



Designer's Guide to PDF Files for SWNA Newspapers



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**Hide
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And the Lord created Desktop Publishing

Once upon a time in the world of Publishing, prepress Operators built Columns of Type on complex Photo-typesetting Machines. They laboured day and night to format these columns of type. Other prepress operators operated giant and mystical Line Cameras to produce Halftones and PMT's. Then, the prepress operators cut the Columns into Strips with sharp knives, at great risk to Life and Limb. They pasted the Columns onto Galleys using great care to leave Spaces for the Halftones and PMT's. Then they pasted the Halftones and PMT's into these Spaces. The most Holy of Operators were allowed to apply Border Tape.

Many prepress operators Drank Heavily.

Then, in the year of our Lord, 1985, God sent us the three A's.

The Three A's were a group of companies whose market offerings in 1985 changed the way we communicate...

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The First "A":

Adobe Systems Incorporated

Adobe brought us Postscript. This was a computer language that could describe the contents of a graphically rich page in such a way that it could be interpreted and presented on nearly any type of computer printer at the highest resolution and best quality that the output device could achieve.

Postscript was **platform-independent**, meaning that it was a language independent of the operating system with which it worked. Postscript-based programs could be written to run on any processor under any operating system. It was also **resolution-independent**, in that the same postscript code could be imaged on a 300 dot-per-inch printer or a 1200 dot per inch imagesetter. Postscript pages always imaged at the highest resolution available on a given output device. This meant that postscript could bridge the gap between a low-resolution computer monitor and a high-resolution printer such as an imagesetter.

```
%%BeginProlog
/md 177 dict def md begin/
currentpacking where {pop /
sc_oldpacking currentpacking def true
setpacking}if
%%BeginFile: lw8_feature-1.01
%%Copyright: Copyright 1990-1998 Adobe
Systems Incorporated and Apple Computer
Incorporated. All Rights Reserved.
/bd{bind def}bind def
/ld{load def}bd
/xs{exch store}bd
/Z{0 def}bd
/T true def
/F false def
/level2
/languagelevel where
{
pop languagelevel 2 ge
}{
F
}ifelse
def
/odictstk Z
```

**Postscript
Page
Description
Language**

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The Second "A":

Aldus

In 1985 Aldus Corporation released PageMaker, the first widely-distributed, mass-market Postscript page layout program. For the first time, graphically-rich content could be produced on a desktop personal computer.

Professional typesetting houses and the Association of Typesetting Professionals went on record as saying that most people could never learn to work with type and that this "desktop publishing fad" would never catch on.



**Aldus
Corporation
brought us
Adobe
PageMaker
version 1.0**

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The Third "A":

Apple Computer, Inc.

In 1985 Apple produced an innovation that acted as a catalyst for what we now call the "Desktop Publishing Revolution." If you ask most people what that innovation was, they'll probably guess the Macintosh computer.

They're wrong.

The growth of desktop publishing would still have occurred had Apple never released the Mac. In fact, the 1985 Amiga was a dramatically superior machine for desktop publishing work. If Apple had never released the Macintosh, the biggest difference to the publishing world today would be that we would all produce our work on Amiga's.

No, what Apple introduced in 1985 was the LaserWriter, the first desktop PostScript laser printer. For the first time, high quality type and layout could be output from a device that cost, not \$40,000,... not \$20,000,... but \$7,000 or less..



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The Three “A’s”:

- 1. Postscript Page Description Language (Adobe)**
- 2. Aldus PageMaker Software**
- 3. Apple Laserwriter Printer**

Enter the Imagesetter

These three developments launched the market for desktop publishing in 1985, primarily on the Macintosh platform. As the cost of DTP equipment and software fell, professional designers and publishers jumped on the bandwagon. However, while these new converts lauded the cost-savings that DTP brought them, they didn't want to compromise on the quality that traditional prepress had provided. Thus were born hundreds of service bureaus, whose task it was to provide high-resolution, composite film output from postscript files produced by PageMaker and, later, Quark XPress.

More Fonts - More Programs...

This was when we first began to see problems with Postscript as a universal medium. If a publisher produced a document with Quark XPress, and passed it onto the service bureau, the bureau needed to open the files with the same version of Quark XPress, using the same versions of the same fonts the original designer used. If any part of this process was subject to variation, re-flowing text or completely different page layouts could occur.

Oh No! More Platforms, too!

Furthermore, by 1987 developers like Aldus and Adobe had realized the market potential of all those Intel-based PC-compatible computers out there. The late 80's saw the introduction of Windows versions of all the state-of-the-art publishing programs. Now, service bureaus had to be able to deal with Quark XPress and PageMaker files produced using incompatible fonts on a completely different platform under a completely different operating system.

By 1991, a service bureau could find itself dealing with a job built on a PC in Quark XPress, using both Postscript and Truetype fonts, with graphics developed in Adobe Illustrator, Aldus Freehand and (God forbid!) Corel Draw. The service bureau operator could spend hours – or even days! – solving compatibility problems between his system and the customer's. In order for a job to go smoothly, the service bureau operator needed to be running the same version of the same software as the customer with exactly the same versions of the all the same fonts. It was a nightmare...

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Birth of the PDF

Then, we saw the dawn of portable digital file (PDF) concept. The basic idea was that graphically-rich content could be converted to a format that precluded the need for common production software and fonts. In this scenario, a freely-available viewing program would interpret the files and the recipient would see exactly what the designer intended. In the early 90's, we saw the birth of three significant contenders in this market: **Common Ground** by *No Hands Software*, **Replica** by *Farallon Computing*, and **Acrobat** by *Adobe Systems*. While both Common Ground and Replica initially had technological advantages over Acrobat, neither Farallon nor No Hands Software could compete with Adobe's development budget or its marketing clout. By 1996, the Acrobat PDF file (now renamed as the Portable Document Format) was the standard in electronic publishing.

What won the format war for Adobe, was its ownership of Postscript. As the original developer of the Postscript language, Adobe was able to develop a PDF format was (almost) 100% compatible with professional-level software in use throughout the graphics industry. With its close connection to the prepress industry, Adobe was able to ensure that the tools it was developing would meet the needs of prepress workflows.

Acrobat v.4 and version 1.2 of the PDF standard are rapidly becoming a staple at every level of the publishing industry. Agencies and designers are using PDF files to distribute advertising to publications in electronic form where the PDF standard ensures that the missing fonts and graphics of the past are no longer a problem. Major publishers and service bureaus now often use PDF-only front-end software to run imagesetter. In many cases, PDF is replacing, rather than merely complementing, Postscript.

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WHAT IS ACROBAT AND HOW DOES IT WORK?

Originally, PDF was merely a variant of the Postscript language. Nearly anything that could be described on a Postscript page could be stored, displayed and printed using PDF. As Adobe developed PDF further, it has developed into a full-fledged page-description language in its own right, with abilities to add hyperlinks, bookmarks, annotations, indexed search capabilities and other enhancements to electronic documents. At its heart, a PDF page still has a lot in common with a Postscript document. PDF either uses or translates almost all standard Postscript commands.

Adobe's primary software package for working with PDF files is Acrobat. Currently in release version 4.0.5, Acrobat is not a program, but rather a set of technologies encompassing several programs:

- **Acrobat (formerly Acrobat Exchange)**
- **Acrobat Reader (a stripped-down view-and-print-only version of Exchange)**
- **Acrobat Distiller**
- **Acrobat Search**
- **Acrobat Capture**
- **CreatePDF (formerly PDFWriter)**

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Acrobat Components

Acrobat Distiller

Distiller is the core of the Acrobat family. It is a full-fledged Postscript interpreter that can take the information normally sent to a Postscript printer and translate it into a PDF file

Acrobat (Exchange)

The PDF-editing program in the suite. It allows a user to view, print, sort pages, add or delete pages, make minor text corrections, add annotations, search, add bookmarks and hyperlinks, establish password-based security restrictions and many other enhancements. As of version 4, Adobe renamed Acrobat Exchange as simply Acrobat. Since that title also refers to the entire suite of applications, this is very confusing. When necessary, this document will refer to the Acrobat editing module as Acrobat Exchange.

Acrobat Reader

Reader is freely-distributable and is available for free download from Adobe's web site. It is very likely now the most commonly-installed computer program in the world. Versions of Reader exist for every major operating system and it ships pre-installed on nearly every new computer system sold today. Reader allows the user to view, search, and print PDF files without requiring the original software, fonts or operating system under which the document was developed.

CreatePDF or PDFWriter

A limited PDF printer driver. Newest versions can work with or without Distiller to maintain Postscript compatibility. Older versions bypassed Distiller at the cost of substituting Postscript graphics with screen-resolution previews. Not recommended for prepress applications.

Acrobat Capture

Capture is an "Optical Character Recognition" module for Acrobat. It will read the content of a scanned document and attempt to recognize it as text. The output is saved as a PDF file either as semi-formatted text or as a graphic with an invisible "text layer" layered over it.

Acrobat Catalog

Reads the text content of a collection of PDF files and creates a searchable index. Particularly useful in a paperless office situation where a user may need to search several hundred PDF files to find a particular reference.

Acrobat Search

A plug-in module for Exchange or Reader that searches Acrobat Catalog indices.

In a prepress environment, we're most concerned with Acrobat (Exchange) and Distiller. To a lesser extent, we're also concerned with Acrobat Reader. However, Reader's functions are essentially identical to the same functions in Exchange. Reader simply doesn't do as much.

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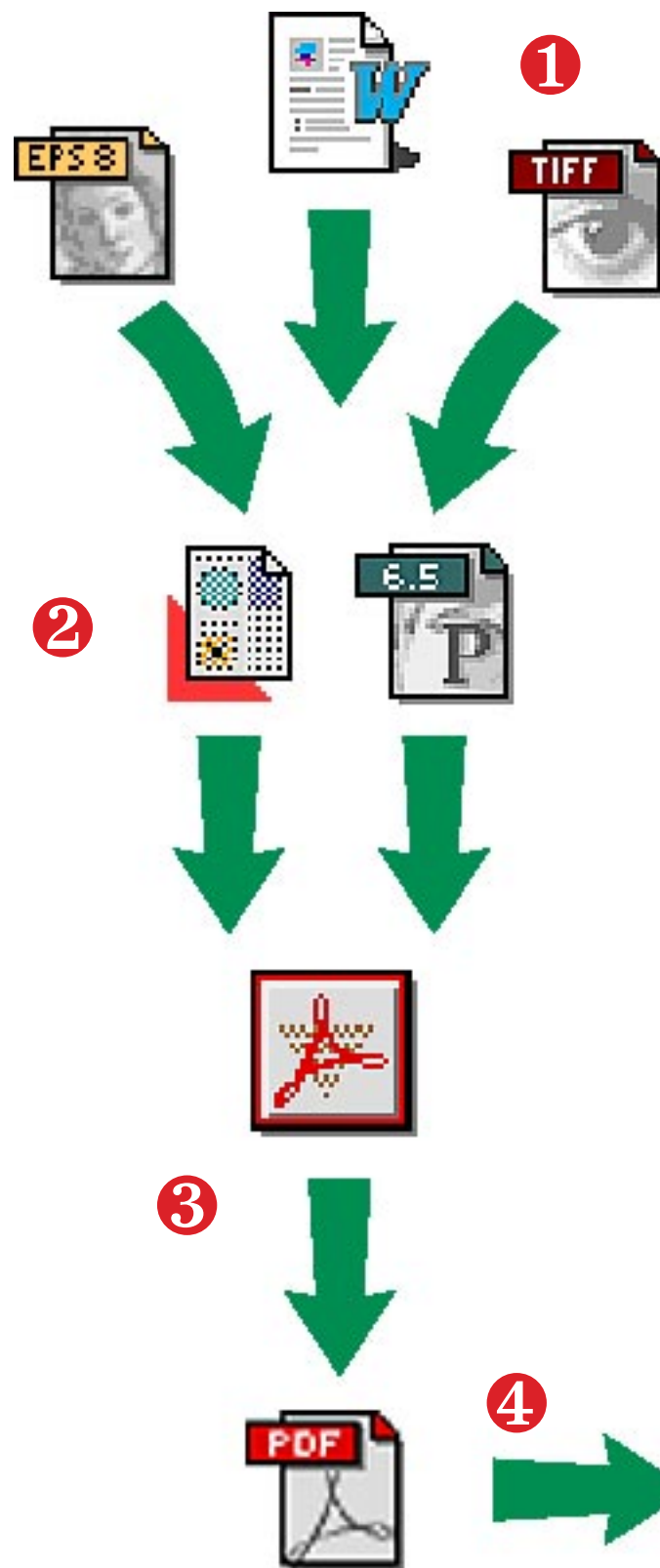
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THE PDF WORKFLOW

- 1 In most publishing environments, graphics (conceived in the designer's imagination) are developed in a drawing program (Adobe Illustrator or Macromedia Freehand) and/or a bitmap editor (Photoshop, Canvas, Painter, etc.)
- 2 Graphics are combined with text in a page layout program such as Adobe PageMaker or Quark XPress.
- 3 Once a document is assembled, the final artwork is printed. In a PDF workflow, the final document is used to produce a postscript file which is converted to the PDF format through Distiller. This PDF file is distributed in place of the final printed artwork.
- 4 The PDF file is output to a high-resolution output device like a laser printer or imagesetter.

The key to a proper PDF workflow is to think of Distiller not as a computer program, but rather as a printer that turns out PDF files.



LINE SCREEN

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PDF Output for Newspaper Reproduction

Controlling Line Screen:

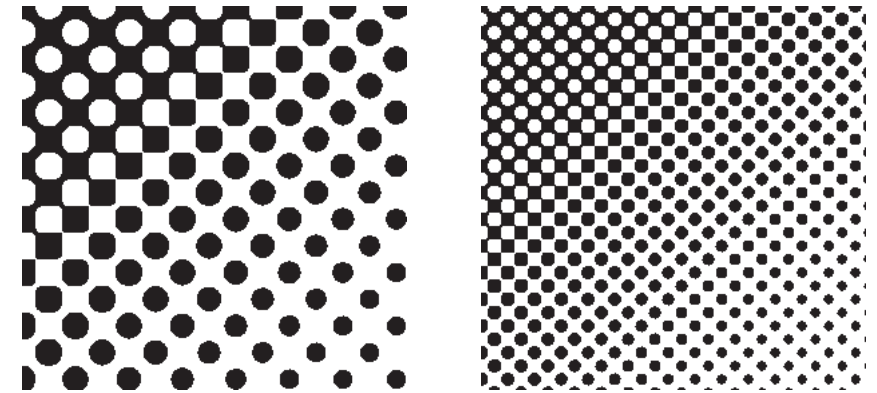
One of the most critical constraints in prepress is the allowance for press gain. This is the tendency for halftone screens to get darker on press. This tendency is especially prevalent when printing on newsprint on a web-offset press. From imagesetter negatives or PMT's, 30% gain is considered standard. Since press gain is measured from a point of 50% ink coverage, this means that a 50% screen with 30% gain is expected to darken on press to be the visual equivalent of an 80% screen without gain. This is under ideal, standard reproduction conditions. It is normal for press gain to be even higher when the original artwork is produced on a laser printer. Since most SWNA members reproduce electronic ads from 600 dpi laser printers, 35-40% gain is a reasonable expectation.

A handful of members use imagesetter output (imaging directly to film at 1200 dpi or higher) and a few use a combination of imagesetter and laser printing. However, since the majority use laser prints as their standard, we'll focus on what to do for laser printer reproduction.

The single most effective method of controlling press gain at the prepress stage is to vary the line screen frequency used to produce the artwork.

Line screen is simply a measure of the size of the dots used to reproduce a halftoned image. Smaller dots (higher line screens) reproduce more detail, but also result in higher press gain. This becomes a trade-off, where you're balancing detail against your ability to reproduce the image on press at all.

In the days of traditional prepress, where most halftones and screens were reproduced on a line art camera, most newspapers used 65 lines per inch (lpi) or 85 lpi as a standard line screen frequency. With the greater control offered by imagesetters (and newer presses), much of the industry has adopted 85 lpi or even 100 lpi as a standard. However, one of the factors to remember when dealing with laser printer artwork is that laser prints will generally incur higher press gain than imagesetter film or camera



Enlarged view of a 71 lpi screen (left) and a 141 lpi screen (right). Higher line screen values mean smaller halftone dots.

shots - **even at the same line screen.**

For newspaper reproduction, we recommend that laser printed artwork on 600 dpi or 1200 dpi laser printers should be reproduced at 70.7107 lines per inch. Some printer drivers or printer profiles will give the option of 71 lpi, or 70.7 lpi or even 70.711 lpi. For all intents and purposes, these are being reproduced at 70.7107 lpi. For the sake of convenience, we'll refer to this as a 71 line screen.

Why a 71 line screen? Think of it as a compromise. 71 lines per inch is fine enough to provide a reasonable level of detail while still keeping press gain to a manageable level. This, in most cases, is the optimal line screen frequency for laser printed artwork that is intended for reproduction on a newspaper press.

**Throughout this manual,
when we refer to a
71 line screen, we mean
70.7107 lines per inch (lpi)**

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Producing Postscript

In placing ads with SWNA member papers, the PDF workflow becomes a partnership between the designer and the local papers. The designer is responsible for producing the original artwork, generating the postscript file and then distilling the postscript code into a PDF file. The individual papers are responsible for printing final artwork from the supplied PDF file.

In this way, the production path is much like a chain. It is only as strong as its weakest link. The quality of the final print depends on the content of the PDF file and the content of the PDF file is dependent on the Postscript code used to produce it.

As a designer, you're in control of both generating the postscript code and of processing that code into a PDF file. The next several pages will guide you in producing PDF content that will work at the local paper level so that SWNA member papers can reproduce your work to the best of their ability.

In generating PDF-specific postscript code, we strongly recommend using AdobePS or (on Macintosh systems) Apple's Laserwriter 8 driver. Note that these are essentially the same software. Postscript drivers are developed by Adobe, and Apple then adds some minor feature enhancements and their own logos.

Other postscript or "postscript-compatible" drivers are available from companies like Microsoft and Hewlett-Packard. These are NOT recommended for PDF workflow as they tend to produce errors in distilling or they can produce unpredictable final results. In the final analysis, Adobe invented both Postscript and PDF. Why would you use software from anybody else?

The most common page layout programs in use in North America are Quark XPress and Adobe PageMaker. Both of these offer PDF export filters that can, to some degree, bypass the use of Acrobat Distiller. Actually, both use Distiller in the background to generate the finished PDF file, but they limit your control over the final output. For this reason, we strongly recommend the following workflow.

RECOMMENDED WORKFLOW FOR PDF PRODUCTION

1. Use a postscript printer driver (Either AdobePS or Apple's Laserwriter 8.x) to produce a stand-alone postscript file.
2. Launch Acrobat Distiller and check for SWNA-compatible settings. These can be saved as a permanent profile in Distiller, as we'll show you in this Guide.
3. Distill the file to PDF format
4. Soft proof the PDF file (view it on-screen)
5. Hard proof (print) the PDF file
6. Submit the PDF file to SWNA

Producing Postscript from PageMaker

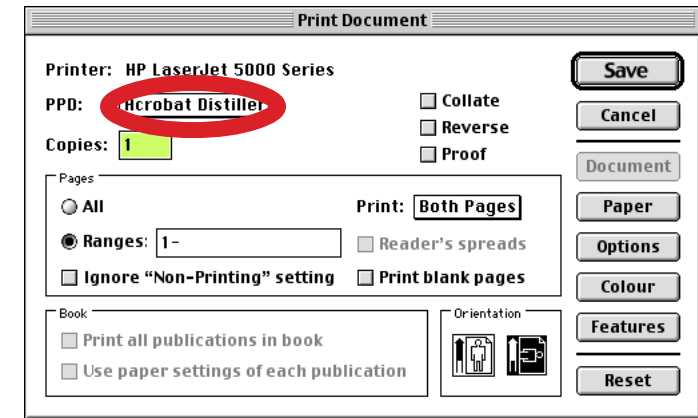
1. Ensure that you've chosen a Postscript printer driver in the Chooser.
2. Select FILE⇒PRINT
3. By default, PageMaker opens the PRINT DOCUMENT window. In the PPD pop-up menu, select ACROBAT DISTILLER. Specify page range (usually a single page) and orientation as you normally would.
4. Click the PAPER button to bring up the PRINT PAPER window. Make sure that the preview shows your entire document printing on the paper size you have selected. It is helpful to enable PRINTER'S MARKS and PAGE INFORMATION. Make sure that Scaling is set to 100%, or your ad size will be altered on final output.
5. If your paper size is too small, click and hold the mouse button on the SIZE... pop-up menu. Select CUSTOM...
6. This brings up the CUSTOM PAPER SIZE window. You can specify a paper size that will accommodate your entire ad, plus printer's marks

NOTE: If you are producing colour separations for a spot colour ad, PRINTER'S MARKS and PAGE INFORMATION absolutely MUST be enabled.



Macintosh Instructions

Document Tab Settings



Paper Tab Settings

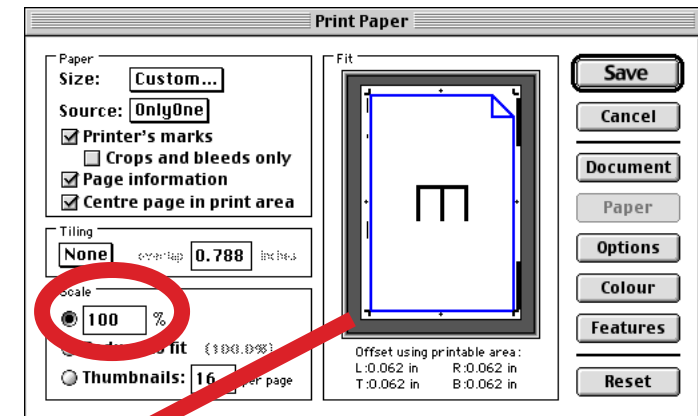
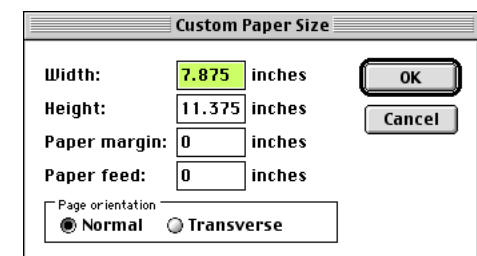


Image area (blue outline) must fit on your paper size

Custom Page Size Window



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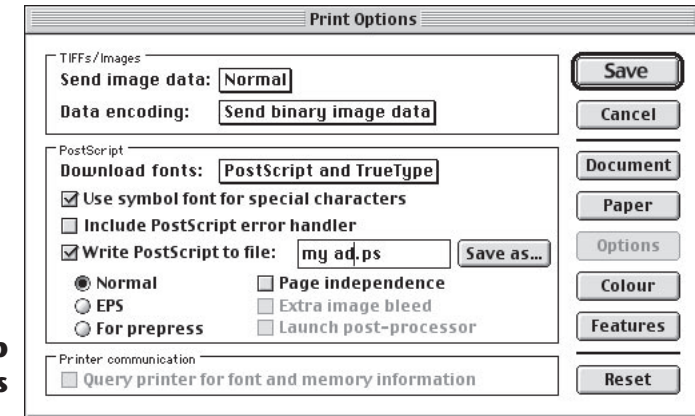
7. Click on the OPTIONS tab. Set to the following

SEND IMAGE DATA: NORMAL
DATA ENCODING: SEND BINARY IMAGE DATA
DOWNLOAD FONTS: POSTSCRIPT AND TRUETYPE
USE SYMBOL FONT FOR SPECIAL CHARACTERS: OFF
INCLUDE POSTSCRIPT ERROR HANDLER: OFF
WRITE POSTSCRIPT TO FILE: ON



Macintosh Instructions

Option Tab Settings



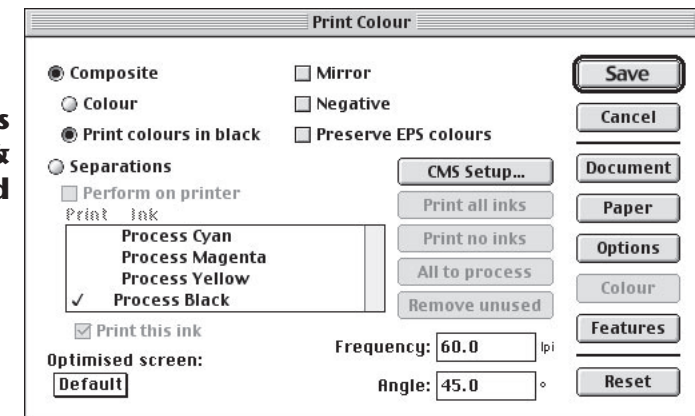
8. Specify a name and location for the postscript file by clicking on the SAVE AS... button. Click NORMAL for the postscript file-type.

9. Click on the COLOR tab. If this is a one-colour ad, click on the COMPOSITE radio button.

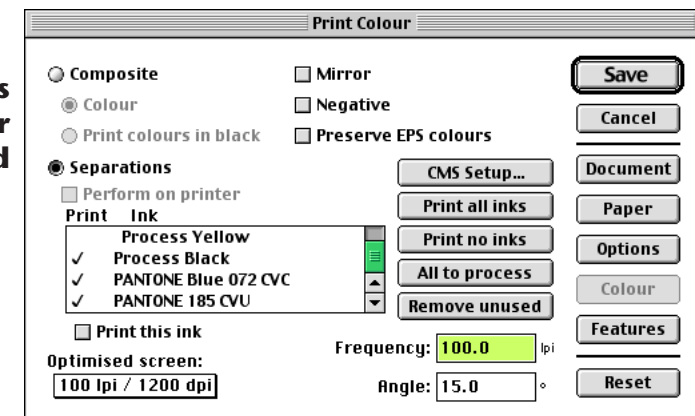
10. If this is a spot colour ad, click on the SEPARATIONS button and select the colours for which you wish to produce plates. This option will result in a multi-paged PDF file where each page is a separated printing plate.

11. Click SAVE. You're done this part of the process as soon as the print progress dialogue goes away.

Colour settings for black & white ad



Colour settings for spot colour ad



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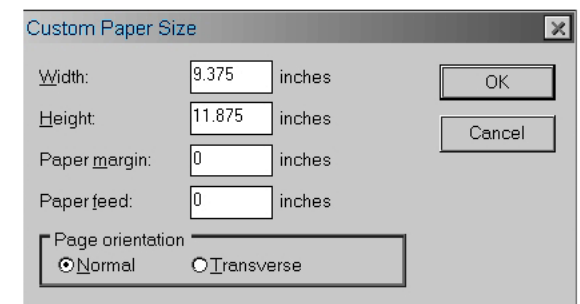
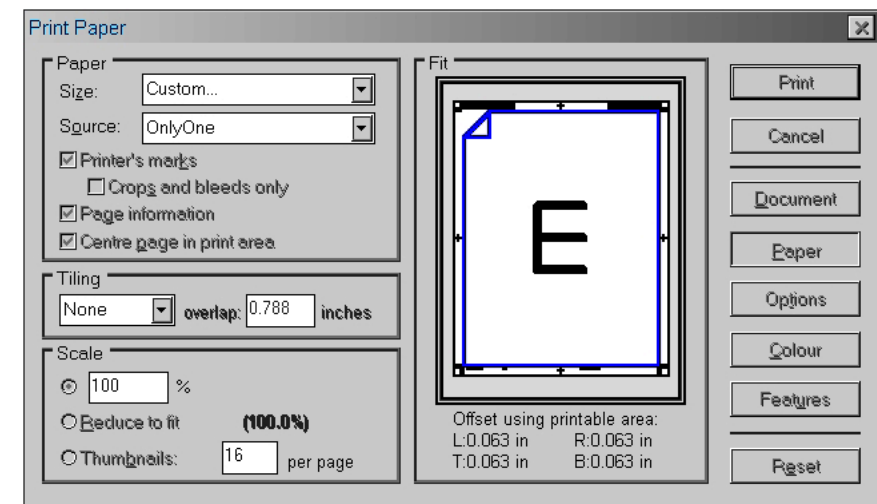
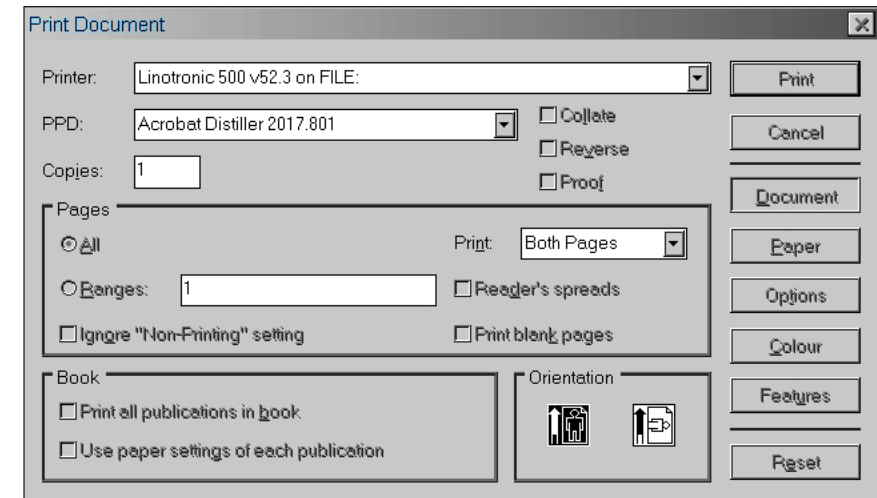


1. Ensure that you've chosen a Postscript printer driver in the Chooser.
2. Select FILE⇒PRINT
3. By default, PageMaker opens the PRINT DOCUMENT window. In the PPD pop-up menu, select ACROBAT DISTILLER. Specify page range (usually a single page) and orientation as you normally would.
4. Click the PAPER button to bring up the PRINT PAPER window. Make sure that the preview shows your entire document printing on the paper size you have selected. It is helpful to enable PRINTER'S MARKS and PAGE INFORMATION. Make sure that Scaling is set to 100%, or your ad size will be altered on final output.
5. If your paper size is too small, click and hold the mouse button on the SIZE... pop-up menu. Select CUSTOM...
6. This brings up the CUSTOM PAPER SIZE window. You can specify a paper size that will accommodate your entire ad, plus printer's marks



Windows Instructions

NOTE: If you are producing colour separations for a spot colour ad, PRINTER'S MARKS and PAGE INFORMATION absolutely MUST be enabled.





Windows Instructions

7. Click on the OPTIONS tab. Set to the following

SEND IMAGE DATA: NORMAL

DATA ENCODING: SEND BINARY IMAGE DATA

DOWNLOAD FONTS: POSTSCRIPT AND TRUETYPE

USE SYMBOL FONT FOR SPECIAL CHARACTERS: OFF

INCLUDE POSTSCRIPT ERROR HANDLER: OFF

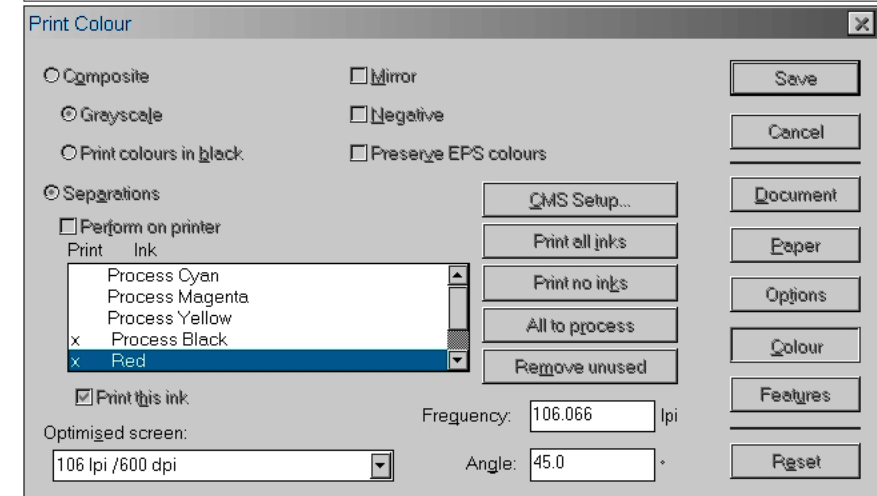
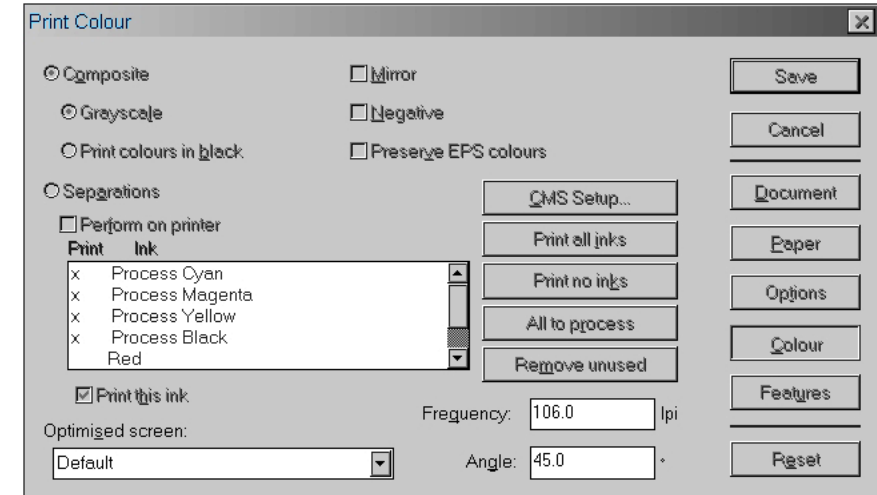
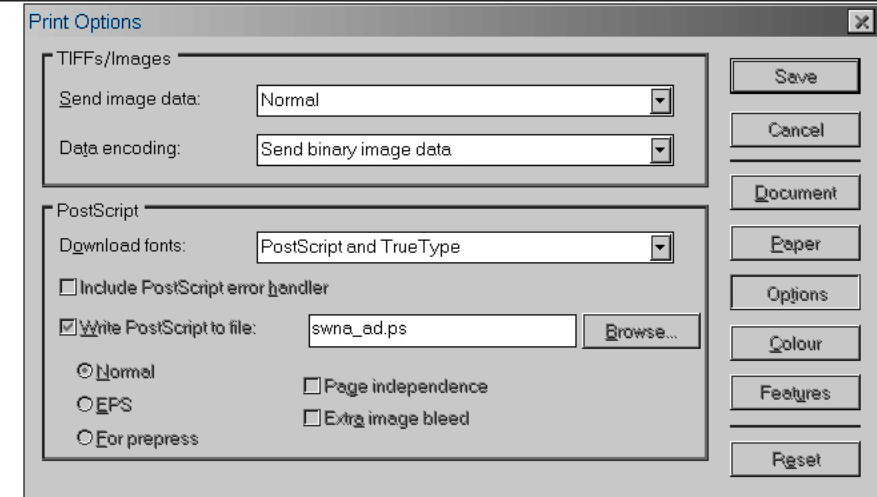
WRITE POSTSCRIPT TO FILE: ON

8. Specify a name and location for the postscript file by clicking on the SAVE AS... button. Click NORMAL for the postscript file-type.

9. Click on the COLOR tab. If this is a one-colour ad, click on the COMPOSITE radio button.

10. If this is a spot colour ad, click on the SEPARATIONS button and select the colours for which you wish to produce plates. This option will result in a multi-paged PDF file where each page is a separated printing plate.

11. Click SAVE. You're done this part of the process as soon as the print progress dialogue goes away.



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Producing Postscript from Quark XPress

The following provides detailed instructions for producing PDF-compatible postscript files from Quark XPress. These are based on the assumption that you're using Quark XPress v.4.0 or later. If you are using Quark XPress v.3.x, the instructions are very similar but you should be aware that v.4 and later are much more PDF-compatible. If you are using Quark for PDF production, you may wish to upgrade at your earliest opportunity.

1. Select FILE⇒PRINT to bring up the PRINT dialogue.
2. By default, Quark's PRINT dialogue first appears with the DOCUMENT tab selected.
3. It's a good idea to enable REGISTRATION, if only because it provides the recipient of your ad with clear instructions on where the boundaries of the ad are.
4. Turn on SEPARATIONS if this is a spot-colour ad for which you are providing a pre-separated PDF file.
5. INCLUDE BLANK PAGES and TILING should both be turned off.
6. If your ad bleeds, set the BLEED option to at least 0.25"
7. Click on the PRINTER button at the bottom of the window.
8. From the pop-up menu labeled GENERAL, select SAVE AS FILE.
9. Choose the following settings:

FORMAT: Postscript Job
POSTSCRIPT LEVEL: Level 2 and 3
DATA FORMAT: Binary
FONT INCLUSION: All
DESTINATION: File

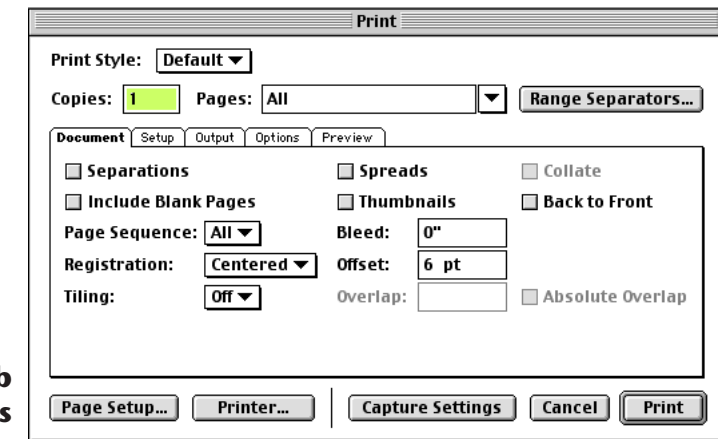
10. Click SAVE, and you'll be prompted for a file name and location for the postscript file.
11. Click on the SETUP tab. Select the following:

PRINTER DESCRIPTION: Acrobat Distiller or Generic Imagesetter
PAPER WIDTH: Large enough to accommodate your document and its crop marks.

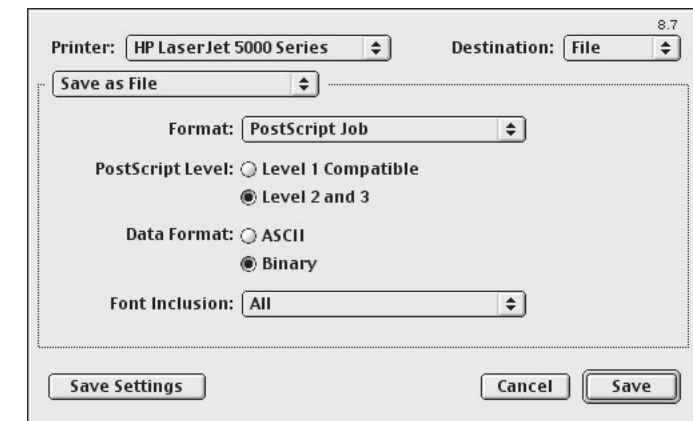


Macintosh Instructions

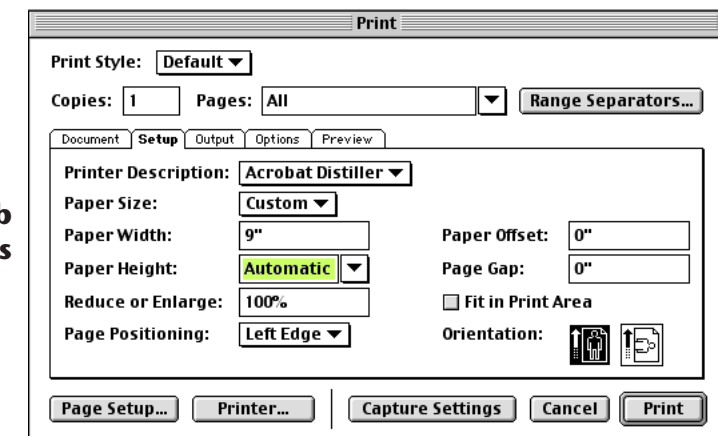
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Postscript File Settings



Setup Tab Settings

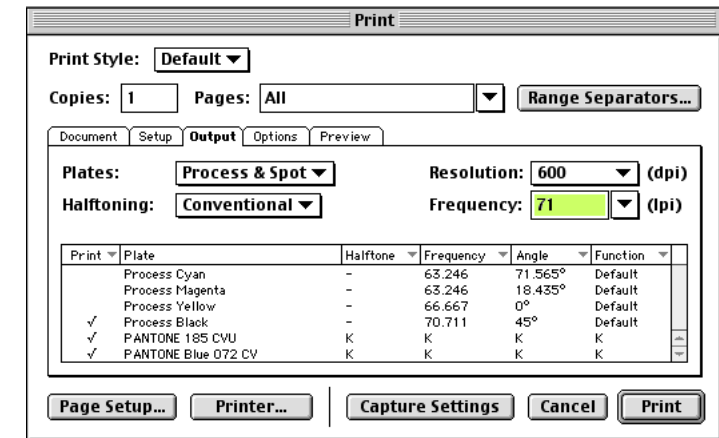
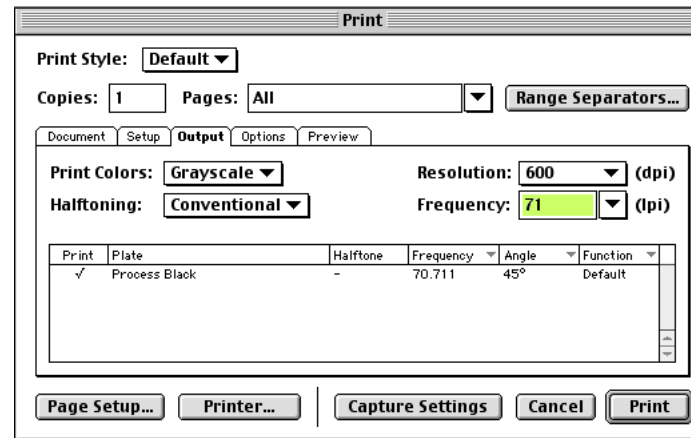


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Output Tab Settings

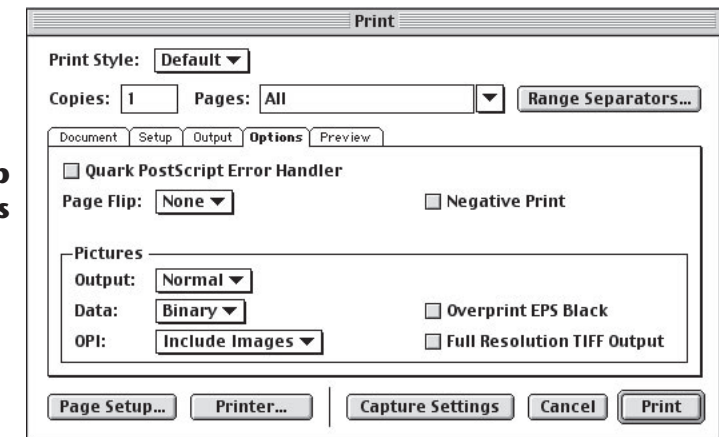


12. Click on the OUTPUT tab.
13. If this is a black & white ad, select PRINT COLOURS: Grayscale.
14. If this is a spot colour, separated ad, select PRINT COLOURS: Process & Spot.
15. Select HALFTONING: Conventional
16. If you're producing colour separations, select the plates for which you want separations from the list below.
17. Click on the OPTIONS tab and select in the PICTURES area:



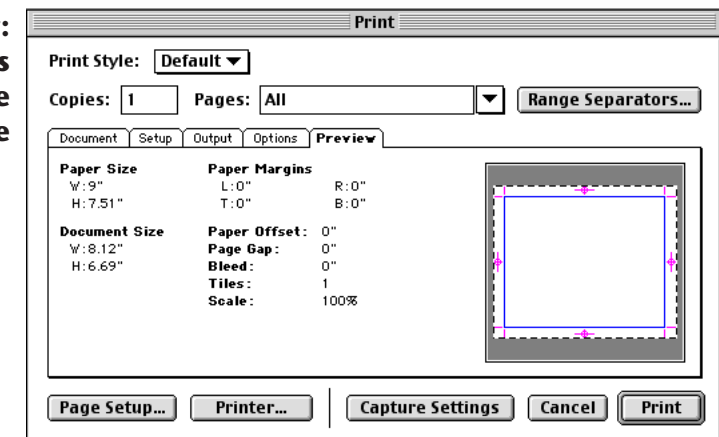
Macintosh Instructions

Options Tab Settings



- OUTPUT: Normal
- DATA: Binary
- OPI: Include images
- OVERPRINT PS BLACK: ON
- FULL RESOLUTION TIFF OUTPUT: ON

Preview: All crop marks should be visible



18. Click on the PREVIEW tab and ensure that the entire document (including registration marks) appears on the paper size you've selected. If not, go back to the SETUP tab and specify a wider PAPER WIDTH.

Note: Resolution and line screen settings are not terribly important because these will ultimately be controlled by the local papers. However, do not set resolution below 600 dpi.

Producing Postscript from Quark XPress

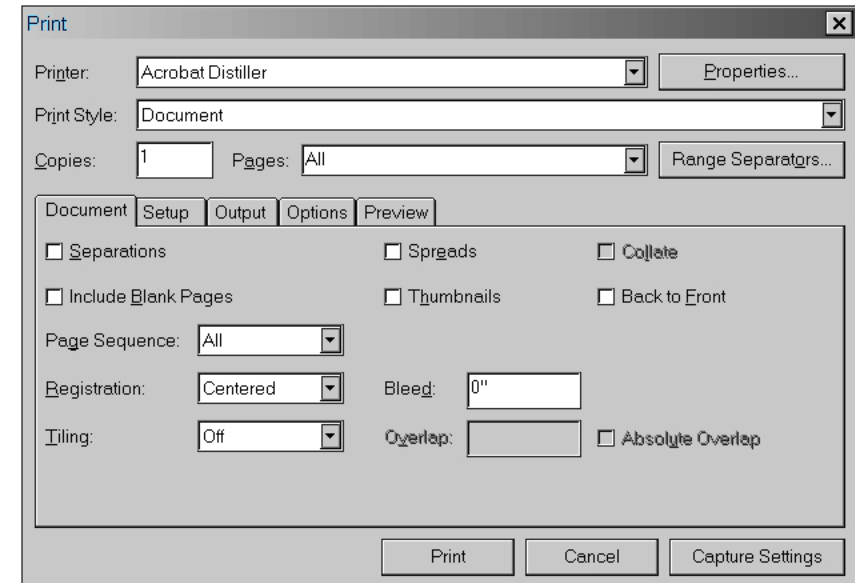
The following provides detailed instructions for producing PDF-compatible postscript files from Quark XPress. These are based on the assumption that you are using Quark XPress v.4.0 or later. If you are using Quark XPress v.3.x, the instructions are very similar but you should be aware that v.4 and later are much more PDF-compatible. If you are using Quark for PDF production, you may wish to upgrade at your earliest opportunity.

1. Select FILE⇒PRINT to bring up the PRINT dialogue.
2. By default, Quark's PRINT dialogue first appears with the DOCUMENT tab selected.
3. It's a good idea to enable REGISTRATION, if only because it provides the recipient of your ad with clear instructions on where the boundaries of the ad are.
4. Turn on SEPARATIONS if this is a spot-colour ad for which you are providing a pre-separated PDF file.
5. INCLUDE BLANK PAGES and TILING should both be turned off.
6. If your ad bleeds, set the BLEED option to at least 0.25"
7. Click on the PROPERTIES button at the top of the window.
8. From the POSTSCRIPT tab, select OPTIMIZE FOR PORTABILITY
11. Click on the SETUP tab. Select the following:

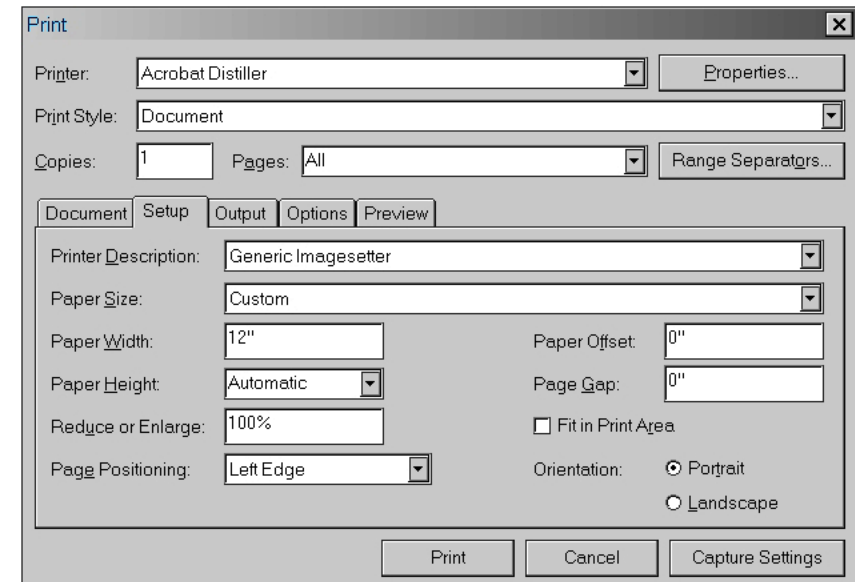
PRINTER DESCRIPTION: Acrobat Distiller (Generic Imagesetter is another good choice)

PAPER WIDTH: Large enough to accommodate your document and its crop marks.

REDUCE OR ENLARGE: 100%



**Windows
Instructions**

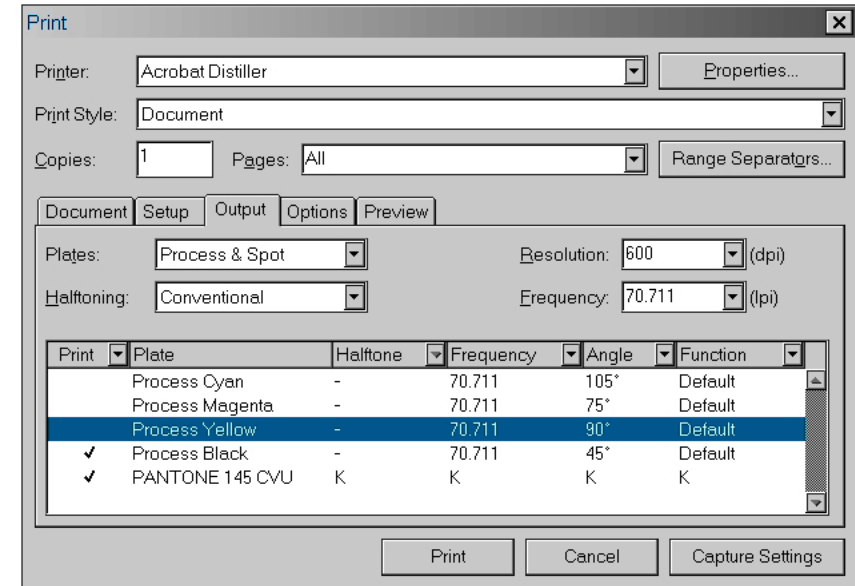
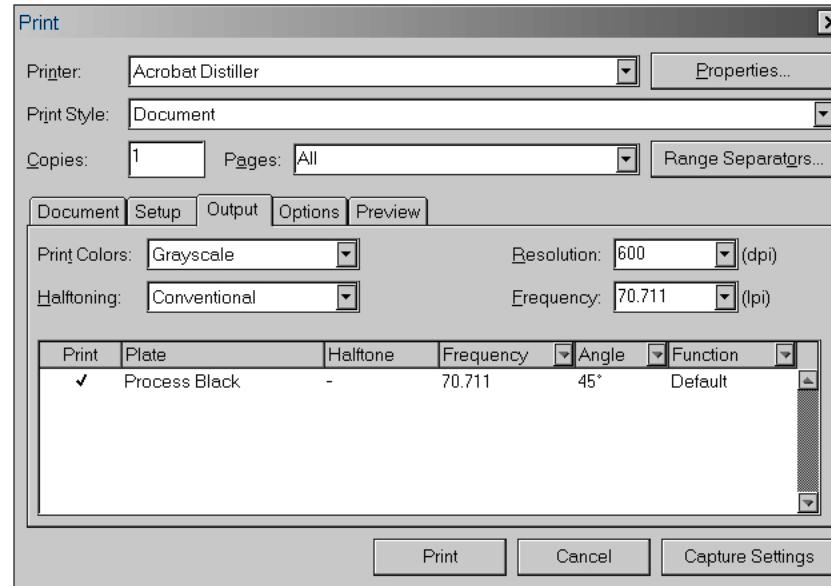
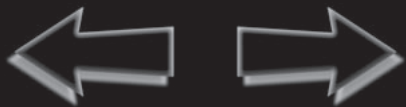


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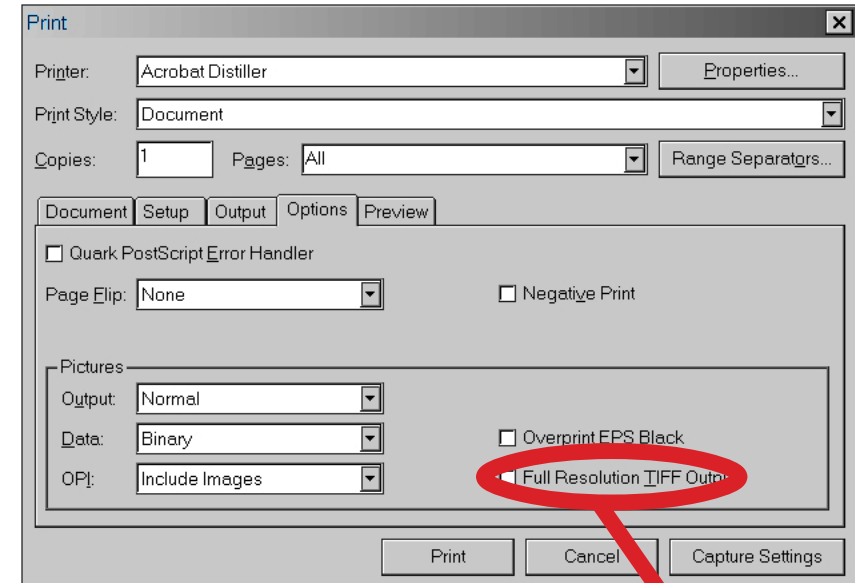


12. Click on the OUTPUT tab.
13. If this is a black & white ad, select PRINT COLOURS: Grayscale.
14. If this is a spot colour, separated ad, select PRINT COLOURS: Process & Spot.
15. Select HALFTONING: Conventional
16. If you're producing colour separations, select the plates for which you want separations from the list below.
17. Click on the OPTIONS tab and select in the PICTURES area:

OUTPUT: Normal
DATA: Binary
OPI: Include images

OVERPRINT PS BLACK: ON

FULL RESOLUTION TIFF OUTPUT: ON



18. Click on the PREVIEW tab and ensure that the entire document (including registration marks) appears on the paper size you've selected. If not, go back to the SETUP tab and specify a wider PAPER WIDTH.

Note: Resolution and line screen settings are not terribly important because these will ultimately be controlled by the local papers. However, do not set resolution below 600 dpi.

Turn this on

Producing PDF Files from Illustrator

Some designers like to work completely within a drawing environment, such as Adobe Illustrator. As of version 7.0, Illustrator included features to make it among the most PDF-friendly environments available.

Illustrator is a Postscript drawing program. As a result, generating a PDF file from Illustrator is an extremely simple process. The drawing information in an Illustrator file is already in Postscript format, so the PDF module built into Illustrator's SAVE command simply incorporates some of the functions of Acrobat Distiller and applies them to the content of the Illustrator file.

In order to save a PDF file from Illustrator, do the following:

1. Select FILE⇒SAVE
2. In the SAVE AS... dialogue box, select ACROBAT PDF from the pop-up menu. Specify a name and location for the PDF file and click SAVE.
3. The PDF FORMAT dialogue will appear with the GENERAL tab selected. Select the following

FONTS IN PDF: Embed All Fonts

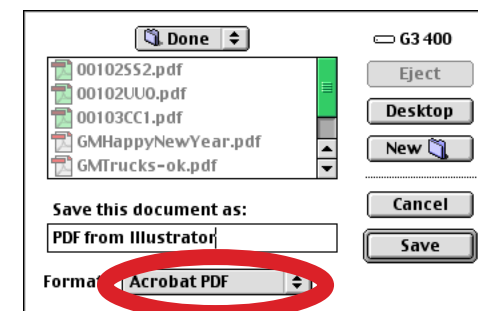
COMPATIBILITY: Acrobat 3.0

COLOR CONVERSION: Leave Unchanged

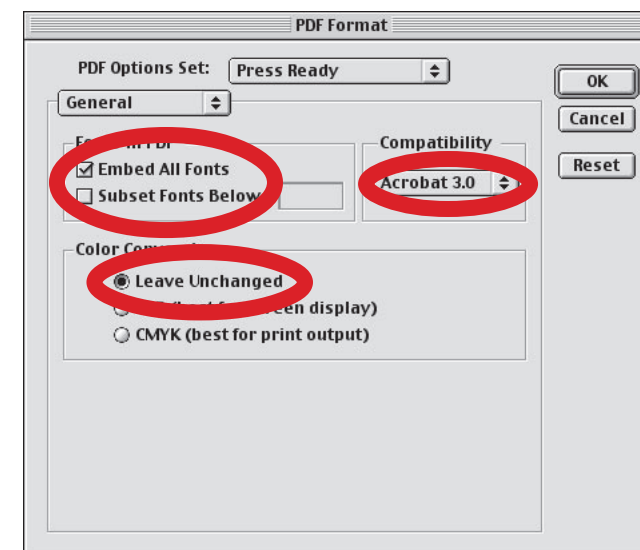
4. From the pop-up menu, select COMPRESSION
5. Set AVERAGE DOWNSAMPLING to 200 dpi for both color and grayscale bitmap images
6. Set COMPRESSION to ZIP : 8 BIT for both color and grayscale bitmap images.
7. Set AVERAGE DOWNSAMPLING to 1200 dpi and COMPRESSION to ZIP for monochrome bitmap images.
8. Turn COMPRESS TEXT AND LINE ART on.
9. Click OK.

Easier Approach: Drag-and-drop any Illustrator .EPS file into Distiller.

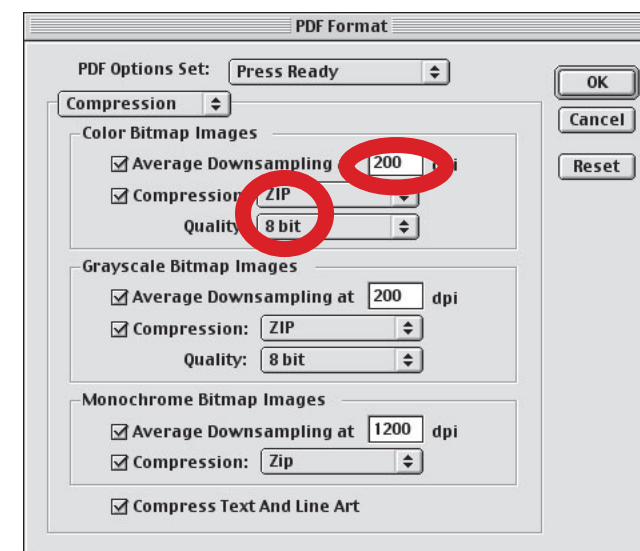
Select ACROBAT PDF from the pop-up menu



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Compression Tab Settings



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Distilling with Distiller v.4

The following step-by-step instructions for Acrobat Distiller 4.x should help you to produce PDF files that will work with the wide variety of output devices and system environments in use among SWNA members. Please remember to check your settings before distilling PDF files for SWNA use. If you change any settings to produce PDF files for a different purpose (CD-ROM distribution, for example), those changed settings will stay in place on your system until you manually specify different settings.

1. Launch ACROBAT DISTILLER
2. From the SETTINGS menu, select JOB OPTIONS.
3. By default, the JOB OPTIONS window appears with the GENERAL tab selected. Specify the following settings:

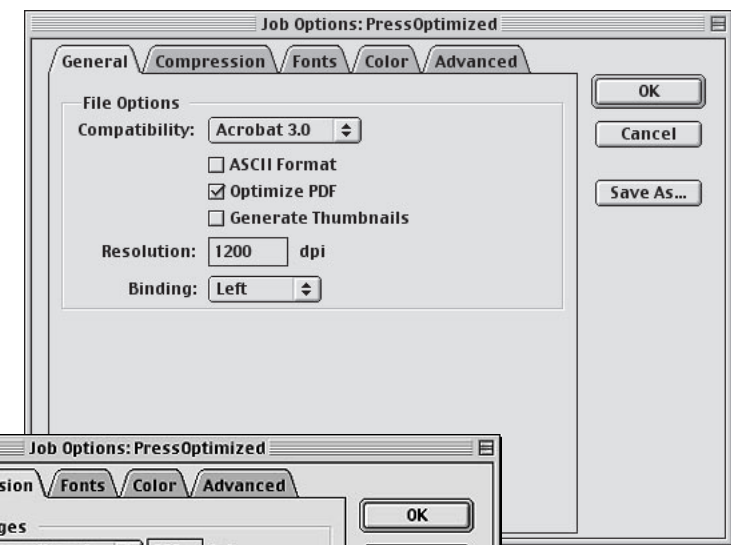
- COMPATIBILITY:** Acrobat 3.0
- ASCII FORMAT:** Off
- OPTIMIZE PDF:** On
- GENERATE THUMBNAI LS:** Off
- RESOLUTION:** 1200 dpi
- BINDING:** Left (It doesn't matter)

4. Click on the COMPRESSION tab.
5. Set AVERAGE DOWNSAMPLING to 200 dpi for both color and grayscale bitmap images
6. Set COMPRESSION to ZIP : 8 BIT for both color and grayscale bitmap images.
7. Set AVERAGE DOWNSAMPLING to 1200 dpi and COMPRESSION to ZIP for monochrome bitmap images.
8. Turn COMPRESS TEXT AND LINE ART on.
9. Click on the FONTS tab and choose the following settings:

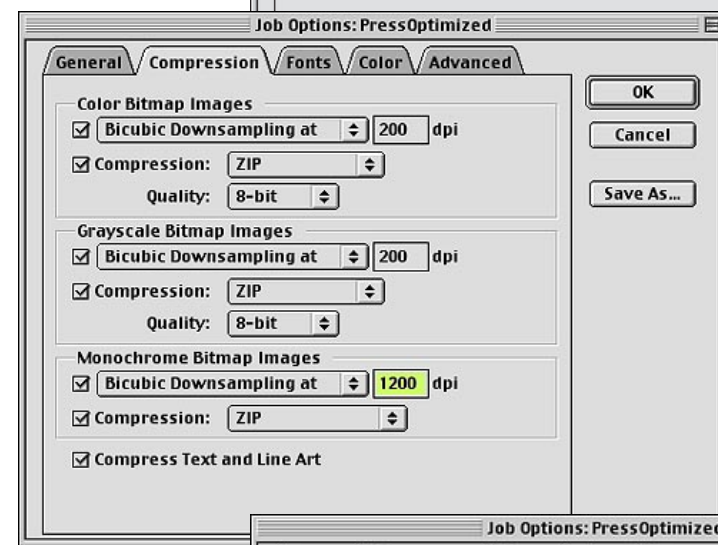
- EMBED ALL FONTS:** On
- SUBSET ALL EMBEDDED FONTS:** Off

10. There should be no entries in either the ALWAYS EMBED or the NEVER EMBED lists.

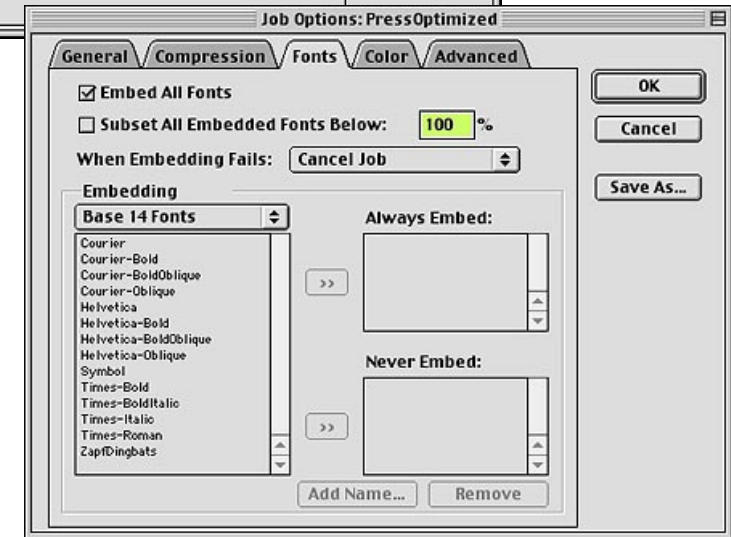
General Tab Settings



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Fonts Tab Settings

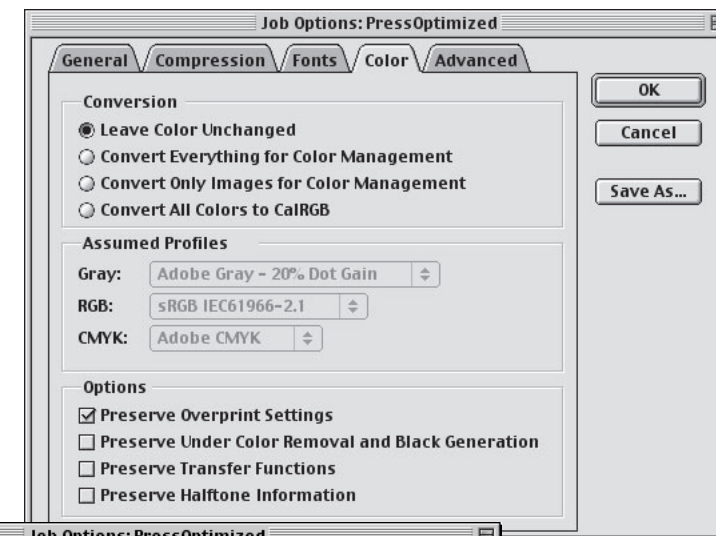


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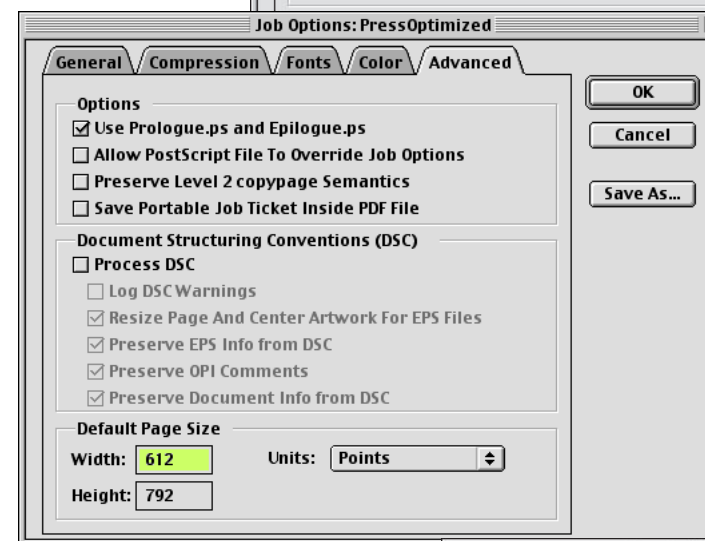


11. Click the COLOR tab
12. Select LEAVE COLOR UNCHANGED
13. Turn on PRESERVE OVERPRINT SETTINGS. This will preserve and apply any trapping that you may have done to vector-based artwork in either Illustrator or Freehand.
14. All other COLOR settings should be disabled.
15. Click on the ADVANCED tab.
16. Enable USE PROLOGUE.PS AND EPILOGUE PS.
17. All other settings should be disabled.
18. Click on the SAVE AS... button
19. Name this profile SWNA NEWSPAPERS. It will now appear as a choice in Distiller's JOB OPTIONS pop-up menu when you launch the program. This makes it easy to specify the correct settings for ads intended for SWNA members.
20. Select OPEN from the FILE menu.
21. Specify the postscript file you wish to distill.
22. Click OPEN and then OK.
23. Distiller will inform you when the file is done distilling.

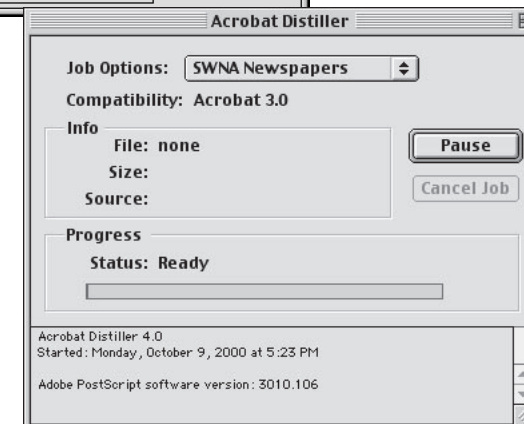
Color Tab Settings



Advanced Tab Settings



Distiller Window



These settings are available as a pre-set Distiller settings file. Send an email request to printmaster@yccdigital.com

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Distilling with Distiller v.5

The following step-by-step instructions for Acrobat Distiller 4.x should help you to produce PDF files that will work with the wide variety of output devices and system environments in use among SWNA members. Please remember to check your settings before distilling PDF files for SWNA use. If you change any settings to produce PDF files for a different purpose (CD-ROM distribution, for example), those changed settings will stay in place on your system until you manually specify different settings.

1. Launch ACROBAT DISTILLER
2. From the SETTINGS menu, select JOB OPTIONS.
3. By default, the JOB OPTIONS window appears with the GENERAL tab selected. Specify the following settings:

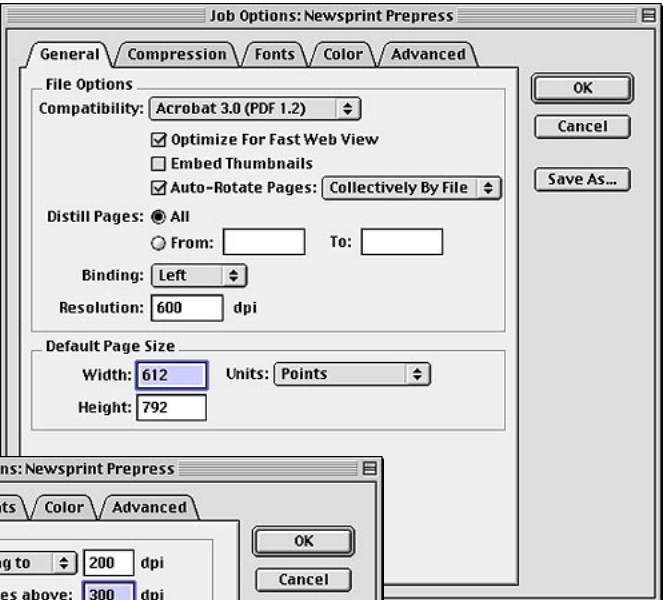
- COMPATIBILITY:** Acrobat 3.0 (PDF 1.2)
- OPTIMIZE:** On
- EMBED THUMBNAILS:** Off
- AUTO-ROTATE:** Collectively By File
- BINDING:** Left (It doesn't matter)
- RESOLUTION:** 1200 dpi

4. Click on the COMPRESSION tab.
5. Set AVERAGE DOWNSAMPLING to 200 dpi for both color and grayscale bitmap images above 300 dpi.
6. Set COMPRESSION to ZIP : 8 BIT for both color and grayscale bitmap images.
7. Set AVERAGE DOWNSAMPLING to 1200 dpi for images above 2400 dpi. Set COMPRESSION to ZIP for monochrome bitmap images.
8. Turn COMPRESS TEXT AND LINE ART on.
9. Click on the FONTS tab and choose the following settings:

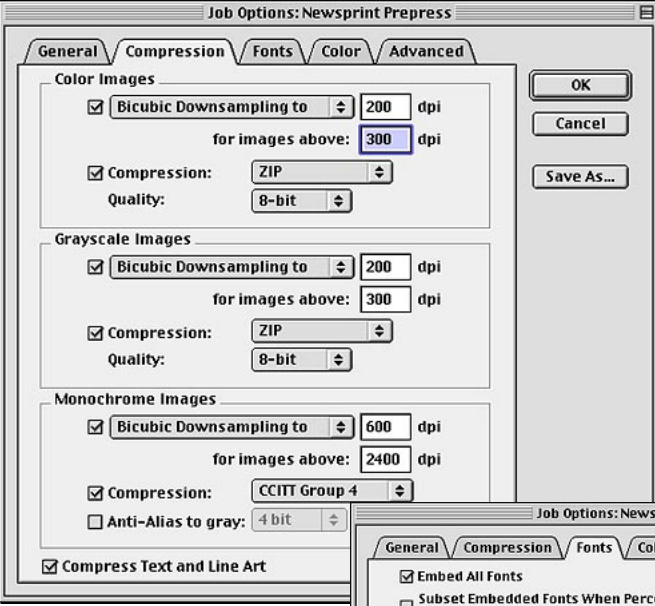
- EMBED ALL FONTS:** On
- SUBSET EMBEDDED FONTS:** Off

10. There should be no entries in either the ALWAYS EMBED or the NEVER EMBED lists.

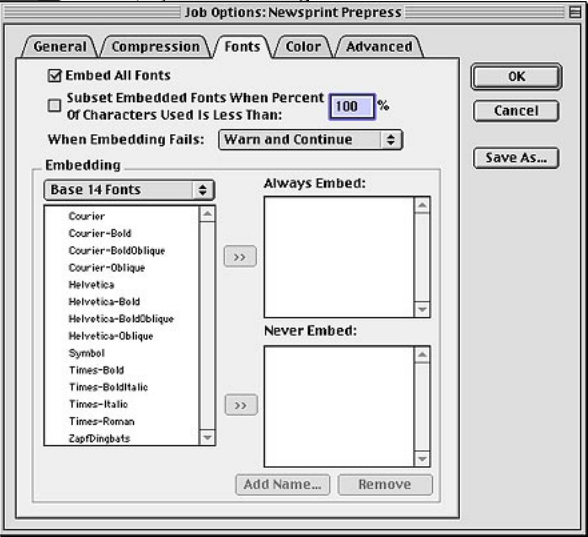
General Tab Settings



Compression Tab Settings



Fonts Tab Settings



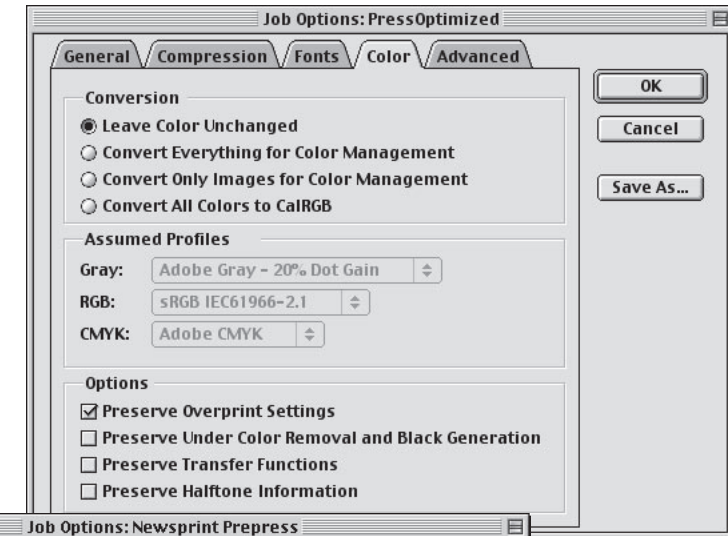
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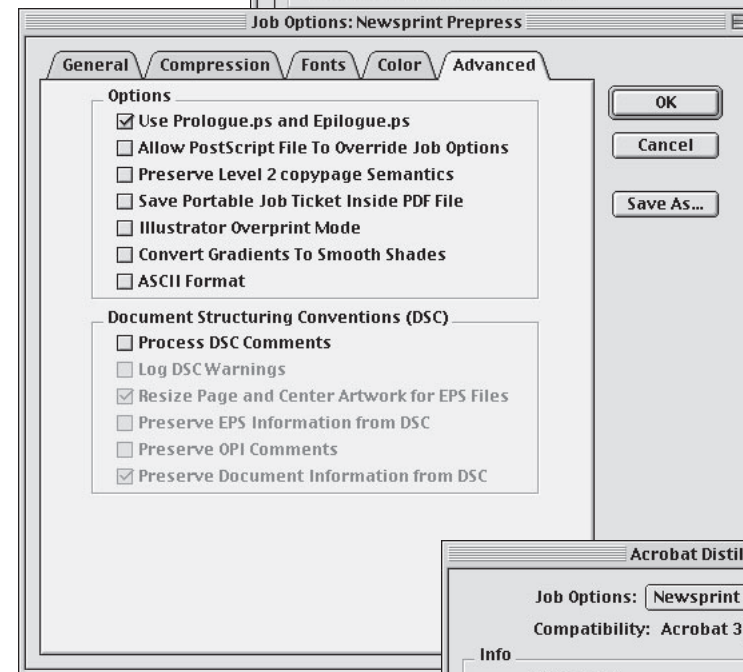
Distilling with Distiller v.5

11. Click the COLOR tab
12. From the SETTINGS FILE: popup, select COLOR MANAGEMENT OFF. This will "gray out" most of the choices on this page.
13. Turn on PRESERVE OVERPRINT SETTINGS. This will preserve and apply any trapping that you may have done to vector-based artwork in either Illustrator or Freehand.
14. All other COLOR settings should be disabled.
15. Click on the ADVANCED tab.
16. Enable USE PROLOGUE.PS AND EPILOGUE PS.
17. All other settings should be disabled.
18. Click on the SAVE AS... button
19. Name this profile NEWSPRINT PREPRESS. It will now appear as a choice in Distiller's JOB OPTIONS pop-up menu when you launch the program. This makes it easy to specify the correct settings for ads intended for SWNA members.
20. Select OPEN from the FILE menu.
21. Specify the postscript file you wish to distill.
22. Click OPEN and then OK.
23. Distiller will inform you when the file is done distilling.

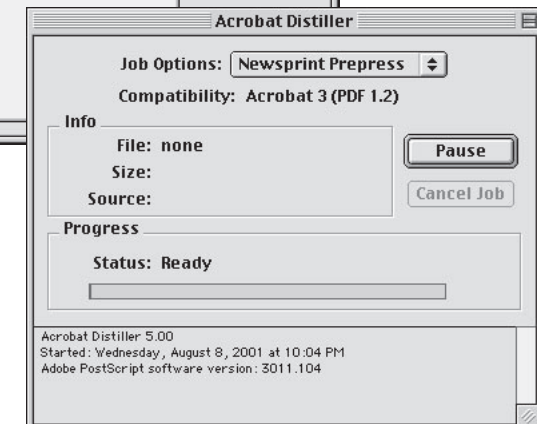
Color Tab Settings



Advanced Tab Settings



Distiller Window



These settings are available as a pre-set Distiller settings file. Send an email request to printmaster@yccdigital.com

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Troubleshooting PDF Production

1. Image is cut off

Check the paper size you've specified in your printer setup. If necessary, specify a tabloid page as your paper size.

2. Distiller reports a Postscript Error

Try re-installing your printer driver. If you're a Windows user, using the Microsoft Postscript driver, install the AdobePS driver from this CD-ROM.

Make sure that none of your placed images are in Windows Metafile (.WMF) or Macintosh PICT format. Neither of these were ever intended as postscript printing formats.

4. My transparent graphics aren't transparent...

Postscript allows for transparency under three circumstances. White pixels in one-bit (black & white) scanned TIFF files are normally transparent in Quark XPress or PageMaker. Alternatively, clipping paths can be used to "hide" portions of a bitmapped image. Quark XPress and PageMaker are both supposed to be able to interpret clipping paths in TIFF files, but this feature is much more reliable with EPS files. Third, compound paths in Illustrator or Freehand can be used to mask portions of an EPS image.

Any other techniques, such as transparent GIF files, are not generally intended for postscript printing.

3. My fonts aren't embedding

Check to ensure that all necessary fonts are actually installed on your system (both screen and printer fonts) and that you're not using keyboard formatting (the BOLD and ITALIC commands). With keyboard formatting, you may find that the bold and italic versions of an installed font display properly but when the system goes to use the associated printer fonts, they don't exist on your system.

5. Distiller reports an "Unexpected End of File..." error

This usually occurs because you have background printing enabled (or desktop printing on a Macintosh system) and you began distilling the file before your printer driver finished creating the postscript file. If this happens, wait a few minutes and ask Distiller to re-distill the file. To keep it from happening in the future, disable background printing or don't start distilling until you're sure your printer driver has written the entire postscript file.

6. My photos are missing

See item #5 (above). In this instance, the driver has written enough information for Distiller to create the page, but it hasn't processed the images yet.

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- 1. Don't use colour in a black and white ad.** Don't just assume that ads will be printed in grayscale properly if you use a colour graphic in the ad. With over 30 different printers in use across the SWNA membership, even if colour content is grayscaled, the results will be unpredictable at best. Convert all colour content to black and white or grayscale before distilling. If you're unsure about how to do this, consult your software manual, or your technical support staff. You can also call Printmaster for fee-based telephone support at (306) 665-7745.
- 2. Don't use JPEG compression.** This can cause problems with older laser printers. JPEG compression also has a negative effect on image quality. ZIP compression provides almost as much compression to grayscale images as JPEG and doesn't impair reproduction quality in any way.
- 3. Don't enable security settings.** The best method available to most SWNA members for maintaining output quality is to import the PDF file into PageMaker or Quark XPress. The import filters for these programs will not work with any PDF file that has security settings enabled.
- 4. Do embed all fonts.**
- 5. Don't use keyboard formatting.** (i.e. - BOLD, and ITALIC commands). Instead, select the bold or italic version of the fonts you are using from your font menu. If you use keyboard commands, the proper fonts may not be embedded in the PDF file, resulting in font substitution at print time.
- 6. Do print your PDF file before sending.** Make sure that it prints predictably on your laser printer first. Better yet, print from another system if you can. This will help to ensure that the file is printing from embedded fonts, rather than from the copies installed on your system.
- 7. Do soft-proof your separations.** Review the contents of each plate to ensure that everything is printing where it's supposed to be.
- 8. Do keep the print path in mind.** Most SWNA members are reproducing your ad from a 600-dpi or 1200-dpi laser printer. Don't expect magazine-quality detail and don't build an ad that requires that level of detail.
- 9. Do remember press gain.** Expect that press gain will exceed 30% in the midtones. That means that a 70% screen will fill in to be the visual equivalent of a solid black. A 25% screen will fill in to be the visual equivalent of a midtone. Highlight detail should be no lighter than 5% and shadow detail should be no darker than 70%. Type on a screened background should be reversed if the background screen exceeds 25% ink coverage. Caucasian flesh tones will look best in the 10-20% range.
- 10. Don't lose image links.** Before you distill, take a minute to check your high-resolution graphics. In Quark XPress, take a quick look at the IMAGE USEAGE utility and in PageMaker check over the LINKS dialogue to make sure that the printer driver will be able to find the high-resolution version of every required graphic. Otherwise, your PDF file will be produced using the screen-resolution preview of your image. Because screen resolution images look good (naturally) on screen, you may not notice the difference until the ad goes to press.
- 11. Don't count on colour management.** ColorSync or ICC color management has been making great gains in the prepress industry, but remember that reliable color management requires a degree of technical sophistication that is not yet common in the community newspaper industry. If you count on an embedded colour profile for things like press gain allowance, you're setting yourself up for trouble.
- 13. Do plan your resolution.** SWNA member papers will output your ad at line screen frequencies ranging from 65 lpi to 100 lpi. Your bitmapped images should support finished output at any of these frequencies. We recommend a final resolution of 200 pixels per inch for any bitmapped images.

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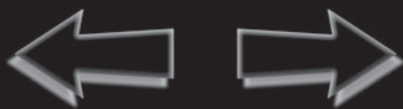
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(continued)

14. **Avoid using Illustrator 9's transparency functions.** These are not supported by Acrobat 4 (which many member papers are still using). They can also cause problems for many laser printers and some imagesetter RIP's.
15. **Do be aware of your blends.** Predictable blends are an ongoing problem in PDF workflows. If blends do not appear properly in your finished PDF file, it may be acceptable to set the Compatibility to Acrobat 4 (PDF 1.3) and turn on "CONVERT GRADIENTS TO SMOOTH BLENDS" in Distiller's ADVANCED settings. Be prepared though, that some papers may have trouble outputting the finished file. The problem is generally specific to Quark XPress files or vector graphics built in Adobe Illustrator. A common workaround is a second version of the file that uses flat tints in place of the blends. A better solution for Illustrator users may be to enable Compatible Gradients in Illustrator's document preferences.
16. **Do install major updates.** For example, users of Acrobat 4 should definitely install the v.4.0.5 update. This solves a major bug that causes Distiller v.4 to miss embedding many fonts. This fix alone can save a fortune in broken keyboards and alcoholic beverages.
17. **Do stay backward-compatible.** In a large association of publishers it's next to impossible to ensure that every single SWNA member is using the latest software on every computer at every office. When you use the latest software it can often present problems to a significant number of shops. These problems can result in unsatisfactory reproduction, missed ads or other undesirable outcomes.
18. **Do use standard "page" sizes.** You should build your ads (usually in Quark XPress) on a document size that is the same as your ad size. However, when you produce postscript to distill, please specify a standard page size such as "Letter" or "Ledger" in the Page Setup. Just use whatever standard size is large enough to accommodate your ad. If you use a "custom" page size, discrepancies between the way your layout software and your printer driver measure the size of the page can result in borders being cut off. Worse yet, the problem is sometimes not obvious until the PDF file is sent to a laser printer or imagesetter.

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Preflighting

What is preflighting?

Preflighting is the process of reviewing the content of a print job for completeness and quality before committing it to the printing process. YCC Digital Services has been retained by the SWNA to preflight blanket display ads before they are distributed to the individual member newspapers as PDF files. When we review a PDF file, we look for several things:

Fonts

Are all necessary fonts embedded in the PDF?

Graphics

Is each graphic placed at sufficient resolution (150-200 pixels per inch).

What colour space(s) are they in? Black & White (1-bit) and Grayscale images are fine, but many agency-produced PDF files end up with RGB images or spot colour graphics placed in black&white ads.

Are graphics placed at excessive resolution? What method of compression was used, JPEG or ZIP?

Page size

Is the PDF distilled at an odd paper size? If so, this may cause problems at individual papers. If possible, we'll crop it down or re-distill it to a standard size?

Compatibility

Acrobat v.3 compatible files work best with import filters and in-RIP PDF-handling.

Security

Were security features used in making this PDF file? If so, we may be able to remove them, allowing those using import filters with PageMaker and Quark Xpress to still be able to work with the file. If we can't remove the security features we can at least send a warning that this file must be printed from Acrobat.

Press Gain

This is the most difficult area to preflight. Depending on the layout, it may be very difficult to spot a potential problem with respect to press gain without individually measuring every flat tint in a given layout. However, we try to check all flat tints (especially those with type on them) and skin tones for reproducibility. We assume a common 40% gain in the midtones at this stage. Caucasian flesh tones are targeted between 10-20%, depending on lighting. Background screens for text are red-flagged if they are heavier than 20%.

Spelling

No, we don't spell-check at the preflighting stage. However, if we happen to spot an obvious typo we will fix it. For the most part, though, we're reading the programming content of the ad, not the copy.

Solutions

Once a problem has been spotted, we have the problem of deciding what to do about it. Often, we can adjust out-of-range screen values. However, in doing so we need to be very sure of what the designer intended the element to look like in print. If we can't fix the problem or we aren't sure of how it should be altered, we'll send it back to the designer and ask for a replacement PDF. In certain circumstances, we'll send it to the papers unaltered, but with a warning that reproduction will take extra care.

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Distiller v.4

Distiller v.5

Design
Considerations

Tech Support



For Further Assistance

If you need further assistance with any of the recommendations in this Guide, you can get help from **Printmaster Ltd.** in Saskatoon. Printmaster can be reached as follows:

MAILING ADDRESS:

**10 – 2404 Thayer Avenue
Saskatoon, SK Canada S7L 6B4**

TELEPHONE:

(306) 665-7745

FAX:

(306) 244-4180

EMAIL:

printmaster@yccdigital.com

WORLD WIDE WEB

<http://www.yccdigital.com>

PRINTMASTER

Advanced, on-site training and technical support are available for imagesetter users and other with needs that are outside the scope of these manuals. Contact Printmaster for details.