

Xerox® iGen® 5 Press with the 5<sup>th</sup> Print Station

# Design and file preparation guidelines

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# Introduction

When you work with print providers that have a Xerox® iGen® 5 Press with the 5<sup>th</sup> print station, you get the opportunity to produce special effects that go beyond digital CMYK.

You can offer your clients on-brand spot colors, as well as design and security enhancements using Xerox® White and Clear Dry Inks, all without sacrificing digital print's turnaround time and cost-effectiveness.



This guide will walk you through several ways to use the 5<sup>th</sup> print station. Best practices for file preparation are included to help ensure print results match your design intent.

All steps included in this guide assume a working knowledge of Adobe® Creative Suite applications.

Always work with your print provider on specific file attributes and PDF export settings.

# The 5<sup>th</sup> print station process.

The 5<sup>th</sup> print station functions differently depending on what ink has been specified and how that ink is used within a design.

If the 5<sup>th</sup> print station is being used with one of the gamut-extending colors – Orange, Green, or Blue – that color will blend in with the press's CMYK Dry Inks and print to your paper in one single pass.

**White and Clear Dry Inks, however, are used for different – spot – purposes and do not mix in with the CMYK Dry Inks.** This means their printing process is somewhat different.

**When a White or Clear element is layered with CMYK in a design, the ink will print in a separate pass from your four color elements.**

This separate pass is invisible to the casual observer as it's happening automatically within the press, but it is important to understand.

Due to slight paper movement between the passes, small adjustments should be made to graphics calling for White

or Clear Dry Inks to ensure the final printed product matches your design intent. Those adjustments will be covered in the following pages.

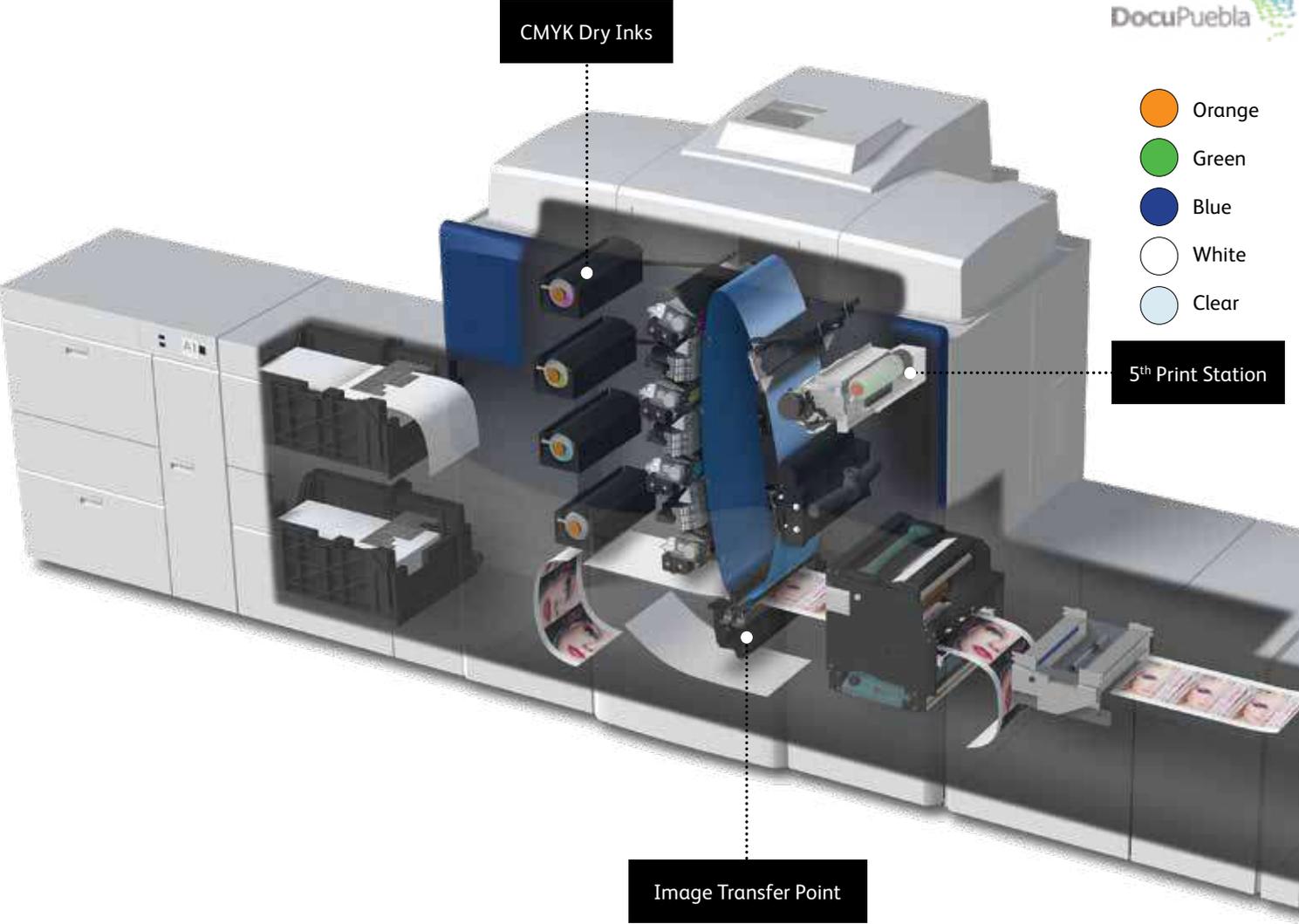
**Designs that place White or Clear Dry Ink elements next to CMYK do not require these adjustments**

because these designs will print in one single pass. It is only when White or Clear are used over or under CMYK that the press prints in multiple passes.

## HELPFUL TERMS:

**Passes** – The number of times a sheet of paper runs through the imaging transfer point.

**Layers** – The number of hits of ink that are required to meet the desired print characteristics for each job.



CMYK Dry Inks

 Orange

 Green

 Blue

 White

 Clear

5<sup>th</sup> Print Station

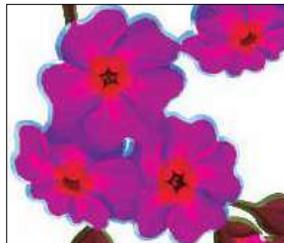
Image Transfer Point

# Choke and spread adjustments.

Choke and spread are two adjustments that will help compensate for any slight movement of paper between print passes. These adjustments create a small overlap that covers unwanted gaps, specifically when using White Dry Ink. The adjustment you chose will depend on your design.



**Choking** makes an element smaller. It should be used on bottom layer elements that don't need to be an exact size – for example, a White box under an image.



In this case, the White area under the flowers is choked in slightly to compensate for small movements of the paper between passes.

The image then completely covers the White box under it.



We recommend you choose a color to make the White and Clear effects easily identifiable within your files. In this guide, we will use 100% Magenta as that color.

Your design – along with the stock you've chosen and the specific iGen® 5 Press your print provider is running – will determine the exact amount of choke or spread needed. You should always request a press proof to ensure the results match your design intent.



**Spreading** makes an element larger. It should be used on top layer elements when retaining shape is more critical – for example, a CMYK logo over White Dry Ink.



Spreading the CMYK slightly will cover the bottom layer of White while retaining your intended design appearance on dark stocks.

Any extra CMYK spread blends in with the dark background stock color.

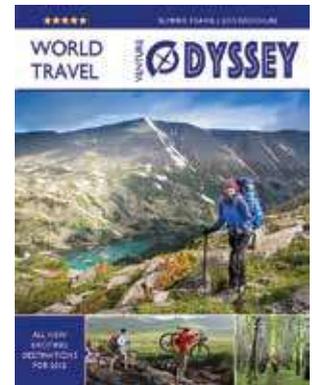


# Be spot-on with brand colors.

The need to accurately represent your clients' brand colors can often be the determining factor in picking a print method. Now, the iGen<sup>®</sup> 5 Press can play a bigger part in your choice.

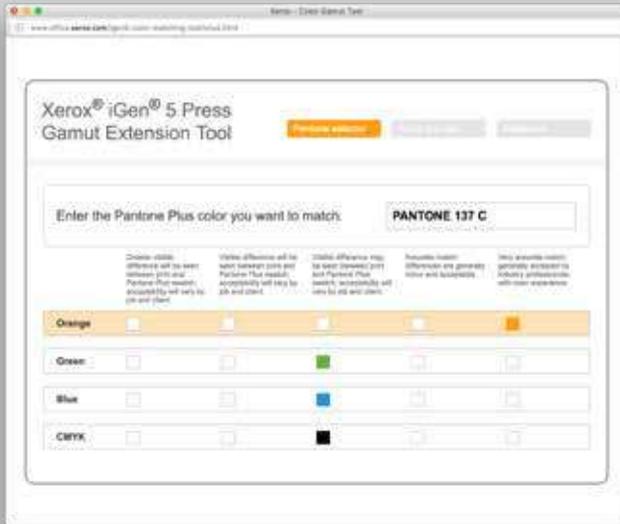
**An optional 5<sup>th</sup> color extends the iGen<sup>®</sup> 5 Press's gamut to put more of your clients' brand colors in reach.**

By adding Orange, Green, or Blue to CMYK Dry Inks in an iGen<sup>®</sup> 5 Press, more than 90% of the PANTONE<sup>®</sup> PLUS swatch book can be accurately reproduced. This makes digital print a highly relevant option for jobs that need fast, cost-effective turnaround – in addition to on-brand color.

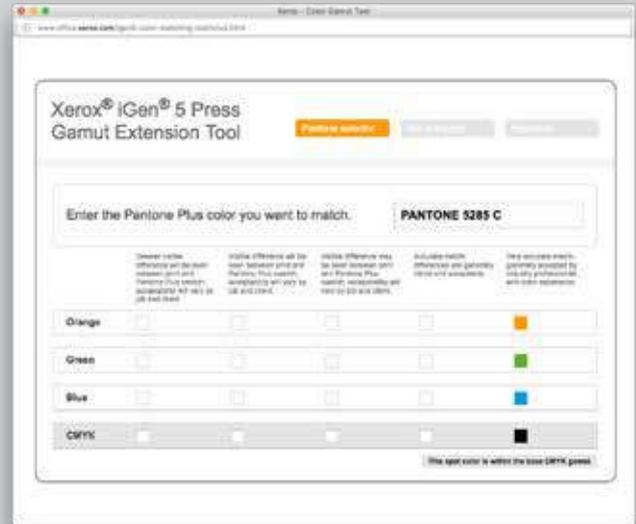


Using the 5<sup>th</sup> color capability is easy. Once you have selected a PANTONE® color, you can quickly check to see if it would benefit from the addition of Orange, Green, or Blue by using the Xerox® iGen® 5 Press Gamut Extension Tool: [xerox.com/gamut](http://xerox.com/gamut).

Simply enter your PANTONE® PLUS color and the tool will let you know if it can be accurately represented by CMYK, or if it would benefit from the addition of a 5<sup>th</sup> color.



In this case, with the addition of Orange, the specified PANTONE® color would be a “very accurate match.”



While a 5<sup>th</sup> color could be used to match this desired PANTONE® color, CMYK alone will also provide a “very accurate match.”

# Using 5<sup>th</sup> color in your files.

Once you know your PANTONE® PLUS color will benefit from Orange, Green, or Blue, you simply need to define it as a Spot color in your layout file. Your print provider – and the iGen® 5 – will do the rest.



Determine whether your PANTONE® selection will benefit from a 5<sup>th</sup> color using the Gamut Extension Tool: [xerox.com/gamut](http://xerox.com/gamut).

1 In InDesign®, add the desired PANTONE® color to your file. Designate it as a **spot color**.

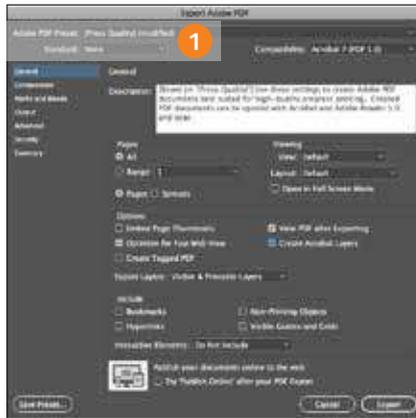
2 Fill your shape with the new PANTONE® color swatch.

Save your file and export as a high-resolution PDF using the instructions on the next page.

When you hand your job off for production, be sure to tell your print provider to run it with a 5<sup>th</sup> color, and to ask for a press proof. This will help ensure the result matches your intent.

# Preparing PDF files for printing.

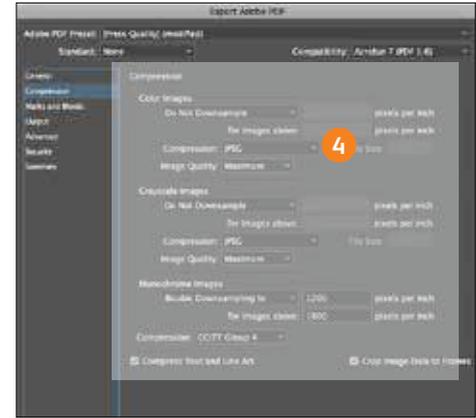
## Exporting as a high-res PDF from InDesign®.



- 1 From the main menu, **select:** File > Adobe PDF Presets > **Press Quality**, and click **Save**.



- 2 **Select** General: Compatibility > and choose **Acrobat 7**.
- 3 On the lower-right side, check: **Create Acrobat Layers**.



- 4 **Select** Compression: Color Images > **Do Not Downsample**.  
Compression > JPEG,  
Image Quality > **Maximum**.  
Choose the same for Grayscale  
Images. For Monochrome Images >  
CCITT Group 4.



# Enhance your designs by adding White Dry Ink.

Adding White to your color palette lets you make a bigger visual impact.

Use White Dry Ink to add visual appeal and function to both colored and transparent media by drawing attention to a graphic or emphasizing an image so it jumps right off the page.

We recommend you choose a color to make the White effects easily identifiable within your files. In this guide, we will use 100% Magenta as that color.



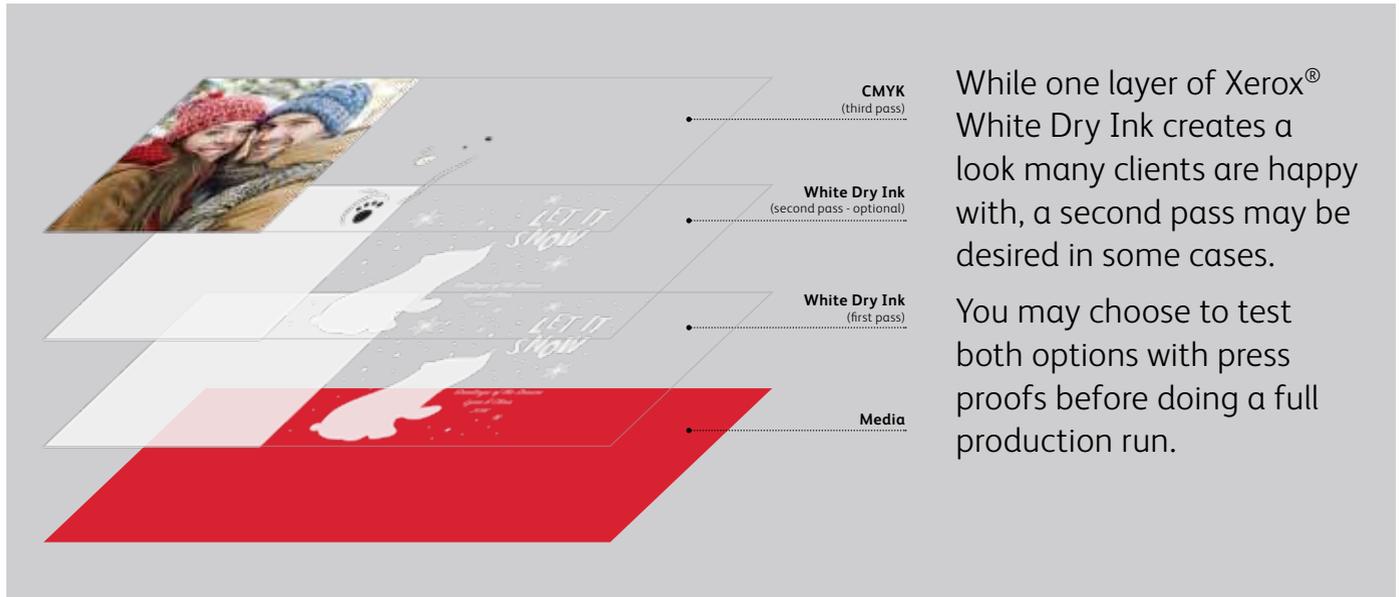
White can be printed next to or under CMYK to enhance images and add more value to jobs.



White enhances designs that print on dark cover stock – such as the holiday card shown here – creating higher-value postcards, invitations, posters, direct mail, and more.



You can also choose to add a second pass of White for more opacity.

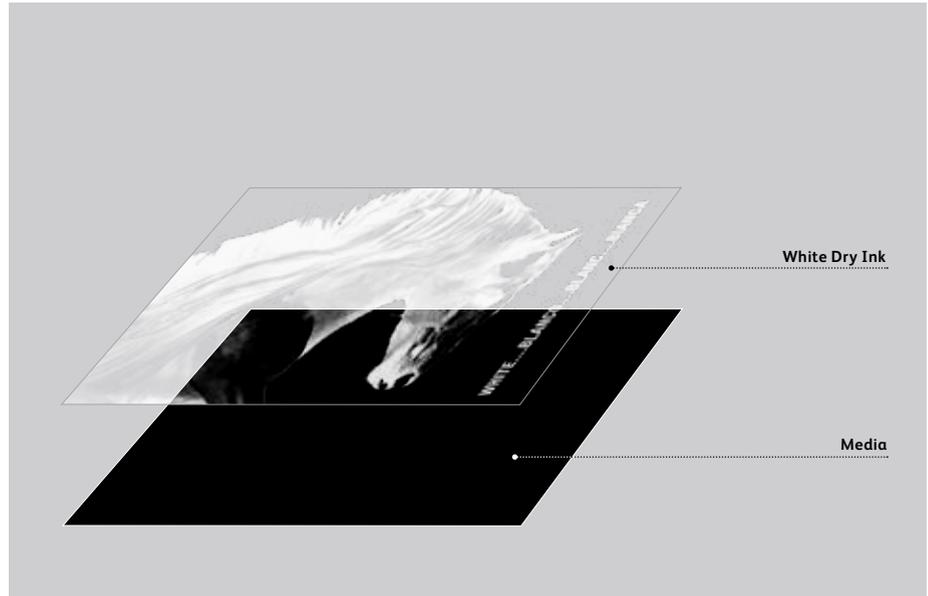


Whether running one pass of White Dry Ink or two, applying a choke to the White box(es) under the CMYK photo image will help ensure the an excellent print result.

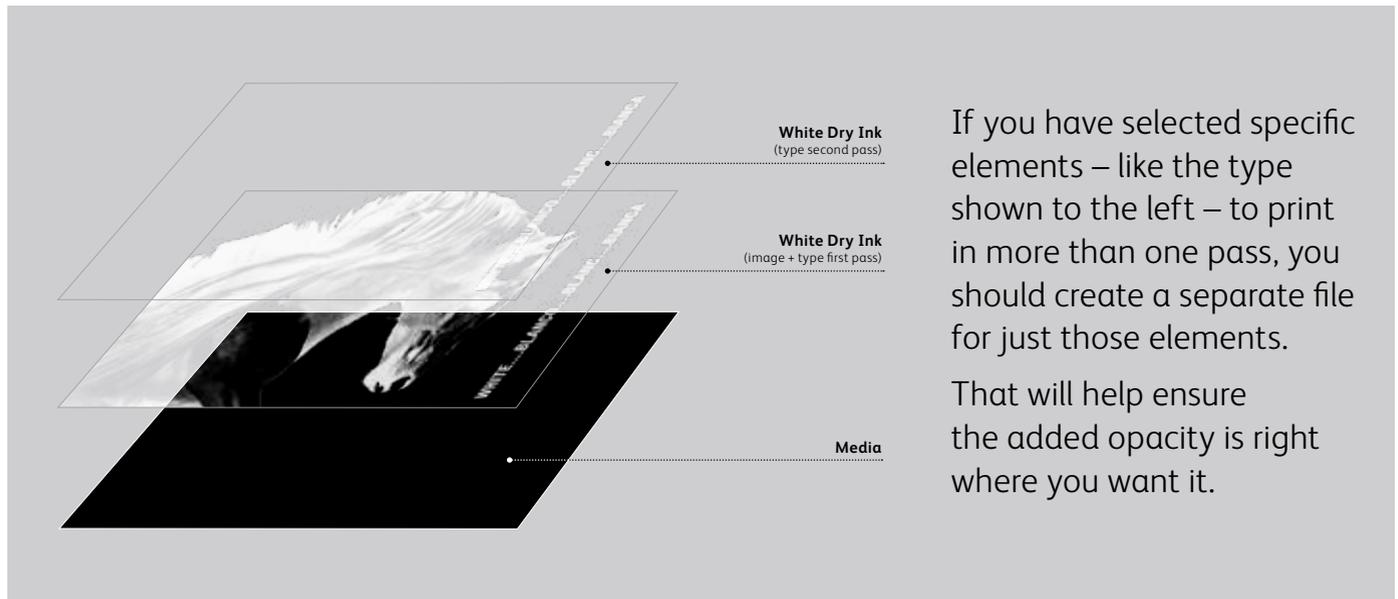
To create a bold look on dark media, create a design that only uses White Dry Ink.



White on its own creates dramatic effects on dark, heavy media, opening up new design possibilities for folders and collaterals.



You can also choose to add a second pass of White for more opacity.

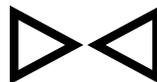
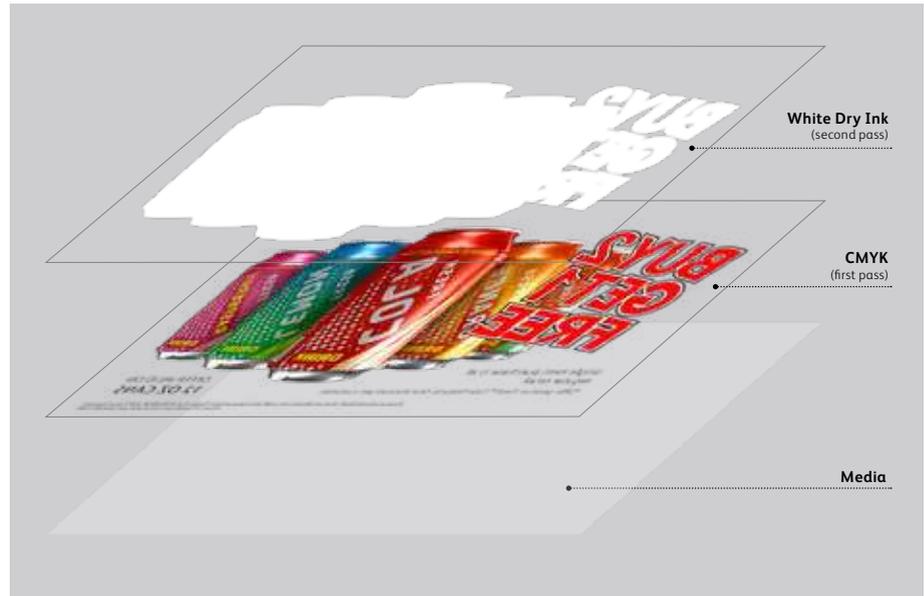


A choke or spread is NOT required for two passes of White elements.

In certain applications, you can use White over CMYK to add an opaque background.



White creates new possibilities for window signage on transparent media. Depending on how the signage is being applied, White can be printed either under or over CMYK.

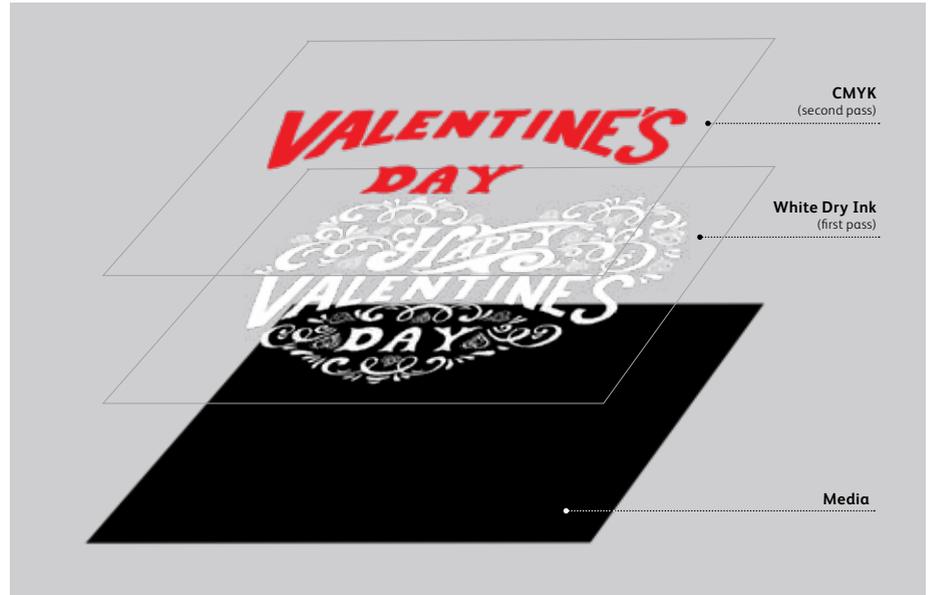


In this example, we have choked the White so it does not spread beyond the CMYK elements.

White can also be used under CMYK to make colors pop on dark stocks.



White makes color pop on dark stocks, giving you a simple way to broaden the types of stocks you specify without giving up legibility or design impact.



In this example, we have spread the CMYK text to fully cover the White underlayer.

# Adding White Dry Ink to your files.

## Preparing bitmap images with Adobe® Photoshop®.



- 1 If you want a bitmap image to print in White, you will need to begin with the image in Photoshop®. If you're starting with a color CMYK image it will need to be converted to **Grayscale** first. All **Grayscale** images then need to be inverted.
- 2 To save as the correct file format, go to **Menu** and select **Image**, then **Mode**, then select **Duotone**.
- 3 Click on **Ink 1** color, then choose the **PANTONE® Solid Coated** library.

Select **Type** as **Monotone**.

NOTE: Instead of Inverting, another option would be to go to **Image > Adjustments > Curves**, then make **Output 0** and **Input 100**. This will give you adjustment capabilities to increase or decrease the image contrast.

Go to **Menu** and select **Image**, then **Adjustments**, then select **Invert**.

## Preparing bitmap images with Photoshop®.



- 4 Select PANTONE Process Magenta, then select **OK**.



- 5 Select and rename the PANTONE Process Magenta as **White**, then select **OK**.

The name "White" is case-sensitive and should be used exactly as shown to ensure proper printing.



- 6 Save your file as a Photoshop® file so it is ready to be placed into an InDesign® layout file.

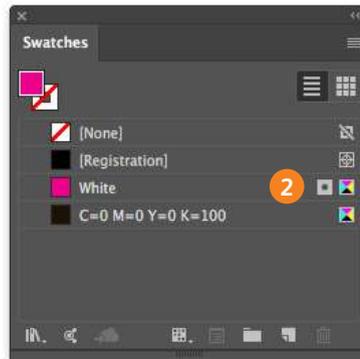
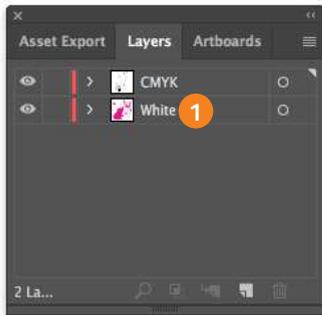
The file should bring in the color **White** as a 100% Magenta spot color.

Recommended file formats:  
psd, eps, and PDF

# Adding White Dry Ink to your files.

## Creating vector graphics with Adobe® Illustrator®.

Vector graphics that are created in Illustrator® can be placed into Adobe® InDesign® and designated to print with White Dry Ink.



- 1 Create your vector graphics on designated layers in Illustrator®: one layer for CMYK, and one layer for **White**.

The name “White” is case-sensitive and should be used exactly as shown to ensure proper printing.

- 2 Add a new color in the swatches palette to identify **100% Magenta** as White and name it **White**.

Designate the Color Type as a CMYK **Spot** Color.

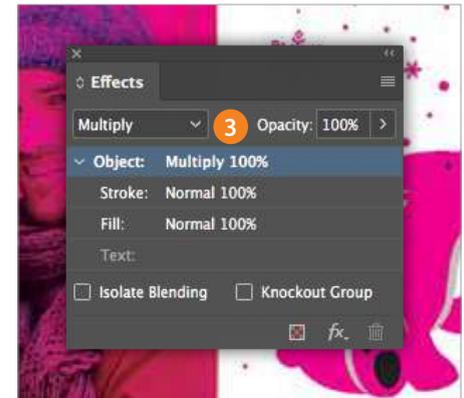
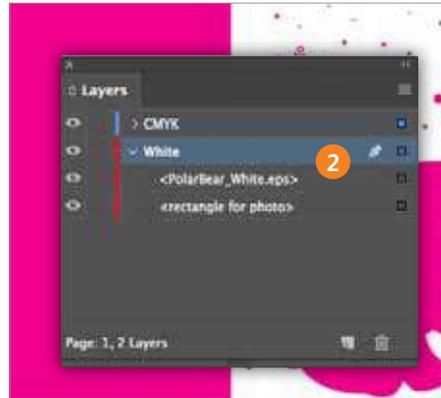
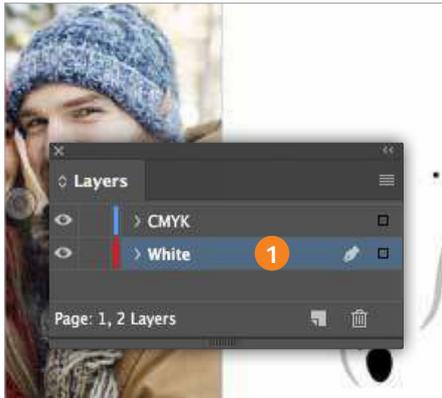
- 3 Save out each layer as a .eps to be placed into your InDesign® file.

In the example shown, the White layer needs to print **under** the CMYK art.

NOTE: Another option is applying overprint to the **White** fill if it is printing over CMYK. You can use this method instead of Multiply in InDesign. To apply in Illustrator, choose Window > Attributes > Overprint.

## Pulling it all together in InDesign®.

Now that you have created your imagery for White, you are ready to put it together in your final layout.



- 1 Create a new layer in InDesign® and name the layer **White**.
- 2 Import Illustrator® .eps graphics into each designated layer within InDesign®: one layer for CMYK, and one layer for **White**. Add a choke to the White layer.
- 3 For graphics imported into InDesign®, choose **Multiply**; for those created within InDesign®, choose **Overprint**.

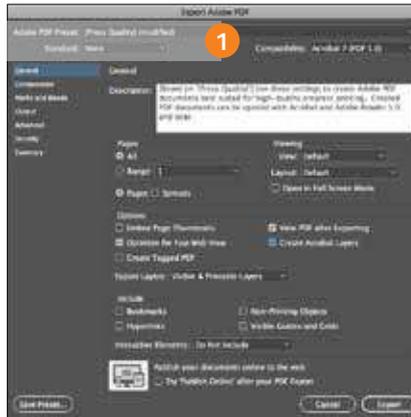
Save your file and export as a high-resolution PDF using the instruction on the next page.



Within InDesign®, make sure that you place the CMYK elements on your CMYK layer and the White elements on your White layer, then ensure you have created the proper choke on the White elements.

# Preparing PDF files for printing.

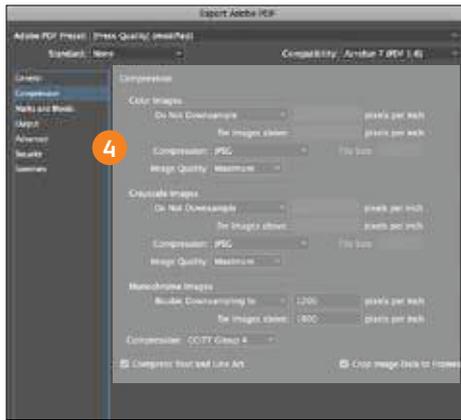
## Exporting as a high-res PDF from InDesign®.



It's important to choose the correct settings when saving a PDF for printing with White Dry Ink.

Follow these steps to create a PDF preset for saving high-res PDFs right out of InDesign®.

- 1 From the main menu, **select:** File > Adobe PDF Presets > **Press Quality**, and click **Save**.
- 2 **Select** General: Compatibility > and choose **Acrobat 7**.
- 3 On the lower-right side, check: **Create Acrobat Layers**.



**4** Select Compression: Color Images > **Do Not Downsample**.

Compression > JPEG,  
Image Quality > **Maximum**.

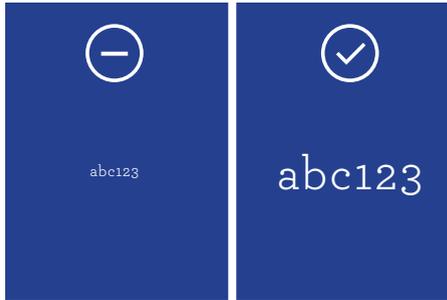
Choose the same for Grayscale  
Images. For Monochrome Images >  
CCITT Group 4.



**5** Set up with **Crop Marks** and **Bleeds** if desired.

Within Acrobat, you can quality check your PDF layers before printing by viewing the file in the Print Production > Output Preview window.

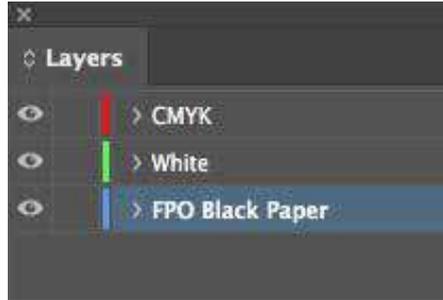
# Get the most from White Dry Ink.



**Avoid serifs and small point text** with White Dry Ink.

**Avoid trying to trap to or overlap White** to CMYK text and graphics with serifs or thin details.

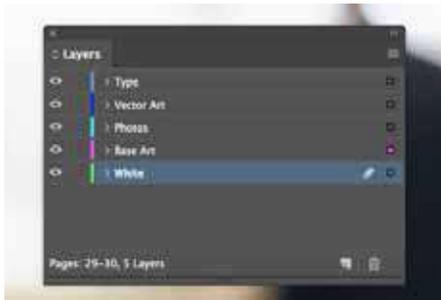
**White Dry Ink is intended for spot usage** and not for flood needs.



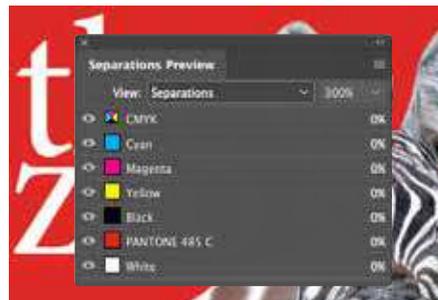
**A faux fill can be added as a layer within your design file to simulate a colored stock.** This can help you better visualize the design (remember to delete or hide this layer when creating the PDF).



**Designing with screens of White is not recommended for text.** If screens of White are used, text legibility may suffer.



Page layout can have an unlimited number of layers; however, all **White text and graphics should be placed together in one layer.**



**You can preview your file** in Separation Preview within InDesign® or in Acrobat (*Print Production > Output Preview*) to make sure the White elements are specified correctly.

Always request a hardcopy press proof to make sure printed results are matching your design intent.



**If the White Dry Ink did not print as you intended,** you may have to enable Multiply or Overprint for overlapping elements or adjust your choke and spread settings.

**If White Dry Ink isn't printing at all,** check that the custom spot is identified for each text/graphic with the same spelling in all cases (i.e., "White").



# Add decorative and security effects with Clear Dry Ink.

Emphasize important content and make an eye-catching impression that drives results.

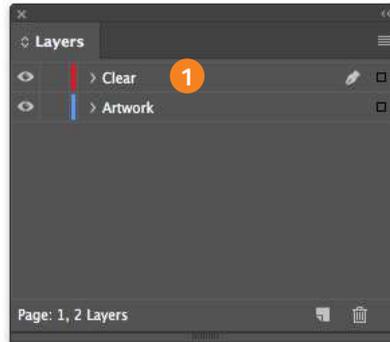
The addition of Clear Dry Ink in the 5<sup>th</sup> print station expands the iGen® 5's versatility and allows you to offer customers a distinctive selection of specialty embellishment options that make an impact.

We recommend you choose a color to make the Clear effects easily identifiable within your files. In this guide, we will use 100% Magenta as that color.



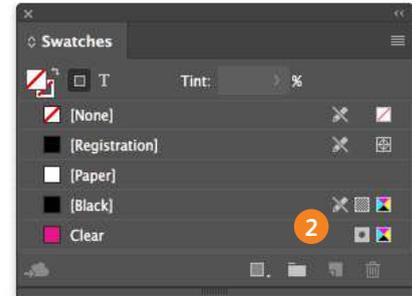
# Adding Clear Dry Ink to your files.

## Setting up your InDesign® file for printing with Clear Dry Ink.

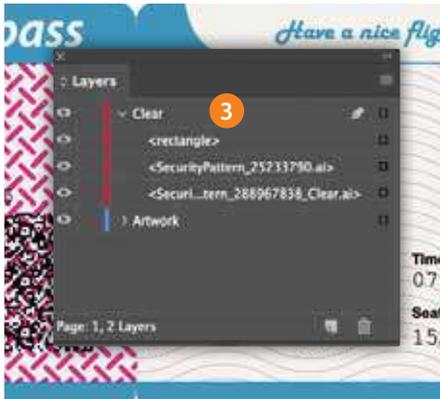


- 1 In InDesign®, add a second layer in the layers palette for Clear Dry Ink.  
Name the new layer **Clear**.

The name “Clear” is case-sensitive and should be used exactly as shown to ensure proper printing.



- 2 Add a new color in the swatches palette and name it **Clear**.  
Designate the Color Type as a CMYK **Spot** Color.  
Fill your shape with the new **Clear** color swatch.



- 3 Import vector graphics, draw and fill a shape, or select text that will have the **Clear** Dry Ink applied. Make sure all elements you want to print with Clear are placed on the **Clear** layer.

In the example shown, the Clear layer will print **over** the CMYK art.



- 4 For graphics imported into InDesign®, choose **Multiply**; for those created within InDesign®, choose **Overprint**.

Save your file and export as a high-resolution PDF using the instruction on the next page.

Within InDesign®, make sure that you place the CMYK elements on your CMYK layer and the Clear elements on your Clear layer, then ensure everything is registered appropriately.

If precise alignment is needed between CMYK and Clear elements, be sure to set choke or spread in your file.

NOTE: Another option is applying overprint to the **Clear** fill when it is printing over CMYK. You can use this method instead of Multiply in InDesign. To apply in Illustrator, choose Window > Attributes > Overprint.

**Clear** will always print over CMYK.

# Preparing PDF files for printing.

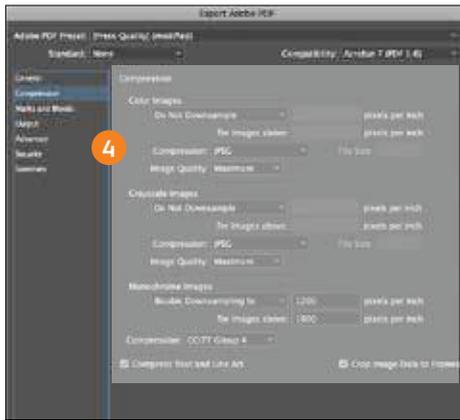
## Exporting as a high-res PDF from InDesign®.



It's important to choose the correct settings when saving a PDF for printing with Clear Dry Ink.

Follow these steps below to create a PDF preset for saving high-res PDFs right out of InDesign®.

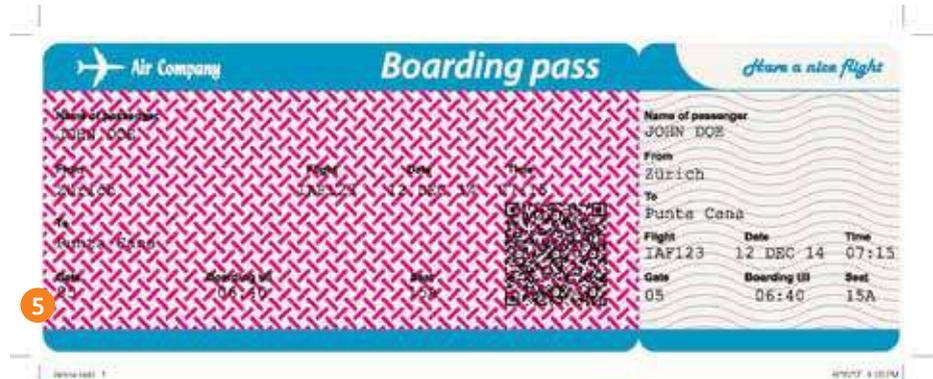
- 1 From the main menu, **select:** File > Adobe PDF Presets > **Press Quality**, and click **Save**.
- 2 **Select** General: Compatibility > and choose **Acrobat 7**.
- 3 On the lower-right side, check: **Create Acrobat Layers**.



**4** Select Compression: Color Images > Do Not Downsample.

Compression > JPEG,  
Image Quality > **Maximum**.

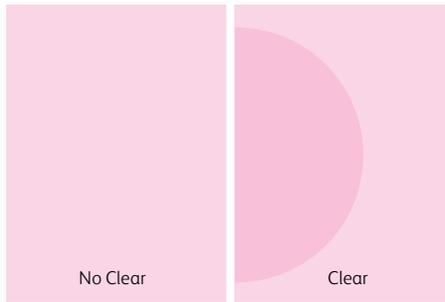
Choose the same for Grayscale  
Images. For Monochrome Images >  
CCITT Group 4.



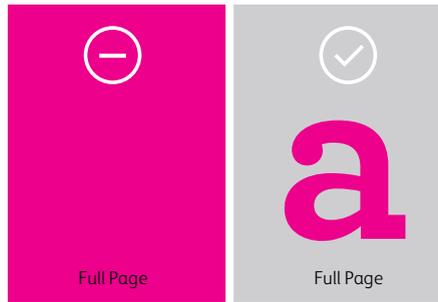
**5** Set up with **Crop Marks** and **Bleeds** if desired.

Within Acrobat, you can quality check your PDF layers before printing by viewing the file in the Print Production > Output Preview window.

# Get the most from Clear Dry Ink.



**Clear Dry Ink increases the saturation** of lighter CMYK colors and makes them pop.



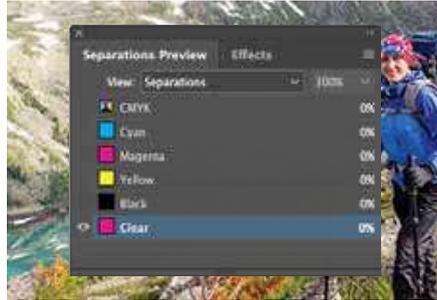
**Clear Dry Ink is intended for spot usage** and not for flood needs.



**Clear Dry Ink shows best on coated or silk-coated media.** This is especially true for Black coated stock.



**Always test first when applying Clear Dry Ink over dark or saturated colors** to ensure you are achieving the desired effect and appearance.



**You can preview your file** in Separation Preview within InDesign® or in Acrobat (*Print Production > Output Preview*) to make sure the Clear elements are specified correctly.

Always request a hardcopy press proof to make sure printed results are matching your design intent.



**If the Clear Dry Ink did not print as you intended**, you may have to enable Multiply or Overprint for overlapping elements or adjust your choke and spread settings.

**If Clear Dry Ink isn't printing at all**, check that the custom spot is identified for each text/graphic with the same spelling in all cases (i.e., "Clear").

# With one print station, you get virtually unlimited possibilities.

The 5<sup>th</sup> print station allows you the flexibility to meet a wider variety of PANTONE® colors and elevate your prints with eye-catching appeal. With Xerox® White and Clear Dry Inks, you can easily design with enhanced creativity in mind.

To learn more about Xerox® iGen® 5 Press, please contact your Xerox representative.