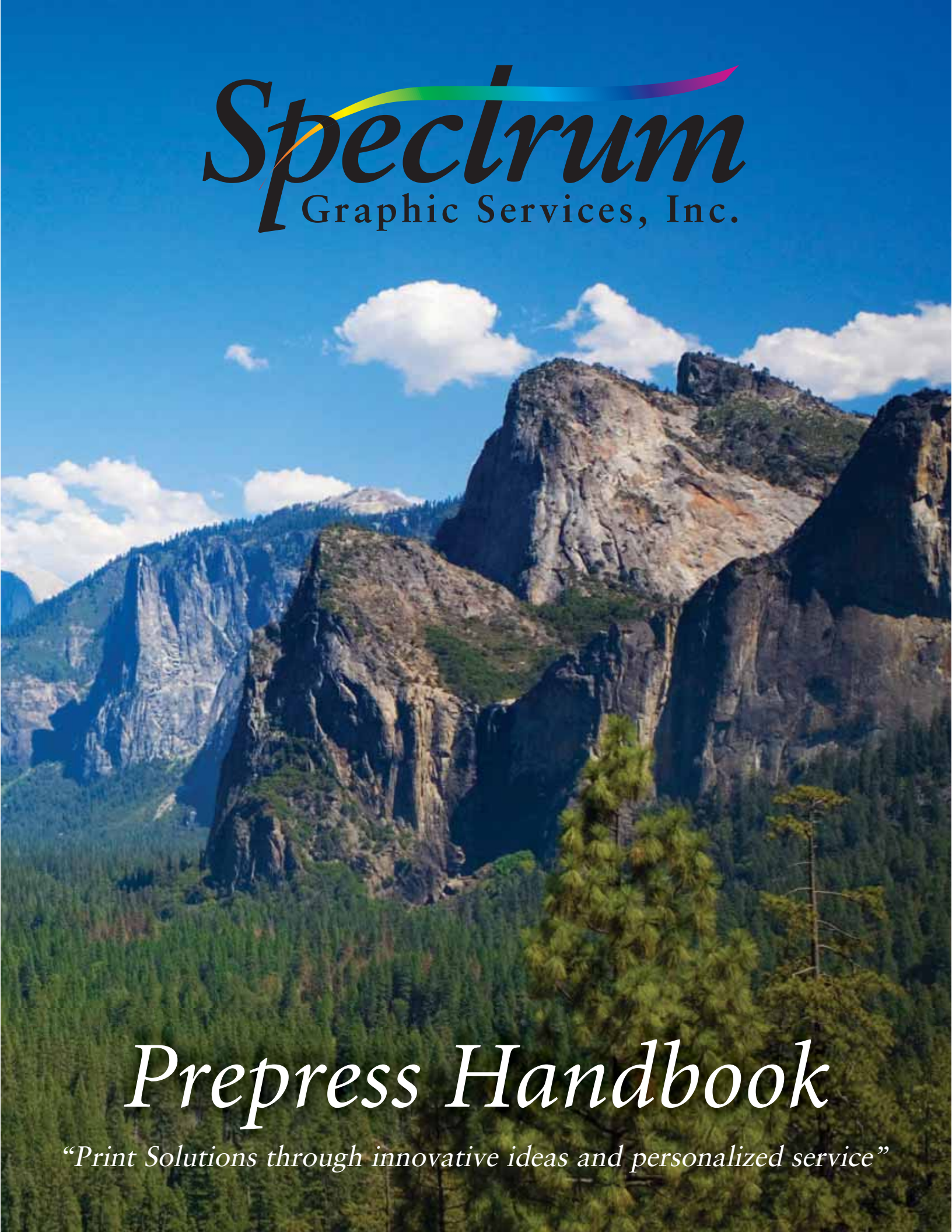
Spectrum
Graphic Services, Inc.



Prepress Handbook

"Print Solutions through innovative ideas and personalized service"

Introduction

Spectrum Graphic Services would like to offer our assistance to those whose job it is to create, edit, and transfer electronic graphic files to print providers.

Ever-changing technology, new state of the art equipment and techniques make keeping up with the most current developments in our industry more and more exciting.

We hope this guide provides you with useful knowledge to help you prepare your files in a manner that reduces changes, cost overruns, and unnecessary delays while increasing turn-around time and customer satisfaction with the finished product.

File Creation

Tools play an important role in every print project, no matter what you are creating. Starting out with the appropriate graphic design software can save you precious time and money. The following is a list of acceptable graphic design applications and their usage:

Quark XPress® – Page layout

Adobe InDesign® – Page layout

Adobe Photoshop® – Raster-based, continuous tone or photographic image editing

Adobe Illustrator® – Create vector-based illustrations, logos, and diagrams

Adobe Acrobat® – Create PDF files

Most graphic designs are created on Apple® Mac computers. If your files were created on a Windows® platform computer, your files will need to be tested prior to output because issues such as type reflow could result. Also, if your files were created in an application not listed above, (such as Pagemaker®, Word®, Excel®, etc.), those files will also need to be tested prior to output to assure quality print.

Our Workflow

Spectrum Graphic Services utilizes a Kodak® Prinergy Evo® workflow. This is a PDF-based digital system consisting of the following key steps:

1. **Initial Preflight –** Files are reviewed by our prepress technicians against a list of specific steps similar to the Preflight Checklist included in this guide.

2. **Prinergy Evo® PDF Refine –** After preflight, application files are converted into refined PDF files. Advanced preflighting and trapping are performed at this time.

3. **Imposition –** Once files are refined they are ready for placement in a press layout. We use Kodak® Preps® imposition software to place files in their proper press form positions. Once imposed, individual pages that require modifications may be replaced without having to RIP the entire layout again.

4. **Proofing –** Before a project can be sent to the press room, a digital proof is submitted to the customer for final approval. We provide high resolution "contract" proofs, which show an accurate representation of color as it will print on press and low resolution "digital dylux" proofs, which show pagination and binding details.

5. **Trendsetter® Direct-to-Plate –** When a project has been approved for print by the customer, it is ready for plates and the pressroom. We use a Kodak® Trendsetter digital platesetter with Squarespot® technology that provides not only a cleaner printed image with conventional screening, but allows us to offer our customers the option of stochastic or FM screening on their projects.

File Preparation Tips

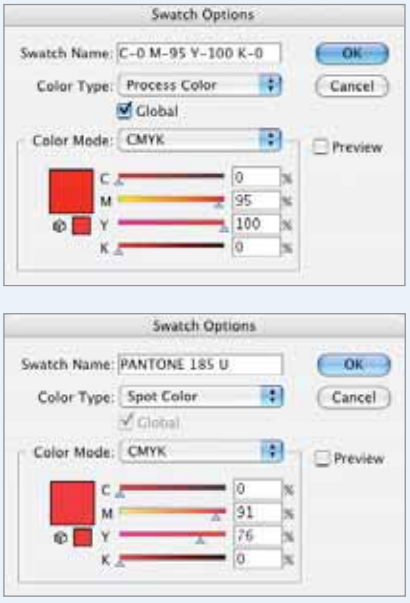
Images

It is recommended that all raster images are scaled, rotated and manipulated in their native application before being imported into a page layout application to preserve the desired image quality.

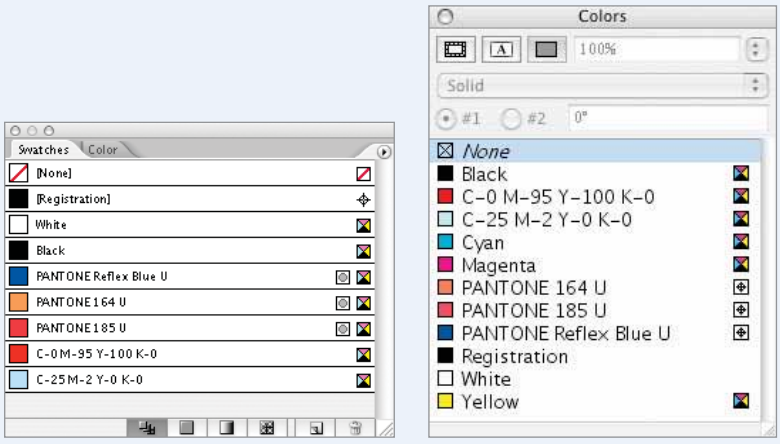
Photographic images must be at least 300 pixels per inch resolution at their final size to assure image quality. All RGB images must be converted to the CMYK color space before being placed in a page layout application.

Color Palettes

Since all graphic design applications have their own color palettes, it is important that color names be consistant across all applications being used in a project. Process match colors should be named according to their CMYK values. For example, C-100 M-30 Y-0 K-20. Avoid naming such colors "Hot Pink", "Ochre", etc. Process match colors also have to be defined as "Process" not "Spot" when being created. When using spot colors, naming conventions also have to be consistant across all applications. A PMS color in Adobe Illustrator® may be named "Pantone 185 CV" while the same color in Quark XPress® may be named "Pantone 185 C". This will cause two spot color plates to be produced for the same color. Spot colors also have to be defined as "Spot" when being created or they will be converted to process equivalents at output. It is also suggested that all unused color and gradient swatches be deleted from the color palettes before saving for output. When large areas of a project require a solid black it is recommended that a "rich" black is used. This can be achieved by creating a process match color defined as C-30 M-30 Y-30 K-100.



The illustrations above show the difference between creating a process match color (top) and a spot color (bottom).



The illustrations above show an Adobe Illustrator® color palette (left) and a Quark XPress® color palette (right) with consistant naming conventions for both process match colors and spot colors.

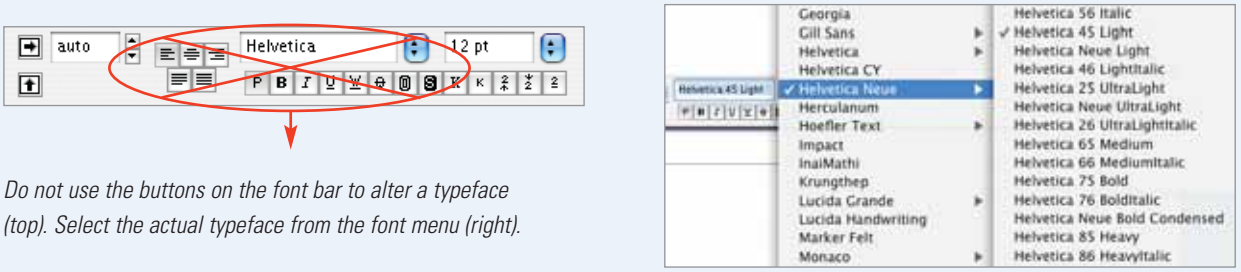
Type

Use only original typefaces. That is, when using a bold, italic, outline or similar typeface, select the actual typeface from the font menu. Do not use style commands (such as B, I, U) on the font bar. These shortcuts may not (and usually do not) translate properly when sent through a RIP for output.

Since most type is printed as black it is important that this type be 100% black only. Also be sure any black type sized under 12 points with a color or background image behind it is set to overprint.

When creating small type in color, remember that registering multiple tints on press is difficult. Try to limit your color choices for type to two-color combinations. Yellow, in particular, is very forgiving if there are registration issues.

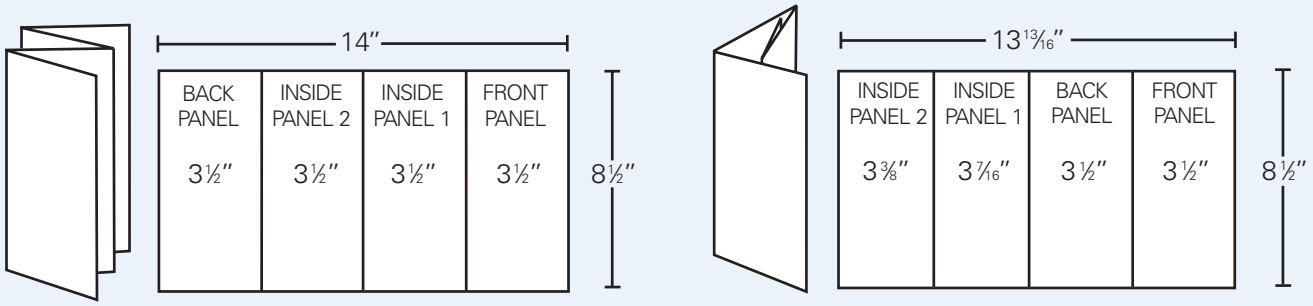
Avoid using TrueType® fonts. If TrueType® fonts must be used, use only TrueType® fonts and do not mix these with PS Type 1 fonts.



Do not use the buttons on the font bar to alter a typeface (top). Select the actual typeface from the font menu (right).

Page Layout

There are many variables to consider when designing brochures and books in a page layout application. With single page brochures it is important to know how the brochure folds down to its final size because some panels may have to be smaller than others to fold properly. This is the case when a brochure is folded in a style known as a "roll fold". *(see below)*



The illustrations above show a four panel brochure with a folded size of 3½" x 8½". The brochure on the left is folded in a style known as an accordion fold. With this style all four panels are the same size (3½"). The brochure on the right is folded in a style known as a roll fold. Notice that the front and back panels are the same width (3½"), but the inside panels decrease in width by 1⁄16" increments. This is to ensure the brochure folds properly. Also notice that this folding style decreases the overall width of the document by 3⁄16".

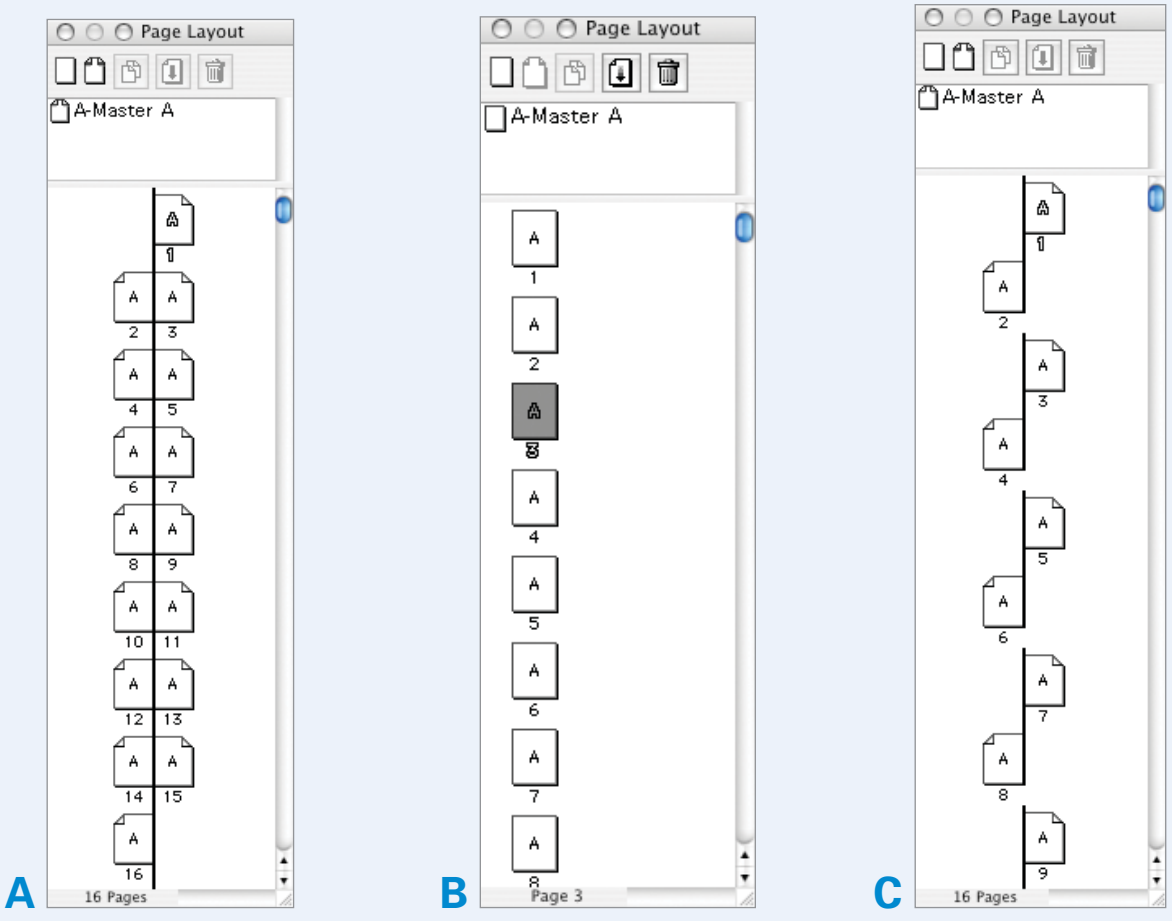
When preparing a layout for a book it is important to know how the book is going to be bound. The binding style will determine whether the layout should be set up as spreads or single pages. There are three basic binding styles: Saddle-stitching, perfect binding, and mechanical (wire, GBC, spiral) binding.

Binding Styles

Saddle-stitching is the simplest and least expensive method of bookbinding. Most small booklets, both in size and number of pages, are bound in this manner. Saddle stitched projects may be laid out as spreads or single pages in a page layout application. When laying out a project in spreads it is important that they are in reader's spreads and not in printer's spreads. When the printing industry was using film-to-plate technology it was easier in most cases for a prepress department to deal with printer's spreads and some printers required projects to be laid out that way. In a computer-to-plate environment with modern digital impositioning software, laying out a project in printer's spreads is no longer practical.

Perfect binding is normally used for booklets and catalogs with a large number of pages. Perfect bound projects must be laid out as single pages in a page layout application because bleed is needed on all four sides of each page.

Mechanically bound projects must follow the same guidelines as perfect bound projects in that the pages must have bleeds on all four sides. It is also important to allow for a margin (normally ⅜") on the binding edge of each page for the holes that are punched into that edge to accept the "comb" that holds the book together.



A B C

Above are three examples of how a book can be laid out in the Quark XPress® page layout palette.
(A) *Shows a 16 page project set up in reader's spreads.*
(B) *Shows a project set up as single pages.*
(C) *Shows a project that was initially set up as spreads, then the facing pages were "pulled apart" to convert reader's spreads into single pages.*

Build To Size

Build files at the proper size. A project with a final size of 8½" x 11" should be built to that size. Spreads should be set up as two 8½" x11" pages, not as a single 17" x 11" page. All pages must have at least a ⅛" bleed on all four sides unless the project is to be saddle-stitched. Projects bound this way do not need bleed at the spine edge.

File Naming Conventions

When naming files, whether they be an image or page layout, there are some guidelines to follow to avoid common problems. First, keep file names under 30 characters total. Second, make sure your files have the proper extensions: .ai or .eps for Illustrator® files, .qxd for Quark XPress® files, .tif or .eps for Photoshop® files, .indd for InDesign® files and .pdf for PDF files. Third, avoid using spaces and unusual characters in your file names. Use underscores instead of spaces and avoid using the following symbols: **/ \ : ; * # & % $!.** Only use a period in between a file name and it's extension suffix.

Releasing Files For Print

This section is presented to give our clients some guidelines for checking files prior to being sent to us. Following these guidelines will save time and money for everyone involved in your project and will expedite the output process resulting in faster turnaround times for your projects.

1. **Missing Fonts –** Make sure all fonts and their variations are included with your project. Substituting fonts can result in type reflow and may not give your project the look you desire.

2. **Trapping –** Our Kodak® Prinergy Evo® workflow creates traps when necessary in the refining process to our specifications, therefore it is unnecessary to set traps for your project.

3. **File House-Cleaning –** Cluttered files can slow your project down and lead to errors. Unused images with no link can lead us to think something in your project is missing. Remove unused images, colors, and fonts. Make sure color names are consistant across all programs.

4. **Missing And Unlinked Graphic Elements –** With missing links, graphics in your document will output in low resolution or not at all. Make sure all links are up to date.

5. **Page Size –** Make sure your document size is the final trim size.

6. **Inadequate Bleeds –** Images that extend off the edge of a document should bleed by at least ⅛ of an inch.

7. **Hard Copy Proofs –** Please send a laser output of your project with the files. Make the printout 100% of the finished size if possible or indicate what percentage of the final size is represented. Sending a hard proof helps us check for discrepancies and clarifies how you intend the layouts to look. For multi-page projects, include a mock-up to show folding and binding layouts. A common error is pages backing up incorrectly or pages bound out of sequence.

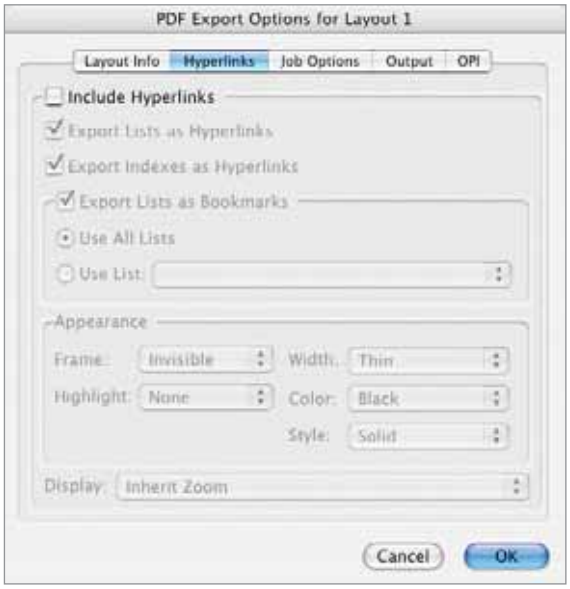
8. **"Collect For Output" –** If your software has a preflight feature, it is to your advantage to use it. This feature will help gather all font and image files, search for missing items and create a report for us. Please double check that all files are present after you collect for output because at times this feature can mistake fonts and their variations.

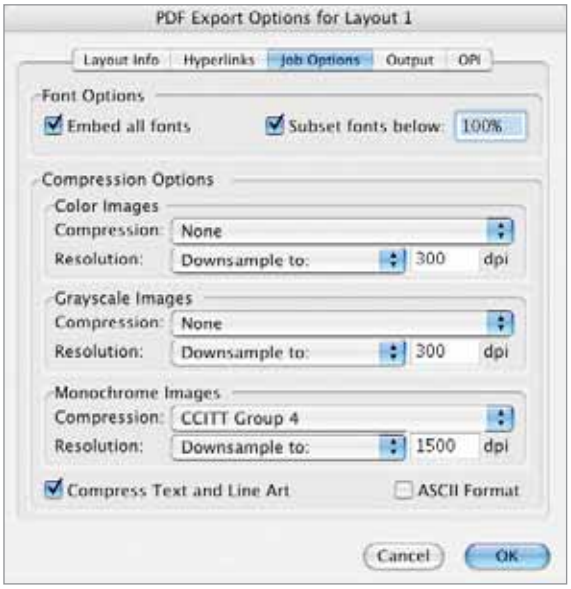
PDF Files

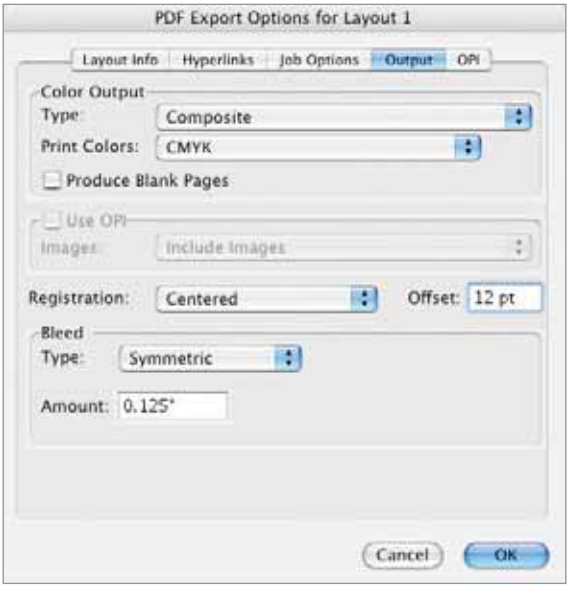
Releasing PDF files to printers has become increasingly more common because this format provides a standard for projects printed by different printers. This format preserves all fonts, graphics, and colors regardless of the application used to create the project. The most important thing to remember about a "press-ready" PDF is that all data within the files are embedded and changes cannot be made, therefore we prefer to have application files on all projects submitted to us. If PDF files must be sent, there are specific parameters required by our workflow that have to be set in the documents when they are saved as PDF files.

Saving PDF files out of Quark XPress® 5.0 to 6.5
FILE ⤵ EXPORT ⤵ LAYOUT AS PDF

The following dialog boxes appear. Fill out the appropriate boxes as shown below.



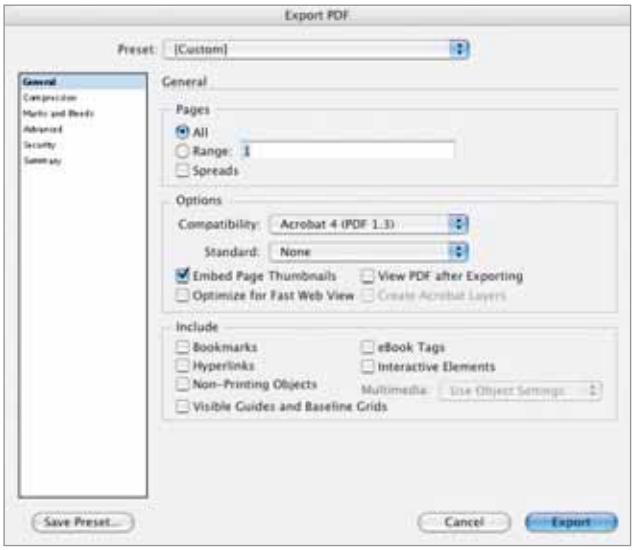


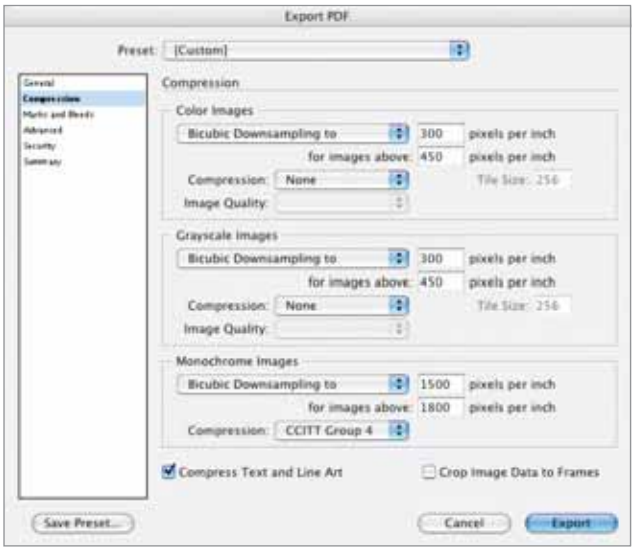


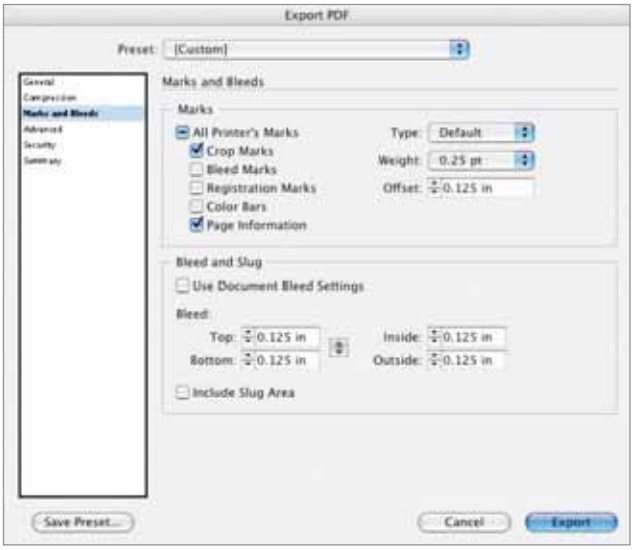
Any dialog boxes not shown may be left at their default settings.

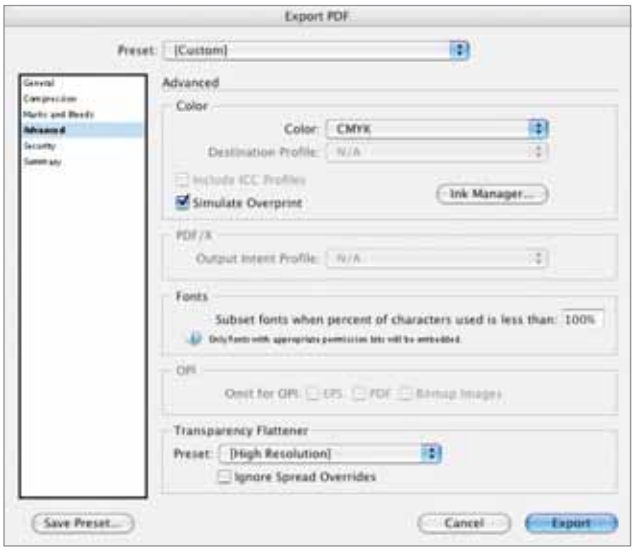
Saving PDF files out of InDesign® CS or later versions
FILE ⤵ EXPORT ⤵ LAYOUT AS PDF

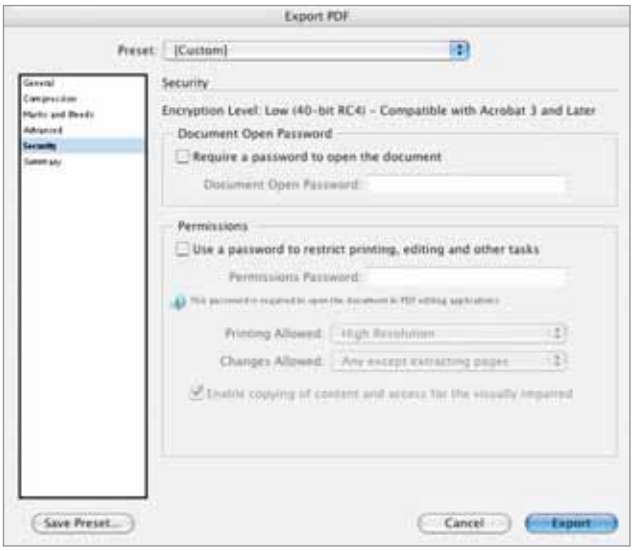
The following dialog boxes appear. Fill out the appropriate boxes as shown below.





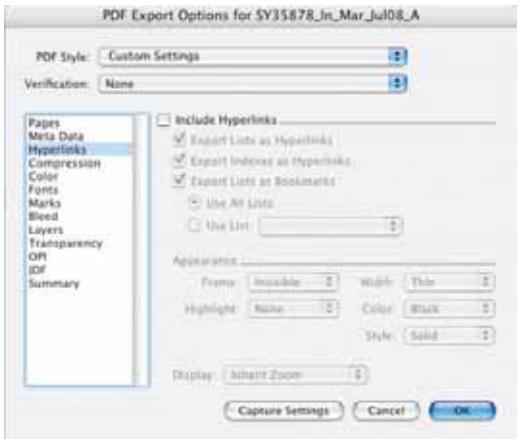


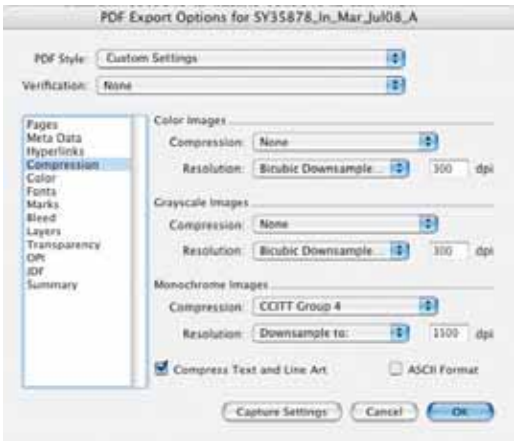


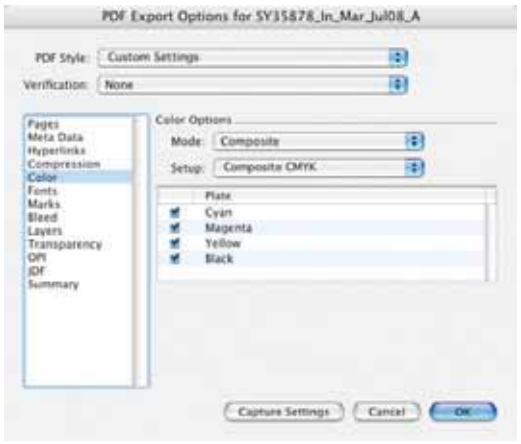


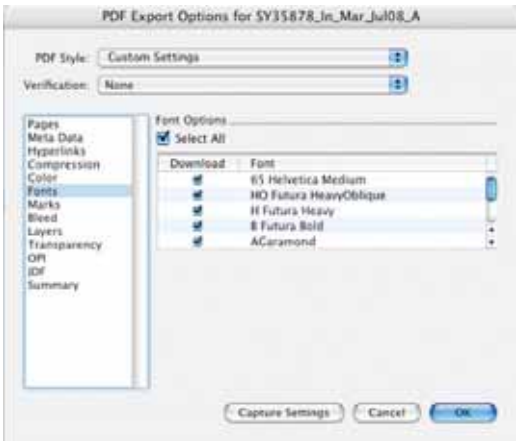
Saving PDF files out of Quark XPress® 7.0
FILE ⤵ EXPORT ⤵ LAYOUT AS PDF

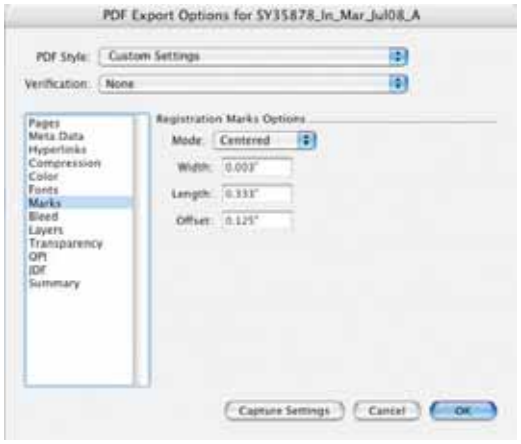
The following dialog boxes appear. Fill out the appropriate boxes as shown below. All boxes not shown may be left at their default settings.

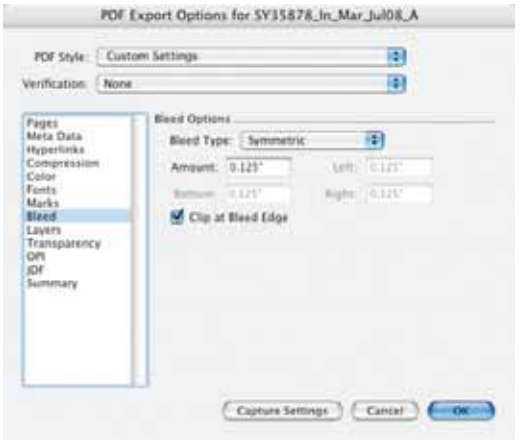


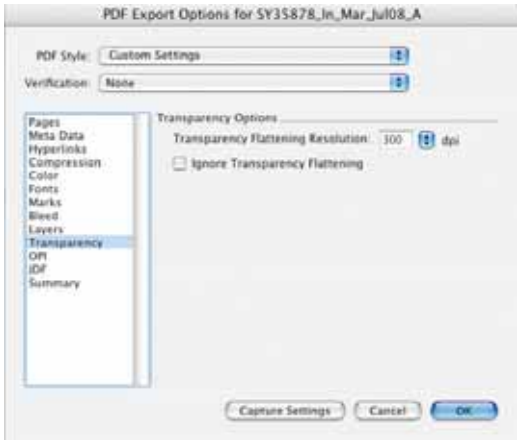


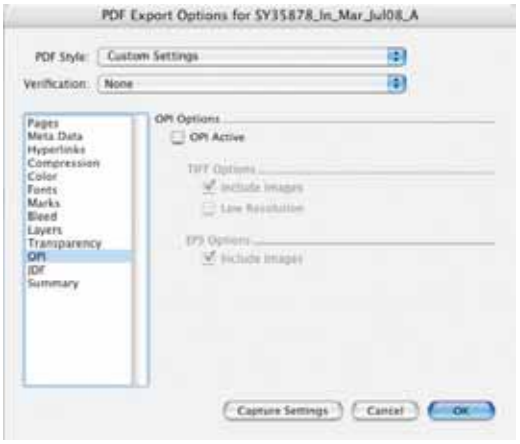












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Production QC Checklist

General Check:

- Run spell-check once project is complete.
- Make sure to include ALL images. (Vector Art and Scans)
- Make sure that the Trim size is set to the actual project size.
- Set up files for special treatments in Black ink. (i.e. foil stamping, embossing, spot uv, etc...)
- Make lasers at 100% size. (lasers can be reduced, if needed)

Margins & Bleeds Check:

- All graphic elements should bleed at least ⅛" beyond the trim.
- All non-bleeding graphic elements should be at least ¼" within trim or fold of jacket.
- All spine art should be at least ⅛" within the turn.
- Type should not be closer than ⅛" from trim.

Image Check:

- All Images should be 300 dpi in grayscale, CMYK, or multi-channel.
- Images should not be enlarged more than 125% in a page layout program. (Raster Only)
- Make sure images that need to be outlined have a clipping path in their native program.
- All RGB files need to be converted to CMYK, before being placed in a page layout program.

Font Check:

- Make sure your fonts are not in Pseudo form in your document under Utilities-Usage.
- Send ALL fonts for the project. Use Open-Type fonts when availiable.
- Delete all unused style sheets.

Color Check:

- Delete all unused colors in the color palette of the page layout program.
- All colors in the color palette should be set up correctly according to specs, i.e. spot (PMS), CMYK, metallic.
- Check all supporting Illustrator® and Photoshop® files to make sure that corresponding colors in the page layout program file are set up and named the same.
- For Illustrator® images with spot colors make sure "convert to process" box is unchecked in seperation setup.
- For CMYK jobs use the C=30, M=30, Y=30, K=100 black formula for large areas of black.
- Print out seperations for spot color jobs to check that all colors are represented as they should be.

Final Check:

- Collect for output and/or gather all application files.
- Prepare PDF files according to Printer Specs.
- PDF Files should be compared with the application file printouts and signed-off by editorial.
- For 2 color, 3 color, 5 color, or multiple PMS jobs attach color chips to your print out.
- Include a printout of all files on the disk. If sending multiple disks, indicate "one of three", etc.

Tear off at perforation and make several copies for future use.

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