

YOUR VISION. OUR PASSION.



TEWELL WARREN PRINTING

A CONSOLIDATED GRAPHICS COMPANY

**DIGITAL PREPRESS  
SUBMISSION GUIDE**

**SOME HELPFUL HINTS  
FOR CREATING AND  
SUBMITTING QUALITY  
DIGITAL FILES**



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## INTRODUCTION

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Our priority at Tewell Warren Printing is to deliver the highest quality product at a competitive price. To meet those ends we have found that customers who have accurate information on how to provide prepress-ready files end up with more than they expected. Amazing page design and files that are press ready can be two very different things. There are many issues to consider to ensure high-quality print production. This booklet outlines Tewell Warrens' preferred means for receiving client files, while providing additional information on what to look for when preparing your files. We have highlighted what we believe to be significant topics in digital prepress and have offered thorough instructions for assisting customers with generating clean files. The focus of this booklet is to provide useful tips and instructions for preparing your electronic files. As organizations continue to bring desktop publishing in-house and as electronic prepress rapidly evolves, challenges are abundant. There is an endless learning curve for both printers and designers alike. Training and education are more valuable now than ever before. We understand that businesses cannot afford large cost overruns and surprise charges. We hope this guide will help to eliminate those concerns, while answering all of your preflighting questions. Please contact our digital prepress technicians before, during and after to discuss your project. We have a support staff that is ready to assist you at any time.

## GENERAL GUIDELINES

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The following guidelines apply for all desktop publishing programs (InDesign, Quark, Illustrator, etc.)

- Pages should be formatted to **TRIM SIZE**. This means that if you have a 6"x9" book, make it 6"x9" with the bleeds positioned to 1/8" outside the trim edge. Printer spreads are not recommended. Reader spreads are OK if you use crossover elements, otherwise single pages with bleeds on all sides are the best.
- When creating a rule, do not use a hairline. In most

programs, “hairline” equals 1 DPI on whatever imaging device you are using. At 2400 DPI, a hairline is almost nonexistent. The lowest you should go is .25 point.

- Please do not attempt to trap your jobs. Our software programs will override any trapping that you establish.
- Please name and supply your fonts correctly. See the section on Stylizing in the Fonts section, if you have any questions.
- Try not to rotate, inverse or scale photos or graphics in a layout program. The best place to make these changes is in the original program where the photos or graphics are created. In other words, if your photo is scanned into Photoshop, rotate the photo using that program, before you place it in your page layout program.
- If you plan to add a Drop Shadow to a Graphic Element that will be rotated, apply the Drop Shadow *after the element has been repositioned*. If an item has a Drop Shadow and is then rotated, the Drop Shadow will retain the original offsets and will not produce the desired results.

## **PRODUCING THE UPMOST QUALITY**

- 1.) Do not use font stylization in Quark. When you want a bold Helvetica, use Helvetica Bold, not Helvetica plus the bold button in the Measurements pallet.
- 2.) Make sure all photos are scanned or shot at 300 dpi and at 100% size as placed in your layout program. Resizing in your layout or increasing the resolution in Photoshop have detrimental effects and **offer no real gain in quality**.
- 3.) All photos should be converted to CMYK or Grayscale, **NO RGB!**
- 4.) If using spot colors, make sure they all have the exact same name within your layout. Ex. Pantone 355 and Pantone 355 CV will come out as two separate spot colors - thus two separate plates. This can be caused by a name used in Photoshop or Illustrator, so make the change in that application, update in your layout, and delete all colors to that spot name. It is recommended to simply name the PMS Spot color with the PANTONE number. An example is: PANTONE 555 or PANTONE WG11
- 5.) Layout page size should be the same as the final

trim size of your piece. Bleeds should be pulled 1/8" outside the trim edge.

- 6.) Don't use printer spreads. The best option is to use single pages while bleeding elements out on all sides. If you use crossovers, reader layouts are ideal.
- 7.) Contact us for information on custom die work. 9 times out of 10 layouts are incorrect and cause expensive intervention time in prepress. We have pre-made dies available for certain pocket folders and envelopes.
- 8.) Use Transparency with care. Never use it to tint colors or on body copy. Pay attention to objects near the transparent elements as they can become distorted when ripped.
- 9.) Include with your files a final hardcopy that is mocked up to demonstrate pagination and layout.
- 10.) Collect for Output or Package your job - before doing this, update all photos and save your document. Make sure you collect the layout, all photos, and all fonts. **Please Note:** Quark XPress Collect For Output will not retrieve Fonts used in satellite programs like Illustrator, PhotoShop and others. Use this feature with care!

## **SOFTWARE SUPPORTED**

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Below is a listing of the applications we support.

### **Layout Programs**

- Adobe Indesign CS4 • QuarkXpress 7

### **Vector Artwork**

- Adobe Illustrator CS4

### **Raster Artwork**

- Adobe Photoshop CS4

### **PDF**

- Adobe Acrobat

**TWP supports both Mac and PC platforms.**

Below is a listing of the applications we do not recommend as final file formats.

- Word • WordPerfect • PowerPoint • Excel • Ventura
- Publisher

Create a PS file or a PDF if using these formats. Even so, print quality and problems may still occur.

If you use something not listed, please contact us for further discussion. All product or trade references are the trademarks or registered trademarks of their respective companies.

# **FONTS, FONTS, FONTS!**

Fonts can be one of the most challenging areas of desktop publishing. While relatively easy to use, fonts are still puzzling for many. We want to begin by providing some simple steps to assembling your fonts, some common pitfalls, and some general information on font types.

## **ASSEMBLING FONTS FOR OUTPUT**

With one exception, the simplest way to correctly provide fonts is to use the “Collect for Output” or “Package” commands from QuarkXpress and Indesign respectfully. As long as the fonts are correctly loaded on your system, these options will ensure that whatever font you have used, all elements of it will be provided. The one exception to this is if you use stylized fonts in Quark (see below). If you use applications other than these, you will need to manually track down your fonts. We recommend using a font management program such as Suitcase or Adobe Type Manager to organize and collect your fonts. You can create font collections by job, that will make assembling them for output much easier.

## **POSTSCRIPT, TRUETYPE, AND OPEN TYPE**

**PostScript** font data are not stored in one file but rather in a collection of files. The way font data are organized in these files depends on the operating system.

- On Macs, PostScript fonts consist of a file containing the outline fonts (the printer font) and one containing a bit map representation of the font in at least one point size. This bit map file is called the screen font and it also contains the metrics data.
- On the Windows operating system, two files are used as well: one uses the file name extension “.PFB” file and it contains the outlines. The other file carries the extension “.PFM” and contains the metrics data.

**When providing PostScript fonts you must provide both the Screen Font and the Printer Font.**

**TrueType** fonts can deliver output at any resolution or size. Support for TrueType is included in all major operating systems on the market which explains why it is such a popular font format. It was originally developed by Apple Computer in the late 80’s. TrueType fonts carry the file name extension ‘.ttf’ or ‘.tt’. All font

data are contained in a single file and on average, a True Type font occupies between 50 and 100K. A common problem, but occurring less often since Postscript Level 3, is character drop off, meaning you loose quotes or commas.

**Since Postscript3 was released TrueType fonts have become more reliable - but platforms and operating systems can change performance.**

**Proofread your copy carefully when using them.**

**OpenType** is a new font technology that is codeveloped by Adobe and Microsoft. Its specs were published in 1997 and the first fonts were published in 2000. OpenType fonts resemble TrueType fonts but they can contain either TrueType or PostScript Type 1 font data. As such, they are a merger of two competing technologies. OpenType has been created to be truly platform independent. Fonts can be copied back and forth between Windows and Macintosh systems.

**OpenType fonts have proven to be Platform Independent and reliable on output.**

## **THE PROBLEM WITH FONT STYLIZATION**

Service providers often face challenges when clients stylize type using various software programs and then do not supply the fonts that go along with that stylization. In Quark, when you type a headline in Helvetica, and then bold it using the bold button on the Measurements palette, be sure you supply the Helvetica Bold font along with the job. The same is true if you italicize a font. Anything you do in “stylizing” needs to have a font to support it. This is why stylization can be so tricky. Software manufacturers, unfortunately, have not helped this situation. Their packages give us the ability to make these selections and then render the fonts to the screen, so we think everything is going to work well. As the example outlines above, this is not always the case. TrueType fonts will also appear normally on the screen when there are problems, but will print to a 300-dpi printer with font irregularities. Also, if the correct printer font is not present when the file goes to a high-resolution imagesetter, the job will print out incorrectly.

**Remember, with fonts, Include every font, on every job...every time.**

# LAYOUT

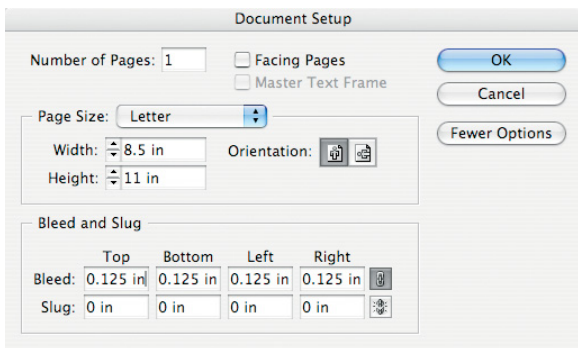
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Layouts are where all your design elements come together. Pictures, graphics, text and design all happen within your layout application. It is important to stress accuracy in these documents and to understand the basic layout issues and problems that some layout programs can create.

## LAYOUT 101

As stated in the General Guidelines section, it is important to design your page to trim size. A 8.5x11 book needs to be designed at 8.5x11 with bleeds extending 1/8" outside this dimension. A simple technique is to create your document to trim size (or final size) and add guides 1/8" outside on the pasteboard on the master page. Then design all your bleed elements out to these guides. (Indesign has a feature in Document Setup, More Options, Bleed, .125 all sides. This creates a guide automatically as described above).

See Example.



We also recommend running your pages in numerical order without using facing pages. Of course, if you use crossovers, you will need to use facing pages. In that case, design using reader spreads as opposed to printer spreads. ***Never paginate in printer spreads; what seems like a favor to us is actually detrimental when using our imposition application.***

## THE RIGHT TOOLS FOR THE RIGHT JOB

Given the variety of applications available to designers we see work coming in many different formats. With this in mind, it's important to stress what applications work best for what kind of work being done. Any piece that paginates, like a book, is best done in Indesign or QuarkXpress. Multi-page documents done in Illustra-

tor's single page format, can create serious delay in prepress. Photoshop's type capabilities are best reserved for larger type that interacts with the image - do not create copy in Photoshop! Illustrator is best used to create vector art. It has many capabilities that crossover to Indesign and Photoshop, but it's primary capability resides in illustration and logo work. A final note is to avoid using Word, WordPerfect, PowerPoint, Excel and Publisher when designing a piece for print. While they are all excellent products, they often create quality issues when applied to high end printing.

## TRANSPARENCY

We have seen the use of Transparency in Adobe products become common place. It allows the designer to create some very spectacular visual work, but unfortunately, it also can be very problematic for a prepress technician. Transparency allows the designer to create drop shadows and transparent type and design elements that interact between two elements that are positioned on top of each other. The downside is how these files are processed by our rips. It forces some objects, that should be vector, into rasterization. Example: a drop shadow from a picture box is on or near some text, often times that text will be rasterized which can create a bloated look to it. There are some basics with transparency that can go far it helping it work better for final output. Here are some basic rules:

- 1)** Never use Transparency to tint a color, instead, use the tint value in the Swatches pallet.
- 2)** Use layering with transparency. Put transparency on the bottom layer, anything that should remain vector, such as type and line art, should be moved to the top layers.
- 3)** Use it sparingly. If over used, you risk adding time in prepress.
- 4)** Never use it on body text. It will rasterize and render it unreadable.

## GRADIENTS AND BANDING

When using gradients there are many pitfalls that may occur. The challenge is in the way some programs create blends. To be sure that a blend will reproduce (print) correctly, we suggest that you create it in Photoshop. The software does an excellent job with blends. If this is not an option, try using the following guidelines. If you start a blend with a CMYK (cyan, magenta, yellow & black) color, finish it with a CMYK color. Do not finish it with white or a spot color. If you want to go from 100% of a PMS color to white, then make it 100% PMS

to 1% of the PMS. The results from this process are, usually, just what you're looking for.

## COLOR MODE AND SPOT COLOR NAMING

All files that are RGB (red, green, blue) must be converted to CMYK before you send them to us. This is important because by converting the files yourself, you will see color shifts that may happen. You can then make any necessary changes before sending us your files. Spot colors can be very tricky. You must be sure that anything you want as a spot color is indeed that color and as mentioned earlier, that it is named with only one name in your document (e.g. Pantone 356 C and Pantone 356 U would print two separate plates). If you have vector files, which have used Pantone (PMS) colors, be sure that the PMS names match the names in your layout document. If you want to have a PMS color added in your document, create one color (e.g. Pantone 123). If you want a percentage of that color, do not make a new color (e.g. 20% Pantone 123), simply tint the Pantone 123 in the Swatches pallet. This, also, will end up generating an extra plate when the job is output. We suggest printing separations of your files for your own review purposes to be sure you have not accidentally left in an extra color selection.

## GRAPHICS

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Graphics can be broken down into two basic types: **Vector** (illustrated files such as logos and diagrams) and **Raster** (photographic or pixel based imagery).

**Vector** images are file types that are created in illustration programs such as Adobe Illustrator, Macromedia Freehand, or any other program that is based on lines and points. These images are considered **Resolution Independent** in that they can be enlarged without any loss of resolution.

Image programs such as Adobe Photoshop create **Raster** files. They are photo realistic representations of objects, which use different shades of color per pixel. These images are **Resolution Dependent** in that, if you keep enlarging them, eventually you will see pixels and resolution loss.

With image programs today, the line between vector and raster is becoming more and more blurred.

Illustrator allows you to “Rasterize” your artwork and use Transparency, in Photoshop you can create text and draw vector paths around objects. It is our advice that you use these tools carefully and sparingly.

### **Vector Files Are Resolution Independent Rasterized Files Are Resolution Dependent**

#### **RESOLUTION, COLOR MODE, FILE TYPE**

**Resolution** - Essentially you need 1.5 times the resolution of the line screen at which you wish to print. So if you are printing a 200 line job, you’ll use 300 dpi images, 175 line; 262 dpi, etc. Two things to consider concerning resolution are that if you resize an image in your design program (Indesign/Quark) you either gain or lose dpi (ex. if you resize a 300 dpi image in Quark to 150%, it’s effective resolution will be 200 dpi. Simply resizing an image in Photoshop will not guarantee resolution quality: taking a 72 dpi image and blowing it up to 300 dpi will not improve it’s quality.

#### **A simple rule of thumb:**

**Images need to be shot or scanned at 300 dpi at 100% of the size you wish to print. Resolution that is added later produces low quality results.**

**Color Mode** - CMYK is how we create four color imagery on our presses, therefore, all images need to be saved from RGB to CMYK before submitting them to us for print. It’s important to understand that most scanners and cameras create RGB files. When using these tools, be aware that you will need to convert your files to CMYK. With spot colors we recommend creating duotone images (Pantone names need to match exactly the naming convention used in the layout program). An option to this is to use a colorized grayscale image in your layout program.

**File Types** - Raster files come in different file types and each has it’s purpose when considering which type to use. The two types of raster files we recommend are **EPS** and **TIFF** files. EPS files retain silhouette, or clipping path, information; TIFF files do not. TIFF grayscale files can be colorized in Quark and Indesign whereas EPS files cannot.

**Clipping Paths** - It is a real art to create clipping paths correctly in Photoshop, we recommend using

Photoshop's tutorials and training materials to fully grasp the art of the clipping path. The two main issues we see with clipping paths are accuracy and smoothness of the path. What's most important is that the path sits just 1 or 2 pixels inside the object you want clipped. This will insure a clean representation of the object, without background image peeking through. Use the bezier curve to create smooth shapes and try to avoid using too many points.

## SCANNING GUIDELINES

We recommend scanning with lots of resolution and with open color settings. Don't apply filters and color correction until you bring the image into Photoshop. Scan to the size you need, considering crop and placement and scan above your desired resolution size. Once you have captured your image, bring it into Photoshop and apply color correction and contrast as necessary and then bring down the resolution to meet your needs. Too much resolution can be detrimental in that it creates file sizes that are larger than necessary. Some specific guidelines with scanning are:

**1)** Resolution needs to be 300 dpi at 100% in the layout program (this includes cropping); **2)** The DMAX or Total Maximum Density should be no greater than 300 (this measurement can be obtained by putting the cursor over the darkest area in the CMYK image and reading the Total Ink measurement in the Info pallet (e.g. C=80, M=77, Y=75, K=58 this adds up to a DMAX 290).

## DIGITAL PHOTOGRAPHY

In many ways, digital photography has replaced the need for scanning. With this transition we find some of the same issues as with scanning and new ones that are distinctly related to using digital cameras. Resolution, of course, is key. The basic ratio of resolution to mega pixels is as follows on the next page:

Mega-Pixel	2.0	4.0	5.0	8.0	11.1
300 dpi	4"x5"	5"x7"	6"x9"	8"x10"	11"x14"

Should you shoot in RAW or JPEG format? That's up to you, they both produce high quality images but with two different results. RAW files are huge but they are the most open as far as color correction goes (no correction is applied) whereas JPEG's are smaller in size

but apply basic corrections (adjusting white balance, sharpening and so on). Whatever format you use, make sure you open your images in Photoshop, convert to CMYK, save to TIFF or EPS and color correct as necessary - **DON'T EXPECT YOUR CAMERA TO TAKE PERFECTLY BALANCED PICTURES.** With as many different cameras out on the market, there are just as many results - it is imperative that you understand how your camera behaves and what its final result with printing will be.

## **COLOR CORRECTION**

We can't stress enough, that color correction is an extremely complex process that includes, your eyes, your monitor, your sense of color and our output devices. With all these elements you can see that many different things can occur. It is important that we proof on our devices and then either you or our prepress alters the images as necessary. Our proofs are based on our color from our presses, therefore, the color moves that are made to the proof will reflect what occurs on press.

## **ELECTRONIC FILE TRANSMISSION**

FTP (file transfer protocol) is Tewell Warren's preferred method of getting your files into our shop. It's fast, reliable and it's extremely easy to use. *Ask your Sales Representative on how to seamlessly upload your files to your specific Sales Rep's Folder.* Give them a call and they can give you all the information, including usernames and passwords, that are required.

If your files are large we recommend breaking the job into different folders and stuffing them using zip or Stuffit compression. If your files are under 10 megabytes, you can e-mail them directly to our Prepress Department at:

**macdept@tewellwarren.com**

When Uploading files to our FTP Site, please keep files names as short and concise as possible, while including the date in the File Name. This will ensure we have the most recent files on hand.

## **MEDIA ACCEPTED**

If your files are very large, which is often the case with print ready files, you can burn them to CD and DVD disks.

## THE PERFECT PDF

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The development of the Portable Document File (PDF) over the last few years has created a new avenue for designers to submit prepress ready art work to their providers. Before we illustrate how to best create a print ready PDF we want to throw in a word of caution. Once you submit a PDF, problems and all, a prepress technician has little recourse to make changes or fixes. So your PDF has to be error free; this includes all artwork, type and layout issues. We recommend having your original files (Indesign/Quark, Photoshop and Illustrator files) ready in case the PDF should not work. Now about that perfect PDF.... There are two basic ways to create a PDF, using Adobe Acrobat's Distiller program or the layout program. The best tool for creating a PDF is Distiller. What Distiller does is convert PostScript data into PDF data. So the basic flow from Distiller is this:

- 1) In Indesign or Quark, make sure all corrections to type, photos and layout are done. Page size and bleed must be set up correctly, layout is perfect, no RGB images, and spot colors named and separated correctly.
- 2) From Indesign or Quark "Print" the document to a PostScript file. In the print dialog use the Adobe Acrobat PPD and make sure you set your bleed to .125. It is extremely important to include this bleed amount, otherwise your PDF will be to trim size and will render it useless.
- 3) Set your Adobe Acrobat Distiller's Default setting to "Press Quality" and drop the .ps file you created on the Distiller window. This will generate your PDF.
- 4) Depending on the original size (megabytes) this PDF can be emailed or FTP'ed.

Both Indesign and Quark create PDF's fairly well, so if you don't own Acrobat you can generate a PDF directly from them. The same rules apply. Create a perfect document then, in Indesign go to File, Export, Format: Adobe PDF. Use the Press Quality setting and make sure you set your marks and bleeds to .125 in. In Quark go to: File, Export, Layout as PDF.

Finally, we can preflight PDF's for you and troubleshoot any issues that may occur from them. There are many variables with using PDF's so please contact us to help you with any problematic issues.

## TWP SPECIALIZED FEATURES

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### METALFX

Tewell Warren Printing is certified with MetalFX Technology, MFX®, which is a revolutionary process used to make any selective, or complete area of artwork, metallic. In its simplest form, metallic areas are created by overprinting CMYK Inks on top of the MFX® Base Silver or Gold Ink in a single pass on a printing press which encompasses the entire metallic color spectrum.



The effects that can be achieved with MFX® are extraordinary and since each job is different, it requires a consultation with your Sales Representative to take advantage of this edge-cutting technology .

### FOREST STEWARDSHIP COUNCIL

The Forest Stewardship Council, FSC, is an international, non-profit association whose membership comprises of social and environmental groups and progressive forestry and wood retail companies working in partnership to improve forest management worldwide.



Tewell Warren Printing is certified with the FSC and your Sales Representative can provide useful information on this popular, and meaningful approach to paper usage.

## SUMMARY

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Ultimately, we want to help you create files that are problem free and save you from a lot of headaches, and more importantly, a lot of expense beyond the provided estimate. The end result of a perfect file is a higher quality product. We are committed to providing you with all the information you need to not only save money, but to create a printed piece that goes beyond what you have envisioned. Take advantage of our extensive knowledge and experience in the entire printing and finishing processes. We look forward to hearing from you soon!

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