a variety of requirements. Once the colorant limiting and gray balance of the press has been set using Harlequin® SetGold™, a profile creation tool of your choice can be used to generate an ICC profile and the Harlequin® ColorPro™ in-RIP color technology can be used to optimize printing.

### Industry standard targets

Input profile data must be able to represent real world printing or industry standards to be of any value. Great care is needed when running a press for the purposes of collecting data for color characterization. Harlequin® SetGold™ comes with industry standard targets but also included are randomized targets shown to be statistically more accurate on press.



Harlequin® SetGold™ supports a variety of measurement devices directly as well as reading from CGATS.17 formatted .IT8 measurement files.

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## Features

- provides a colorimetric approach to ink/toner limiting, delivering a more accurate result than using density measurements to find the best relationship between color and colorant amount on the chosen substrate
- provides a colorimetric approach to gray balancing using a patented technique
- ensures that minimal interpolation is required around the color critical neutral axis/grays to avoid printing artifacts
- provides an accurate way of capturing the profile making sessions parameters, recorded in a human-readable form in the profile for later reference
- fine tunes the colorant tone curves to approximate 18% dot gain (a common reference point for graphic arts printing and a good starting point for color profiling)
- GUI driven approach, making it easy to use
- provides and/or creates all necessary targets
- supports a variety of measurement devices directly as well as reading from CGATS.17 formatted .IT8 measurement files
- has been shown to assist in integration of color workflows accurate enough to be FOGRA certified as meeting ISO 12647-7 Proofing requirements (suitability of any press or printer for certification will depend on device stability).



## SPECIFICATIONS

<b>RIP Requirements</b>	Harlequin® MultiRIP™ version 10.0 or greater or Harlequin® Host Renderer™ version 4 or greater Harlequin® ColorPro™ in-RIP color management
<b>Platform/OS Supported</b>	Windows® XP, 7, 8, Server 2003, 2008, 2008 R2, 2012 Redhat Linux Enterprise Server v6.2 (Harlequin Host Renderer only)
<b>Printers Supported</b>	Most color digital presses and printers
<b>Over-inking Controls</b>	Automatically calculated or user adjusted in Status T or percentage reduction
<b>User Controls</b>	Definable error tolerance L* changeover (to maintain appropriate gray balance throughout tonal scale)
<b>Measurement Type Spectrophotometers:</b>	Direct-connect reader (read color measurements directly into Harlequin SetGold): X-Rite i1Pro, i1Pro 2, DTP41 series IT8 file import via Gretag Macbeth Spectrolino/Spectrochart, X-Rite iLiO and i1 iSis

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[www.globalgraphics.com](http://www.globalgraphics.com)

**Global Graphics Software Inc.**  
Somerset Court, Suite 320  
281 Winter Street  
Waltham, MA 02451, USA  
Tel: +1-978-849-0011

**Global Graphics Software Ltd.**  
Building 2030  
Cambourne Business Park  
Cambourne, Cambridge  
CB23 6DW UK  
Tel: +44 (0)1954 283100  
Fax: +44 (0)1954 283101

**Global Graphics KK**  
704 AIOS Toranomon Bldg.  
1-6-12 Nishishimbashi, Minato-ku,  
Tokyo 105-0003  
Japan  
Tel: +81-3-6273-3740  
Fax: +81-3-6273-3741

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