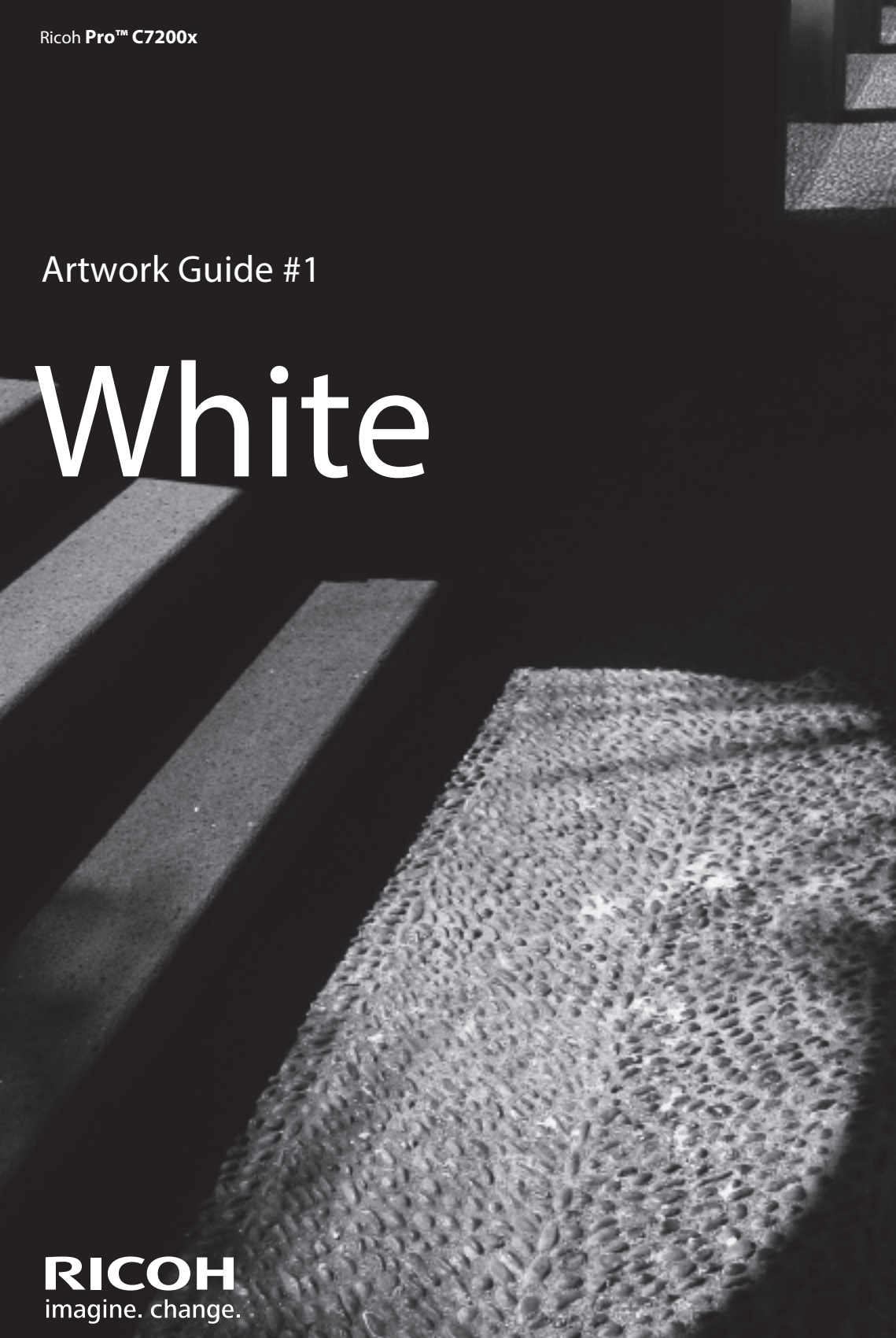
Ricoh **Pro™ C7200x**

Artwork Guide #1

White



RICOH
imagine. change.

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Ricoh Pro C7200x 5 colour digital printing presses open up an exciting range of creative possibilities for designers and printers, adding value to a wide range of print jobs.

This artwork guide describes how to create artwork files in which elements print white, with examples of these in use.

By understanding the underlying principles and exploring the examples you will be able to not only achieve the results shown here but also create individual, impactful print effects of your own.

We look forward to seeing the results.

Ricoh Pro C7200x 5 colour digital printing presses recognise data in artwork files that include a fifth colour named 'White'.

These guidelines describe how to set up effective files for this process using the following Adobe software: *InDesign, Photoshop, Illustrator* and *Acrobat*. A working knowledge of these programmes is required.

The key techniques are presented separately. However it is often possible to combine two or more on one item of print.

To export files as PDFs see instructions on page 18.
When areas of white are overprinted with CMYK elements of the same shape and size it is recommended that the white is 'choked' to avoid it showing around the edges of the overprinted matter – see page 20.

Adobe InDesign

How to create a white spot colour and apply it to type, panels and logos.

1 Create a new swatch and name it 'White'. (Window / Colour / Swatches). Designate this a Spot Colour. Give the swatch a representative colour (e.g. 100% Cyan) so that it is visible against the original image. This colour will be translated as white ink by the RIP. All other swatches should be CMYK.

2 Create a new layer and name it 'Spot White'. This should remain the top layer even if additional ones are added. Turn this layer on and off in order to view or hide elements that are to print 'White'.

3 Any element of a design can be coloured 'White'. If creating new white elements work on the 'Spot White' layer. If elements on other layers are coloured 'White' these should be transferred to the 'Spot White' layer.

4 'White' elements that are to overprint (as opposed to knock out) CMYK colours should be selected and set to 'Overprint Fill' (Window / Output / Attributes).

TIP

As 'White' prints after CMYK, two print passes are required to overprint colour on top of white.

NOTE

If a *Photoshop* or *Illustrator* file containing spot colour 'White' is imported into an InDesign file the 'White' will automatically be included in the final output pdf.

Adobe Photoshop

How to manipulate images, or parts of images, so that they print white.

1 Open image in *Photoshop*. Files can be RGB or CMYK. If required adjust Levels (Image/ Adjustment/Levels) or other attributes to suit desired final effect.

2 Make a selection that is to print white (e.g. Select / Colour Range)*

3 In 'Channels' create a new spot channel and name it 'White'. Give this channel a representative colour (e.g. 100% Cyan) so that it is visible against the original image.

4 If both 'White' and colour image are to print, all channels should be checked on. If only 'White' is to print uncheck all colour channels other than 'White'.

*** NOTE**

When viewing the file on screen, imagery in the 'White' channel will appear in the representative colour value (e.g. 100% Cyan) when all channels are checked on. Imagery in the 'White' channel will appear black if the other colour channels are unchecked.

TIP

The selection to be printed white may be achieved using any suitable Photoshop technique.

Adobe Illustrator

How to create a white spot colour and apply it to an illustration.

1 Create a new swatch and name it 'White'. (Window / Colour / Swatches). Designate this as a Spot Colour. Give this swatch a representative colour (e.g. 100% Cyan) so that it is visible against the original image. This colour will be translated as white ink by the RIP. All other swatches should be CMYK.

2 Create a new layer and name it 'Spot White'. This should remain the top layer even if additional ones are added. Turn this layer on and off in order to view or hide elements that are to print 'White'.

3 Any element of an illustration can be coloured 'White'. If creating new white elements work on the 'Spot White' layer. If elements on other layers are coloured 'White' these should be transferred to the 'Spot White' layer.

4 'White' elements that are to overprint (as opposed to knock out) CMYK colours should be selected and set to 'Overprint Fill' (Window / Attributes).

TIP

Illustrations can be created that will only print white – with no CMYK elements. E.g. a device or logo that will print on coloured paper. In this situation only use the 'White' spot colour swatch.

Technique #1

CMYK and White on metallic substrates

White can be printed on metallic substrates to 'block out' areas of the surface. By selective use of white, solid and graduated colours, and halftones a wide range of effects can be achieved as shown in the example here.

CMYK halftones can be printed on the white, resulting in conventional colour images. CMYK graphics and images printed directly on to the substrate will appear metallic (e.g. yellow printed on silver will appear gold).

NOTE

As 'White' prints after CMYK, two print passes are required to overprint colour on top of white.

HOW IT WORKS

PRINTS *CMYK*

PRINTS *WHITE*

METALLIC SUBSTRATE




Digital Work
CUBA
MDF 002
3
PER LE LETTERE
WATER

Technique #2

CMYK and White on colour papers

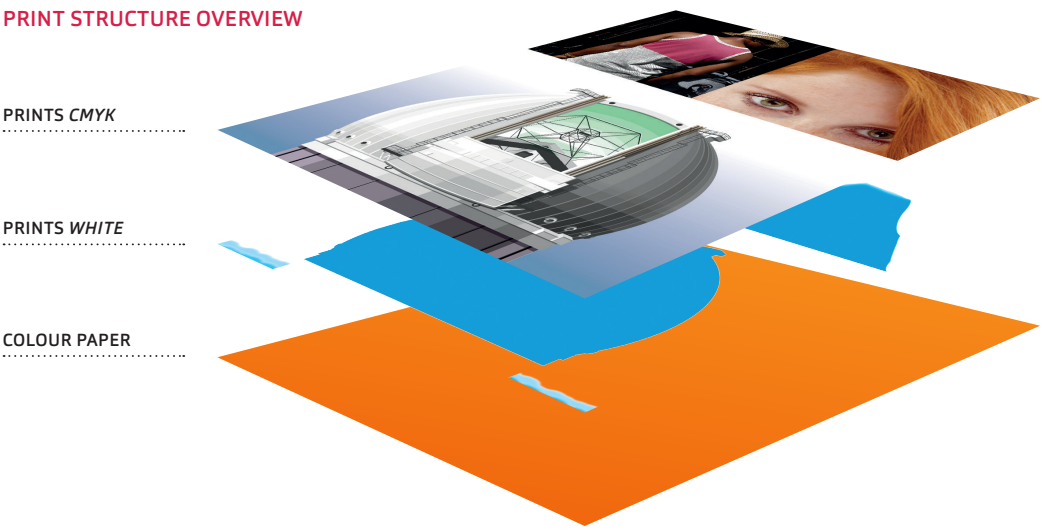
White can be printed on black or colour papers to provide an area which can then be overprinted CMYK. In the example white is printed first on bright orange paper before being overprinted CMYK.

White may be used selectively so that areas of the paper are visible. Alternatively one side of the sheet can be printed totally white and then overprinted CMYK, while the other side retains the appearance of the paper.

NOTE

Because 'White' prints last two passes are required in order to print CMYK on top of the white.

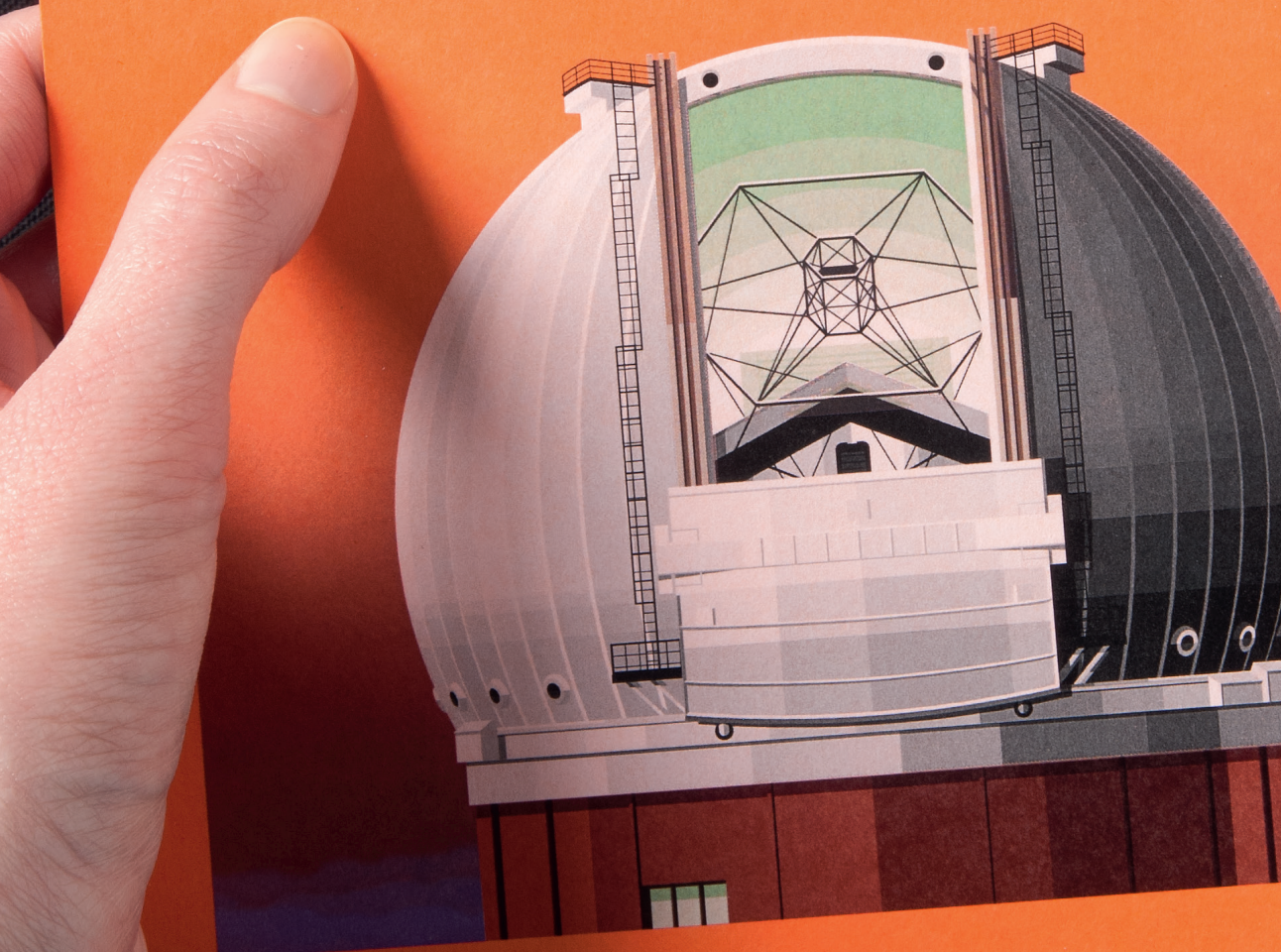
PRINT STRUCTURE OVERVIEW



Digital Works







Technique #3

White halftones on colour papers

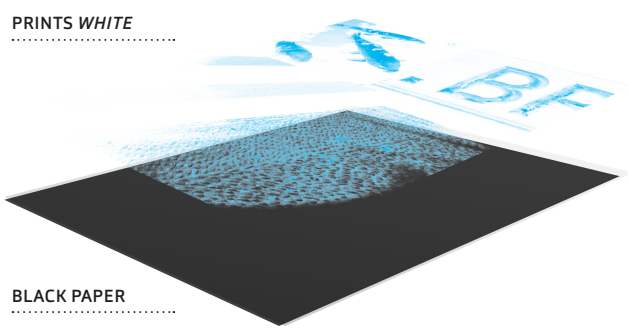
Striking monochrome results can be achieved by printing greyscale halftones in white on black or colour paper. This technique is particularly successful when used with high contrast images.

The *Photoshop* and *InDesign* processes described, create a negative image that will print white.

TIP

***For greater contrast control when converting image to greyscale use either 'Levels' (Image / Adjustments / Levels), 'Black & White (Image / Adjustments / Black & White) or 'Channel Mixer' (Image / Adjustments / Channel Mixer) with 'Monochrome' ticked.**

PRINT STRUCTURE OVERVIEW



HOW TO CREATE A *PHOTOSHOP* HALFTONE TO PRINT WHITE ON BLACK OR COLOUR PAPER

1 Convert image to greyscale (Image/Mode/Greyscale) *see Tip

2 Invert (Image/Adjustments/Invert).

3 In 'Channels' create new spot channel, name it 'White'. Give this channel a representative colour (e.g. 100% Cyan) so that it is visible.

4 In 'Layers' double click 'Background'. 'New layer' window will appear (with default specification – Opacity:100%, Mode: normal). Click OK . This will convert 'Background' into 'Layer 0'.

5 Select all of 'Layer 0' and copy.

6 In 'Channels' make 'White' channel active, paste selection and deselect.

7 In 'Layers' create new layer and hide 'Layer 0'.

8 Save file in suitable format for printing (pdf or tiff).

HOW TO COLOUR A HALFTONE IN *INDESIGN* TO PRINT WHITE ON BLACK OR COLOUR PAPER

1 Import *Photoshop* positive greyscale image in tiff format into a picture box in *InDesign*.

2 In 'Swatches' colour background 'White' spot colour (see page 3 for how to create spot colour).

3 In 'Swatches' colour foreground/ content 'Paper'.



Technique #4

White linear designs on colour papers

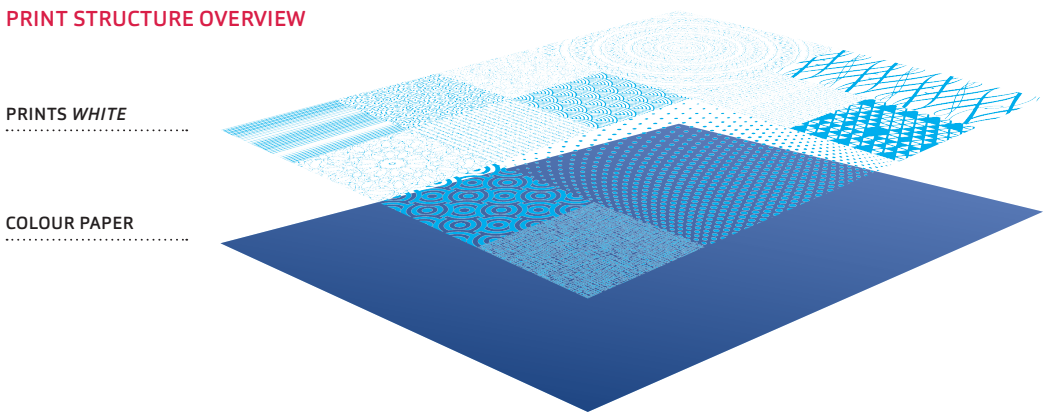
Designs containing fine linear detail (i.e. no halftone) are crisp and eye-catching when printed white on colour or black papers. The example shows a range of designs that print successfully in this way.

Artwork files can be created in *InDesign* or *Illustrator* as described on pages 3 and 5.

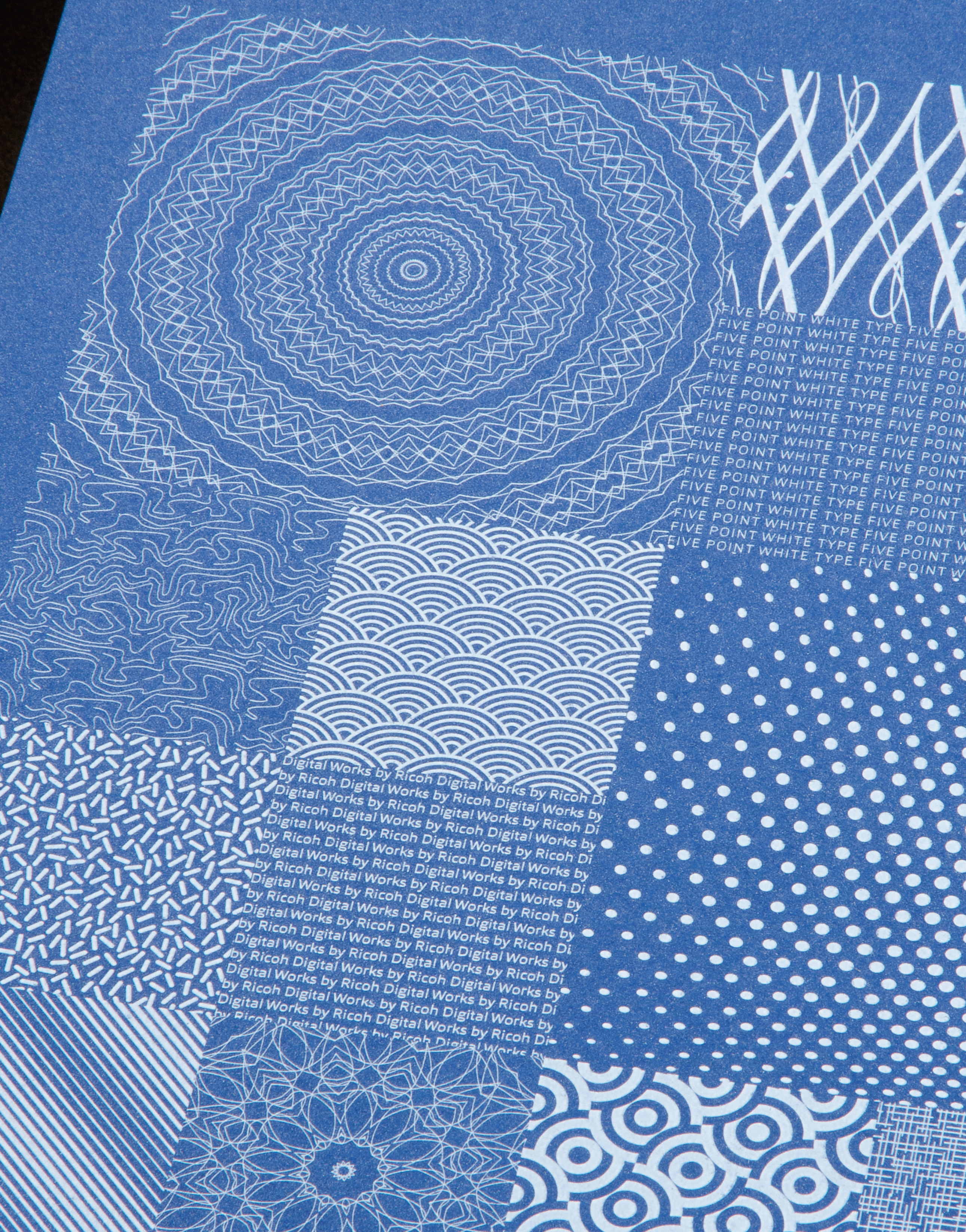
TIP

This technique is particularly effective on black and dark colour envelopes. Because the Ricoh digital printing process is able to incorporate information from a database of names and addresses each envelope can be customised to an individual recipient.

PRINT STRUCTURE OVERVIEW



Digital Works



Technique #5

CMYK and White on clear films

Ricoh 5 colour digital print is successful on clear films. This is an effective way of creating backlit material (e.g retail display graphics).

Because clear film is printed on the reverse, so that the image is protected by the film, artwork should be flipped.

White is printed last in sequence in the same pass as the CMYK colours, forming a background to all or parts of a design.

TIP

Because white is semi-opaque, type and other linear graphic elements reversed out of solid white will be visible when a film is viewed against a backlit lightbox.

INK ORDER ON SUBSTRATE

White prints last and forms a background behind the CMYK.



PRINT STRUCTURE OVERVIEW



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Digital Artwork Guide White

and White on clear film

Technique #6

CMYK and White on self-adhesive vinyl

Window stickers can be created by printing CMYK and white on clear self-adhesive vinyl.

Because the vinyl is viewed through the self-adhesive surface on the opposite side to the print, artwork should be flipped.

White is printed last in sequence in the same pass as the CMYK colours. In the example white forms a background to some areas of colour but not others, which appear transparent.

TIP

A cutter guide to 'kiss cut' the vinyl sheet can be created in *InDesign* or *Illustrator* on a separate layer in a non-printing colour.

TRANSPARENT COLOURS AND WHITE

To achieve white surrounded by transparent colour 'White' should be set to 'knock out' CMYK.

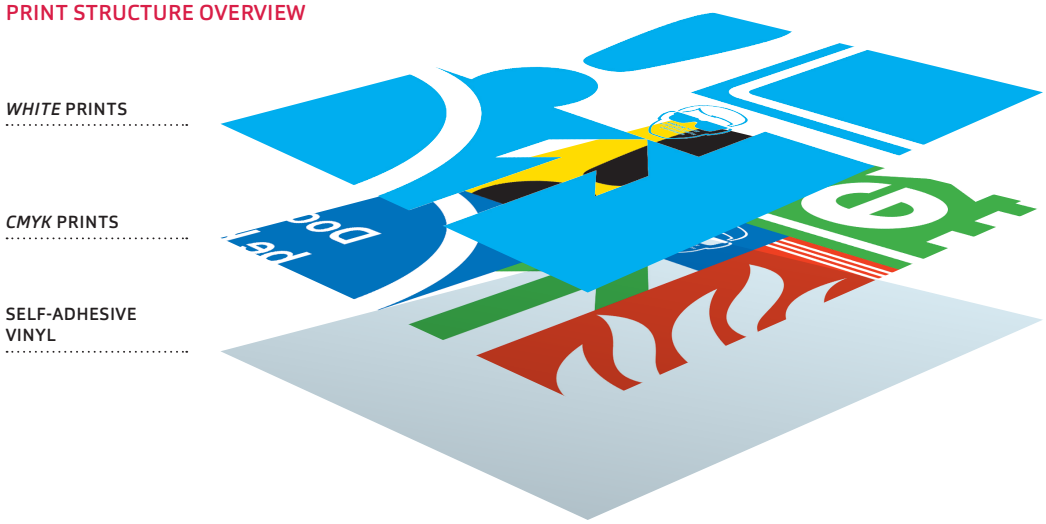


OVERPRINT WHITE

To achieve colours that will appear with white behind them a 'White' solid should be created on the 'Spot White' layer. This should be set to overprint. Areas that are to appear white should be created using the 'Paper' swatch in InDesign or CMYK white in Illustrator.



PRINT STRUCTURE OVERVIEW




Digital Works
Wear goggles when using this machinery

Technical details

Exporting PDFs from InDesign

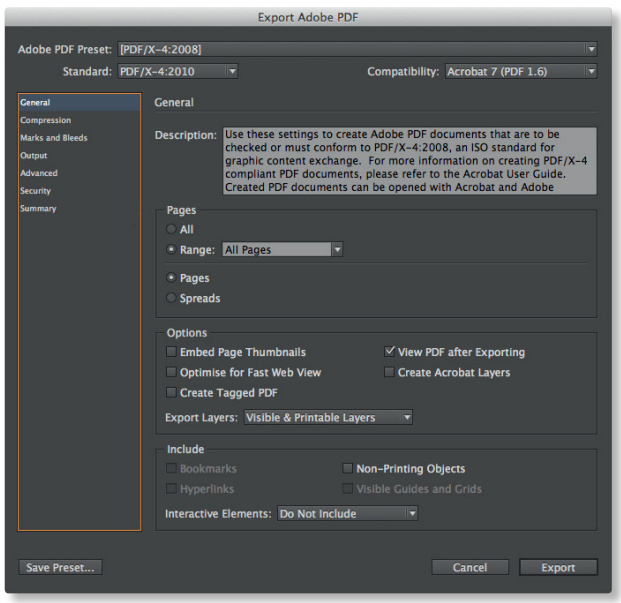
All PDFs produced by using the instructions shown opposite will conform to the latest PDF X4 2007/2008 specification, with either our coated or uncoated CMYK working space profile as the output intent. This new setting will keep all transparency 'live', however all images will be converted to the correct CMYK plus any spot colour used.

Follow the step by step guide (opposite) on how to create this specification. The instructions outline the best and easiest way to export a good high resolution PDF X4 for printing from InDesign. It does not use Acrobat Distiller and Postscript, instead using an Adobe PDF library within InDesign.

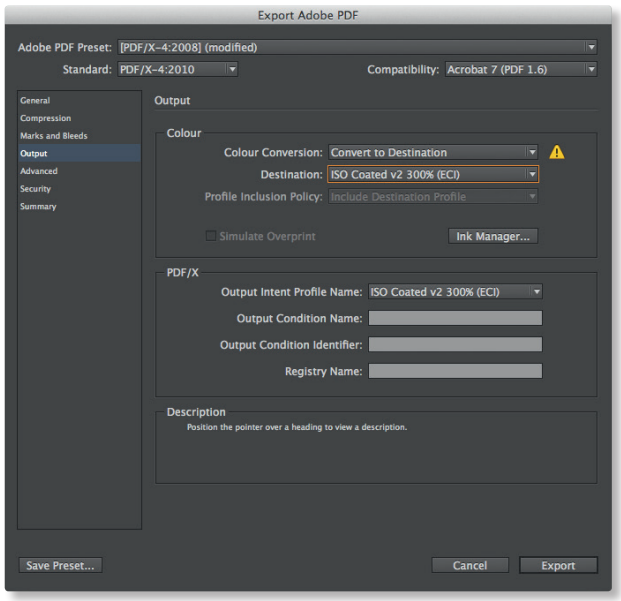
NOTE
The instructions given opposite should be used in conjunction with the *RICOH Print Production Desktop Colour Manual Document*.

NOTE
The Adobe PDF Presets you set up will also be available in Acrobat Distiller as a 'Job Options File (.joboptions) for use by other Adobe softwares creating PDFs. Using the Postscript method, make sure that the correct RICOH Color Settings File (.csf) is selected in the 'Color' tab in the Distiller settings.

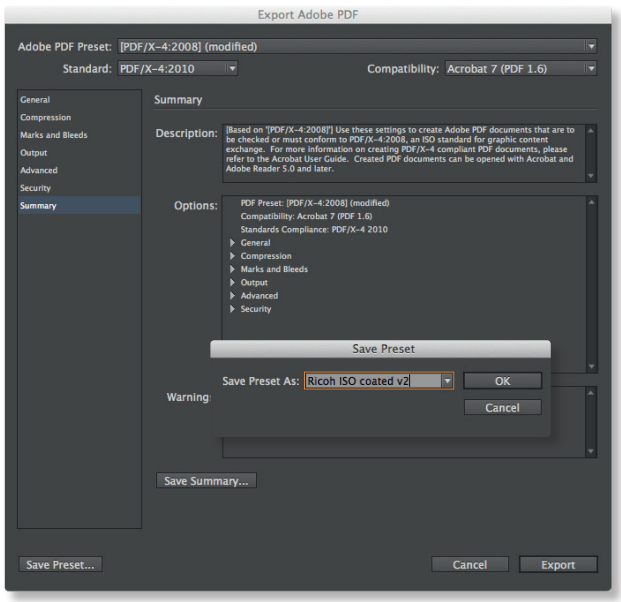
NOTE
QuarkXPress v9 does not yet support the export of PDF X4 files.



Default 'Export Adobe PDF' window



'Output' settings (see step 6)



'Summary' settings (see step 8)

RICOH-ADOBE INDESIGN CC/CS 4, 5, 6 AND CC, PDF X4 SETTINGS

1 Select Adobe PDF Preset 'PDF/X-4:2008' (File/Adobe PDF Preset/PDF/X-4:2008)

2 Select destination folder, input file name, click 'Save' to open 'Export Adobe PDF' window.

3 *General* – use default settings, unless you need to define 'Pages'.

4 *Compression* – use default settings.

5 *Marks and Bleeds* – tick 'Crop Marks', 'Bleed Marks' and 'Page Information' boxes. Also tick 'Use Document Bleed Settings' if required. You will notice the Adobe PDF Preset box (at top) has changed to 'PDF/X4-2008 (modified)'.

6 *Output* – this should default to the colour settings file you use in Adobe CS/CC. Check that the 'Colour' box is set to 'Convert to Destination', and the destination is the CMYK profile desired. The 'PDF/X' box should default to the PDF X output intent for the destination CMYK.

7 *Advanced* – use default settings. Ignore *Security* and go to *Summary*.

8 *Summary* – check settings then click 'Save Preset' (bottom left) and save as 'Ricoh ISO coated v2' PDF setting. This new setting now appears in 'Adobe PDF Preset'. If other PDF settings are needed for other RICOH ISO coated and uncoated workflows, repeat as needed, changing the colour settings files in InDesign. For further details see the *RICOH Print Production Desktop Ccolour Management Manual*.

9 Click 'Export' (bottom right) to save PDF to destination folder.

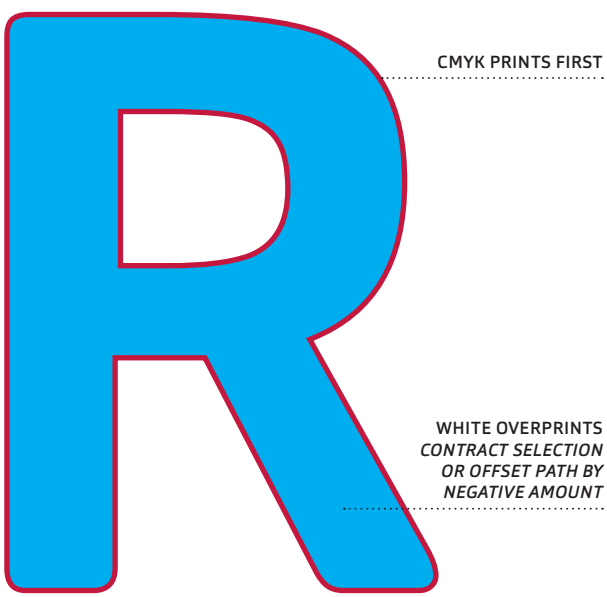
10 This new setting now appears under 'File/Adobe PDF Presets' for creating future PDF artworks.

Technical details

Applying choke to white print

When white is overprinted with a graphic element of an identical shape and size, it is advisable to choke the white to avoid it showing around the edges. There are a number of ways to achieve this. The techniques described here assume that an appropriate 'White' spot colour or channel has already been created as described on pages 4 and 5.

HOW 'CHOKING' WORKS



ADOBE PHOTOSHOP

1 Select area that is to print white.

2 Contract selection*, e.g. by 2 pixels (Select/Modify/Contract).

3 In 'Channels' select spot 'White' channel created previously (see page 4) and fill 'Black' (Edit/Fill).

4 Save in suitable file format for end use: *Photoshop*/tiff/eps/pdf.

NOTE

***The amount of contraction required will depend on the scale at which the image is to be reproduced. The smaller the scale the greater the number of pixels contraction – and vice versa.**

ADOBE ILLUSTRATOR

1 Select area that is to print white.

2 Offset path by a negative amount*, e.g. by –0.1mm (Object/Path/Offset Path)

3 In 'Swatches' apply spot 'White' colour created previously (see page 5).

4 In 'Attributes' check 'Overprint Fill'

5 Save in suitable file format for end use: *Illustrator*/eps/pdf.

NOTE

***The amount of path offset required will depend on the scale at which the artwork is to be reproduced. The smaller the scale the greater the path offset – and vice versa.**