"HP has been a Pantone licensee for many years and we have collaborated closely with them to provide the best possible representation of PANTONE Colors on the Indigo systems. We are pleased to make available our products for HP Indigo customers."

Andy Hatkoff, VP of Electronic Colour Systems, Pantone.

For further information, please contact your local HP Indigo sales consultant or log on to the My HP Indigo portal: www.hp.com/go/myhpindigoweb

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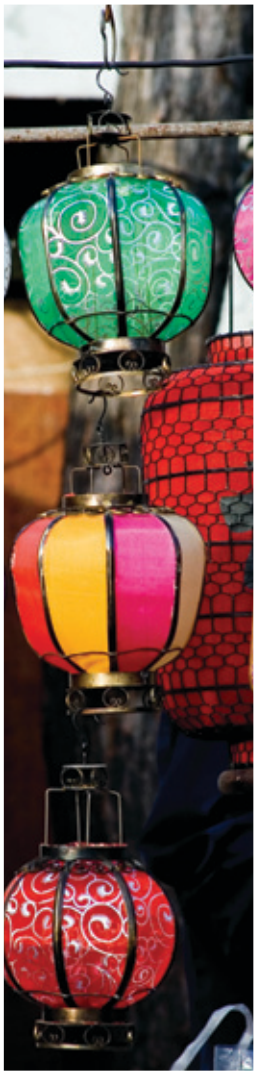
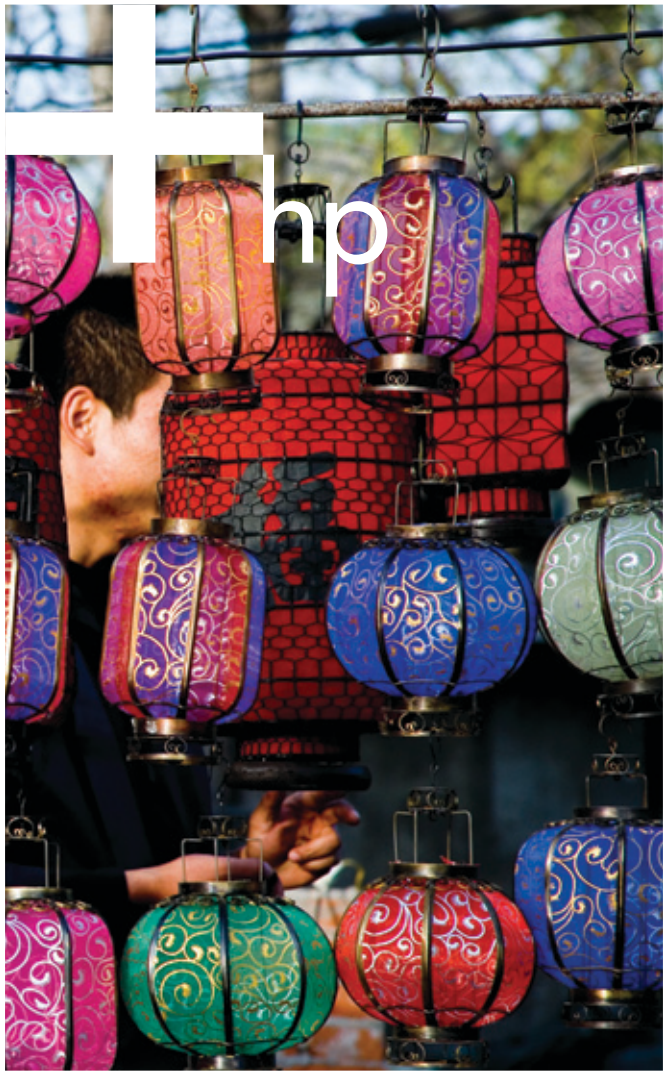


PANTONE®

Q5397-03160, 12/2006.
This is an HP Indigo digital print. Printed in Israel.

invent



Pantone and HP Indigo's Digital Colour Toolbox

invent

Spot on colour from HP Indigo digital presses

HP and Pantone know how much colour matters! We have therefore put together this special two-guide PANTONE® HP Kit for users who will be designing and printing to a Pantone-licensed HP Indigo digital press with either CMYK or HP IndiChrome (CMYKOV) ink sets. The purpose of the kit is to help you see, in a side-by-side format, how industry standard PANTONE Colours can be printed using either offset or HP Indigo's unique digital printing technologies.

The kit will allow you to:

- See exactly how an HP Indigo digital press can reproduce PANTONE Colours using both 4-colour and 6-colour IndiChrome
- Visually evaluate the trade-off between the more economical solution – CMYK, and the more accurate, CMYKOV broader colour gamut
- Compare the results to offset press printed versions using a spot colour and its 4-colour process counterpart

The highest colour fidelity

When it comes to colour accuracy and specification, Pantone, Inc. sets the standard for the printing industry. Pantone and HP have worked together to offer unprecedented levels of fidelity to the PANTONE Colour standard when reproduced on the HP Indigo press series 5000. This is accomplished through the development of expertly tuned colour look-up tables (LUTs) by the colour specialists at Pantone. These LUTs comprise HP Indigo CMYK or HP IndiChrome CMYKOV values that provide an optimal simulation of the PANTONE MATCHING SYSTEM® Colours for the specific printing device.

In order to achieve the best representation of a PANTONE Colour for a specific printing system, Pantone and HP colour scientists, as well as colour analysts who develop the data for the look-up tables, consider many components when developing the custom data (CMYK or CMYKOV): the inks, RIP or digital front end, resolution, substrate and colour marking engine. This is necessary because the colour data for each LUT depends upon each of these components, and each may affect the colour output. Even so, it is not possible for all colours to be achieved on every printer. However, Pantone does provide the closest possible simulation for each PANTONE Colour. This Pantone-developed colour data/colour LUT, is then provided to HP, and the data is integrated directly into HP's RIP or firmware for postscript solutions.

Why go to all this trouble?

While trying to match a corporate logo or brand identity colour, pleasing colour is not good enough! Although ICC colour management can effectively handle images, it has a more difficult time trying to match a specific colour and particularly out-of-gamut colours that include many PANTONE Colours. As a result, if you want to print a specific logo colour, another method must be used. Therefore, the creation of special, device-specific colour data tables is required. For graphic designers, a Pantone-licensed press means that they can design using industry standard PANTONE Colours and get colour output that helps them achieve in output what they conceived in their design.

The commitment to this process by HP is a significant one in terms of time, expertise and resources. The development of colour LUTs is an iterative process and may take a number of print runs until the desired results are achieved. During the process the device is tested not only for the quality of the simulations achievable for PANTONE Colours, but also for colour stability, consistency and repeatability. Once this rigorous process has been completed the device can then be considered Pantone-licensed.

See, select and simulate with ease

To help you select the best colour process for any print job, the swatchbook features HP IndiChrome on-press 6-colour process (CMYKOV) Pantone-licensed simulations, compared to standard 4-colour process (CMYK) Pantone-licensed simulations.

The CMYK/CMYKOV-divided swatchbook for HP Indigo presses together with the original industry standard PANTONE Colours swatch book, provides a tool that offers print buyers the option to visually evaluate the trade-off between the economical solution – CMYK, and the more accurate simulation and broader colour gamut of CMYKOV.

To allow print service providers the highest degree of flexibility in their offerings, HP Indigo has developed the broadest Pantone-licensed set of solutions

HP's exclusive Pantone-licensed features for high-end, offset-quality spot colour printing and process colour matching include:

- **HP Professional PANTONE technology**[1]**.** An on-press 4-colour (CMYK) PANTONE emulation to simulate PANTONE MATCHING SYSTEM Colours.
- **HP IndiChrome on-press.** A 6-colour (CMYKOV) PANTONE emulation enabling simulation of the PANTONE MATCHING SYSTEM.
- **HP IndiChrome off-press.** An 11-colour mixing system for solid spot ink creation.

[1] Available for the HP Indigo press 5000

Use cases for the HP Indigo's exclusive Pantone-licensed features:

HP Professional PANTONE emulation technology (CMYK)

Scenario

- Short run PANTONE Colour jobs with frequent changes
- Print on demand with no advance planning
- Print buyer is extremely price sensitive
- Image has a colour within or close to CMYK gamut
- Press is not configured for 6 colours

Usage pattern

- The PSP will use CMYK inks and refrain from spot colour installation and changes

Inks to be used

- Regular CMYK process inks

HP IndiChrome on-press (CMYKOV)

Scenario

- Short run PANTONE Colour jobs with frequent changes
- Print on demand with no advance planning
- Print buyer is moderately price sensitive
- Image has a colour far from the CMYK gamut

Usage pattern

- The PSP will use CMYKOV inks and refrain from spot colour installation and changes

Inks to be used

- Regular CMYK process inks, Orange and Violet inks

HP IndiChrome off-press spot Ink Mixing Services

Scenario

- Contract with one/few customers who use known colours
- Very low frequency of spot colour change (if at all)
- Print buyer has low price sensitivity
- Image includes a colour outside the CMYKOV gamut

Usage pattern

- The PSP will use regular process CMYK inks + spot inks and refrain from spot colour changes
- The PSP tends to leave the spot ink on the press

Inks to be used

- Mixed spot/brand ink ordered from HP IndiChrome Ink Mixing Services

HP IndiChrome off-press Ink Mixing System (on-site)

Scenario

- On demand job requiring best quality and spot colour accuracy
- Print buyer is not price sensitive
- Image includes a colour outside the CMYKOV gamut

Usage pattern

- The PSP will use regular process CMYK inks + spot inks
- The PSP will remove the spot ink post usage

Inks to be used

- Mixed spot/brand inks, mixed on-site using the HP IndiChrome Ink Mixing System