



PRECISION IMAGES

Designing for Print

HOW TO BUILD A FILE FOR SUCCESSFUL PRINTING

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Building Your File

Step 1: Choose your Design/Layout program(s)

Choosing the right program for designing your project is key. Follow these guidelines when choosing the programs you will use.

Adobe Photoshop

- For photographs and rasterized images only.
- Text is best left to other applications like Illustrator or InDesign.
- When using Photoshop it is NOT recommended to enlarge images because this will result in pixelated images and poor print quality.

Adobe Illustrator

- Illustrator works with vector images which are based on mathematical formulas. This means images created in Illustrator can be scaled up or down without loss of quality, as can happen with rasterized images in Photoshop.
- Illustrator is great for text that will be used as a design element, or logos.

Adobe InDesign

- This is a layout program that is used to combine text and graphics.
- It is best to compose large areas of text in InDesign rather than Illustrator or Photoshop.
- Place images designed in Photoshop or Illustrator into your InDesign layout to bring everything together and get it ready for print production

Microsoft Word

Word can be useful when creating large bodies of text, however as a design/layout tool it is not nearly as powerful as InDesign. If your product is going to have images we do not recommend using Microsoft Word as your primary design tool because quality can be a concern. In addition, when Word documents are opened on different computers, with different operating systems or different versions of Word, the layout could be changed, fonts may not appear correctly and images may have lost quality. For these reasons we recommend using InDesign for final layout purposes.



Why is adding a Bleed necessary?

Small mechanical variations can end up leaving a white edge where there should be no white edge if the image is not extended beyond the final trim size. Extending images 1/8" beyond the final trim size guarantees that images truly will print to the edge of the paper.

How do I add bleed to my design?

Build your files 1/8" larger than the final trim size. For example, if you have designed a standard 3.5" x 2" business card with a red background covering the whole area, you will need to enlarge that red background to 3.75" x 2.25". This will make the red background extend 1/8" on every side of the page.

Adobe Photoshop

1. Open Photoshop and click File > New...
2. Enter the full bleed⁴ dimensions. That is, 1/4" extra both vertically and horizontally.
3. Set the Resolution at 300 pixels/inch
4. Set your Color Mode at CMYK

Adobe Illustrator

1. Open Illustrator and click File > New...
2. Enter the trim⁵ dimensions in the Width and Height boxes (for example, the trim dimension on a standard business card would be 3.5" x 2")
3. Enter 0.125 for the top, bottom, left and right bleed
4. Set your Color Mode at CMYK
5. Set your Raster Effects at High (300ppi)

Adobe InDesign

1. Open InDesign and click File > New > Document...
2. Enter the trim dimensions under Page Size (for example, a standard business card would have trim dimensions of 3.5" x 2")
3. If you do not see "Bleed and Slug" at the bottom of the window, click the "More Options" button.
4. Enter 0.125 for the top, bottom, left and right bleed

Trimming & Bleed Guidelines

When building your file, please follow the guidelines below to ensure your project is printed correctly.

Trim Edge

This is the edge of the final printed product. For a standard business card the trim dimensions would be 3.5" x 2"

Product Specification Quick Sheet

Bleed Edge

Images should be pushed out to the Bleed Edge, 1/8" past the trim edge on every side.

Safe Edge

Text and other important elements should be placed within the Safe Edge which is 1/8" inside the Trim Edge. This will ensure that no text is cut off due to variation in the trimming process.

Examples

Correct



The background image has been extended 1/8" past the Trim Edge and the text is within the Safe Edge.

Incorrect



The background image has not been extended to the Bleed Edge. This could result in strips of white around the edges of the business card.

Incorrect



The text has not been kept within the Safe Edge. This could result in text being cut off due to tolerances during trimming.

Guidelines for Images and Color in Printing

Product	Flat Size	Bleed	Resolution	Submit Size	
	W x H			Inches	Pixels
Tri-Fold Brochures	8.5" x 11"	.125"	300dpi	8.75" x 11.25"	2625 x 3375
Half-Fold Brochures	8.5" x 11"	.125"	300dpi	8.75" x 11.25"	2625 x 3375
4x9 Half-Fold Brochures	8" x 9"	.125"	300dpi	8.25" x 9.25"	2475 x 2775
Standard Business Card	3.5" x 2"	.125"	300dpi	3.75" x 2.25"	1125 x 675
Envelopes (No. 10)	9.5" x 4.125"	0	300dpi	9.5" x 4.125"	2850 x 1238
Flyers	8.5" x 11"	.125"	300dpi	8.75" x 11.25"	2625 x 3375
Greeting Cards, Fold Down	6.25" x 4.5"	.125"	300dpi	6.5" x 4.75"	1950 x 1425
Greeting Cards, Side Fold	4.5" x 6.25"	.125"	300dpi	4.75" x 6.5"	1425 x 1950
Letterheads	8.5" x 11"	.125"	300dpi	8.75" x 11.25"	2625 x 3375
Post Cards - 6x4	6" x 4"	.125"	300dpi	6.25" x 4.25"	1875 x 1275
Post Cards - 5.5x3.5	5.5" x 3.5"	.125"	300dpi	5.75" x 3.75"	1725 x 1125
Posters - 11x17	11" x 17"	.125"	300dpi	11.25" x 17.25"	3375 x 5175
Posters - 12x18	12" x 18"	.125"	300dpi	12.25" x 18.25"	3675 x 5475
Rack Cards	4" x 9"	.125"	300dpi	4.25" x 9.25"	1275 x 2775

Guidelines for Images and Color in Printing

Images

1. Resolution for all images should be at least 300 pixels/inch
2. Preferably, all images should be saved to .eps files
3. Images that are to be at the edge of the page should be extended 1/8" beyond that final size⁶
4. Images should be created in/converted to CMYK⁷, not RGB.

Vector Images (Illustrator)

ALWAYS "Create Outlines" (Illustrator) or "Rasterize Type" (Photoshop) to avoid font issues when submitting files for printing. [Click here to find out more about creating outlines and rasterizing type.](#)

Pixel-Based (Photoshop)

- Avoid over-scaling images (125% or more) when placing into your layout program.
 - Sample down (reduce the size) a copy of larger images and link them to your file to save disk space and processing time.
-

Color

- NEVER use RGB
- Always create or convert all text, images, and files to CMYK or Spot Color values
- Avoid transparency effects when working with spot colors
- Use the Pantone names for spot colors and avoid calling them things like, “Company X Yellow”
- Keep in mind that the colors you see on your screen may not match the printed result. Work with your printer to make sure colors turn out the way you want them to.

All About Fonts

PostScript® Fonts

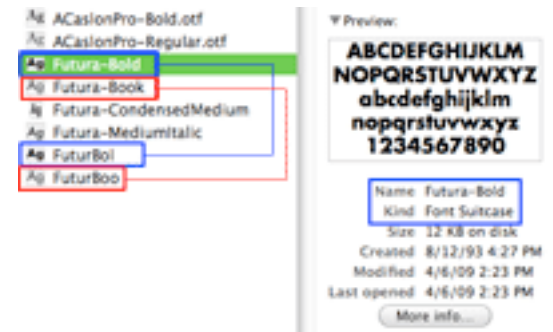
PostScript fonts have two important files. Each of these files must be present in order to render the font properly both on screen and in print.

The “screen” font

The “screen” font is a font suitcase containing all the information necessary to render a scalable font on your computer monitor. Often the name of this file will be the full font name (Futura-Bold). In addition to this screen font you must also include the linked printer font (the blue and red lines show the relationship between two printer and screen fonts).

The two “screen” PostScript fonts in this example are Futura-Bold and Futura-Book.

Note: The description for the “Kind” attribute in the Preview pane (on the right in the image) is “Font Suitcase.”



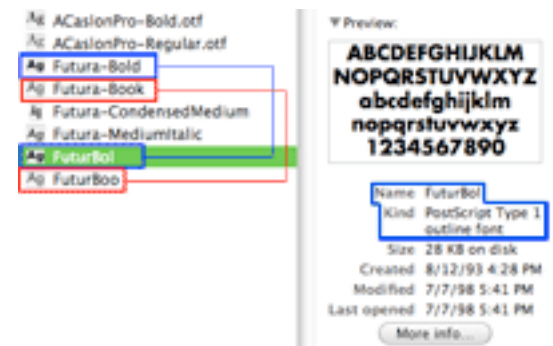
“Screen Font” : The Red and Blue lines show the relationship between the two parts of the PostScript fonts.

The “printer” font

The “printer” font contains vector outlines of the font and is often named with an abbreviation of the full font name (FuturBol). In addition to this printer font you must also include the linked screen font (the blue and red lines show the relationship between two printer and screen fonts).

The two “printer” PostScript fonts in this example are FutuBo (linked to Futura-Bold) and FuturBoo (linked to Futura-Book).

Note: The description for the “Kind” attribute in the Preview pane (on the right in the image) is “PostScript Type 1 outline font.”



“Printer Font” : The Red and Blue lines show the relationship between the two parts of the PostScript fonts.

When you use a PostScript font in your design, make sure you include each of these files with your output. This is quite easy to do in InDesign (see *Packaging in InDesign*).

TrueType® Fonts

TrueType fonts were designed to eliminate the need for multiple files. They incorporate both PostScript fonts into one file.

When packaging (see *Packaging in InDesign*) your file, you will not see two files for each font as you will when you use PostScript fonts. The two TrueType fonts used for this example are Futura-CondensedMedium and Futura-MediumItalic

Note: The description for the “Kind” attribute in the Preview pane (on the right in the image) is “Font Suitcase.” This is the same as with a PostScript font. To tell the difference between the two, see “Knowing Which Fonts are PostScript, TrueType or OpenType” below.

OpenType® Fonts

OpenType was built on TrueType and also contains, in one file, all the information necessary to render fonts correctly both on screen and in print. It’s main benefit is that it is cross-platform. The same file will work on both a Windows and Macintosh system. OpenType fonts with the .otf extension contain PostScript information while those with the .tff extension are TrueType-based. For more information on OpenType fonts visit the Adobe Fonts website:

<http://www.adobe.com/type/opentype/>

When packaging (see *Packaging in InDesign*) your file, you will not see two files for each font as you will when you use PostScript fonts. The two OpenType files used in this example are ACaslonPro-Bold.otf and ACaslonPro-Regular.otf.

Note: The description for the “Kind” attribute in the Preview pane (on the right in the image) is “OpenType Font”

Knowing which fonts are PostScript, TrueType, or OpenType

You can tell what most font types are by looking at the extension.

Mac

.ttf = TrueType

.otf = OpenType with PostScript Content

.dfont = a version of TrueType

No extension = PostScript (either screen or printer)

Windows

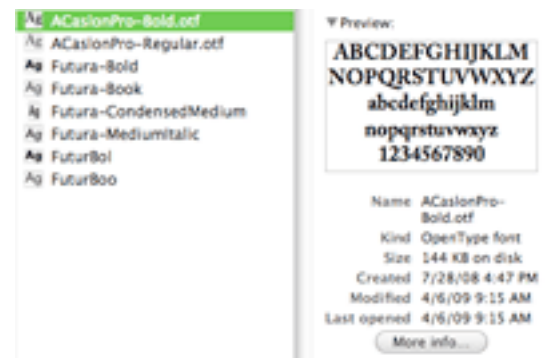
.ttf = TrueType

.otf = OpenType with PostScript Content

.pfb and .pfm = PostScript

.CompositeFont or .cff = compressed .pfb and .pfm PostScript files

.fon = For use in on-screen menus and Graphical User Interface (GUI). NOT for printing



OpenType fonts are only one file and have a .otf extension.

Packaging in InDesign

When using InDesign, a great way to make sure your printer will receive everything they need to correctly print your document is to create a “Package” containing all of the necessary files. Fonts, images and other necessary items are put in one folder that you can easily send to your printer.

InDesign does this automatically with its “Package” function. To package your InDesign file:

1. Open your file in InDesign
2. Click File > Package...
3. Go through the menu options on the left and check:
 - a. Fonts: All the fonts you want to use are in the list and the status for each one is OK. Click “Find Font...” if anything is missing.
 - b. Links & Images: Make sure each image type says “CMYK” and not RGB and that the status of each image is “Linked.” We prefer linked, rather than embedded, images because it saves disk space. If any of the images are missing, click on them in the list and then click “Relink”
4. Click the “Package...” button
5. Choose a descriptive name for the text file that will be included with the package. This file will contain instructions for the Prepress team. It is also helpful if you fill out the other requested information (Contact, Company, Address, Phone, Fax, Email). Click Continue
6. Select a destination for the packaged folder (preferably the same folder your original InDesign file is located in) and give it a descriptive name. Click Save.
7. The packaged folder will be created in the location you specified. Make sure it contains:
 - a. A .txt file
 - b. An InDesign file
 - c. A Fonts folder containing all the fonts you used (there may be “extra” fonts in this folder. See “PostScript Fonts” above)
 - d. A Links folder containing all the images you used
8. Compress or “zip” this folder and send it to your Print Provider

More about the Package function

The Package dialogue box has several menu options that will help you ensure all fonts and images are linked or embedded, and that the colors are correct. These options can help you locate issues in your InDesign document you may not have been aware of.

Summary

Information about the document is displayed here, including any errors that are found (such as images that are not in CMYK, missing fonts and images).

Fonts

This lists all the fonts that are used in the document. It tells you the name of the font, what type it is (postscript, TrueType, etc), and if it is present or missing. If there are errors select the specific font and then click “Find Font...” to see available options. You can change the font in the “Find Font” window, if you wish. Each instance of the original font will be changed to the new font you specify in the “Replace With” section of the “Find Font” dialogue box.

Links and Images

This section will tell you if there is anything wrong with your images. Make sure there are no missing images (if there are, select the image and click “Relink” to find the image). If you have images that were created in the RGB color space, a warning will appear here. You can edit your images in Photoshop or Illustrator and convert them to CMYK if you wish, or you can let your printer’s Prepress department do this.

Colors and Inks

Process (CMYK) and spot colors are listed in this view. You should see Process Cyan, Process Magenta, Process Yellow, and Process Black. If there are spot colors listed you may want to go back to your document and convert those colors to process, unless your printer knows you intend to use spot colors. You can change spot colors in your InDesign document by canceling out of the Package window and right clicking on the spot color in the “Swatches” palette. Select “Swatch Options,” then change the Color Type to “Process.” Go back to the Package window by clicking File > Package...

Print Settings and External Plug-ins

These are a list of settings and plug-ins that are used in the document. They cannot be changed in the Package dialogue box.

For more information, visit Adobe InDesign’s Help page

Common Mistakes in Print Design

Everyone makes mistakes but Precision Images is dedicated to informing our customers about the design and printing process so you will always have a great printed product. Avoid the following common pitfalls when designing your brochure, business card, flyer, or any other printed project.

Mistake 1: No Bleed

Be sure you extend images 1/8” beyond the final trim edge. For more information on this see *Trimming & Bleed Guidelines* and *About Bleed*

Correct



The background image is extended to the Bleed Edge (blue line)

Incorrect



The background image is NOT extended to the Bleed Edge (blue line)

Mistake 2: Text too close to the edge

Text and other important elements like logos should be placed no closer to the Trim Edge than 1/8”.

Correct

Incorrect



The text is kept within the Safe Edge (orange line)



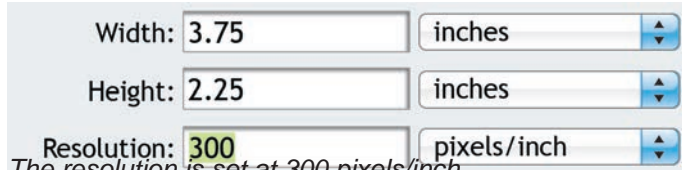
The text is NOT kept within the Safe Edge (orange line)

Mistake 3: Low Resolution

The resolution for anything that is to be printed should be at least 300dpi. Anything less than this could result in pixelated images and fuzzy text. Images captured from the web are NOT suitable for printed applications.

Correct

Incorrect



The resolution is set at 300 pixels/inch



The resolution is set below 300 pixels/inch

Mistake 4: Borders aren't thick enough

This is really a combination of Mistakes 1 and 2. If you want a border around the edge of your page, they should start within the Safe Edge and extend out to the Bleed Edge. This will ensure the border is not trimmed off.

Correct



The purple border has been placed within the Safe Edge (orange line)

Correct



The purple border has been thickened and extended from within the Safe Edge (orange line) to the Bleed Edge (blue line)

Incorrect



The purple border has been placed outside the Safe Edge (orange line)

Mistake 5: Designed in RGB

Designing in RGB is appropriate for graphics that will only be displayed on screen, website graphics for example, but is NOT appropriate for printed applications. When designing for print you should always create or convert your images to CMYK.

Adobe Photoshop

Create file in CMYK:

1. Click File > New...
2. Set the size of your image, then select "CMYK Color" from the Color Mode drop-down menu. Make sure your resolution is set at least 300 pixels/inch.

Convert to CMYK after design/creation of file:

1. Click Edit > Convert to Profile...
2. Under "Destination Space" select "U.S. Web Coated (SWOP) v2"

Adobe Illustrator

Create File in CMYK:

1. Click File > New...
2. If Advanced Options are not visible, click the arrow next to “Advanced” at the bottom of the window
3. For Color Mode, select CMYK

Convert to CMYK after design/creation of file:

1. Click Edit > Assign Profile
2. Select “Profile” and in the drop-down menu select “U.S. Web Coated (SWOP) v2

Adobe InDesign

Convert to CMYK after design/creation of file:

Adobe InDesign defaults to a CMYK color profile. There is no need to convert your InDesign document to CMYK or to set a color mode when creating the file. However, you should make sure the working CMYK profile is set to U.S. Web Coated (SWOP) v2. Do this by:

1. Click Edit > Convert to Profile...
2. Under “Destination Space” select U.S. Web Coated (SWOP) V2 in the CMYK Profile drop-down menu

Mistake 6: Fonts not converted or included

When text is created in Photoshop or Illustrator it should be flattened for final output. In Illustrator this is called “Create Outlines” and in Photoshop it is “Rasterize Type.” Text is no longer editable, but errors related to missing fonts when sending files to your printer are eliminated. You can also create outlines from text in InDesign, however this is not necessary if you Package³ your file before sending it to the Printer.

Adobe Photoshop

1. Select the text layer in the Layers Palette
2. Click Layer > Rasterize > Type OR right-click on the text layer and select “Rasterize Type”
3. It is highly recommended you Save As... to a different file name after you create outlines as you will no longer be able to edit any of the text.

Adobe Illustrator

1. Select the text box
2. Click Layer > Create Outlines
3. It is highly recommended you Save As... to a different file name after you create outlines as you will no longer be able to edit any of the text.

Adobe InDesign

It is not necessary to Create Outlines from text in InDesign if you Package (see *Packaging in InDesign*) the file (an InDesign tool that collects all fonts and linked images into one easy-to-send folder for your Printer).

Last but not least, always be sure to flatten your PDF Files to insure all layers will print.