

Printing tips

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PLANNING -- PLANNING -- PLANNING!!:

- We can not stress proper planning enough. Know ahead of time what you are trying to accomplish and know how you wish to accomplish it. Use scans where scans are needed (usually only in photos or continuous tone art) and line art as logos and flat art.
- Always work with your printer at the inception of a project. Consulting a printer at the early part of a job will usually save you time, money & frustration.
- Most printers have a set of "standard" inks that they order premixed to PMS standard colors. Using one of these standards can save the cost of the printer having to mix inks to a precise formula to achieve an exact specified PMS color.
- If the final electronic file you give to the printer is too large for a 1.44 floppy -
- MAKE sure that the storage device you use will be compatible at the printer / service bureau. Nothing like getting the whole project on a 200Mb Syquest Disk and finding out your printer can handle only up to 88Mb's. Or, worst yet, has scrapped the Syquest for Optical or Zip Drives. Check out your compatibility first -- if you have to work around it, it's nice to know it while you have the time to.
- Be aware of folding panels. Do your work at 100% the size of the printed piece and allow for proper margins where you want it to fold!
- Plan what program is best to accomplish your goal. QuarkXpress or Pagemaker are the programs best designed for page layout. Illustrator is great for line art, but is limited in page sizes. Freehand is usually best to overcome this page size limitation.
- Single page layouts should be built at trim size with bleeds.
- Resize ALL halftone and four color scans in PhotoShop or any other paint program.

Resizing in the page programs or draw programs can lead to long imaging (RIP) time (and therefore cost more money). DO NOT compress the scans in PhotoShop! Export scans or graphics at the size they will print.

- When using colors, plan on what the colors will be and how they will print -- spot or process. If you use spot colors, specify colors in PMS (Pantone Matching System). If the colors are built out of process, please specify them as CMYK (cyan, magenta, yellow & black) or Separations within the color pallet. A quick check to see how many plates (or negatives for making the plates) will be printed is to bring up the "Print" menu and select "Separations." The colors will be listed (note: "Registration" is NOT a true color or plate).
- The term "Gripper" refers to the space at the edge of the sheet where it is "gripped" and pulled through the press. This area is not printable and each press can have a different requirement on the amount of gripper it needs. Check with your printer to find out which press (and thus how much gripper to allow for in laying out your job. If you need to print within the gripper (or want to bleed an ink off the sheet) -- let the printer know. They will usually have to print on a larger sheet and then do a final trim to the desired finished size. This will cost more and can sometimes be avoided by changing your layout slightly during the planning stage.
- Prepare Text For Translation: If you're creating a publication that will be translated into another language, create a second black (spot color) called Text Black for your QuarkXPress or PageMaker color palette and apply that color, either manually or by including it in style sheets, to all text that will be translated. That way, the translators will only have to create one new set of film, which can be stripped together with the previous color separations for the new print run.

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FONTS:

- Fonts used by both client (you) and vendor (printer/service bureau) MUST be of the same vendor, name and manufacturer.
- It is the client's responsibility to maintain licensed versions of the fonts at its location. It is the vendor's responsibility to maintain licensed versions of the fonts at its location.
- A complete listing of all PostScript fonts used to create a document should accompany the document for output. Be sure that the fonts in EPS files are included also!
- Don't forget to send dingbat fonts if you are using them!
- Adobe PostScript Type 1 fonts are the defacto standard of the industry. Unless client and vendor have a different understanding beforehand, the vendor assumes that all non-Adobe fonts will be flagged. True Type works with some Mac systems, but it is DISASTROUS in others. Ditto for Bitstream fonts.
- PostScript fonts have both a "screen font" for proper display on your monitor AND a "printer font" that is used to create smooth type on a printer, especially on an imagesetter. Always send BOTH! I've quit counting the number of times clients (and some were "experienced") have given me a job on diskette only to find missing printer or screen fonts. We usually get the screen fonts and not the printer fonts. Sorry, but the meter is running on your job when this happens -- and we have to wait and start over later!!

- If you are going "cross-platform", i. e., from MAC to PC (or the other way) -- Remember that the fonts DO NOT travel well. MAC and PC fonts are different animals, even if both are Adobe Type 1. Special characters are at different key combinations. You MUST send hard copy proofs in this situation, so that any major changes in font metrics are corrected. Many times the printer will have to replace the called for font with "THE CLOSEST" similar font that they have. This can create a shift in the entire "look" of the piece. (This is true even in cases where you are using "cross platform compatible" programs such as QuarkXpress or Pagemaker. The files may well be compatible, but the postscript fonts WILL NOT be!)

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TEXT TIPS:

- Create outlines in programs like Freehand or Illustrator. NEVER use the style sheet "Outline" command. Likewise, never use the style sheet "Shadow" for your type. Create drop shadows in a drawing program or your page layout program, where you can control them.
- Convert headline type to paths in Illustrator or Freehand, etc. Then you won't need to list the font, and the vendor can't accidentally make a type or line-break change. (We get a ton of art from clients where type was used in the art and never outlined and converted to art -- thus the poor overworked imagesetter promptly calls for the fonts that WERE NOT included.)
- NEVER NEVER NEVER use the style menu to make type "**BOLD**" or "ITALIC", etc., if the document is going outside your company or to a high-resolution device (imagesetter). Chances are it will not print correctly. (On our imagesetter, it defaults to "courier" - not the best looking type! The hidden danger is that the laser printer can create and print most of these type effects by altering your basic fonts - a high end Imagesetter (2500 dpi +) will NOT!)
- Most typefaces named after cities (especially on Mac's), i. e., Geneva, New York, Chicago, Monaco, San Francisco, etc. are "Screen Fonts" and are not made for high-end output. Avoid them like the plague! ("Memphis", however, is a real typeface, and not a bad one at that. Use it all you want.)

TYPOGRAPHY & QUARK

- If you look back nostalgically to the days when typographers provided you with galleys, you may appreciate fine typography-appropriate hyphenation, word spacing, kerning, and tracking, as well as a trained eye watching out for loose lines, widows and orphans. Some would argue that desktop tools lack the sophistication of yesterday's dedicated typesetting systems. QuarkXPress has many refinements; you just need to know where to look. Four common areas of improving Quark-based typography are:

First, you may be disappointed with the kerning of your typography. There's a good chance it isn't even turned on for type of under 10 points. That's because Quark's default preferences don't make use of a font's built-in kerning pairs except for type set above 10 point. You should change this default setting to seven point, in Typographic Preferences under the Edit menu. You will probably notice a significant difference.

Second, we believe Quark's Justification space settings are also set too loosely. The XPress settings are 85%, 110%, and 250%, referring to the minimum percentage of a space band between words, the optimum, and the maximum. The first and last are used to determine line breaks for justified type only; the optimum setting refers to preferred spacing for justified as well as flush left, right, or center type. We prefer the standard settings to be set to 85%, 95% and 105%. This forces a tight, professional look. While you are at it, you might create some additional settings that are even tighter. You can apply these to paragraphs that have a widow in order to tighten them up slightly, with the goal of bringing the widow up to the prior line.

Third, you can also set your paragraph tracking to improve its appearance. We suggest a tracking setting of -2 or -3 for body text, and more for headlines. You can access these settings in the Measurements Palette, the Style menu, or the Character settings of Edit Style Sheets. Of course, you may also tighten this setting (increasing the negative number) to avoid a widow as well.

Finally, subheads ending up at the bottom of a column or page are an embarrassing problem that's easily missed. A simple way around this: Use the Keep With Next "PARAGRAPH" setting. If you apply this to the paragraph formats of a subhead style, it will always stay with the text paragraph that follows it.

There are other tools for the desperate, such as using horizontal scaling or adjusting leading to make lines fit or widows disappear. We recommend that you avoid these if possible. They are often noticeable and can wreak havoc on your grid. A better idea...just edit a word or two of a paragraph, if you can. You'll often find that to be the quickest way of fixing a bad break, widow, or extra line.

DOCUMENTS & DEFAULTS (QuarkXPress)

Many of the improvements we review in the article above can actually be set in the Default Preferences. To access your defaults, first launch Quark and make sure no documents are opened. With all documents closed, any changes you make will be applied as the default settings to all new documents you create in the future.

Remember, a change in the default preferences will not change any previously-created documents. For these, you will need to open each document and make the changes manually.

Default Settings: Preferences Under Application, turn on Drag and Drop and Smart Quotes

Under General, set Auto Kern Above to 7 pts and turn Ligatures on

Default settings: Edit H&Js Standard: Set maximum hyphens in a row to 3; set justification space to 85, 95, 105%.

Duplicate that setting, and call it No Hyphenation. Turn off Auto Hyphenation (this is for headlines)

Create several more with tighter space parameters for widow control.

Default Settings: Edit Style Sheets For Normal, change tracking under Character to your preferences (-2 or -3)

Default Settings; Edit Colors Remove Red, Green and Blue from color list (speeds up RIP time)

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PREFERRED PROGRAMS:

- Be sure your vendor has the application programs that wish to use. (This is REAL HELPFUL when we have a problem, or you make a last minute discovery, and the file has to be modified or corrected before being output!)
- If you are using Corel Draw to produce art, PLEASE save the art using the "save as" feature -- as illustrator art! Not many vendors use Corel and even fewer can read and output it's native format.

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HARD COPY PROOFS:

- Art boards and the tissues that used to accompany them are DEAD! Providing a hard-copy, to-size proof of the final version of the file, eliminates many opportunities for misunderstandings. Most vendors WILL NOT accept responsibility for the final film without this hard copy proof!
- Real World: If last minute changes preclude producing a new, up-to-date proof,, be sure to mark all changes clearly on the hard-copy proof. (If you had trouble printing a laser proof, you can be pretty sure that the vendor will have trouble too!)
- If a client does not provide a hard-copy proof, the vendor should produce (and charge for) a laser proof and fax it to the client for approval. The schedule clock does not start ticking until this signed approval is received.
- Hard copy proofs that are not 100% to size lead to scaling problems, inability to compare laser output to film output on a light table, and other production bugaboos. Clients should tile and tape their proofs, or, at the very least, note in BIG RED LETTERS somewhere that the hard copy is 100%. This allows the vendor to run a same-size proof. Remember that the scaling percentage and the "fit in window" percentage travel with the electronic file, making it easy for a careless vendor to output to the wrong size film. (Don't laugh, it actually happened to me just last week - 12 pieces of film straight to the trash can!!)
- Mark all images "live" or "FP0" (for position only), just like you would on an art board. Then the vendor won't waste time looking for files that don't matter.
- Note any images that have been "flopped". Your vendor may also want you to note any images that have been anamorphically scaled or rotated.
- Your vendor may ask that you supply laser-printed "color separations" for color files. This helps to eliminate confusion and aids estimating and job planning.

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FILE FORMATS:

- Generally speaking, EPS (encapsulated postscript file) files are the most foolproof, and carry the most information. The TIF (TIFF on the MAC's) format, while better than it used to be, causes problems with some vendors. Avoid PICT files like the plague! No imagesetter, anywhere, likes them.. and most laser printers don't either.
- Be sure that Photoshop EPS files are saved in "BINARY" format!
- Using links instead of embedding graphics in publications makes the final main document much smaller and speeds up the composition work. Be sure to include the linked files along with the fonts for the job -- the imagesetter will follow the link from the document and use the actual graphic for its output.
- DO NOT place an EPS within another EPS!!! This is a big NO-NO!! PostScript errors are at their greatest when this is done and can cause major time and expense.

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BLEEDS & TRIMS:

- The client should construct all necessary bleeds, unless instructed otherwise by the vendor. If the vendor has to do it, extra expense is incurred, as well as increased opportunity for error. (Bleeding means that the ink (any portion of any ink) runs to the very edge of the finished piece. This means that the printer must print the piece oversized and then trim back to the final size. To create a bleed all you do is carry the image, background, line, etc. 1/8" outside the piece your are working on.)

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FILE NAMES:

- Every file should have a unique name.
- NEVER change the name of any FPO (For Position Only) or "swap out" file given to you by the vendor.
- Do not change the name of an image, EPS file, or any import after it is placed in the page file.
- Change the cropping, percentage, and/or rotation ONLY in Photoshop (or other similar program), NEVER in the page layout program!

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COLOR:

- Use CMYK colors, with separation ON, if you want 4-color process printing. You will be amazed at what you get if you send a file in RGB and the printer doesn't catch it and change it to CMYK.
- Use spot colors, separation OFF, if you want spot colors.
- Some Color Tips:

For better print reproduction, use a two-color combination rather than a three- or four-color combination. This is particularly important in the lighter shades where a small amount of density change or register shift can alter the appearance of the color dramatically.

Clean oranges, violets and greens are very difficult to match in four-color process printing. To get a vibrant, clean and matching color (such as a specific logo color) you should strongly consider using a fifth SPOT color to achieve really decent results. The increase in cost can be well worth it!

Colors that closely resemble the four primary process colors and dirty, muted colors reproduce well in four-color process printing.

Fluorescent and Metallic colors CANNOT be achieved using four-color process printing. Again, if you have to have one of these colors, try adding a fifth spot color.

- Avoid using RGB when printing -- always convert to CMYK before output. (I've seen a pretty purple background come out on a color proof when the client wanted a very blue background!!)
- When using color in a document or graphic, be sure to delete all unused colors in your pallet -- i.e. Blue, Green, Red, 10% Gray, Proof-1, My Color, Rover's Ears, etc. These only serve to confuse and may cause printing problems with EPA's.
- In ANY program, list all colors used in placed graphics EXACTLY AS WRITTEN IN THE GRAPHIC!! Printing problems occur due to correct colors being left out of the pallet. Also, if the graphic has a red labeled "Pantone 032 RED" and you define and use a red you call "032 RED the postscript rip will see these as two distinctly different inks and make a separate negative for each -- remember: time & money!
- Mac default black is 100%. For large solid areas of black, we suggest a mixture of 60% C, 50% M, 40% Y & 100% K: "Rich Black", if you are printing four color process.
- Use a printed "built tint" swatch guide, like the Pantone Process Guide, TruMatch, or FocolTone systems, to visualize built colors. You will probably be disappointed in the built approximation of most Pantone colors. In fact, only about 50% of PANTONE MATCHING SYSTEM Colors can be closely simulated in four-color process printing. (See if your printer has a book by Pantone that shows all PMS colors with each side by side with the four-color simulation -- you will be amazed!)
- There is no guarantee the Pantone tints will match between applications. ALWAYS check the built-in percentages.
- NEVER trust the color fidelity of any monitor, anywhere. Period. Transmitted additive images can never "match" reflected subtractive images. Use the "numbers", the information box in Photoshop, and printed swatch guides.

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RULES & BORDERS:

- NEVER use the predefined "Hairline" weight for a line: a laser printer defines a hairline differently than an imagesetter does. A good "rule of thumb" for a hairline is .25 point.
- Use the geometric tools to make boxes & frames... don't built them from individual lines. Your laser printer may overlook corners that don't fit exactly. An imagesetter just isn't as kind.

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PATTERN FILLS & POSTSCRIPT FILLS:

- Use pattern fills ONLY if there is no other alternative. Their printing results are erratic, especially if color is involved. PostScript custom fills are a little more dependable, but caution is still advised. Many vendors, including Altman Printing, are not responsible for output results of pattern fills and PostScript fills, unless they run a test first.
- Preparing Multitoned Images for Printing: When preparing images for duotone, tritone, or quadtone printing, you must set the screens to different values so that the inks don't print directly on top of each other. In Photoshop, set screen values before you save the file as an EPS file, and PageMaker will defer to Photoshop's settings (make sure you keep color names consistent across applications). Choose Page Setup and click on the Screen button. Enter the screen values for each ink you will print-90 degrees apart for a duotone-and save as an EPS file, selecting the Include Halftone Screen box. If you output through QuarkXPress, save the EPS file without saving the screen values. In QuarkXPress, go to the Edit Colors dialog box, select each color used in your duo/tri/quadtone, and click on Edit. In the dialog box that appears is a Screen Values pop-up list of the names of the process colors; assign your duo/tri/quadtone inks to values other than process black so that they don't print on top of one another. (If you don't feel competent to handle this important technical aspect, just be sure to tell your printer / service bureau to check this for you -- it may cost a little more, but it can be well worth it!)

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TRAPPING & OVERPRINTING:

- Be sure that the vendor and client agree beforehand who is responsible for trapping. In most cases it is better for the vendor to apply the trap. Occasionally the client may have some more skill in this area, or may attempt to save money by doing the trapping. The important thing is to agree beforehand who is responsible for what. Only the most generous (and soon to be insolvent) vendor repeatedly takes responsibility for a client's trapping mistakes.
- Note whether black is to OVERPRINT or DROP OUT, unless you want to rely on the vendor's judgment. Note any special overprint/drop out requirements for other colors.
- If you're not sure whether to trap or not (or if you don't know what trapping is and when it is needed -- ASK your printer or service bureau -- everyone has to learn trapping sooner or later. Sooner is much better than later!! Trapping is a process that compensates for minor misregistration that can occur on a printing press. It is compensated for usually by overlapping adjacent colors (the lighter color into the

darker) slightly so no paper color will show if the inked areas don't quite touch everywhere. Typically light colors are either spread (enlarged) or choked (reduced) into darker colors. When the printer performs this work, it's expensive. That's why many designers and desktop publishers do it themselves.

- To set your own traps, you can work within the applications program or you can use a dedicated trapping program. Many applications -- QuarkXPress, Adobe Illustrator, Aldus Freehand -- offer tools for trapping, but you need to understand how the tools work and how the applications interact. For instance, if you import an Illustrator drawing into your Quark file, you cannot use the Quark tools to trap objects in the drawing. You must perform the trapping within the original Illustrator file. And Quark will not take the graphic's color content or boundaries into account when trapping native Quark elements to it.

First, see if your printer has a dedicated program that will perform the necessary trapping and can handle all the work from the finished job file. This is the best solution, producing more professional results, and avoids some pitfalls caused by manual trapping within the application program.

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VIGNETTES & BANDING PROBLEMS:

- Generally speaking, the best vignettes are created in a program like Photoshop. Vendors often decline responsibility when banding occurs in drawing programs and page make-up programs like QuarkXpress and Pagemaker.
- Banding is the problem of optically noticeable bands running through a graduated blend. 1-color PMS blends tend to cause more banding problems than 4-color or multi-tint blends. The "speed" (amount of gradation from one endpoint to another) and distance of blends are variables that impact banding. Too long a distance and too little a gradation or, inversely, too short a distance and too great a gradation will result in banding. (Try to keep blends/gradations under 9 inches.) Rastering an Illustrator, Quark or Freehand blend in PhotoShop to produce a tiff tends to reduce banding somewhat. This also allows you to apply filters to the blend, such as despeckle, blur or noise. Experimenting with lowering resolutions of blends, we've found that even at 72 dpi they look much smoother than higher resolution version. (From Tech Tips @ Pearl Pressman Liberty Comm. Group)
- Tired of those nasty stair-stepping problems in your desktop blends? Here's a couple of easy recommendations that can help keep your vignettes smooth.

There are two types of blends: object-oriented and bitmap. The first, object-oriented, are generated in programs like Adobe Illustrator, Aldus Freehand, or QuarkXPress. These blends can be problematic: their steps are just too perfect. Your eyes are naturally drawn to the transition from one perfect step to another.

The solution?

For Illustrator or Freehand users, keep your Blends to a net change of no more than 75% from end to end. A blend that starts at 10% and ends at 80% is much less likely to band than one that begins at 0% and ends at 100%.

Additionally, if you are using a service bureau, set your screen angles in spot

colors to cyan (15¼) or magenta (75¼). This reduces the banding effect.

The second type of blends is bitmap, which are generated in Photoshop. If you create a bitmap blend, add a pixel or two of noise (found in the filter menu) to the selection to avoid those nasty stairsteps.

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WHAT THE VENDOR NEEDS FROM THE CLIENT (That's You):

Page layout file (if applicable)

Live EPS files (plus) the " parent file" in the case of Aldus Freehand) and other imports, and all live scans and images.

All fonts used -- BOTH Screen & Printer versions. If you use a font in an EPS art file (like a logo, and you haven't outlined and converted to art - then PLEASE send those fonts also.

Hard copy proof (if multicolor, then send color-separated copy also -- if you can't get it to print out on your laser, then we will too), at 100%, of latest version of file. NEVER send the original documents. Send a copy in case it is damaged in transport or is a victim of disk failure.

Any original artwork or transparencies needing to be scanned.

Transmittal form with names of files, fonts, line screens & emulsion information, expected delivery time, etc.

No superfluous material! If it's not needed for the job, don't send it.

Printing Resources:

The XPresso Bar	An independent guide to QuarkXPress on the net.
Yahoo' s DTP Jump /Busi ness_and_Economy/Si te	Great Lists of Resources for DTP... From Yahoo
Pantone: Graphics Tips & Techniques	Excellent Resorces on Color - From the Masters at Pantone Matching System
Money Savi ng Tips	
Design Type & Graphics Li brary	Great "On Li ne" Free Magazi ne
Global Prepress Center	Good Si te
Digital Training & Designs, Inc.	Software Tips - QuarkXpress

ELECTRIC- PAGES:	GRLab's Journal of Publishing Evolution
DesktopPublishing.com	They call themselves "The Ultimate Resource" - and they may just be that -- over 6,000 pages & growing -- WOW!
Desktop Publishers Journal	The Printed Magazine's Web Site -- Good Stuff Here!
Microsoft Typography	All About True Type - with a PC Slant I'm Sure...
2 Desktop Publishing	A Great Site with a bunch of links to DTP Sites
typoGRAPHIC	About Type -- is that obvious?
Publish RGB	An Excellent DTP Magazine
Publish RGB's -- 121 Hot Tips	An Excellent Series of Tips on A Wide Range of Topics
PrePress Basics	The Digital PrePress... Another page dedicated to helping people get their electronic files correct for high quality printing.
PrePress Main Street	Some great tips that you can use
The Design & Publishing Center	Check it out!
Printing a PostScript File	Some Heavy Duty Stuff!!
Glossary On Scanning	Learn The Terms Right!!
NAPL - The National Assoc. of Printers & Lithographers	Some interesting stuff here!
GATF - The Graphic Arts Technical Foundation	Great place for the nitty, gritty stuff.
Things You Should Know About Color Printing	Just What It Says!!
Pearl Pressman Tech Tips	Good Tips

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