

## Tips for Achieving Successful Output

- Be sure you provide a print out from the file you are having output. If your file is more than 1 color - be sure to check your separations before submitting for output.
- Include all graphic files, embedded and non-embedded. **TIP** - Use the “Collect for Service Provider” option if your program has one, such as Pagemaker, QuarkXpress, InDesign, Publisher.
- Include all fonts, both screen and printer fonts, or True Type. **TIP** - Again, the “Collect for Service Provider” option is great for this. (Truetype fonts are not recommended, Type 1 fonts are more reliable)
- If images are used in your file, be sure they are scanned or created at high-resolution to size, preferably 300 dpi for 133-200 lpi output. (images downloaded from the internet are typically Lo-Res and may pixellate when output on Hi-Resolution devices such as imagesetters)
- Be sure all full color files are CMYK, as RGB files may result in unexpected results.
- When generating PDF files, be sure your colors are tagged properly in your original document before creating the PDF. Be sure all fonts are embedded. Use a “PRESS QUALITY” setting in Acrobat.
- Be sure your files are properly trapped. For example, those files created in Adobe Illustrator, Freehand or CorelDraw. **TIP** - Also check your page layout programs trap settings, black text overprints as default in many programs. Text entered on a page in black then tagged a color may retain the overprint value although your intent is to trap.
- Photos/Scans or files created in an Image Editing Program (such as Photoshop or Photo Paint) should have all layers flattened and saved as a “.tif”, (use .eps for special use files such as duotones, consult your software documentation for these type of situations), no compression, CMYK mode for full color output.
- On Quark files, fill “tiff” photo boxes with white. **TIP** - If colored text has its text box touching a picture box check its trap settings, it may trap even though it is not on top of a graphic or background color and may result in “fatter” text than desired.
- When submitting files, specify the platform: Mac or PC, file names to be output, how many colors (and which colors for spot output). **TIP** - Remove any colors from the document not that are not in use before submitting the files for output.
- Be sure you have patched your software with the latest available updates!
- Professional level software commonly supported:  
QuarkXpress, Pagemaker, Photoshop, Illustrator, InDesign, Freehand and CorelDraw.

# Ten Things You May Not Know About Graphics and Desktop Publishing!

So far you know how to bring an image into Pagemaker (or Quark), position it, resize or rotate it, and wrap text around it. Those are the basics; what follows are intermediate but essential skills.

**1. What format do I use for my images?** Your best bet for printing is to save your bitmap files in Photoshop as tif images. The only exception is to use Photoshop eps format for files with clipping paths. (See #6.) Vector graphics created in programs such as Illustrator and Freehand must be imported either as pict or eps files.

**2. Resolution:** Remember that while screen resolution is typically 72 ppi (Macintosh) or 96 ppi (IBM), this resolution does not print all that well. Our laser jet printers, for example, can print as high as 600 dpi. I usually recommend that you scan images at no less than 300 dpi.

If you want to enlarge an image (say a small snapshot) you can scan it at a high resolution, then use Photoshop's Image Size feature to halve the resolution while doubling the size. For example, a 2" x 2" image scanned at 600 dpi could be printed at 4" x 4" but only at 300 dpi, which is still not bad.

On the other hand, if you have a 72 ppi screen image captured from video or the World Wide Web, you can only make it more printable by reducing its size. If it's 4" x 4" at 72 ppi, you could print it as a 2" by 2" image at 144 dpi, which is not great but is still a significant improvement. Of course web images tend to be very small anyway (to allow for faster download times), so printing them half size may not be an option. With video, you might capture someone's face at full screen and then reduce the size while gaining a lot of pixels for printing.

In both cases, when you are in the Image Size dialogue box, make sure that the Resample Image check box is not checked.

**3. Color Images:** Color printing is still very expensive, and chances are that your print projects will mostly be printed in black & white or, at best, 2-color printing. In either case, the images will not be in full color. On the other hand, since you will be outputting your work to the web, I recommend that you scan all images as RGB color and save that original version. If you are bringing the color image into page layout program for eventual black & white output, as is likely, I recommend that you create a separate grayscale version of it in Photoshop and import that into Pagemaker. This enables you to better preview it so as to determine if it needs lightning up, etc. (see #4 below) and it also makes for a smaller file size (grayscale = 256 colors). Also, my guess is that Photoshop's algorithms do a better job of gray-scale conversion than if it's done on the fly when you go to print.

If later on you want to do a PDF version of the same file for the web, you can swap in the color version of the image. No problem.

**4. Scanning & Moiré Patterns:** There is a big difference between scanning photographs and printed material, a difference you must absolutely understand. A photograph is a chemical product, a series of incredibly tiny silver nitrate particles. Hold a photo up to a magnifying glass and you still won't see those particles. Printed material, such as in newspapers, magazines, or our own laser jet output, is made up of small printer dots that can easily be seen through a cheap magnifying glass. In other words, once an image has been printed, it has already been "screened," resulting in the series of dots. Now here's the important part....

If you scan a printed image, it is like placing a screen over a screen. The result is a blotchy mess known as a moiré pattern. Imagine how easy it is to look through one screen window, but if you put another behind it it's hard to see anything.

So what do we do about this?

The easiest way to avoid this is to use the Descreening option in your scanning software when scanning printed material. Under the Descreen section you have a choice between None (use this for actual photos), Newspapers, Magazines, and Art Magazines. An art magazine would be a glossy publication printed at an even higher resolution than your typical magazine. There is also an Other setting, which allows you to choose a value in between these four defaults.

**5. Darkness:** In general, images print darker on the laser jet than they do on the screen and they print considerably darker at the Offset Printer's than they do on the screen. Some of this is a trial and error, learn by experience kind of thing. To be on the safe side, any images (especially faces) that might be on the dark side should be lightened up in Photoshop, or your final result will be a blotchy, shadowy mess with all the detail missing. You can do this by playing with the brightness and contrast settings under **IMAGE / ADJUST / BRIGHTNESS & CONTRAST** or **IMAGE / ADJUST / VARIATIONS**.

**6. Clipping Paths (or, Losing that Background):** With every photo you use of someone, ask yourself the question: does that background really add anything to the photograph, or does it just create a dark, smudgy spot on my page. Portraits without backgrounds not only project a cleaner image, they also help you escape from that rectangular, linear look and allow you to do some fancy text wraps.

To lose the background, you will have to select it in Photoshop using the appropriate tools, and this will vary according to the image: rectangular or elliptical marquee, lasso, magic wand, or pen tool. You should already know how to do this from your Intro to Computer Graphics class. My advice is to go very slowly and to use the magnifying glass a lot.

If you create a path with the pen tool, be sure to save the path. If you use the other tools, creating a selection of "marching ants," you will need to convert your selection to a path. Here's how...

Once the background is selected, invert the selection so that the foreground < the part you want to bring into your page layout program < is selected. (**SELECT / INVERSE**) Then open the Paths palette, and from the pull-out tab on the right choose **Make Work Path**. It will convert your selection into a path called **Work Path**. This path must be saved to work! From the pull-out tab on the right choose **Save Path**. You can give it a descriptive name, but since it will probably be your only path, the default **Path 1** is fine.

Now to make this a clipping path that you can export, you must save this as a Photoshop EPS image. If this option is not available when you do **Save As**, it probably means that your image has layers and needs to be flattened. The native Photoshop format is the only one that recognizes layers. To flatten it, open the Layers palette, and choose **Flatten Image** from the pull-out tab.

When you save it as an EPS image, you will come to the EPS Format dialogue box. From the Clipping Path pop-up box choose the name of your path, which is probably **Path 1**. Now when you bring this image into Pagemaker or Quark, the background will be transparent!

# Twenty Desktop Publishing Don'ts: Common Errors That Cost You Time And Money

You've used your computer to create your own document to save yourself time and money. Don't let a simple mistake ruin your schedule or your budget.

We have collected 20 Desktop Publishing Don'ts that can help keep your project on time and on budget. Avoid these mistakes and you'll create better documents every time.

- 1.** - Don't do page layout in a word processor. Selecting the right program for the right job will assure that your document will print properly. Use a page layout programs such as Adobe Pagemaker or Quark Xpress if you plan to construct complex documents with color and graphics.
- 2.** - Don't use the default hairline when drawing lines and boxes. Always specify line thickness and avoid using the default hairline. The higher the resolution of the output device, the thinner the line may appear in the final output. Whatever looks good on your 600 dpi printer may be too thin at a higher resolution.
- 3.** - Don't use too many fonts in a document. Too many different fonts in a document can distract from the message and the design. It may also cause problems when printing.
- 4.** - Don't forget to include both the screen font and the printer font when including fonts with the document. Postscript (Type1) fonts are in two parts. A screen font displays the font image on the screen. A printer font instructs the output device how to print the font. When exchanging fonts with a printer, you need to provide both the screen font and the printer font to assure the document will print correctly.
- 5.** - Don't forget your font license agreement. Many fonts are licensed. Be sure you know the rules for using the fonts you own before asking the printer to use your fonts for outputting. Some font companies do not allow fonts to be moved to other computers for output with the exception of providing the fonts for output purposes only to an authorized Service Bureau. While many files created by popular applications are cross platform compatible, the fonts are not.
- 6.** - Don't use quick keys to apply type styles. When applying styles such as bold, italic, bold italic, outline or shadow to a typeface with a quick key commands (Cont-B, Cont-I, etc.), check with the printer to be used so the output device will translate those commands.
- 7.** - Don't use the wrong file format. A TIFF format is usually used for images and an EPS format is used for graphics. Discuss with the printer the best format to use for your particular job. Avoid using PICT graphics when printing to an imagesetter.
- 8.** - Don't place an EPS graphic within another EPS graphic. This is a major cause of Postscript errors and will create printing problems.
- 9.** - Don't resize a photo within a page layout program. Resize all halftone and color scans in Photoshop or other image-editing programs. Resizing a photo in a page layout program can lead to a long printing time. You will want to export scans or graphics at the size they are to be printed.
- 10.** - Don't scale, crop or rotate imported TIFF files within your page layout program. Use editing software to prepare the graphic at its proper size and orientation before importing it into the page layout program.
- 11.** - Don't create complex clipping paths in Photoshop or Illustrator. A complex path is one with too many control points. This may create Postscript problems and slow down the imaging time. It may also cause the imaging of the document to fail.
- 12.** - Don't use RGB (Red, Blue, Green) colors in a document. RGB values are primarily for establishing the color on a monitor. CMYK (Cyan, Magenta, Yellow, Black) create process color that is used in printing. RGB color files must be converted to CMYK files because RGB colors may not print correctly.
- 13.** - Don't rely on your monitor's display for color selection. The colors will vary and may be substantially different from the printed page.

- 14.** - Don't trap if you don't know how. Trapping parameters vary with each press and paper combination. If you do trapping yourself, your printer can help by giving you the parameters you must use. The printer cannot be held responsible for errors arising from improper trapping.
- 15.** - Don't forget to include all the necessary files to produce the job. The printer will request all images and graphic files imported into your document. These files must be saved in a file format that the printer can output. You may also want to provide any application files related to the imported files.
- 16.** - Don't forget to provide hard-copy originals or proofs. The proofs will be used to assure your document is printed the way your document is printed the way you expect it to be.
- 17.** - Don't forget gripper space on the document. A press or copier needs a small area to grip the paper as it is imaged. You will want to avoid placing text or graphics on the gripper area. Check with your printer for the gripper space needed.
- 18.** - Don't use any font but Postscript or Type 1 fonts. These fonts have become the standards in the printing industry. If you used True Type fonts, you may not receive the results you want, especially on a high-quality imagesetter.
- 19.** - Don't use type smaller than 6 point. It will be difficult to read, especially when reversed.
- 20.** - Don't proceed without double checking settings and layout!

# You have needs

## Any desktop publisher needs to consider the following elements:

**Planning** -- Your first responsibility is defining what you want to say and how you want it to look.

**Hardware** -- You need to choose the equipment and platform that best suit your situation. This decision will include everything from the CPU and memory to the monitor, scanner and disk drives.

**Software** -- You need to pick the publishing applications that permit you to create and maintain your artwork. This includes not only the desktop publishing software itself but any typefaces and utility software.

### Planning - The Basics

Although certain elements may change in the course of designing a piece for printing, some basic rules should always be kept in mind.

Establish which colors you will be using to print the piece. Determine if they are to be Pantone colors, Process tints or a combination of both Pantone and Process Colors. Then make sure to use only those colors when creating artwork for the document. Be careful to insure the color names match word-for-word from application to application.

Keep a list of all fonts used to create the piece.

This includes fonts used in the document and the artwork used to create the document.

Set jobs up for the final output device's resolution, not your laser printers resolution. This will help reduce the number of complex paths when the PostScript code is made.

Maintain a list of all original artwork (ie. FreeHand and Illustrator files) that you used when creating the piece.

### Hardware - The Basics

Only you can decide which hardware platform makes the most sense for your organization.

If you are building your system from scratch, you may want to look at how desktop evolved to what it is today. The good news is that there are only two computer platforms to consider, Macintosh and the PC.

### Macintosh

The desktop publishing industry traditionally has clung to the Macintosh environment. Most page layout software was first released for the Mac and later released for the PC. This was due to the user friendly atmosphere of the Macintosh.

Early on Macintosh handled large graphic files better and the architecture of the machine made saving and transporting files quite simple.

### The PC

The Personal Computer (PC) has recently come into its own with the graphic arts industry. All major software developers have released their programs to work on both the Macintosh and PC and have written the software to be readily transportable between the platforms.

#### *Prolog*

It used to be that most the printers in the world today would tell you to buy a Macintosh or one of its clones. However, with the current power capabilities of the PC (2+GHz...far more "bang-for-the-buck" than MAC), and the fact that over 90% of all software is written for the PC, most printshops and graphic designers are leaning toward the PC as the more powerful and cost effective solution to desktop publishing.

## Hardware Items

**RAM:** You'll never regret buying the most Random Access Memory (RAM) you can afford. Graphics programs are memory hogs.

**Hard Drive Memory:** Ditto the above.

**Media (Disk Drives-Fixed and Removable):** Graphics files are large. Floppy disks are small. Bitmap photographs for graphics applications are large, sometimes many megabytes. Floppy disks are small. File compression programs don't always compress the files very much. The point is this: Make sure you have a disk drive that can write to removable media other than the built-in floppy drive. This will give you the piece-of-mind that you can reliably back-up the data from your hard disk and send files to other peoples systems. Consider the following drive types: Zip, Syquest, Optical, Jazz, Recordable CD.

**Printers:** Invest in a PostScript printer. They come in all price ranges.

**Scanners:** When looking for a desktop scanner, consider its input resolution and with which software it is packaged. Many scanners come with "light" versions of image manipulation software that let you acquire and edit art immediately.

**Modem:** How else are you going to find your soul mate? Get a fast one, modem that is, or look into a broadband connection.

## Software

Most software manufacturers are releasing their programs for both the Mac and PC and are making the files transportable between those platforms. I encourage you to stick with the proven leaders in desktop publishing. If you do this your level of support from your service bureau and printer will be guaranteed.

### Most designers need three types of programs meet today's demands:

**Page Layout:** Page layout programs are the backbone of your desktop. If you only get one program to start, it better be one that can handle all the text and tabular copy that is expected. Although drawing applications can handle text, they are a far cry from perfect when large amounts of text are to be used.

The two programs most used today for page layout are QuarkXPress and PageMaker. Both do an excellent job of handling text and importing graphics.

**Graphics Illustration Programs:** These are the drawing programs. They let you create and edit vector based illustrations and logos. The three programs most used today for drawing are Adobe Illustrator, Macromedia FreeHand and CorelDraw.

**Image Manipulation Programs:** These are the programs that let you edit scans and draw bitmapped artwork. The program most used today for photo and bitmap editing is Adobe PhotoShop.

### Software you really can't do without

**Fonts and Font Management Utilities:** We encourage you to purchase only Type 1 fonts. These are vector based fonts that conform fully to the PostScript language. If you must use TrueType fonts, remember that they sometimes print with questionable results. We advise you to send any TrueType fonts to us to test prior to using them in a production situation. To manage these fonts on your system, we encourage you to get Adobe Type Manager and a program such as Suitcase.

**Virus Protection:** We encourage all of our customers to get a good virus detection program and install it on all their computers. Keep the virus definitions up to date!

**Disk Recovery and Management:** Norton Utilities is a very good choice.

# We have needs

## To tackle any desktop project you need to consider the following elements

Fill out one of our output order forms and check through each item. We require these forms in Electronic Prepress to ensure the job can be opened quickly and properly. If any questions arise, our staff is quick to call and inquire about how a particular file was set up.

Included on that form should be any preflight notes, imagesetter and device information, screen frequency, color information, orientation, output size and trapping instructions.

Keep file names brief and obvious. If you use Illustrator to build your artwork, we can generally find the file with no trouble. but if you use FreeHand, please make an effort to keep the EPS prefix the same as the original file name. Renaming the EPS adds confusion when trying to find the right file to fix.

Ungroup as many objects as possible before saving an art file for placement.

Use the features of your page layout or graphics programs that allow you to numerically align objects that butt together. This is especially important for trapping colors.

Only send the artwork and page layout files that pertain to the job. Be sure to include the TIFFs and EPSs you've used in building the document, along with all original art files.

Check and update links prior to sending the disks.

List the printer and screen fonts used in the artwork and page layout files. Then make a folder for the fonts you have used and put both the printer and screen versions in that folder only.

Note: Please send only the fonts that you have used in the job. We may run into a great number of font ID conflicts if you send additional fonts that do not pertain to the piece at hand.

*Caution:* Some programs have features designed to enlighten you about which fonts are present and loaded. They don't always find fonts from placed artwork though.

*Great Tip:* After you have copied all the files in a job to a transport disk, open the fonts on that disk and print a set of lasers. This will give you the confidence that the screen and printer fonts are indeed all present and accounted for.

Make a folder that includes all artwork and pages you are sending.

If you set your own traps or want us to run the job "as is," make a special note.

Include a day- and night-time number where the artist can be reached. Send the printer a clean set of color broken lasers with the job and make sure to print the lasers after the final revisions are made. This step will eliminate confusion at the printers.

### **Play it again:**

*Face it. Nobody in this business is ever happy with the first proof.*

When submitting revisions, we request that you send back the most recent proof that we generated for you and mark all changes that need to be made. This will ensure that we can concentrate on the corrections at hand without having to worry about any corrections that were made previously.

Changes also need to be made to the computer file and then saved under a new name. A good way to keep track of revisions is to name subsequent files R1 (ie. Revision 1), R2, etc...

The new file should come back accompanied with a new hard copy proof.

Embedded art files that you correct need to maintain their original name and be relinked prior to returning them to us.

If we have set traps in art files for you, it would be best: *for you to correct the files we altered so that this task won't have to be repeated each time you send corrections.*