



Their Success is Our Business

## Prepress Standards For Web Offset Heatset, UV And Sheetfed Printing

Version 2.0 March 2008



Our advertisers' satisfaction is critical to the success of our publications and our company's growth. The InterCo Print Prepress Standards were created with customer satisfaction in mind.

This booklet describes a wide variety of technical and design standards for the heatset sections of our publications printed at our InterCo Print plants. Simply put, these standards describe what will look good in print. This booklet is a helpful tool to help select advertising elements that will print well on press.

Most of the specifications are taken directly from printing industry standards, exhaustively researched by the leading printing and publishing industry associations in the U.S. They are not unique to InterCo Print.

All customers have an opportunity to contribute to the quality of their printed advertisements. Following the guidelines in this booklet will optimize the final appearance of printed books, and the effectiveness of the advertising. Choosing to deviate from these standards may result in poor printing results.

## Scope of this booklet

This booklet specifically addresses **web offset heatset printing, UV printing and sheetfed printing** on coated paper stock in the Interco Print plants. SWOP (Specifications for Web Offset Printing) and other industry leaders were used as a resource for these specifications. Anyone sending material for heatset printing to a InterCo Print printing plant is responsible for assuring compliance with these standards. Any questions should be addressed to the printing plant manager.

Only heatset specifications are covered in this booklet. For open web newsprint specifications, refer to the other booklet titled “Prepress Standards For Web Offset Coldset Printing At InterCo Print Plants”

This booklet does *not* encompass all the standards that each InterCo Print composing center applies to materials being sent *into* the composing center. Each publication division, and in some cases, each composing center, has its own requirements. Anyone sending material to a composing center must check with that center to receive its standards. Some aspects of the designer’s work are covered in this booklet only because they affect the finished files being sent to the InterCo Print plant, or impact the printability of the ads.

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## Heatset vs. Open (Cold) Web and Coated vs. Uncoated Paper Stock

This booklet specifically addresses **web offset heatset printing** and **sheetfed printing** on coated paper stock in the InterCo Print plants. For open web newsprint specifications, refer to the other booklet titled “Prepress Standards For Web Offset Coldset Printing At InterCo Print Plants” Specifications for newsprint (open web) printing are more stringent. If an ad is set up according to this booklet’s heatset specifications, it cannot successfully be printed on newsprint stock. So if a customer is switching from the coated to the uncoated section of a publication, it is the designer’s responsibility to assure correct specs for uncoated stock. This will require reworking the ad according to the specs in the other booklet.

**If an ad is set up according to this booklet’s heatset specifications, it cannot successfully be printed on newsprint stock.**

### Page Dimensions

- **Advertising space** (all advertising elements within this dimension)
- **Live area** (advertising space plus folio)
- **Trim size** (actual size of the publication)
- **Bleed size** (non-live bleed background elements should be extended to these dimensions)

### **Standard Books**

- Advertising space: 6 1/2” x 9 1/2” ( *Portland Plant: 6 1/2” x 9 1/4”* )
- Live area: 6 1/2” x 9 3/4” ( *Portland Plant: 6 1/2” x 9 1/2”* )
- Trim size: 7 1/2” x 10 1/2” ( *Portland Plant: 7 1/2” x 10 1/4”* )
- Bleed size: 7 7/8” x 10 7/8” ( *Portland Plant: 8 1/2” x 11”* )
- PDF size: 8.5” X 11”

### **Digest Books**

- Advertising space: 4 1/2” x 7 1/4”
- Live area: 4 1/2” x 7 1/2”
- Trim size: 5 1/4” x 8 3/8”
- Bleed size: 6 1/4” x 9 3/8”
- PDF size: 6.5” X 9 3/8”

### **National Books**

- Advertising space: 6 1/2” x 9 1/2”
- Live area: 6 1/2” x 9 3/4”
- Trim size: 7 3/8” x 10 3/4”
- Bleed size: 8 1/2” x 11”
- PDF size: 8 1/2” x 11”

### **Distinctive Homes / New Homes and Living Books**

- Advertising space: 9 1/2” x 11 1/4”
- Live area: 9 1/2” x 11 1/2”
- Trim size: 10” x 12”
- Bleed size: 11” x 13”

## Dots Per Inch (DPI)

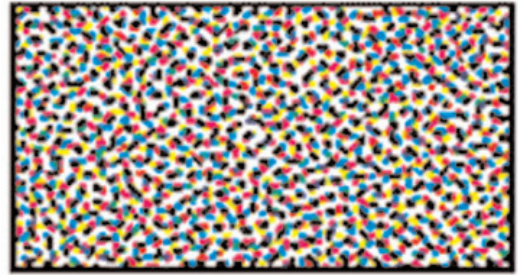
Files should specify 1200 dots per inch, or DPI. Dots per inch is a measure of the resolution of an output device. It actually refers to the dots of ink or toner used by an imagesetter, laser printer, or other printing device. A setting of more than 1200 dpi will result in larger files, taking longer to transmit and longer to image. You will not get a better printed image by increasing the dpi setting.

## Staccato Screening Vs. Conventional Screening

Staccato screening is also known as Stochastic or FM (Frequency modulation). With staccato screening the dots remain the same size and then use closely spaced dots to reproduce darker areas and widely spaced dots are used to reproduce lighter areas. Dot size is measured in microns. Conventional screening is also known as standard, halftone or AM (amplitude modulation). With conventional screening the dots change size and then use larger dots to reproduce darker areas and smaller dots to reproduce lighter areas. Dot size is measured in dots per inch.



Conventional Screening



Staccato Screening

Staccato screening has gained prominence in the last few years with the development of Computer-To-Plate (CTP) because we now have very precise dots produced directly on the printing plate and also advancement in software workflows. Staccato screening also reflects light more efficiently, increases the color available in mid-tones, reduces the color contamination effect of the paper stock and you see a truer representation of the image. Also because staccato screening uses much smaller dots and are random vs. conventional screening which uses geometric ruling, screen angles and rosette dot structure you get a more “continuous tone” or photographic quality.

## Dot Gain

Dot gain is an inherent characteristic of any offset printing and cannot be eliminated. This term is used to describe the apparent increase in tone value from the original values on a digital file, to printing. This change is caused mostly by a slight change in dot size when making the printing plates, and then again when ink is transferred to the paper. Very small dots (5% or less) tend to disappear, and other dots tend to get bigger.

Dot gain occurs throughout the entire tone scale, but is most apparent in the 50% dot (mid-tone) range. You should expect to see a gain of 21-29% at the mid-tones.

Because the amount of dot gain is not exactly consistent, you might see variation in colors throughout a press run, or from one issue to another. Dot gain is normal, and should be expected.

## CMYK

Colors must be built in four-color process, or CMYK (cyan-magenta-yellow-black). Colors cannot be defined as RGB (red-green-blue), PMS (Pantone Matching System), or spot color.

Solid black backgrounds, bars or blocks of black, and very large block-style black headlines should be built as **“rich black:” 100K / 30C. (100% black and 30% cyan)**. Rich black should *never* be built as a solid of all four colors.

Any built color must not exceed a Total Area Coverage of 280. That is, the percentage of tint of each color when added must not exceed 280%. For example, dark blue 30K / 100C / 50M = 180. Exceeding the specified TAC would cause problems (ink back-transfers, ink drying problems, and ink trapping difficulties) in any press operation.

It is important to understand that color monitors, color proofs and the actual printed magazine will vary somewhat in their color reproduction. Regular, consistent color calibration of the monitors and proofing devices is helpful, but keep in mind that monitors and printing devices produce color by entirely different means and have different color range capabilities. Furthermore, CMYK printing on any press is capable of creating less than three-quarters of the colors visible to the human eye, and is not capable of exactly reproducing PMS and RGB colors. (Refer to the Pantone Process Color Simulator book that shows chips of PMS colors next to their CMYK builds.) Finally, it is normal to see a range of dot gain and color variation on one color throughout the press run, and from one issue to the next.

## Customer-Supplied Ads

Customer-supplied ads are usually designed by customers' ad agencies. The Composing Center is responsible for opening the files and assuring that customer-supplied ads match the specifications in this booklet before forwarding the files to the printer.

## Vignettes or Fadeaway Edges

Designers should be wary of using fadeaway or feathered edges, also called vignettes, where the fadeaway is made up of more than one color. This is because any dot less than 5% might disappear in the platemaking and printing process. Usually feathered edges on coated stock print acceptably well, but rarely may appear chunky at the edges, or may experience color shifts in the lightest areas.



If you are creating a drop shadow to make an outlined item look anchored, it's best to make that shadow in black only, to account for any registration issues on press.



**Correct**



**Incorrect**

## Fonts

Only PostScript fonts (preferably Adobe PostScript fonts) should be used. Be sure to check at your composing center for a list of acceptable fonts; some publications are limited to a specific collection of typestyles.

The selected fonts cannot be stylized. That is, the designer may not highlight the selected font and then use the drop-down menu to make it bold, italic, etc. This might look fine on the computer monitor and proof, but at the RIP stage the type will default or the page will fail. Instead, select the correct typestyle from the fonts in your font menu. For example, if you want a bold typeface, choose the bold version from the font menu rather than choosing “bold” from the typestyle menu.

Ads built by advertisers and supplied to InterCo print for insertion in the publications may use their own fonts. It is the advertiser’s responsibility to comply with industry standards for font licensing. Regardless of the font used, the ad must be supplied to the printing plant as a PDF, even if this requires that the composing center must substitute fonts before making the PDF.

### Font Selection

Selection and placement of type can have a critical impact on the effectiveness of any ad. When working with type, consider the following guidelines.

Type can generally be classified into two major groups: serif and sans-serif. Those little ditties at the ends of the strokes of the letter are serifs. If a font doesn’t have those, it’s called “sans serif” because “sans” means “without.”

## Serif Font - Times

## Sans-Serif Font - Helvetica

Generally speaking, it’s best to use serif type for body copy, and sans-serif for headlines. Serif is more readable in extended text than sans-serif. Sans-serif is easier to recognize at a glance for short bursts of type, and is very effective for headlines or lines with no more than seven or eight words. A simple sans-serif, such as Helvetica, is also a good choice for the very small copy blocks typically used below each photo in homes and autos publications.

As a general rule of thumb, page design is best limited to two typestyles. It’s best to select a sans serif for the headline and a serif for the body copy. Select contrasting fonts; faces which are similar in style can lead to a subtle competition. If the sans serif is light and airy, contrast it with a dense black serif headline. If one face is small, make the other one large. Use a few carefully-chosen typefaces, sizes and weights to organize the information and create a natural path for the eye.

Italics are useful for emphasis, or to portray irony or humor. Italics also imply a conversational tone or the spoken word. All capital letters might be suitable in a very short block of text or in a heading, but should be used sparsely. When a sentence is all caps, we have to read it letter by letter rather than by recognizing groups of letters. It's wise to avoid font attributes, especially on strange-looking fonts, except for a very specific reason.

*The use of all caps or all italics quickly undermines character recognition and becomes tedious when used beyond their emphasis roles.*

WHEN A WORD IS ALL CAPS, WE HAVE TO READ IT LETTER BY LETTER, RATHER THAN BY RECOGNIZING GROUPS OF LETTERS.

**TAKE A LOOK HOW THIS FONT IN ALL CAPS BECOMES ALMOST IMPOSSIBLE TO READ** or setting *italic* or an ***italic-outlined-bold-shadowed-underlined face*** is almost illegible.

### Font Size – Small Type

Selection and placement of rules and type are critical components in the legibility and effectiveness of our advertiser's pages. Very small or fine type can be difficult or impossible to read. When selecting typefaces and font sizes, the designer should bear in mind that less-than-perfect register may occur occasionally.

Type that reverses to white out of a dark screen build background – minimum size 10pt.

Sans Serif - Minimum size: 5 point  
Serif - Minimum size: 6 point

Do not design type that reverses to white out of a light screen build background.

Sans Serif - Minimum size: 10 point  
Serif - Minimum size: 10 point

Type that reverses to white out of a photo should be placed with care, because light areas of the photo will not allow the type to be legible. If the photo is dark enough, the minimum point sizes should be 10pt.

Sans Serif - Minimum size: 10 point  
Serif - Minimum size: 10 point

Type that is filled in with a screen build should be carefully designed, both so that the type is large enough to carry the dots of the screen build, and so that the contrast between the type and background is sufficient to be legible. Minimum size is 10pt. At the smaller font sizes and especially on serif fonts, the screen should be in only one process color. Only with chunkier fonts should the type be filled with a screen build of more than one color.

Sans Serif - Minimum size: 10 point  
Serif - Minimum size: 10 point

Use caution when designing drop shadows and outlines (halos) around type. These techniques tend to look like printing mistakes (mis-register) rather than design elements, especially if they are small.

Sans Serif - Minimum size: 10 point  
Serif - Minimum size: 10 point

**Black type should be built only in black and should overprint the background. It should not contain any cyan, yellow or magenta, and the background behind the type should not knock out. The only exception is headlines at least 36 point, which can be built as a rich black.**

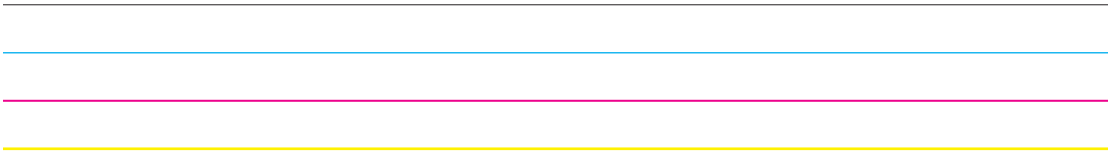
Sans Serif - Minimum size: 10 point  
Serif - Minimum size: 10 point

## Fine Rules

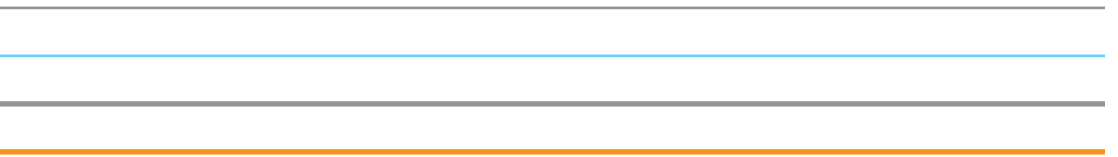
Rules are defined as thin lines or borders. The following standards will assure reasonable reproduction of rules.

Minimum rule size is 1/4 point.

Rules smaller than 2 point should be reproduced only in a solid of only one process color: cyan, yellow, magenta or black, and only on a white background.



Rules 2 point or larger may be done in more than one process color, and may be screened.



Rules reversed to white out of a solid or screened background should be at least 2 point.



It is strongly recommended to avoid a screened rule on a screened background, unless the rule is very large.



## Design and Color

Color should be carefully utilized to achieve each ad's goals: getting the reader's attention, and easily communicating key information to the reader. Choose color carefully to achieve maximum impact. Avoid the lure of using too many colored elements on a page, or the reader will not know where to look first. Colors should complement the content, not distract from it. Readers forced to divide their attention will probably lose their attention instead.

Select a basic text color and stick to it, allowing one or two accent colors for emphasis. Strive for as much contrast between type and background as possible. The greatest contrast is always between black and white. Colored text can also be effective, but only if it reproduces well.

### Effective selection of color for type



#### Headline Goes Here

Body copy goes here. Body copy goes here. Body copy goes Here. Body copy goes here.

Black copy on a white field always reproduces the best, and also puts the reader's focus on the photo.



#### Headline Goes Here

Body copy goes here. Body copy goes here. Body copy goes Here. Body copy goes here.

Some snap is added with a 50% yellow background, but the black type still **overprints** and reads clearly.



#### Headline Goes Here

Body copy goes here. Body copy goes here. Body copy goes Here. Body copy goes here.

This 20% black background doesn't compromise the black **overprint** type, and focuses the reader on the photo.



#### Headline Goes Here

Body copy goes here. Body copy goes here. Body copy goes Here. Body copy goes here.

With white type on a black box, the type is clear as long as it's not too small.



#### Headline Goes Here

Body copy goes here. Body copy goes here. Body copy goes Here. Body copy goes here.

If bright colors are required it's best to keep the background uncomplicated (this is 100% cyan) and use black **overprint**.

### Poor selection of color for type



**Headline Goes Here**  
 Body copy goes here. Body copy goes here. Body copy goes Here. Body copy goes here.

This copy is hardly legible under the best conditions, and it distracts from the photo.



**Headline Goes Here**  
 Body copy goes here. Body copy goes here. Body copy goes Here. Body copy goes here.

The small serif font and complicated color builds are too vulnerable to register problems.



**Headline Goes Here**  
 Body copy goes here. Body copy goes here. Body copy goes Here. Body copy goes here.

Avoid yellow for type due to legibility problems.



**Headline Goes Here**  
 Body copy goes here. Body copy goes here. Body copy goes Here. Body copy goes here.

There is some contrast between the font and background colors, but any register problems will make an illegible mess.



**Headline Goes Here**  
 Body copy goes here. Body copy goes here. Body copy goes Here. Body copy goes here.

This is a 3/C screen build and a fine serif font. It's not likely to consistently print well.

### Other color selection rules of thumb

Any black type in the ad smaller than 36 point should be black only. The designer should not attempt to punch the density of the black by putting any other colors (cyan, yellow or magenta) under the black, because even the smallest mis-register on press will leave color "hanging."



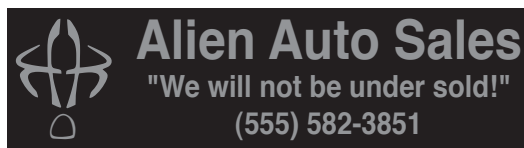
**Alien Auto Sales**  
 "We will not be under sold!"  
 (555) 582-3851



**Alien Auto Sales**  
 "We will not be under sold!"  
 (555) 582-3851

For best reproduction, select colors that are made of only one of the four process colors (cyan, magenta, yellow or black). These are the easiest to print, and best at hiding inconsistencies on press.

Beware customer logos that are reproduced at tiny sizes, as the small parts will probably be illegible. This problem is even worse if the customer's logo is a screen build, and/or reverses out of a screen build.



Beware fadeways or vignettes, especially those of multiple process colors, because they tend to drop off or get chunky at the lighter end.



Don't be too liberal with lots of solid coverage in too many of your ads. The more ink on the 8-page side, the harder it is to print well in any press operation due to problems such as ink back-transfers, ink drying problems, and ink trapping difficulties.



### Digital Photography

Digital photography has become common as digital cameras become more technologically advanced and less expensive. However, all but the very most expensive digital cameras produce photos that don't look too great in print at large sizes. Be aware that if the digital photo is going to print sharply as a large picture in the final ad, you'd better start with a very good quality digital camera.

The photos should be provided to the designer full frame. It's important to photograph the object (car, house, etc.) with plenty of space around all four sides, to allow for later cropping.

If digital photos go through IAQ software at the composing center, then the digital photo should be sent as 4c for a color ad, or b/w for a b/w ad. (The digital photo should not be sent in color for a b/w ad.)

If digital photos don't go through IAQ software at the composing center, then the digital photos should be sent as color, regardless of whether they will appear in print as 4c or b/w.

- Digital camera should be at least "5-7` megapixel."
- Minimum resolution 756 x 504; for finer detail 1024 x 768
- Minimum 266 DPI
- JPEG
- CMYK
- Use minimum compression and maximum resolution.
- Photo file must be already color-corrected as needed; there is no color-correction done in prepress.

### Scanning

- Conventional photographic prints or slides must be scanned to create the dots needed on press. Scanning specifications have a very significant impact on the quality of the picture in our customer's ad.
- Scanning resolution is affected by the input/output size ratio and the screen ruling (133 line screen). Resolution of the scans should be twice the numerical value of the screen ruling at the output size, or 266 dpi for an image scanned to output size for 133 line screen. Scanning images at higher than two times the screen ruling is discouraged because it will not necessarily improve the quality of the reproduction, but it will make for more cumbersome files. Images should be sized to the approximate area to which they will be placed. To compute the correct input scanning resolution, use this formula:
- Scaling scanned images will impact the effective resolution and can negatively affect

Scanner Input Resolution = Percent Output Size x 133 x 2	
Percent Output Size	Input Scanning Resolution
100%	266ppi
125%	333ppi
150%	399ppi
175%	466ppi
200%	532ppi
300%	798ppi
400%	1064ppi

quality and file sizes. Loss of sharpness and clarity can result from enlarging an image after it has been scanned. Enlarging images more than 110-130% may cause the image to break apart, or pixelize. The original should be rescanned at a higher resolution if the scan is to be output at a size larger than 110%. Placed images should also not be reduced to less than 50% of their original size, to avoid excessive RIPping time or choking.

- For line art, use 1200 dpi.
- GIF, PICT, BMP and 72 ppi images (including web pages or web banners) are not acceptable.
- Neutrals should be carefully adjusted to establish a gray balance and avoid a cast. When converting from RGB to CMYK, color management software should be used to control the integrity of the image on the screen. Gray is produced by unequal dot sizes of the three process inks, with the cyan dot always larger than the yellow and magenta.

### Page Construction Basics

- Set printing options at 100%.
- Use the portrait orientation to prevent pages from being cut off or compressed.
- Do not overlay filled graphic elements to hide non-printing items.
- The pasteboard area outside the actual page should be clean. Delete any unused elements that may have been placed outside the page while it was being built. If using Quark, perform “collect for output.”
- Place all graphics on the page using the tools of the native graphics application (*e.g.*, Quark). Avoid shared document features. Do not use the “publish and subscribe” features for graphics on Macs. Do not use the “cut/copy and paste” features on any platform.
- Copy and include as a linked element in each of the different ad folders any logo or graphic that is used in more than one ad.

To minimize output problems, flatten or composite all layers before saving the final file.

- Remember that an EPS (Encapsulated Postscript) file nested within another EPS file causes layering complexity. These nested files may cause the file to choke or fail.
- Minimize the number of points used when creating clipping paths. Large numbers of points can make page files too complex. For cleaner-looking results and a better-built file, clipping paths should be created in PhotoShop rather than the page application.
- Use the CYMK format for color graphics and images.
- Do not change the names of photo or graphic files after they have been imported into the ad layout, or file path links will be obliterated.

- Use caution when applying special effects (ghosting, feathering, posterizing, etc.) to photos. The image on the computer screen and/or the proof will not accurately represent the actual image! These effects should be used only if the designer has extensive experience using them and understanding the extrapolation from monitor to printed piece. Note: images to be colorized in the native file should be saved as a 1-bit TIFF.

### Trapping

Trapping is the allowance of overlap for two colors of the ad printed adjacent to each other, as a means of compensating for mis-register and to avoid gaps between colors. Trapping will be done at the InterCo Print plant, and should not be done by the designer and/or the composing center.

### Overview: Preflight, Postscript and PDF

All advertising material sent to InterCo Print plants is to be in the form of digital files in PDF format. Only PDF files will be accepted. Conventional artwork, film and photography cannot be sent.

- The composing center should conduct the following steps, in order, before sending files to the InterCo Print plants:
- Build each ad in the graphics application.
- Preflight each file, using preflight software.
- PostScript the files.
- PDF the files.
- Preflighting, PostScripting and PDFing described in more detail in the next sections of this booklet.

Note that if advertisers build their own ads and supply them digitally, it is the composing center's responsibility to open them and assure they are properly preflighted, PostScripted, and PDFed.

### Pre-flight

Prior to PostScripting and converting an ad to PDF, the designer must assure that the native application file is print ready. For example, the file cannot include any RGB images or colors, must maintain links to placed graphics and images, must have all fonts embedded, and must contain only the high-resolution image data (no FPOs). "Preflighting" is the industry standard name for this process. Ignoring preflighting can result in missed deadlines at the printing plant.

**All files sent to InterCo Print plants must be preflighted.**

Unfortunately, it's often impossible to spot such problems on the screen. Incompatible graphic elements, font errors, incorrect image resolutions and color build errors are the most common mistakes that don't show up on the monitor. But they will cause the page to choke at the output device, or cause defaults that ruin the ad.

Fortunately there are many excellent software packages available to make preflighting easy. Preflight software will scan, verify and collect the job, then report on potential problems. Pit Stop by Enfocore is highly recommended (learn more at [www.enfocus.com](http://www.enfocus.com)). FlightCheck by Markzware is another (see [www.markzware.com](http://www.markzware.com)).

### PostScript

Behind every successful PDF file is a successful PostScript file. It is recommended that designers use the original files application and the PostScript driver on the system to create a PostScript file and then convert the PS file to PDF. Creating the PostScript file manually provides more control over the page descriptions.

For step-by-step instructions, refer to Appendix I.

### PDF

All advertising material sent to InterCo Print plants is to be in the form of digital files in PDF format. Only PDF files will be accepted. Conventional artwork, film and photography cannot be sent.

PDF is shorthand for Portable Document Format, a page description software published by Adobe Systems Incorporated. PDF has become the universal standard for exchanging pages in print production. Properly-prepared ads can be opened using almost any hardware and software, yet still look exactly as the designer intended. PDF files are highly compact, but layout, fonts, links and images remain intact. Once created, PDF files are completely independent of the original application and of the computer platform on which the pages were originally created. Correctly generated PDF documents contain all the data required for screen display and for output on a printer, imagesetter, or platesetter.

Why do the InterCo Print plants require PDFs? PostScript is a programming language; PDF is an object-oriented data format. Every PostScript document is a program that has to be interpreted by the RIP, and PostScript files often contain device-specific commands not understood by every output device. The output of PDF, on the other hand, is a pure data format; its reliability is considerably higher than that of PostScript.

It is acceptable to either PDF individual pages and drop them into a Quark document, or PDF the complete collection of individual ads. Be certain to check with your printing plant to determine acceptable versions of Quark. Ads should be sent as single page files, not as printer's flats; imposition will be done at the printing plant using imposition software.

There are various methods of generating PDF files, but the most reliable method of producing high-end files for output on a high-resolution device is Acrobat Distiller software. Be sure to check with your local printing plant to ascertain which version they are using; you must use the same (or a compatible) version.

For step-by-step instructions, refer to Appendix II. For more information about the software in general, check out [www.adobe.com](http://www.adobe.com).

### File Naming Conventions

For all files sent to the InterCo Print plant, there is only one rule about file naming conventions: the page number should be the first two or three items in the file name. Otherwise any characters or spaces are suitable for the file name, and must be no more than 32 characters long including the extension. Also, make sure your file name doesn't include "/" or spaces before the file name. Here are a few examples of good file names:

- 07bobsmithtrucks.pdf
- 233\_c21howell.pdf
- 09jones\_p3v2.pdf

### What to Send to the Printing Plant

The only items to be sent to the InterCo print printing plant are the PDF files and a completed "Print Profile" form for each issue.

The "Print Profile" form is absolutely critical for successful publishing of the magazine. Without the print profile, the printing plant does not know the page counts, sections, stock, details of bindery, and other key facts. The printing plants have been instructed not to run a book on press without a Print Profile. The Print Profile can be sent via fax, email or FTP'ed to the printing plant.

See Appendix III for Print Profile blank form, completed sample, and instructions.

## After Sending Material to the Printing Plant

After sending material to the printing plant, it is imperative that the people who built the files are available to handle phone calls and potential problems. Make sure the printing plant has up-to-date phone numbers, including home phone, beepers and/or cell phones for at least two people. Remember that the printing plant works 24x7. The plants generally work on files as soon as they get them. If they run across a problem and cannot reach you for resolution, they'll have to make a judgment call based on the limited information they have.

Typical examples include books being output with fill pages to replace corrupted advertising pages, old versions of ads, or the entire book losing its spot in line on the presses. Once a job misses its scheduled print window, it may not be printed for several days.

## SUGGESTED RESOURCES

### **Desktop Publishing with Jacci Howard Bear**

Web site [www.desktoppub.about.com/cs/prepress/index.htm](http://www.desktoppub.about.com/cs/prepress/index.htm). *An outstanding website with excellent links to instructions on effective ad design, fonts, scanning, preflighting, PDFs, etc.*

### **Pantone Process Color Simulator**

Available at local graphic arts suppliers, or at [www.Pantone.com](http://www.Pantone.com). *The best reference for comparing PMS colors and their CMYK builds.*

### **Pocket Guide to Color Reproduction – Communication and Control**

By Miles and Donna Southworth. Graphics Arts Publishing. ISBN 0-933-600-09-7. *The Pocket Guides have been “the” introductory technical book for the printing industry for generations. Be sure to get the latest version!*

### **SWOP for the New Millennium, 2001: Specifications for Web Offset Printing.**

Available through the SWOP website [www.swop.org](http://www.swop.org). *A publication of SWOP, a non-profit industry organization endorsed by the publishing and printing industries. An important source document for this booklet.*

# APPENDIX I

## Postscript Guide

### INSTRUCTIONS FOR CREATING POSTSCRIPT FILES

#### PRINT DRIVER CONTROLS:

**Format:      PostScript Job**

This tells the print driver to save to disk a PostScript file appropriate for sending to a printer.

The EPS choices should be avoided because Encapsulated PostScript files are not intended for sending directly to a print device; they're designed to be embedded in some other document. As a consequence, they may not have fonts embedded, they may not specify a page size, they may not even generate a page. Some or all of these weaknesses will roll over into the PDF file.

**PostScript:   Level 2 and 3**

Selects what set of PostScript language features may be used in the PostScript file. If you are converting this file to PDF, you should pick Level 2 and 3. All other things being equal, a PostScript Level 2 or 3 file will be smaller and execute faster than the Level 1 equivalent. Since all current PostScript-to-PDF converters understand at least PostScript Level 2, there is no good reason for picking Level 1 Compatible.

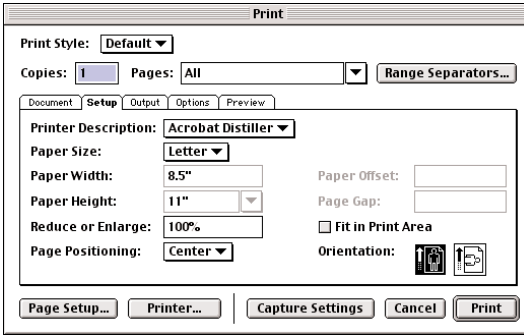
**Data:          Binary Format**

Affects the format in which image data and, in some circumstances, fonts are embedded in the PostScript file. If you have worked with PostScript files for a long time, you tend to think of ASCII as large but safe and binary as more compact but a little risky. This doesn't apply to PostScript files for PDF. No PDF creator has any trouble with binary data in PostScript files.

**Font:          All Inclusion**

The only way to ensure that your fonts are correctly embedded in the final PDF file is to embed them in the PostScript.

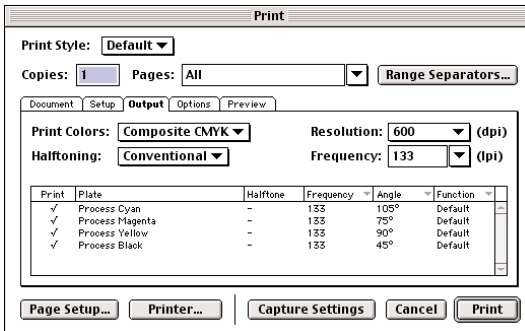
Use of application such as QuarkXpress give controls in addition to the standard print drivers.

SETUP TAB:**Printer:** Any Acrobat Distiller PPD file

The PPD file that your application uses to generate its PostScript. This is especially important if your document has color in it; QuarkXpress replaces all color with grays if it thinks it is printing to a black-and-white device. Distiller and its cousins all look like color devices to QuarkXpress.

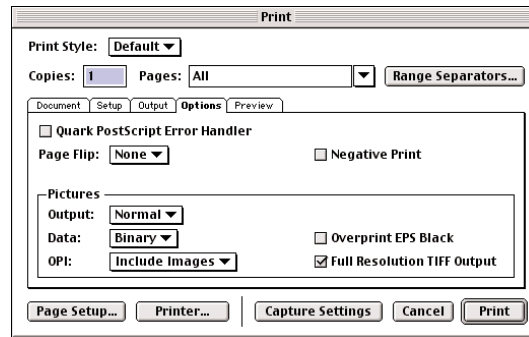
**Paper Size:** Width And Height

On occasion, QuarkXpress changes the paper size when you select Distiller PPD file. Check and make sure these reflect the page size you want for your final PPD file.

OUTPUT TAB:**Print:** Composite CMYK

It is important to make this selection in your PostScript file before creating your PDF. Profiles must be embedded in a PostScript stream and are not offered as job options in Distiller. PDF's default color space is RGB; images in CMYK, the standard model for print production, are translated to RGB upon conversion to PDF without this selection.

**Halftoning:** Conventional**Resolution:** 600ppi**Frequency:** 133lpi

OPTIONS TAB:**Output:**      **Normal****Data:**        **Binary****OPI:**         **Include Images****Select:**      **Full Resolution Tiff  
Output**

It prevents QuarkXpress from down sampling images that it thinks have too much data.

Once you have a PostScript file, you're ready to convert the file to PDF.

# APPENDIX II

## PDF Guide

### AN OVERVIEW OF THE PREFERENCES AND THE SETUP PROCESS FOR CREATING PRESS READY PDF DOCUMENTS

#### Rough Overview Of The PDF Process

- Setup a print station to handle the PDF output.
- Setup your Acrobat Distiller
- Create a watched folder for the Distiller. Setting the watched folder job options to the press optimized settings with minor changes to the settings.
- Create a print style in QuarkXpress for the out put of the PDF.
- Setup the Adobe PS utility for PDF output.
- Produce a book document in the standard adopted at the production site.
- Print that book using QuarkXpress into a standard Distiller watched folder.

#### 1. Setup a print station to handle the PDF output

The machine used to print to PDF should be a machine dedicated to this purpose and this purpose only. This insures that settings and preference will not be changed for any reason. Consistency will insure the plant receives quality documents allowing proper output to their PostScript imagers. Also the size documents being printed and potential postscript errors from eps's, images, and out of shop ads will tie the machine up.

It is suggested that this machine be at least a G4 (Upgraded computers work fine) with a 100 BaseT connection running QuarkXpress 6.0 or InDesign 3.0 or later and Acrobat 6.0 or later. A lesser grade PowerPC running QuarkXpress 4 and Acrobat 5 will do fine, however printing time will increase.

#### 2/3. Setup your Acrobat Distiller and Create a watched folder for your print files

Install Acrobat Distiller on your machine. Create a folder to be watched, name it something like PDF\_press or whatever is preferred. Distiller can monitor up to 100 watched folders. The configuration of folders will vary by composition center, contact your System Administrator for the specific set-up at your facility. For this documentation we will use this single folders PDF\_press in example.

Run the distiller and select Watched Folders under the Settings Menu. See Figure 1-1

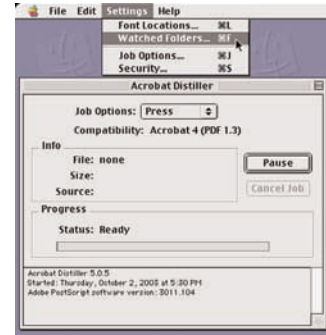


Figure 1-1

This will produce a window like the one in Figure 1-2. Select add and select your folder (PDF\_Press) to indicate to Distiller to watch this folder.

Your watched folder will show up in the list as shown in Figure 1-3.

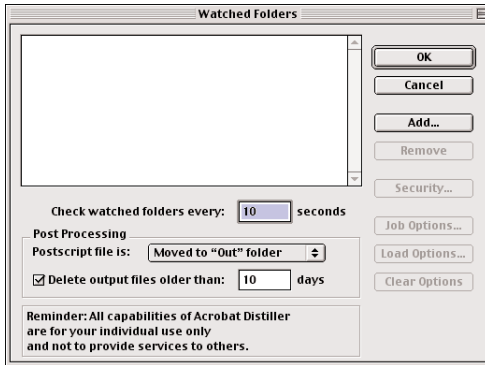


Figure 1-2

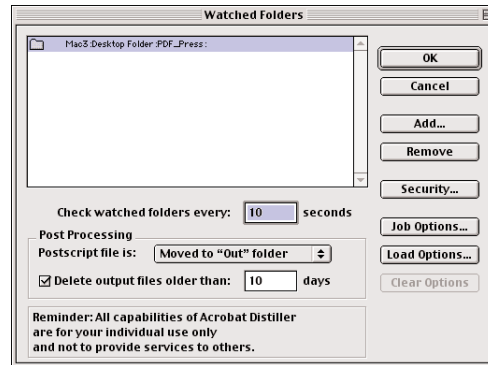


Figure 1-3

If you were to look inside this watched folder (Figure 1-4) you'd see that Distiller has automatically created an IN and an OUT folder within the PDF\_Press folder. As covered later in the appendix, you will place your .ps files into this IN folder. Distiller interprets the .ps file and creates the .pdf, which is automatically placed in the OUT folder upon completion. Also covered at the end of this appendix is how to set options that manage the files placed within these folders.

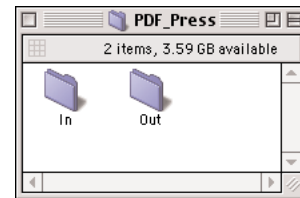


Figure 1-4

Select Load Options to set the job options for your folder. Figure 1-5

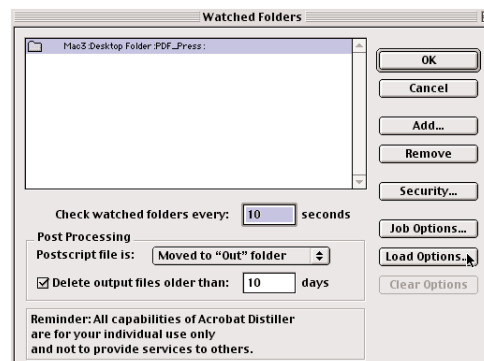


Figure 1-5

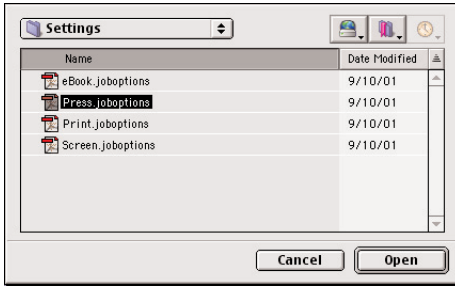


Figure 1-6

Locate press optimized.joboptions in the settings folder of Distiller and open it. This sets the proper options. (Figure 1-6)

Loading the press-optimized job options saves and additional file into the PDF\_Press folder (Figure 1-7). This file will store settings to be used by distiller whenever items are placed into this watch folder.

Select Job Options to modify the settings. (Figure 1-8)

**General Tab:** (Figure 1-9)

Acrobat 3.0 compatibility should be selected to maintain a universal ability for others to view your PDF's.

**ASCII Format: OFF**

No PDF creator has trouble with the smaller binary data in PostScript files.

**Optimize PDF: ON**

This reduces the file size. To optimize a file, Acrobat removes repeated background text, line art, and images, replacing them with pointers to the first occurrences of those objects, and restructures the file to prepare for page-at-a-time downloading from Web servers. This makes for faster access and viewing when downloading the file from the Web or a network.

**Generate Thumbnails: ON**

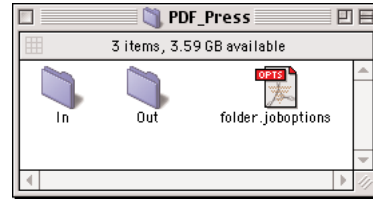


Figure 1-7

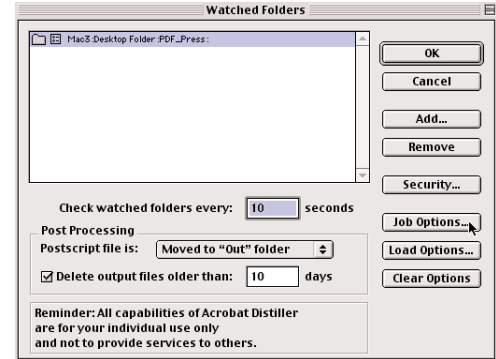


Figure 1-8

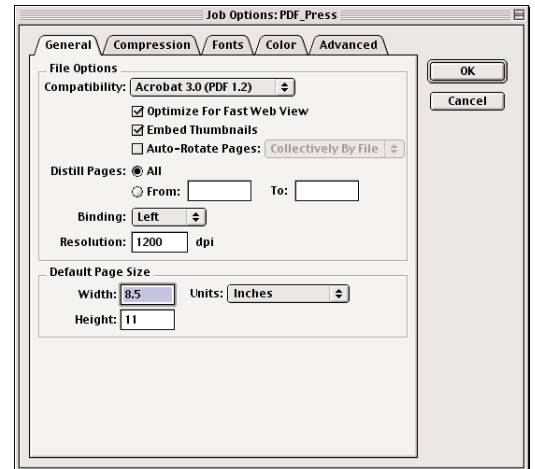


Figure 1-9

Creates a thumbnail preview for each page in the PDF file.

**Resolution:** 1200 dpi

**Binding:** Left

**Compression Tab:** (Figure 1-10)

Color bitmap Images:

Bicubic Downsampling at 300 dpi uses a weighted average to determine pixel color. Bicubic is the slowest but most precise method, resulting in the smoothest tonal gradations. Distiller can downsample or subsample a bitmap image to reduce the amount of data in the image to no more than what an output device needs. If your images are sampled at a higher resolution than the device, the extra resolution only increases the time it takes the device to process the image.

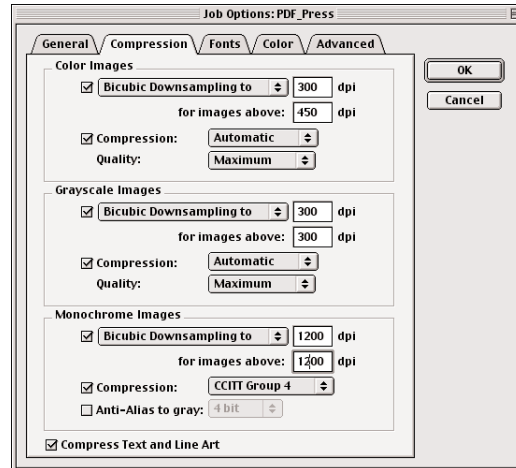


Figure 1-10

**Compression:** Automatic

**Quality:** Maximum

Grayscale Bitmap Images: (those that have a continuous tone of gray, such as black and white photographs) Same settings as used for color images Bicubic Downsampling at 300 dpi.

**Compression:** Automatic

**Quality:** Maximum

Monochrome Bitmap Images: (those in which each pixel is either black or white, with no shades of gray) Bicubic Downsampling at 1200 dpi.

**Compression:** CCITT Group 4 Compress Text and Line Art

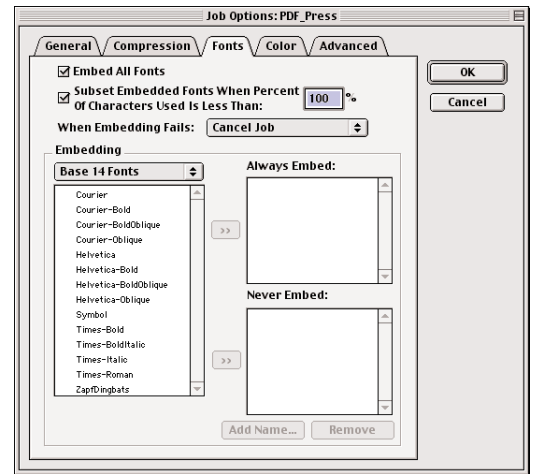
**Font Tab:** (Figure 1-11)**Embed All Fonts****Subset All Embedded Fonts Below:  
100%****When Embedding Fails: Cancel Job**

Figure 1-11

**Color Tab:** (Figure 1-12)**Conversion:**

**Leave Color Unchanged** – This option leaves device-dependent colors unchanged. With this option you cannot choose assumed profile options. The Leave Color Unchanged option can be useful for print shops that have calibrated all their devices, used that information to specify color in the file, and are only outputting to those devices.

**Options:**

**Preserve Overprint Settings** – Retains any overprint settings in files being converted to PDF. Overprint colors are two or more transparent inks printed on top of each other. For example, when a cyan ink prints over a yellow ink, the resulting overprint is a green color. Without overprinting, the underlying yellow would not be printed, resulting in a cyan color.

**Preserve Under Color Removal and Black Generation** – Preserve Under Color Removal and Black Generation Settings retains these settings if they exist in the PostScript file. Black generation calculates the amount of black to be used when trying to reproduce a particular color. Undercolor removal (UCR) reduces the amount of cyan, magenta, and yellow components to compensate for the amount of black that was added by the black generation. Because it used less ink, UCR is generally used for newsprint and uncoated stock.

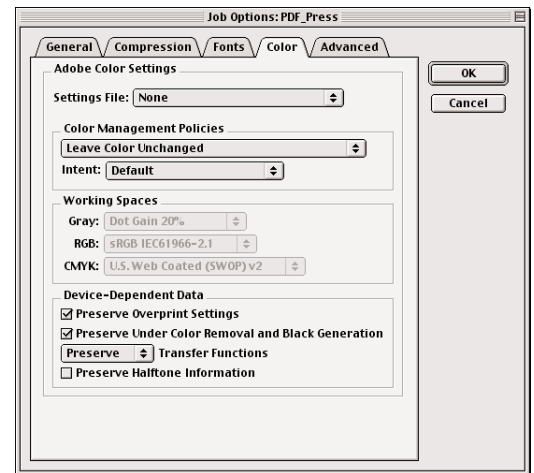


Figure 1-12

**Preserve Transfer Functions** – Retains the transfer functions traditionally used to compensate for dot gain or dot loss that may occur when an image is transferred to film. Dot gain occurs when the ink dots that make up a printed image are larger (for example, due to spreading on paper) than in the halftone screen; dot loss occurs when the dots print smaller. Transfer functions are specific to an output device. For example, a file that is intended for output on a particular imagesetter may contain transfer functions that compensate for the dot gain inherent with that printer.

**Advanced Tab:** (Figure 1-13)

The Advanced job options specify DSC comments to keep in a PDF file, define a default page size, and set other options that affect the conversion from PostScript. In a PostScript file, DSC comments contain information about the file (such as the originating application, the creation date, and the page orientation) and provide structure for page descriptions in the file (such as beginning and ending statements for a prologue section). DSC comments can be useful when your document is going to print or press.

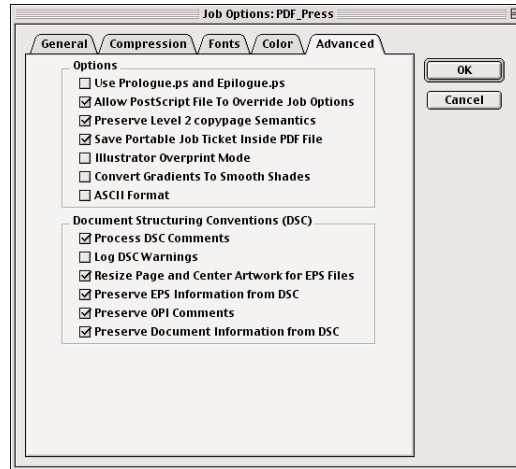


Figure 1-13

**Options:**

**Allow PostScript File To Override Job Options** – Uses settings stored in a PostScript file, rather than your current job options. Before processing a PostScript file, you can replace Distiller parameters in the file to control compression of text and graphics, downsampling and encoding of sampled images, and embedding of Type 1 fonts and instances of Type 1 Multiple Master fonts. See the related technical note on the Acrobat CD for more information on using parameters.

**Preserve Level 2 copypage Semantics** – Uses the copypage operator defined in LanguageLevel 2 PostScript rather than in LanguageLevel 3 PostScript. This means that if you have a LanguageLevel 3 PostScript file and select this option, Distiller will make the copypage a showpage operation.

**Save Portable Job Ticket Inside PDF File** – Preserves a PostScript job ticket in a PDF file. The job ticket contains information about the PostScript file itself, such as page size, resolution, and trapping information, rather than about content. This information can be used later in a workflow or for printing the PDF.

**Document Structuring Conventions (DSC):**

**Process DSC** – To maintain document-structuring information from a PostScript file.

**Resize Page and Center Artwork For EPS Files** – centers an EPS image and resizes the page to fit closely around the image. This option applies only to jobs that consist of a single EPS file.

**Preserve EPS Info from DSC** – retains information, such as the originating application and creation date for an EPS file. With this option deselected, the page is sized and centered based on the top left corner of the top left object and bottom right corner of the bottom right object on the page.

**Preserve OPI Comments** – retains information needed to replace a For Placement Only (FPO) image or comment with the high-resolution image located on servers that support OPI versions 1.3 and 2.0.

**Preserve Document Info from DSC** – retains information such as the title, creation date, and time. When you open a PDF file in Acrobat, this information appears in the General Info dialog box (through File > Document Info < General).

Default Page Size:

Distiller uses this page size only if a PostScript file does not specify a paper size.

Width: 8.50	Height: 11.00	Units: Inches	<i>or</i>
Width: 612	Height: 792	Units: Points	<i>or</i>
Width: 51.00	Height: 66.00	Units: Picas	<i>or</i>
Width: 21.59	Height: 27.94	Units: Centimeters	

#### 4. Create a print style QuarkXpress for the output of the PDF.

At this point the Distiller is setup to accept postscript files to be PDFed. QuarkXpress needs to have a PDF print style setup for easy selection and printing.

Select Print Styles... from the Edit Menu in Quark. (Figure 2-1)

This brings up the Print Styles window. Select New to create a new style. (Figure 2-2)

This brings up the Edit Print Styles window which contains 4 tabs

##### Document Tab: (Figure 2-3)

Name: Give your style a name in the box provided.

Page Sequence: All

Registration: Off

Tiling: Off

##### Setup Tab: (Figure 2-4)

Printer Description: Acrobat Distiller

Paper Size: Letter

Paper Width: 8.5"

Paper Height: 11"

Reduce or Enlarge: 100%

Orientation: Portrait

##### Output Tab: (Figure 2-5)

Print Colors: Composite CMYK

Halftoning: Conventional

Resolution: 600 dpi

Frequency: 133 lpi

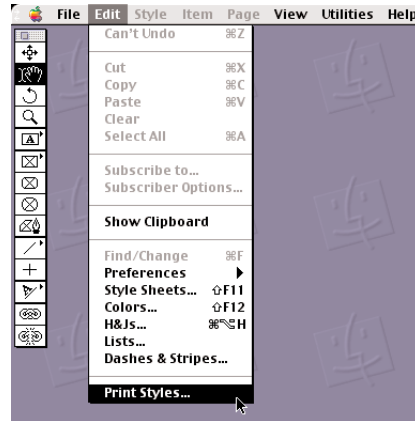


Figure 2-1

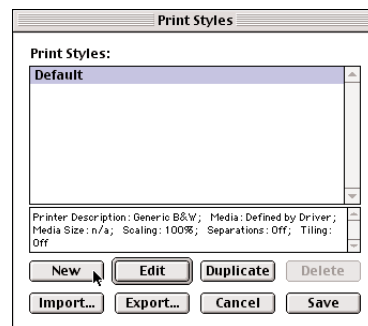


Figure 2-2

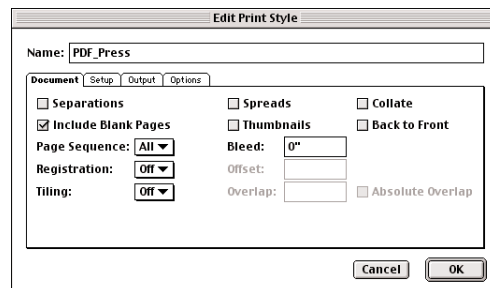


Figure 2-3

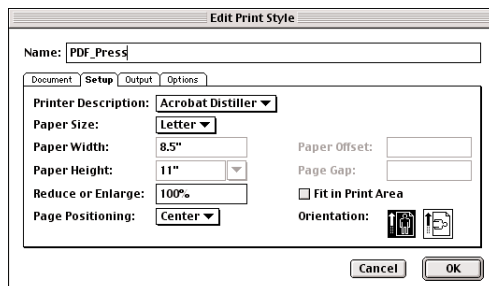


Figure 2-4

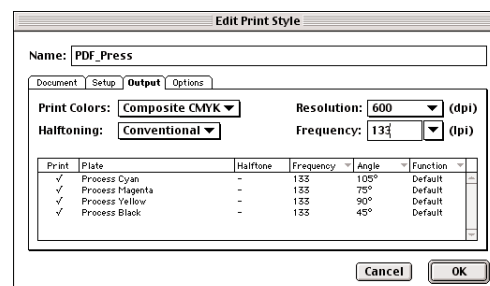


Figure 2-5

**Options Tab:** (Figure 2-6)

Page Flip: None

Output: Normal

Data: Binary

OPI: Include Images

Select OK to save these settings for the PDF\_Press print style.

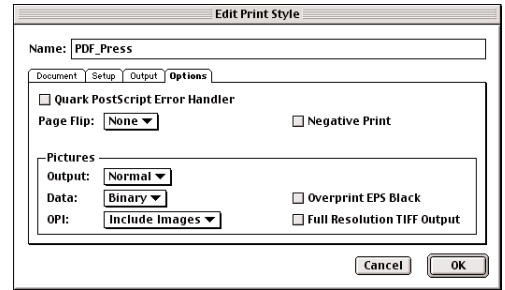


Figure 2-6

Once setup, when you print in quark you have only to select your PDF print style to have the correct set up. (Figure 2-7)

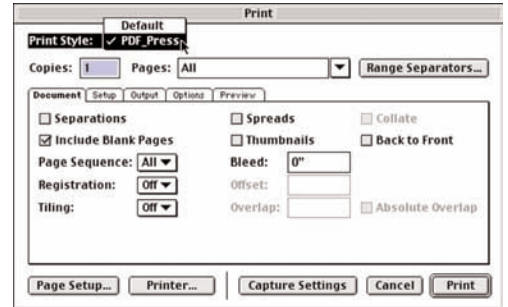


Figure 2-7

**5. Setup the Adobe PS utility for PDF output.**

To set up up your Adobe PS printer utility locate the extension in the Acrobat Package and place it into your extension folder. Locate the Adobe PS in the chooser and highlight it.

If you have defined a watched folder via the print spooler you can find and highlight that "printer", then select Setup.

Click Select PPD to choose the Acrobat Distiller (PPD).

Locate and highlight Acrobat Distiller from within the Printer Descriptions folder, and choose select.

If you have installed AdobePS version 8.6 or later, you will have the ability to print to a Virtual Printer. To create the Virtual Printer: Install the AdobePS printer utility, then from within the Chooser double-clicking on any printer will indicate that you want to set a printer up automatically, causing the lookup of the printer descriptions, with the

Acrobat Distiller now within the Printer Descriptions it will create a Virtual Printer which you can later select as a Printer. (Figure 3-3)

## 6. Setup the Adobe PS Print utility for PDF output.

Produce a book document in the standard adopted at the production site. Print that book using QuarkXpress into a standard Distiller watched folder. Those distilling on the same workstation they are printing from will need to print to a file. Those using a print server will setup their watched folder in Print server software as a normal printing option. When printing in Quark you must also setup up the PS utility settings. Select

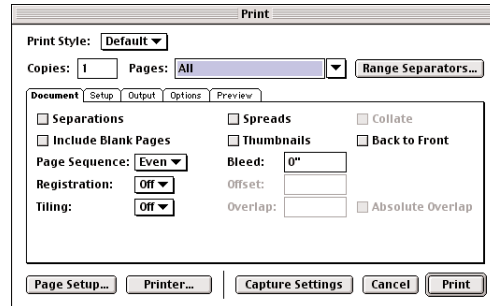


Figure 3-1

Printer in the print window of Quark 4.0. (Figure 3-1) This opens the Adobe PS utility (when printing in Quark 3.x Adobe is Immediately opened).

If your creating a .ps file from a Quark document with more than one page, be sure to indicate the page(s) you intend to save to the file, otherwise all the pages of the document will be saved to the postscript file. Multiple page layouts may be saved as one .ps file, but they must be in the exact order shown on layout in Quark document before creating the .ps file.

If you have created a custom Print Style as outlined in (Figure 2-3 thru 2-6), you will now select that print style to define this documents print options as shown in (Figure 3-2). If you have not created and saved a print style you will need to set the options for this document.

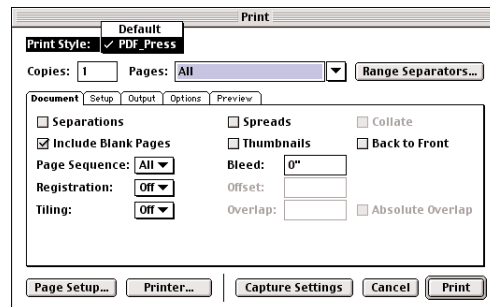


Figure 3-2

After completing print settings, select Page Setup.

From Page Setup set to match the following screen shots.

Page Attributes: (Figure 3-3)

**Paper:** Letter  
**Orientation:** Portrait  
**Scale:** 100%

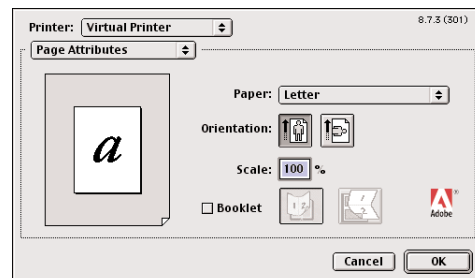


Figure 3-3

## PostScript Options: (Figure 3-4)

**Visual Effects:** All Unchecked  
**Image & Text:** All Unchecked.

In Mac OS, do not select Substitute Fonts, Smooth Text, or Smooth Graphics in the PostScript Options panel of the Page Setup dialog box. If you select these options, the printer driver smoothes graphics by adding many time images to the document. This may result in a large PDF file that takes a long time to display and print.

### Virtual Printer: (Figure 3-5)

Ensure that Acrobat Distiller is shown as your Virtual Printer and select OK.

This will return you to the Print dialog.

### Select Printer. (Finger 3-6)

**Printer:** If you have configured your watched folder using your Print server software, select the printer you defined for PDF output. As shown in (Figure 3-3). If using the print spooler configuration, you will need to make the selection Destination: Printer. (Figure 3-7)

If you are not printing your file to a print server and you are using version 8.6 or later of Adobe PS, you will select Virtual Printer as your Printer selection as shown in (Figure 3-4.) Destination: File is preselected and is the only available choice. (Figure 3-7)

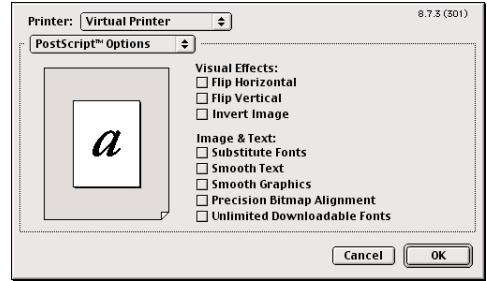


Figure 3-4

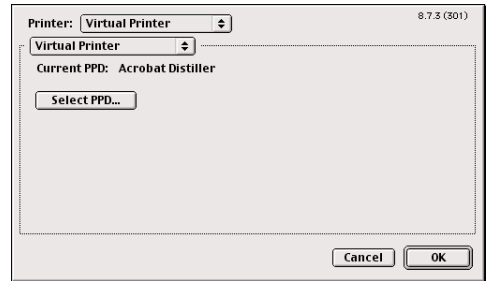


Figure 3-5

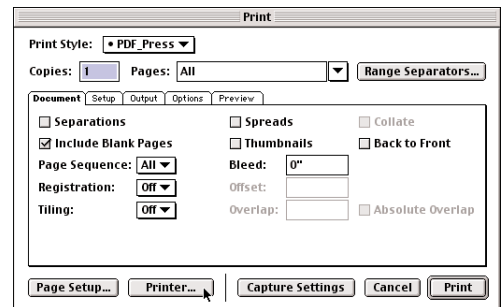


Figure 3-6

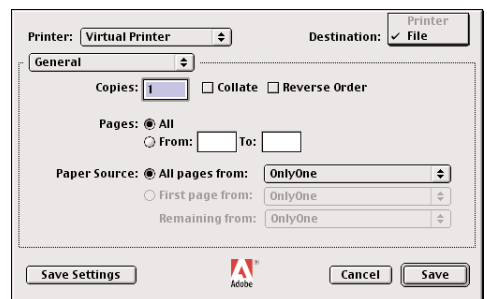


Figure 3-7

(Figure 3-8) shows the choices for preferences in the pull down menu for the Print Utility.

**Background Printing:** Should be setup to the liking of the user.

**Cover Page:** Set to none

**Color Matching:** Set to Color/Grayscale.

**Layout:** Set to pages per sheet 1, border none.

**Error Handling:** Set to no special reporting.

**PostScript Setting:** Level 2 Only

**Printer Specific Options:** Set to 600 DPI.

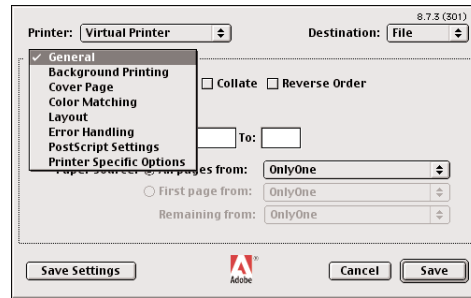


Figure 3-8

With all these settings in place select Save Settings: Once you have saved these settings for a specific printer, you will not need to set them for subsequent print jobs to this printer, these options are saves.

Having selected Save Settings, select Save to return to the print window.

Now we select Print.

**When printing to file:** (Figure 3-9)

Locate the watched folder and open. Locate the In folder nested within the watched folder and select Open.

The Quark document name will automatically be entered into the Create File: dialog. This file should be renamed to meet the naming conventions as previously outlined in the chapter File Preparation.

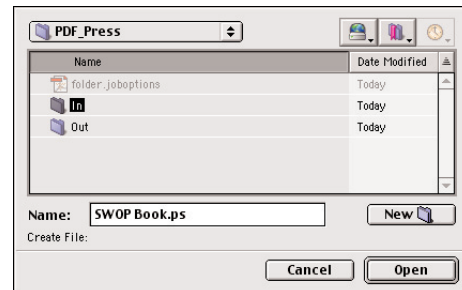


Figure 3-9

## 7. To convert a PostScript file to PDF in a watched folder:

1. Having placed the PostScript file to the IN folder in the watched folder. Distiller checks the IN folder for PostScript files on the set schedule and will automatically convert any files in it to PDF. Important: If two PostScript files with the same name are placed in and IN folder, the second PDF file created by Distiller automatically replaces the first.

2. After the files have been converted, your .pdf's will be saved to the Out folder nested within the watched folder. The .ps files can either be moved to the out folder and deleted along with other outdated files or deleted, this depends on the Post Processing options set.

To interrupt or cancel a processing job: Do one of the following in the Distiller window: click Pause to have Distiller stop distilling after it finishes processing the current PostScript file. Click Resume when you're ready to go on to the next file. Click Cancel Job to stop processing on the current PostScript file. Distiller begins processing the next file. If a PDF file is partially processed, Distiller deletes the file and creates a log file (with the name of filename.log) reporting that the job was terminated at the user's request. The log file is saved in the same folder as the PostScript file.

### Post Processing Set-up:

Set options to manage the processing of files: Enter a number of seconds to specify how often to check the folders. You can enter a value from 1 to 9999. (For example, 120 equals 2 minutes and 9999 equals about 2-3/4 hours). Choose what to do with a PostScript file after it has been processed. The file can be moved to the OUT folder along with the PDF file or deleted altogether. Any log file is also automatically copied to the OUT folder. To delete PDF files after a certain period of time, select the option and enter a number of days. You can enter a value from 1 to 999. This option also deletes PostScript and log files, if you have chosen to delete them.

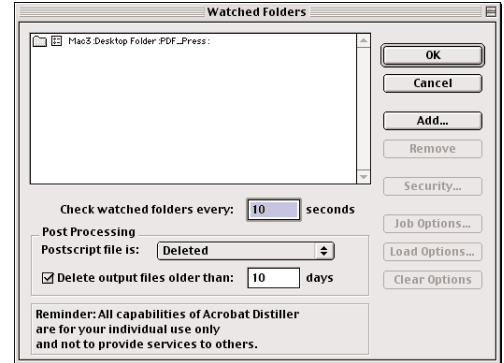


Figure 4-1

Click OK.

### To remove a watched folder:

Select a folder in the Watched Folders dialog box, and click Remove. Note: When you remove a watched folder, Distiller does not delete the actual folder, the IN and OUT folders, their contents, or the Folder.job options file. It simply doesn't watch those folders any longer. You can delete these when appropriate.

# Appendix V

## Print Profile Forms

The following pages provide a print profile instruction page, sample page and a blank page.

<b>Dominion Homes Media</b>					<b>InterCo Print</b> Magazine Print Profile		
<b>Sierra Foothills</b>					Book Code: SEC		
					City Code: 419		
Composing Site: Sacramento				Print Order: 17,000		Issue Date: 05/11/07	
<b>Paper Totals</b>					<b>Pre-Printed / Supplied Inserts</b>		
	4/C	3/C	2/C	1/C	Description	Pages	Location
70lb Enamel:	16						
38lb Enamel:	16						
45lb High Bright:							
35lb High Bright:	40						
27.7 Standard News:							
7 Point Matte:							
8 Point Gloss:							
<b>Total:</b>	<b>72</b>						
<b>Pagination (Bindery) Information</b>							
<b>Breakdowns</b>	<b>Page(s)</b>	<b>Paper</b>			<b>Special Instructions</b>		
Cover	8	70lb Enamel					
Wrap	16	38lb Enamel					
Newsprint	40	35lb High Bright					
Insert	8	70lb Enamel					
<b>Total Page Count:</b>	<b>72</b>	<b>Publication Will Be: Saddle-Stitch</b>					
<b>Delivery Information</b>							
<b>Destination Name</b>	<b>Quantity</b>	<b>Contact Name</b>	<b>Contact Number</b>	<b>Address</b>		<b>Special Instructions</b>	
North Highlands TDS	17,000	Jill Smith	(555) 123-4567	4558 Roseville Rd., Unit B, N. Highlands, CA 95660			
<b>Total Books To Ship:</b>	<b>17,000</b>						
<b>Contact List For Production Concerns</b>				<b>Special Instruction</b>			
John Smith	Work: (555) 123-4567 x112			If there is no tag line on the bottom left corner, this is a customer supplied ad. OK to run as is. Examples: AdBuilder-GVB-652.00010961-052606-pg1 5/12/2006-EL DORADO-653.0005473-martin PG. 34			
John Smith	Cell: (555) 123-4567						
John Smith	Home: (555) 123-4567						

