



Quebecor World

# How2PDF Guidelines

**Creating Print-Ready PDF Files Using  
Adobe Acrobat 4.0 and 5.0**

**Quebecor World Inc.**

North America Technology Group

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# Disclaimer

Adobe's Acrobat application is a very robust software package with numerous capabilities and options. These guidelines explain how to create a typical PDF for print. Some of these settings may not be appropriate for your use. Always **consult** your printer and **test** before **going live** with a job.

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# How to Use This Guide

**How2PDF** is intended to provide guidelines for all suppliers of PDF files to Quebecor World facilities. The suggestions in this document will aid in the creation of PDF files that will process quickly and efficiently through our printing facilities.

Adobe's current release of Acrobat is Version 5.0. The guide summarizes new features of Version 5.0 and highlights the main differences from Version 4.0 beginning on page 7. A **Quick Start Guide** with screen shots of all Distiller settings begins on page 3. For those who want more thorough explanations of the Acrobat settings, a detailed look at Adobe Distiller 5.0 begins on page 8.

Some suppliers still use Acrobat 4.0 since version 5.0 is a relatively new release. A **Quick Start Guide for 4.0 Users** is included and begins on page 30.

Quality PDF files start with the creation of quality PostScript files. The section named **Layout to PDF** describes the best practices for the creation of PostScript files from QuarkXPress, Adobe InDesign and Adobe Pagemaker. This section begins on page 17.

**Data Compression and Subsampling Schemes** are defined in **Appendix A** starting on page 34. There are several compression options available for use with Distiller. Understanding each option will allow users to make the best compression decisions for their job.

A few possibilities for optimizing file size and further customizing your PDF files are available outside of the basic user interface of the Distiller application. In general, there is no need to change these settings. However, for those with a specific purpose or desire, the **Job Options** section describes how to make these changes. Refer to **Appendix B** on page 37 for additional job options information.

The definition of a **PPD**, the type of information that it contains, and a brief glance into the **Acrobat Distiller PPD** is in **Appendix B** on page 42.

## Contacting Quebecor World about PDF

All Quebecor World manufacturing facilities have their own technical staff who are directly supported by the North American Technology Group (a corporate staff of technical specialists). Among their various duties, this group is responsible for keeping this guide up-to-date.

The North American Technology Group values your opinions and encourages feedback and suggestions. In an effort to make it easy for you to contact us, we have created a special email address just for PDF issues. Our email address is: [pdfinfo@quebecorworld.com](mailto:pdfinfo@quebecorworld.com).

The latest revision of this manual can be downloaded from the FTP site at: <ftp://specs.qwinc.com>. Log-in as user name: **PDF** and use the password: **PDF**. A complete set of file format specifications are included at this site.

## Benefits of PDF?

The Adobe Acrobat PDF file format can be very reliable and efficient for submitting jobs to your printer. The format allows you to create a single file package that includes all text, fonts and graphics with optional compression and downsampling. The resulting PDF file is optimized to minimize file size which reduces storage requirements and improves file copy/transmittal, and print times. PDF files are platform independent and can be opened, viewed, edited or printed on a wide variety of operating systems. The architecture of Adobe

Acrobat enables plug-ins from third party vendors that add considerable functionality to the Acrobat application. For example, Enfocus PitStop Professional ([www.enfocus.com](http://www.enfocus.com)) is a plug-in that allows editing and preflighting of PDF files. Quite a Box of Tricks from Quite Software ([www.quite.com](http://www.quite.com)) can web optimize high resolution PDF files for use in web pages. Both plug-ins are available for download as demos at their respective web pages. While surfing the web, check out [www.pdfzone.com](http://www.pdfzone.com) or [www.planetpdf.com](http://www.planetpdf.com) for other plug-ins that may be useful for specialized requirements. The extra effort required to implement these plug-ins will save time and result in smaller PDF file sizes that have excellent reliability.

### Here is a quick list of workflow issues that often lead to PDF printing errors:

- Spot Color Blends in QuarkXPress, will convert into CMYK separations if not done properly.
- DCS 1.0 or 2.0 Images will only work in a separated workflow.
- Duotones, Tritones etc., will convert into CMYK separations unless you create the images using PhotoShop 5.01 or higher and generate PostScript 3 to distilling.

### Ask your printer these questions:

#### 1. What version of PDF do you support?

Your printer may use RIP software that cannot handle the latest versions of PDF. Some software RIP manufacturers take months to release new RIP's that can handle the newer PDF specifications. At the time of this writing, no RIP manufacturer can process the complete feature set implemented in the PDF 1.4 specification. Refer to **PDF 1.4 Support** on page 7 for more information.

NOTE: The current version of Acrobat is capable of creating an earlier version of the PDF specification.

Adobe **Acrobat 3.0** can only create a **PDF 1.2** version of the Acrobat PDF specification

Adobe **Acrobat 4.0** can create **PDF 1.2** and **PDF 1.3** versions of the Acrobat PDF specification

Adobe **Acrobat 5.0** can create **PDF 1.2**, **PDF 1.3**, and **PDF 1.4** versions of the Acrobat PDF specification

#### 2. Should "Subset Embedded Fonts" be turned on or off?

Acrobat Distiller 4.0 and 5.0 enables all fonts to be embedded in the PDF. When a font is subsetted, Acrobat only embeds the font characters that were used in the document instead of the entire font. Subsetting of fonts makes it more difficult to edit the text in PDF files especially when a change requires text reflow. Some software applications do not understand how to decode the subsetted fonts. However, subsetting helps guarantee against unintended text editing.

## Do I need to Preflight my PDF?

Yes! Over the last three years the volume of PDF continues to grow at a substantial rate. Unlike TIFF/IT-P1 (CT/LW), this format is robust enough for cross-media publishing. Because of this, unprintable objects such as sounds, movies, and less desirable color spaces can be embedded into a PDF.

Our business is constantly facing shorter deadlines. Without preflight, an improperly created PDF can be submitted for print. With these shortened timelines, press schedules can be missed while files are being fixed and retransmitted. By preflighting the file, errors are found further upstream, eliminating problems at press time. The supplier who preflights will rarely have problems.

Several software companies offer preflight software packages. These companies include Callas, Enfocus, and Extensis to name a few. A small investment of under \$999 can save you thousands of dollars later.

# Quick Start Reference: Adobe Acrobat Distiller 5.0

**Adobe Acrobat 5.0** was released in April of 2001. Updates may come frequently and there are three ways to obtain these updates:

1. Launch: **Acrobat 5.0** application (not Distiller). Select: "*Adobe Online....*" It is located under the "*Help*" menu at the top of the monitor. Select: "*Updates*" and follow the instructions.
2. Check the Adobe web site ([www.adobe.com/support/downloads/main.html](http://www.adobe.com/support/downloads/main.html)) frequently to verify you have the latest version.
3. Call Adobe Customer Service at (800) 272-3623.

## Caution: New PDF 1.4 Transparency Feature

With the release of **Adobe Illustrator 9.0** and **Acrobat 5.0**, transparency functionality was added to both software suites. Currently Adobe has not released a RIP SDK (Software Development Kit) to their OEM (Original Equipment Manufacturer) partners that explains how to handle transparency at the RIP level.

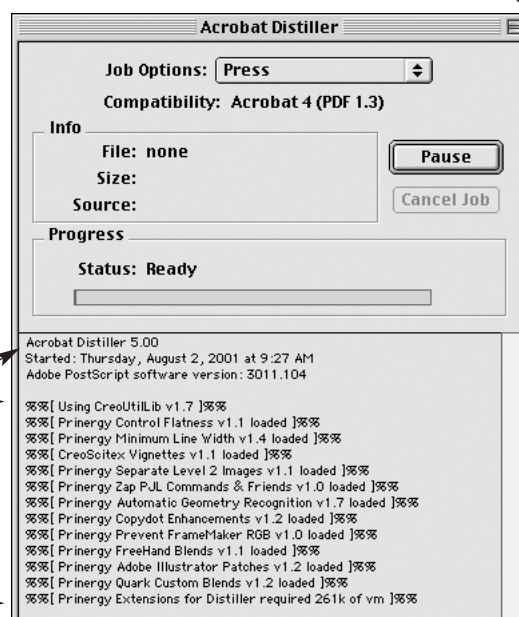
For this reason, files created in Illustrator 9.0 that use the transparency feature must be flattened before they are converted to PDF by the Acrobat Distiller.

Currently, no preflight software can detect transparency. However, you can be sure your file is flattened by creating your PDF from PostScript data rather than creating it directly from an Illustrator 9.0 file.

Refer to Adobe's white paper that outlines what transparency is and how it pertains to print. The title of the paper is "*Printing and Exporting Objects with Transparency.*" It can be downloaded from their web site at [www.adobe.com/products/illustrator/pdfs/ai9print.pdf](http://www.adobe.com/products/illustrator/pdfs/ai9print.pdf).

## Software Requirements

1. Be sure to use the most recent version of **Adobe Acrobat Distiller 5.0**.
2. **Prinerigy Distiller Plug-in** (optional, but highly recommended) This free plug-in, compliments of CreoScitex and Heidelberg, adds several enhanced graphic art features to Acrobat. These features include tiling enhancements for copy-dot, controls for legacy flatness settings, and controls that ensure all "hairline" rules have a minimal line width of .216 points. This plug-in is free and may be downloaded from the Prinerigy web site at [www.prinerigy.com](http://www.prinerigy.com).
3. **Preflight software** (optional, but highly recommended) There are several good PDF preflight software packages available. These packages verify that your final PDF is print ready. They will identify problems and enable you to correct them before the final PDF files are sent to the printing plant.

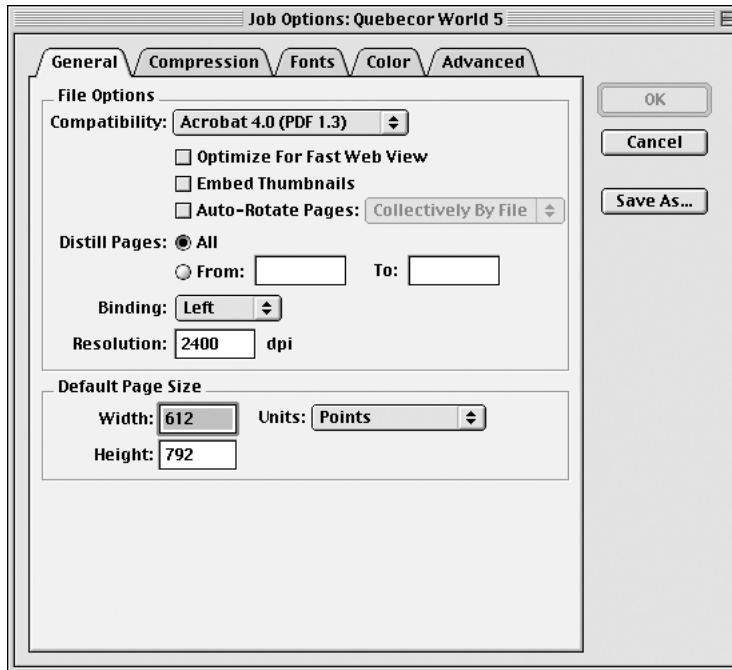


Shows **version status**

Indicates that the **Prinerigy Plug-in** has been installed and is active (optional, but highly recommended).

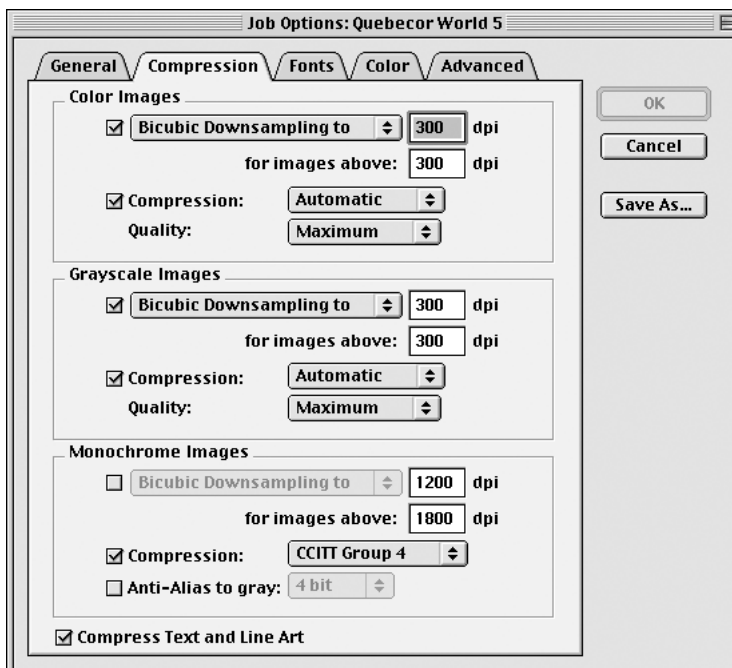
# Quick Start Reference: Adobe Acrobat Distiller 5.0 *(cont.)*

## General Setting



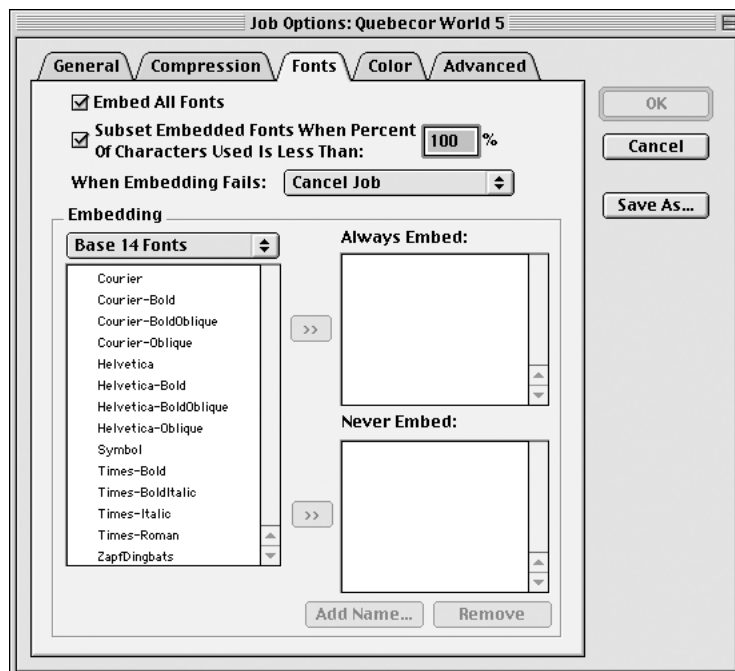
## Compression Settings

Refer to **Appendix A** for an explanation of the various compression settings.

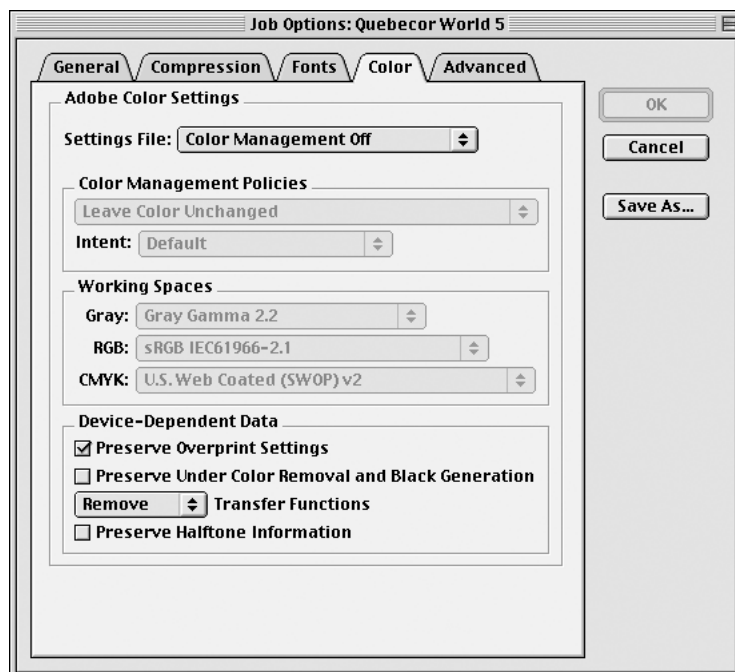


# Quick Start Reference: Adobe Acrobat Distiller 5.0 *(cont.)*

## Fonts Settings

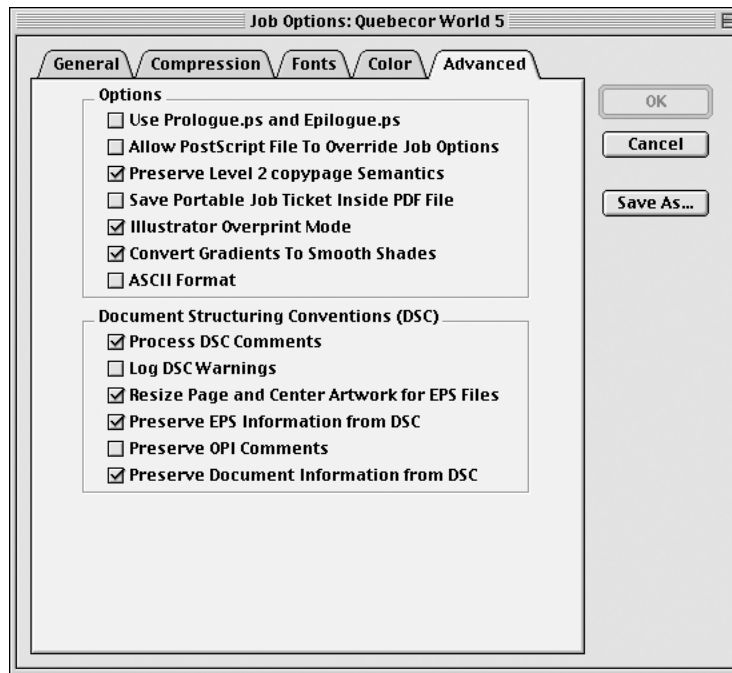


## Color Settings



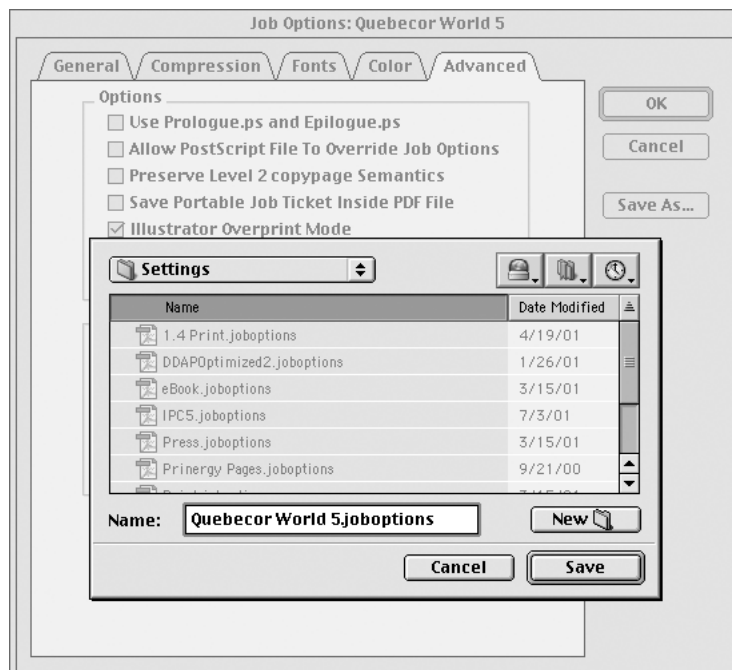
# Quick Start Reference: Adobe Acrobat Distiller 5.0 *(cont.)*

## Advanced Settings



## Saving Your Job Options File

Save your newly created "Job Options" file back to your local hard drive. On a Macintosh the path will be "Macintosh HD:Applications (MacOS 9):Adobe Acrobat 5.0:Distiller/Settings" and for the PC the path will be "C:\Programs\Files\Adobe\Acrobat 5.0\Distillr\Settings."



# What's New in Acrobat 5.0

Most of the Acrobat 5.0 improvements were designed for the large corporate IT professional market rather than for the smaller print and publishing market. Few of the Acrobat 5.0 enhancements have an impact on printers and publishers. However, noteworthy enhancements include the addition of the PDF 1.4 specification, transparency, overprint viewing, online collaboration and an improved Acrobat Distiller interface. See the following for a brief overview of improvements related to print/publishing:

**Top Level Toolbar** - the vertical tool bar is gone. Acrobat 5.0 now has a similar look and feel to the Microsoft Office suite of software.

**On-line Software Updates** - updates and plug-ins can now be configured to download from Adobe's web site either automatically or manually.

**Batch functionality support** - Adobe has added a limited set of batch processing features to Acrobat. Exporting PostScript for a PDF can now be done via a batch script.

**On-line Collaboration of multiple users** - multiple users can now view and annotate PDF's on the Web. All annotations are collected and saved to a unique folder on a local disk or server, or an internet accessible WebDAV server.

**Ability to View Overprint Operators in Acrobat** - in previous versions of Acrobat, overprint operators could not be viewed. This version allows you to view all embedded overprint commands.

*Note: PDF's distilled in earlier versions of Acrobat Distiller (4.0 or earlier) **will not** display their overprints when viewed in Acrobat 5.0. However, PDF's distilled using Acrobat Distiller 5.0, even those saved into a earlier compatibility formats (1.2 or 1.3), will display overprints when viewed in Acrobat 5.0.*

**PDF 1.4 Support** - this change will have the greatest impact on printers and publishers:

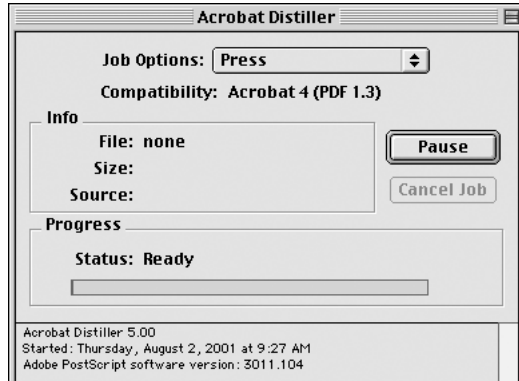
1. **Transparency** - at this point in time, transparency WILL NOT render correctly when imaged. Until Adobe releases an update to their RIP, objects defined with this new "transparency" feature will be rendered as "OPAQUE." To better understand what transparency is and how Adobe intends you to use it, please download and read Adobe's white paper titled, "*Printing and Exporting Objects with Transparency.*" It can be downloaded from their web sit at [www.adobe.com/products/illustrator/pdfs/ai9print.pdf](http://www.adobe.com/products/illustrator/pdfs/ai9print.pdf). Until Adobe releases software that enables a RIP to handle "transparency," follow the guidelines in this white paper. If your PDF is created from PostScript, you do not need to be concerned with this feature. PostScript is OPAQUE and has no concept of transparency. Therefore, PostScript coming from any application will not have transparency.
2. **JBIG2** - this format may produce better compression for copy-dot data and allow you to create smaller PDF's. However, as with transparency, Adobe has not yet released software that enables a RIP to process this type of compression.
3. **OpenType** - this new multi-platform font technology is now supported in Distiller.

**Improved Printer controls from Acrobat** - you now have the ability to break a large page into overlapping tiles. During printing, you can also add printer's marks or other custom marks to the page.

Some additional Acrobat 5.0 and PDF 1.4 enhancements that are noteworthy include:

- **XML metadata support** - Acrobat 5.0 now supports RDF-compatible extensible metadata architecture (XML) in a PDF.
- **Tagged PDF support** - this benefits the eBook and other compact display devices. Continuing articles remain linked when reformatted for smaller displays.
- **New export formats** - images can be exported directly from Acrobat as either TIFF, JPEG, or PNG.

# Detailed Look at Adobe Acrobat Distiller 5.0 Settings

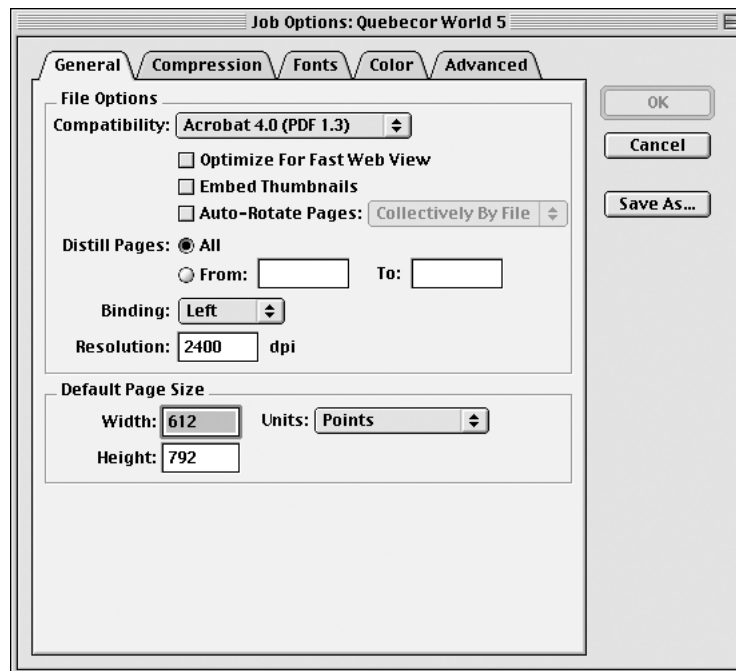


Launch **Acrobat Distiller 5.0** on your computer. Mac or PC dialog windows will appear with the same options.

Select “**Press**” in the Job Options list box. This is extremely important because it ensures a consistent starting point for establishing the exact distiller configuration suggested in this guide.

Go to “**Job Options...**” under the “**Settings**” menu.

## General



**Compatibility:** Even though this is Acrobat version 5.0, the setting indicated above will create a PDF that complies with the **Acrobat 4.0 (PDF 1.3)** specifications. In rare instances, your printer may instruct you to use Acrobat 3.0 (PDF 1.2) for RIP compatibility reasons.

If you are using **Duotones** and **Colorized TIFF's** that require the **PostScript 3 Device** color space operator, you must set the compatibility to either Acrobat 4.0 (PDF 1.3) or Acrobat 5.0 (PDF 1.4). Previous versions of Acrobat (3.0

or earlier) do not support the DeviceN color space. Check with your printer before starting your job. To correct the "Colorized TIFF" composite PostScripting printing issue, involving QuarkXPress, both CreoScitex (*Prinerly Print XT*) and Agfa (*Agfa CTIFF*) have created free QuarkXTension's to fix this problem.

**Optimize For FastWeb View:** turn this setting - **OFF**. On rare occasions, RIP problems have occurred when this option was turned on. However, turning it on will not affect the usability of your files. Since everything inside a PDF is an object in a database, some objects are duplicated because they are used more than once within a document. Optimizing removes duplicate objects in the PDF and results in smaller files sizes.

**Embed Thumbnails:** turn this setting - **OFF**. Turning this setting on embeds the thumbnails and results in larger file sizes. However, turning it on does not effect the usability of your files. Note that in Acrobat 5.0, thumbnails are automatically created when a document is opened.

**Auto-Rotate Pages:** leave this setting - **OFF**. Turning this setting on will cause your pages to be rotated differently than the settings specified when printing from the page layout application.

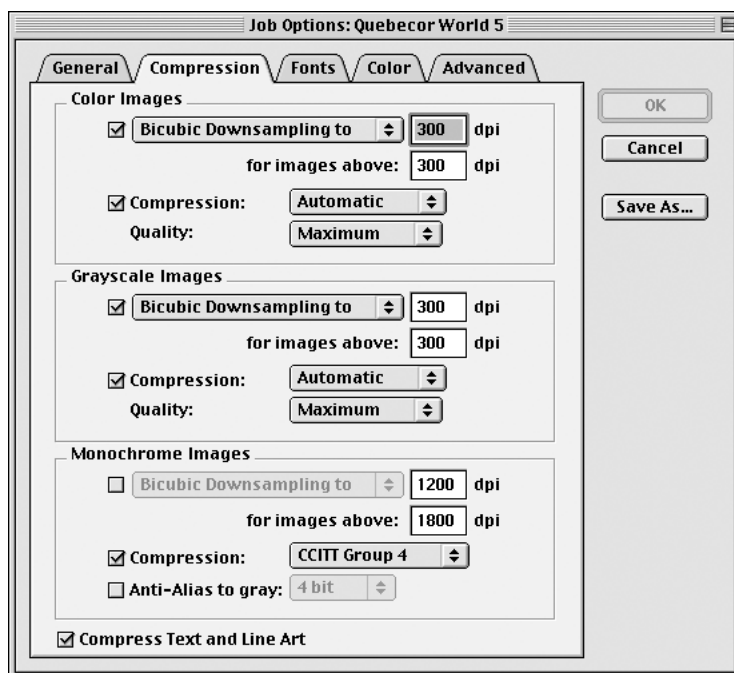
**Distill Pages:** leave this setting - **ALL**. Multi-page PostScript files will convert to multi-page PDF files.

**Binding:** leave this setting - **LEFT**. Other settings could cause problems with imposition.

**Resolution:** leave this setting at - **2400**. The wrong setting here could cause problems later in the process. The resolution setting is used when distiller is calculating blends and processing vector based art.

**Default Page Size:** width **612** points, height **792** points. Leave these settings as your default sizes. They only apply to incoming PostScript files that do not have a page bounding box (usually EPS files). Printed PostScript pages from layout applications will typically have bounding boxes.

## Compression



The settings for compression control the resampling of images and the compression of images and text.

The settings recommended in the previous screenshot compress your images using a mixture of JPEG and ZIP compression schemes. These settings maintain the highest possible quality. They represent settings that are common for the industry and are endorsed by Adobe. The editors of this guide acknowledge that JPEG compression is a lossy compression scheme. If you have a quality concern with the compression settings suggested in this guide, consult with your printer or a member of the North American Technology Group.

Please refer to **Appendix A** for a detailed explanation of each compression and resampling setting (alternative settings for this tab are included).

## Color Bitmap Images and Grayscale Bitmap Images

You will typically find the control settings for both Color Bitmap Images and Grayscale Bitmap Images grouped together.

**Bicubic Downsampling:** leave this setting - **300 dpi**. Set **for images above:** to **300 dpi**. These settings force distiller to downsample all images that are 301 dpi or above down to 300 dpi using the best downsampling algorithm available (bicubic).

*Note: Acrobat Distiller will not resample your images to a higher resolution (upsample).*

Files will take a little longer to distill when bicubic sampling is enabled. However, the resulting PDF files will be more compact and will be processed at the proper resolution for printing. Resampling continuous tone images (color and grayscale) is common and normal for any CT/LW RIP and is no cause for alarm. The DPI setting should be at least twice the value of the line screen of your print job. When you do not know what line screen will be used for you print job, 300 dpi should be sufficient.

Adobe has always allowed you to set the downsampling value for Distiller. Starting with Acrobat 4.0, the downsample threshold default was set to 1.5 times of the specified value. For example, if you set the Distiller to downsample images above 300 dpi, images would have to be over 451 dpi ( $300 \times 1.5 = 450$ ) before they would be downsampled. Images that fell in the range of 300 dpi to 450 dpi would not be downsampled. To change the threshold in Acrobat 4.0 requires hand editing the individual "*Job Options*" file. Now with Acrobat 5.0, you are provided with an easy to use GUI (Graphical Users Interface) to overwrite the default threshold value.

**Compression:** leave this setting - **Automatic** and **Quality:** leave this setting - **Maximum**. These settings specify that continuous tone images will be compressed. By selecting Automatic, you allow Distiller to analyze each image and choose between two possible compression schemes. Your image will either receive a JPEG-Maximum quality scheme (lossy) or a ZIP 8-bit compression scheme (lossless). Most of your images will have the JPEG-Maximum Quality compression applied to them which is the safest JPEG compression option. Images that contain large flat tints with sudden shifts of color, such as the "screen captures," will be compressed with ZIP.

JPEG compression has been a part of printing workflows since level 2 PostScript was introduced in 1992. All of us have been using it since then, often without knowing it.

## Monochrome Images

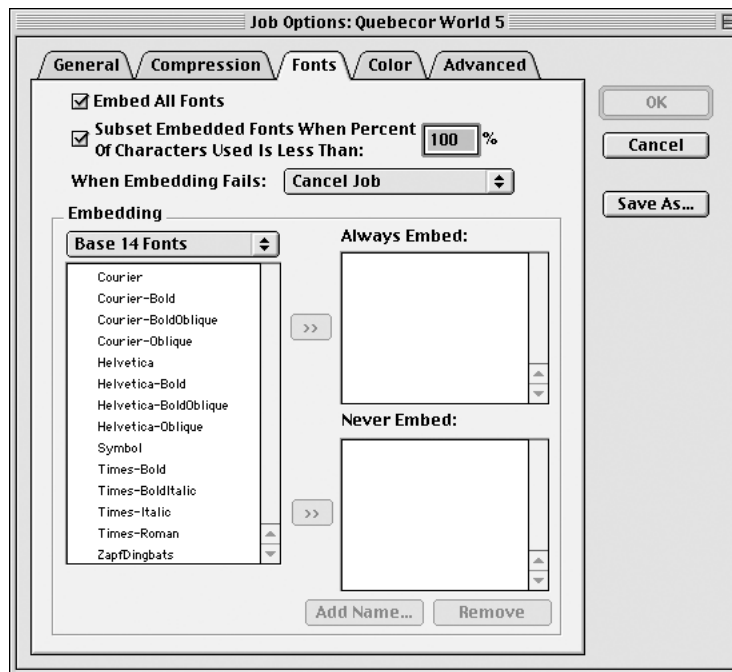
**"Resampling":** turn this setting - **OFF**. Embedded copy-dot images are monochrome bitmap images and must not be resampled because this can produce artifacts (moire' looking pattern) when previously screened images are printed.

**Compression:** leave this setting - **CCITT Group 4**. This lossless compression algorithm works well with monochrome images. The actual setting configured here should not affect the usability of your files.

**Anti-Alias to gray:** leave this setting - **OFF**. This resampling technique should only be applied outside of Distiller.

**Compress Text and Line Art:** turn this setting - **ON**. This is a simple and compatible lossless compression algorithm.

# Fonts Settings



**Embed All Fonts:** leave this setting - **On**. This setting informs Distiller that all fonts used in the page need to be embedded and embeds them. Some font manufactures do not license or allow you to embed their fonts. Certain fonts, including some TrueType font flavors, with the “do not embed” permission tag will not embed regardless of the Distiller settings that have been configured. In this case, the printer is required to have a matching font to image the page correctly. Even if Distiller allows you to embed the font, the manufacturers license agreement may prohibit it. If you are not sure if your fonts can be legally embedded, refer to your license agreement or contact the font manufacturer.

**Subset Embedded Fonts When Percent of Characters Used is less than:** change this setting to - **100%**. This setting forces Distiller to subset and embed only the used font characters instead of embedding the entire font character set. Subsetting will make the PDF file smaller, but limits the editability of the text later. Any text editing of the PDF file will require that the entire font be embedded before the text can be changed. Be aware that all Type 3, TrueType, and CID fonts will always be subsetted regardless of this setting.

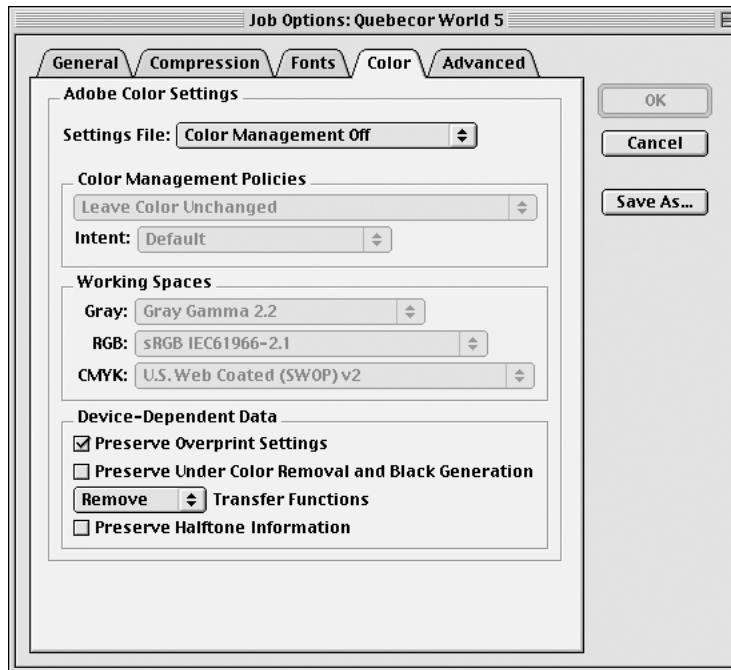
**When Embedding Fails:** change this setting to - **Cancel Job**. This setting aborts the distiller process without creating the PDF when a font that is used in a document cannot be embedded. If you activate this setting, all PDF files that successfully process through the Distiller will have embedded fonts.

**Embedding - Always Embed:** This window allows you to list all fonts that you want to embed in every PDF, even if the font is not used. In the screenshot shown above, nothing has been added to the “*Always Embed*” list because only the fonts used in the PDF page are desired.

Some people prefer to move the “*Base 14 Fonts*” into the “*Always Embed*” column. By doing this, the PDF itself is not negatively affected but it will increase the PDF file size (a minor drawback).

**Embedding - Never Embed:** This window allows you to list all fonts that are used in the document that you do not want to embed. Since it is a requirement to embed all fonts, do not list fonts here.

# Color Settings



**Settings File:** select the pull-down option - **Color Management Off**. This option disables all color management functionality of Distiller and Adobe's built-in color management will not be used. By turning "*Color Management Off*," continuous tone images with attached ICC profiles are not automatically converted to a device independent color space (Lab) and all device-dependent color spaces (CYMK) are maintained.

*"Color Management Off"* is now a standard "One Button" setting in all new Adobe products. Adobe PhotoShop 6.0 and Adobe Illustrator 9.0 have the same "**One Button**" setting to disable all color management. The Acrobat 4.0 setting to "*Leave Color Unchanged*" has a similar effect.

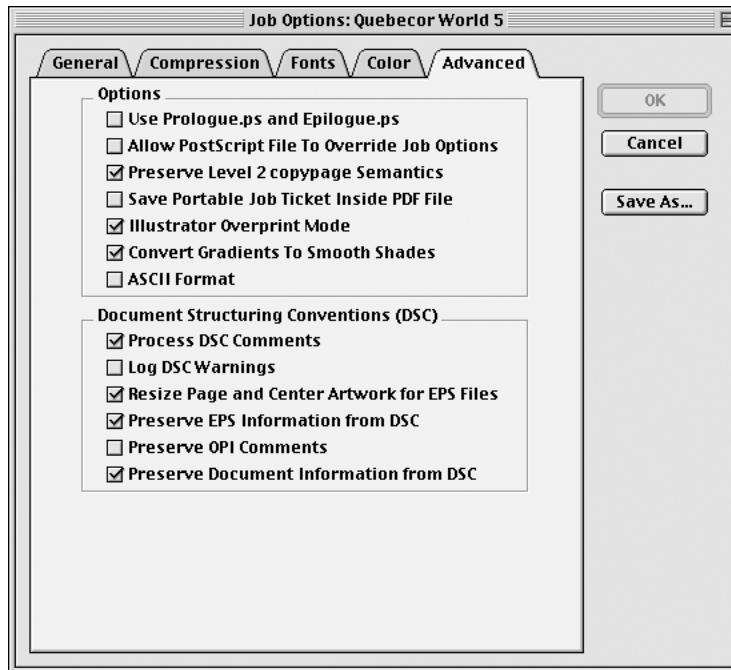
**Device-Dependent Data, Preserve Overprint Settings:** leave this setting - **ON**. This setting preserves overprint settings from applications, such as QuarkXPress, InDesign, and Illustrator.

**Preserve Under Color Removal and Black Generation:** Turn this setting - **OFF**. This How2PDF guide specifies working with images that are in the CMYK color space (non-color managed). Therefore, any Under Color Removal or Black Generation has already been built into the images.

**Transfer Functions:** select the pull-down option - **Remove**. The special effect of curving of a continuous tone image can be added through a transfer function. Transfer functions are normally used to compensate for dot gain and are output device specific. This setting removes all transfer functions from continuous tone images. Any of these special effects/curves need to be saved into the image prior to distilling.

**Preserve Halftone Information:** Leave this setting - **OFF**. Screening and halftone information can be saved into an image using an application such as PhotoShop. In some RIP's/workflows this setting overwrites the settings on a high resolution output device. There have been occurrences when these settings were set for LaserWriter quality output which results in poor quality. By removing this information, the print facility controls their high resolution output settings for optimal results.

# Advanced Settings



**Use Prologue.ps and Epilogue.ps:** leave this setting - **OFF**. The prologue and epilogue files allow you to append PostScript code to a PDF file when it is created. These .ps files are installed with Acrobat and are located in the "Acrobat>Distiller>Data" folder. Both files must be customized before they have any influence on Distiller or your PDF. To use these files, they must be moved into the same directory as the Distiller application.

**Allow PostScript File to Override Job Options:** turn this setting - **OFF**. Activating this setting allows the PostScript file to overwrite your Distiller Job Option settings. Note that Distiller Job Option settings are desirable for producing consistent PDF files.

**Preserve Level 2 copypage Semantics:** leave this setting - **ON**. This setting deals with the semantic differences between PostScript Level 2 and PostScript 3. By activating this setting, it allows you to image to both PostScript Level 2 and PostScript 3 devices.

**Save Portable Job Ticket Inside PDF:** turn this setting - **OFF**. This setting allows you to embed job ticket information. Most PDF workflows generate their own job tickets and do not require a job ticket to be embedded in the original PDF file.

**Illustrator Overprint Mode:** leave this setting - **ON**. This setting preserves overprints assigned by Adobe Illustrator.

**Converts Gradients To Smooth Shades:** leave this setting - **ON**. This setting will cause gradients to be converted to smooth shades and will appear much smoother when output to a PostScript 3 device.

**ASCII Format:** leave this setting - **OFF**. ASCII PDF files have a much larger file size and will take longer to output.

**Document Structuring Conventions (DCS), Process DCS Comments:** leave this setting - **ON**. DCS comments contain detailed information about the PDF file. These comments are helpful in troubleshooting and by leaving this setting on, you can maintain access to the individual DCS controls.

**Log DCS Warnings:** leave this setting - **OFF**. If a file has errors in DCS structuring, the errors are logged into a file.

**Resize Page and Center Artwork for EPS Files:** leave this setting - **ON**. If you drop an EPS (Encapsulated PostScript File) onto Distiller that does not contain page size information, the page size will default to the “default page size” setting located in the General Tab. When this setting is activated, Distiller reads the bounding box information of the EPS and uses this bounding box information to define the page size. The artwork will be centered within the document.

**Preserve EPS Information from DCS:** leave this setting - **ON**. By turning this setting on, the DCS comments from an embedded EPS file are maintained.

**Preserve OPI comments:** turn this setting - **OFF**. When creating PDF files that contain embedded high resolution images, the OPI comments are not necessary. Embedding these comments can cause your printer’s OPI-aware workflow to fail. The OPI workflow initiates a search for high resolution images outside the PDF container when this setting is turned on. Preserving OPI comments can also inhibit effective preflighting.

**Preserve Document Structure Information from DCS:** leave this setting - **ON**. This setting preserves the DCS document structure of the PDF.

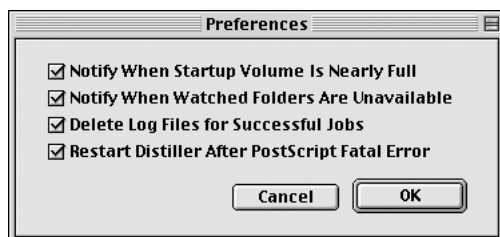
## Important Acrobat 5.0 Distiller Presettings

As with any program, the configuration of an application’s preferences play an important role in how the application handles specific situations. The preference files are slightly different between the Macintosh and the Windows platform. Both are described below.

To open the Preferences dialog window on both platforms, choose “**File>Preferences...**” from the menu bar.

Also described in this section is the Font Handling set-up. This controls how Distiller deals with certain font issues such as embedding and duplicate names.

### Preference Settings for a Macintosh Environment



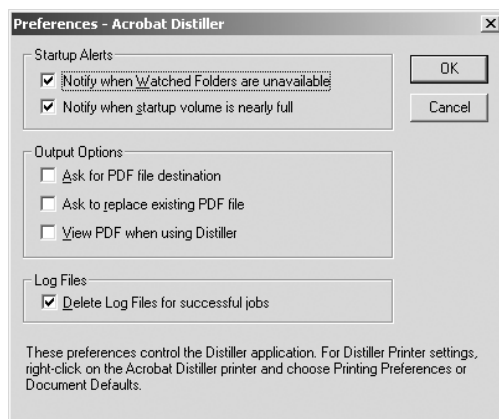
**Notify When Startup Volume Is Nearly Full:** turn this setting to - **ON**. This setting notifies you that your startup volume has less than 1MB of remaining disk space available. Acrobat Distiller requires temporary disk space to convert PostScript to PDF. The temporary disk space required by Distiller is approximately twice the size of the PostScript file that is being distilled. If you get this warning, stop and remove unnecessary data from your hard drive immediately.

**Notify When Watched Folders Are Unavailable:** if you are using hot folders, turn this setting - **ON**. Distiller monitors directories or hard drives on your local machine or network that have been designated as hot folders. If these folders/drives become unavailable, Distiller will warn you.

**Delete Log Files for Successful Jobs:** turn this setting - **ON**. If your file fails the distilling process, an ASCII log file is created. CreoScitex's Prinerger plug-in always creates a log file. By turning this setting on, the log file will be created and automatically deleted for all PDF files that are successfully distilled.

**Restart Distiller After PostScript Fatal Error:** turn this setting - **ON**. When the Distiller is interpreting a PostScript file, errors may occur. If the error is fatal, the Distiller application will shut down. Activating this setting causes Distiller to automatically relaunch after a fatal error. This is an important feature when using hot folders.

## Preference Settings for a Windows Environment



**Startup Alerts, Notify When Watched Folders Are Unavailable:** turn this setting - **ON** (if you are using hot folders). Distiller monitors directories or hard drives on your local machine or network that have been designated as hot folders. If these folders/drives become unavailable, Distiller will warn you.

**Startup Alerts, Notify When Startup Volume Is Nearly Full:** turn this setting - **ON**. This setting notifies you when your startup volume has less than 1MB of remaining disk space available. Acrobat Distiller requires temporary disk space to convert PostScript to PDF. The temporary disk space required by Distiller is approximately twice the PostScript file being distilled. If you get this warning, stop and remove unnecessary data from your hard drive immediately.

**Output Options, Ask for PDF file destination:** turn this setting - **OFF**. When Distilling PostScript files individually (not via hot folders), this setting will cause Distiller to prompt you to select the destination of completed PDF files. With the setting turned off, Acrobat will place the PDF files back into the directory where the PostScript files resided.

**Output Options, Ask to replace existing PDF file:** turn this setting - **OFF**. This setting will cause Distiller to ask you if it is OK to overwrite an existing PDF with the same name. With the setting turned off, Acrobat will automatically overwrite the existing PDF.

**Output Options, View PDF when using Distiller:** turn this setting - **OFF**. If this setting is turned on, Distiller will automatically launch the default Acrobat viewer and display your newly created PDF and slow down the distilling process.

**Log Files, Delete Log Files for Successful Jobs:** turn this setting - **ON**. If your file fails the distilling process, an ASCII log file is created. CreoScitex's Prinerger plug-in always creates a log file. By turning this setting on, the log file will be created and automatically deleted for all PDF files that are successfully distilled.

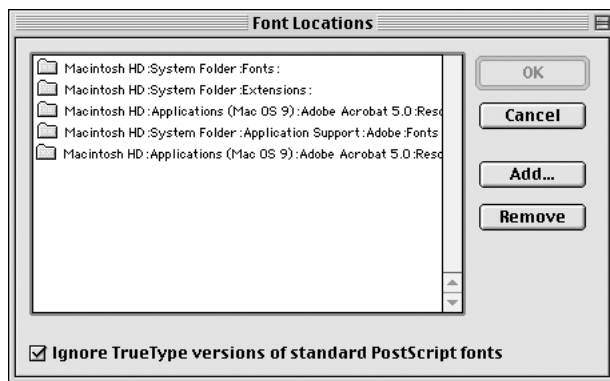
# Font Handling

The **Font Handling** defaults play a very important role in how Distiller addresses specific font situations. When Distiller is not able to locate a particular font, the locations defined in this window are used to search for the font. If the font was not embedded or opened with a font manager (ATM or Suitcase), Distiller looks to the Font Handler before aborting. In this example, the Distiller is set to fail if a font can not be found.

Font Handling also allows you to control how Distiller addresses duplicate **TrueType** and **PostScript** font names. If you determine that the base 13 TrueType fonts are not desired, this setting will allow you to remove them from a distilled PDF.

Distiller uses the settings in the Font Locations list when it detects a missing font. Distiller then looks in the list for additional locations where the font may be found.

To open the Font Location menu, choose “**Font Locations...**” under the “**Settings Menu**” of the menu bar.



Acrobat Distiller uses this window to define the location of fonts. When a page is distilled, the Distiller searches for the required font in the following sequence: first it looks in the PostScript file for the embedded font; then it checks ATM to see if the font has been loaded; and finally it looks at the locations defined in the Font Locations window. If the font is not found in any of these locations, it will not be embedded.

**Ignore TrueType versions of standard PostScript fonts:** turn this setting - **On**. This setting allows Distiller to resolve conflicts between PostScript and TrueType fonts that have the same name. When this setting is activated, the PostScript version of a duplicate font name is embedded (an excellent feature).

# Layout to PDF

This section provides QuickGuides for creating good PostScript from QuarkXPress, Adobe InDesign and Adobe PageMaker. You can export PDF directly from either InDesign or PageMaker. However, this guide recommends a two step process for creating a uniform PDF: One -- write consistent PostScript directly from the application. Two -- convert the PostScript file through Distiller to get a reliable PDF.

To create PostScript files, you can use Apple's LaserWriter PostScript driver or Adobe's AdobePS PostScript Driver. The AdobePS driver was selected for use here because it complies (as much as possible) with DDAP (Digital Distribution of Advertising for Publishing) PDF procedures (published at [www.ddap.org](http://www.ddap.org)). This driver was also selected because it is distributed by Adobe (the originators of PostScript in the mid-80's).

The following procedure assumes that you are working from a Macintosh workstation. You will find the Windows settings slightly different.

Obtain the latest AdobePS print driver from Adobe at [www.adobe.com/support/downloads/pdrvmac.htm](http://www.adobe.com/support/downloads/pdrvmac.htm).

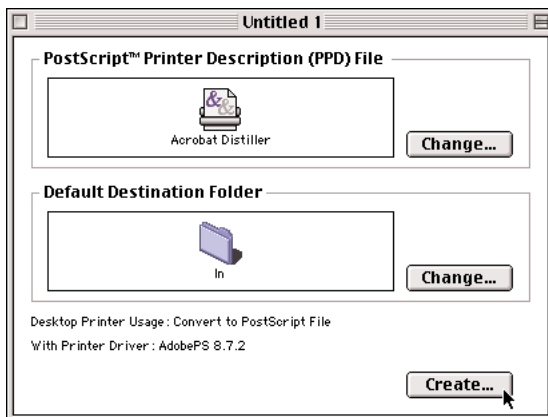
## Creating An Acrobat Desktop Printer

When you install the AdobePS driver on your computer it creates a Desktop printer named "Virtual Printer." This "Virtual Printer" can be used to create a PostScript file for distilling. However, you will want to create your own Desktop printer that uses the Acrobat PPD to comply with these instructions.

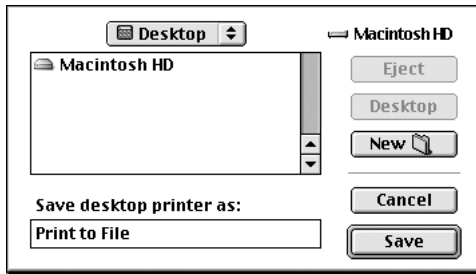
Every Macintosh comes with a handy and seldom used utility called "**Desktop Printer Utility.**" You can use this utility to create a new Desktop Printer or modify an existing one. Identify the location of this utility to build a "**Print to File**" Desktop Printer for writing PostScript files for Distiller. This utility is located in one of two places: your local harddrive or your MacOS System CD-ROM.



1. Launch the "**Desktop Printer Utility.**"
2. Choose "**AdobePS**" from the drop-down menu.
3. Select "**Create Desktop... Translator (PostScript).**"
4. Click "**OK.**"



5. Change "**PostScript™ Printer Description (PPD) File**" from "**Generic**" to "**Acrobat Distiller.**"
6. Change "**Default Destination Folder**" from "**Desktop**" to your **desired location**. If you have set up Acrobat Distiller to monitor a "**Watch Folder**" (hot folder), specify your destination to be your Watch Folder's "**In**" folder.



7. Click "Create."

8. Name your new Desktop Printer something appropriate. In this example, the name is "Print to File."

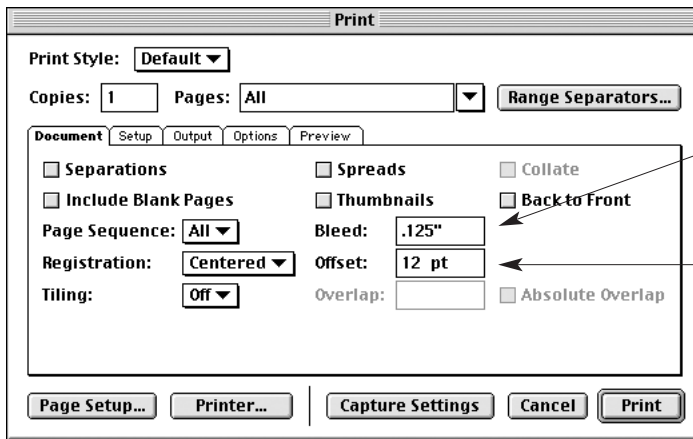
9. Your newly created Desktop Printer is ready to use.

## Creating a PDF file from QuarkXPress 4.11

The following diagrams show proper print dialog settings necessary to create good PostScript from QuarkXPress v4.11r2. The latest version of QuarkXPress 4.1x can be downloaded from Quark's web site at [www.quark.com/support/downloads/index.jsp](http://www.quark.com/support/downloads/index.jsp). It is assumed that the user is fluent in QuarkXPress and has correctly designed the page.

These settings assume that your QuarkXPress document(s) were built to trim. The final trim size of the book is the values entered in the "File>Document Setup..." window of QuarkXPress. The document bleed (0.125") extends into the pasteboard.

Please note that these settings will make your final PDF document exactly 1" larger than QuarkXPress document size you entered. Example, if you entered a QuarkXPress document of 8.125" by 10.75", the resulting PDF will be 9.125" by 11.75". This includes crop marks and bleed.

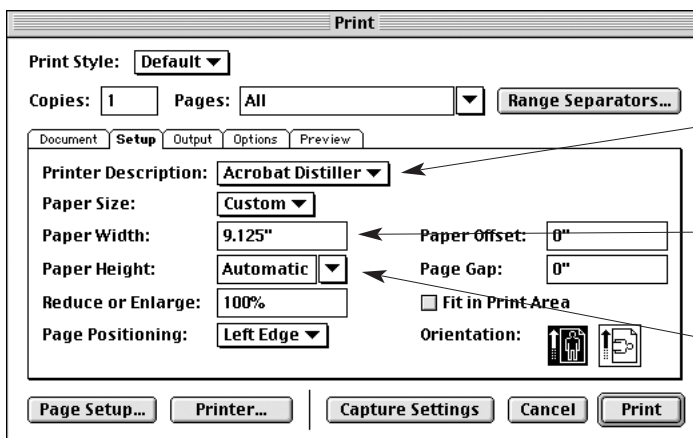


### Document Tab Settings

Bleed: .125" or 9 pt

Offset: 12 pt

*Note: 12 pt offsets will not work for perfect bound covers. Consult your print facility for further information.*

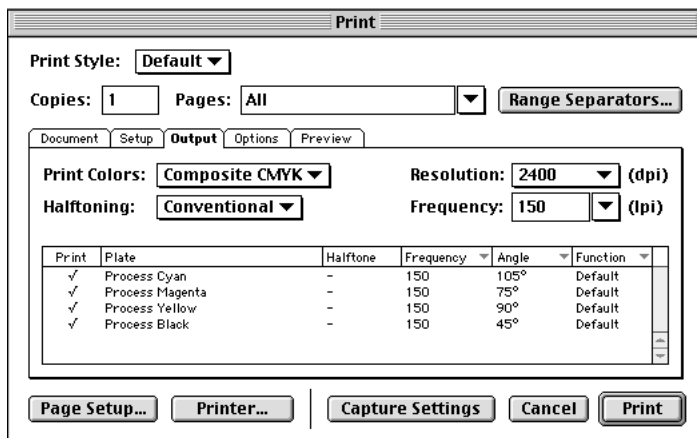


### Setup Tab Settings

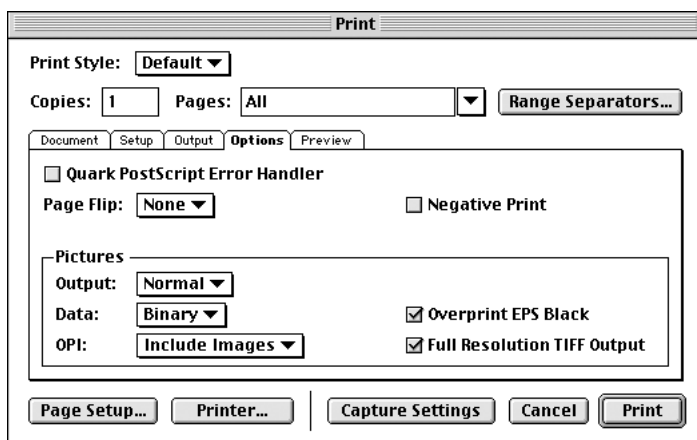
Printer Description: Acrobat Distiller

Paper Width: Document Size plus 1 inch

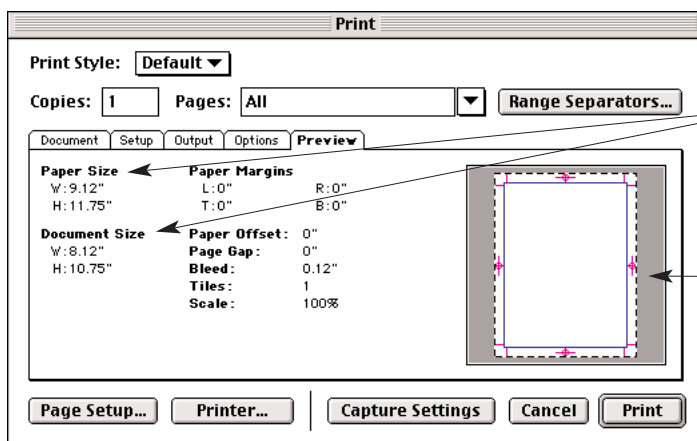
Paper Height: Automatic



**Output Tab Settings**



**Options Tab Settings**



**Preview Tab Settings**

Note: "Paper Size" should be exactly **1" larger** than the specified "Document Size"

Preview should look like this

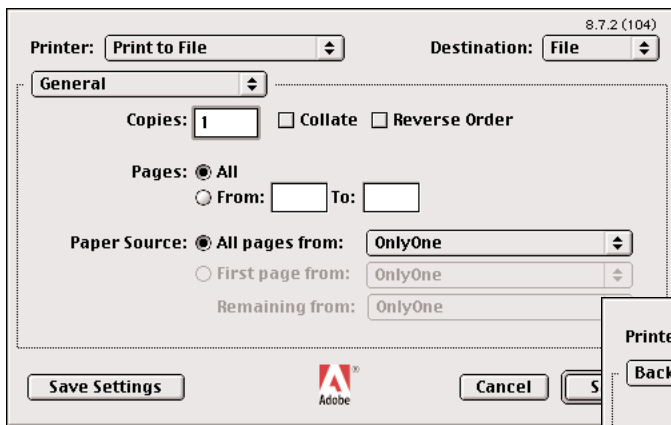
Instead of having to create these settings every time, check out Quark's "Print Styles." These "Print Styles" allow you to preset all the above settings and save them to disk. Once a "Print Style" has been configured, all you have to do is select the "Print Style" from a pull-down list, instead of checking and resetting all five tabs each time.

Before we are ready to print, it is important to properly configure the "Print to File" Desktop Printer previously built in the "Creating An Acrobat Desktop Printer" section on page 16 of this guide.

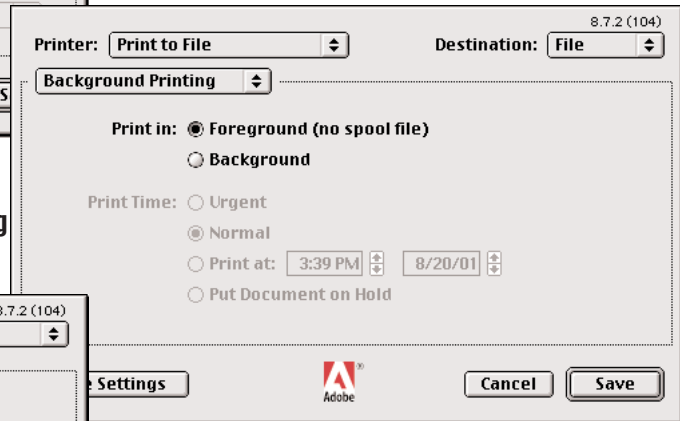
## AdobePS Printer Configuration

With the application specific print settings properly configured (QuarkXPress, InDesign, or PageMaker), you must now configure the Desktop Printer that was made earlier. This procedure may seem to be out of order, but it is necessary that it follow the page layout sequence in order to properly set the configuration. The previously created "Desktop Printer," will be referred to as the "Print to File" Desktop Printer for the remainder of this section.

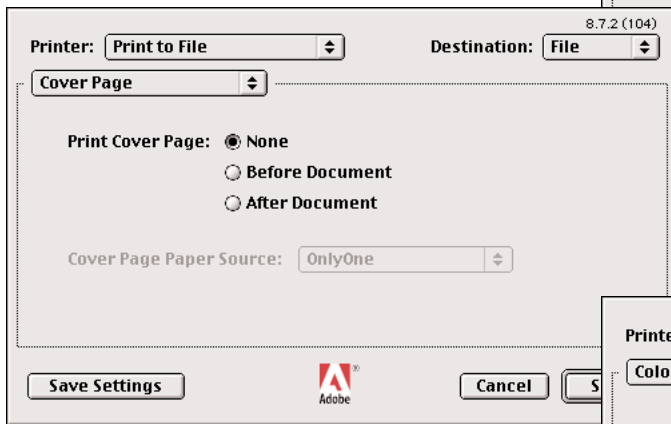
To get started, click the "Printer..." radio button at the bottom of the print dialog window.



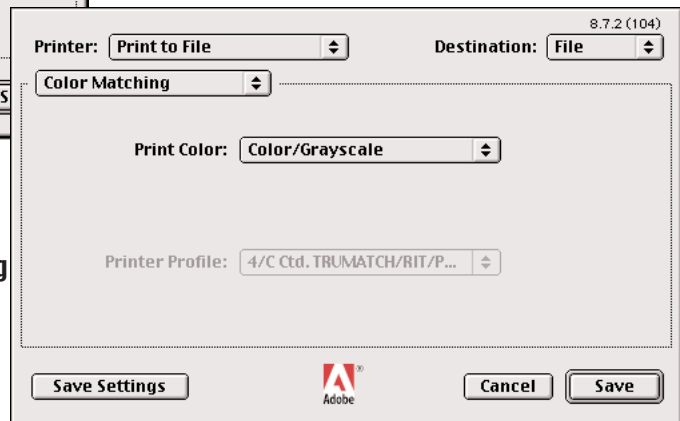
Printer..., General Tab



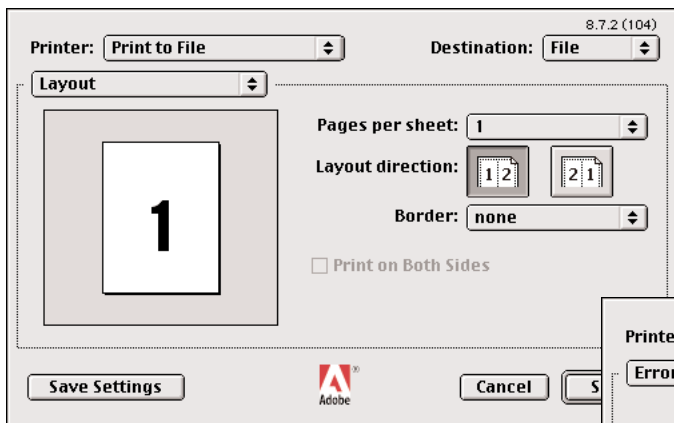
Printer..., Background Printing



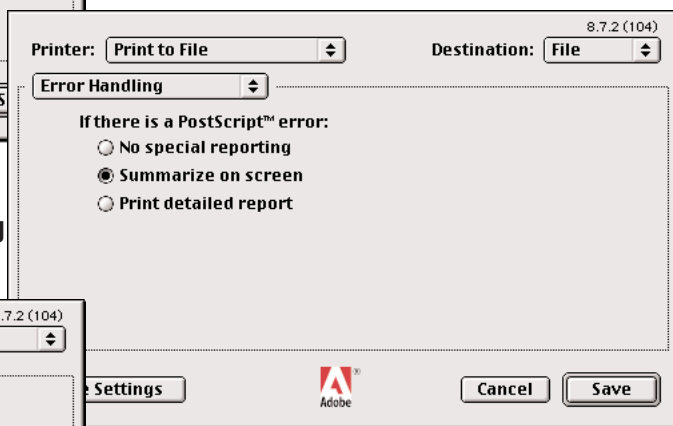
Printer..., Cover Page



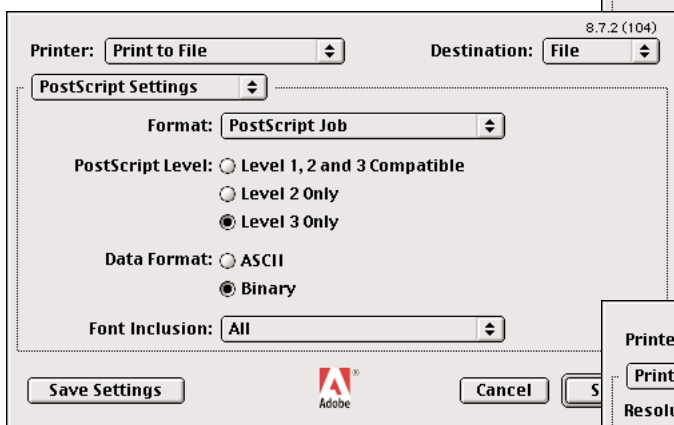
Printer..., Color Matching



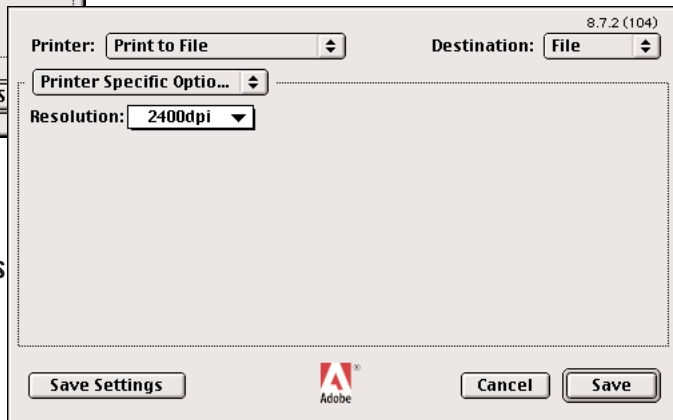
Printer..., **Layout**



Printer..., **Error Handling**



Printer..., **PostScript Settings**



Printer..., **Printer Specific Options**

Click “*Save Settings*” to make the above settings for the “**Print to File**” Desktop Printer. Unless you save over these settings, they are now this printers defaults and will be used each time you select the “Print to File” Desktop Printer. These settings are printer specific, not application specific. You only have to save them once no matter how many applications (i.e. QuarkXPress, InDesign, ...) you use. If you print to this printer, these settings will be used.

# Creating a PDF file from Adobe InDesign 1.5.2

The following diagrams show proper print dialog settings necessary to create good PostScript from InDesign 1.5.2. If you do not have the latest version of InDesign 1.5, it can be downloaded from Adobe's web site at [www.adobe.com/support/downloads/idmac.htm](http://www.adobe.com/support/downloads/idmac.htm). Both of Adobe's page layout applications, InDesign and PageMaker, allow you to export PDF directly. Previous versions of these applications sometimes exported PDF files insufficient for print. In order to standardize the process, this section explains how to create PDF from PostScript only. The following instructions will explain this procedure. It is assumed that the user is knowledgeable regarding the InDesign application and has created the document correctly.

These settings assume that your InDesign document(s) were built to trim. The final trim size of the book is the values entered in the "File>Document Setup..." window of InDesign. As with other page layout applications, the document's bleed extends into the pasteboard area.

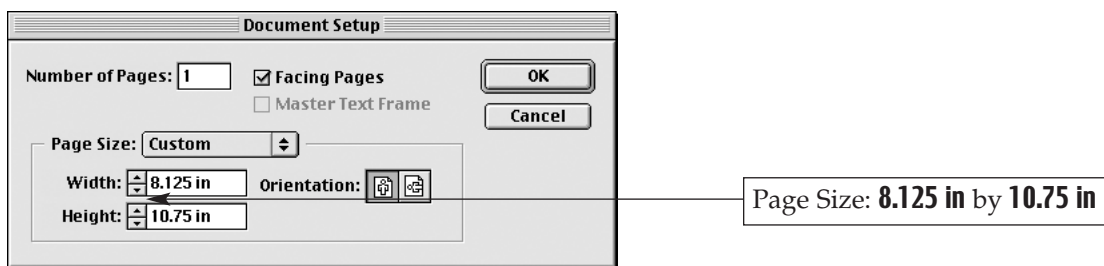
When pages are output from InDesign, the "Paper Size," not the "Document Size," will define the size of the PDF file. Therefore, our "Paper Size" must be a user defined custom size that is proportional to the InDesign "Document Size." As with QuarkXPress, the "Paper Size" will be made exactly 1" larger (height and width) than the document to allow space for bleed and all appropriate marks.

## Defining a Custom Page Size

For this guide, we will continue to use an example document trimmed size of 8.125" by 10.75". The page will need to include a .125" bleed area and extra space to accommodate for the bleed and trim marks. To maintain consistency of PDF files coming from various page layout programs (i.e. QuarkXPress, InDesign, or PageMaker) the final page size of the PDF will be exactly one inch larger than the area described in the "Document Setup." These setting will create consistent PDF's for the print manufacturing facilities that include consistent page sizes and page offsets for the digital imposition process. For this example our custom "Paper Size" will be 9.125" by 11.75" or exactly 1" larger than the InDesign document. This will create a PDF to the same 9.125" by 11.75" document size.

1. Activate the "Print to File" Desktop Printer as your default printer. See page 16 on how to create this printer.

Verify the document size by opening the "File Document Setup..." of the document. Write down the exact page size dimensions.

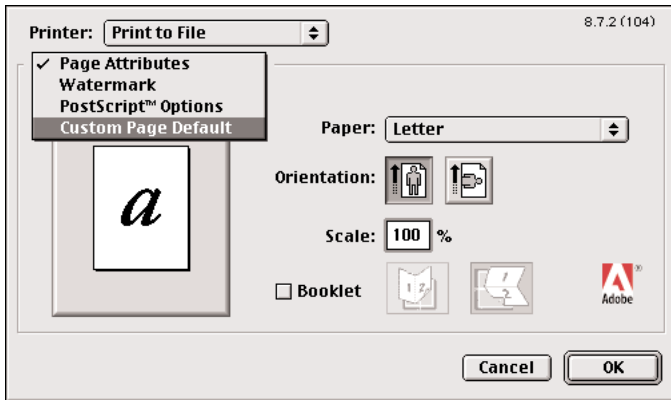


Note, that the InDesign application reads the default printers PPD (PostScript Printer Description) file to obtain the default paper sizes. Our "Print to File" printer has been set-up to use the Acrobat PPD, which limits the predefined "selectable" paper sizes to the common paper formats available for LaserWriters (i.e. Letter, Legal, Tabloid, etc.).

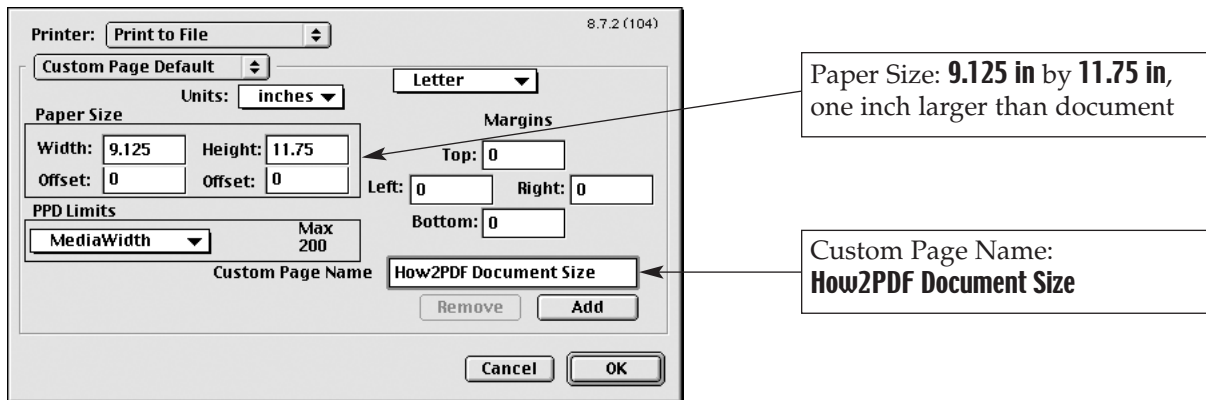
Any new "custom" paper size created for this "Print to File" or any other Desktop Printer will be stored in the Desktop Printer itself and not in the PPD. If you delete the printer, for any reason, all "custom" paper sizes must be regenerated.

2. Choose **“Page Setup...”** (shift-command-P) from the **“File”** menu.

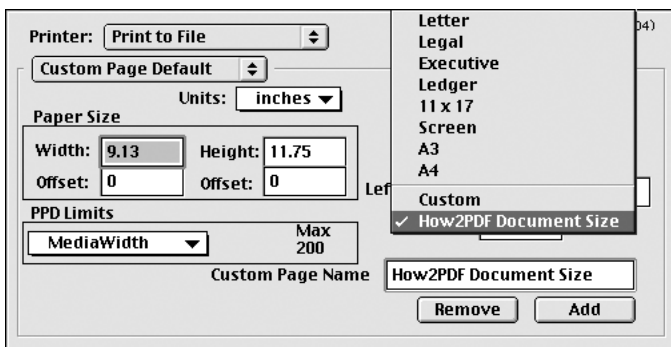
3. Select **“Custom Page Default.”**



4. Enter in your **“Custom Page Size”**, give it a **“Distinct Name”**, click **“Add”** to add it to the paper list.



The **“Custom Page Name”** will appear in the paper drop down menu.

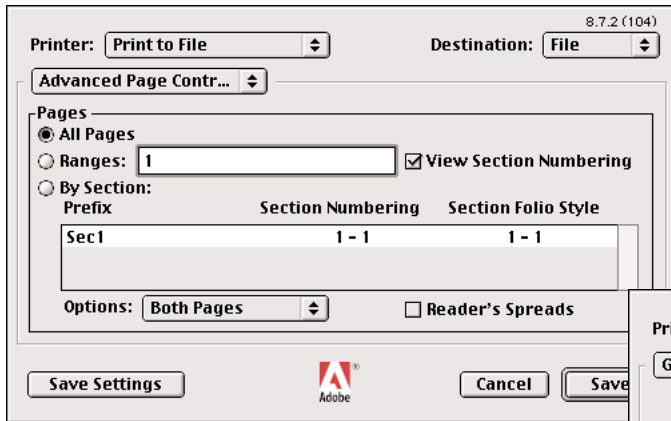


Note that the paper size dimensions have been rounded off to two decimal points (9.13” instead of 9.125”). The AdobePS PostScript Driver only allows for two decimal points of accuracy. The resulting PDF file (s) will also be rounded off.

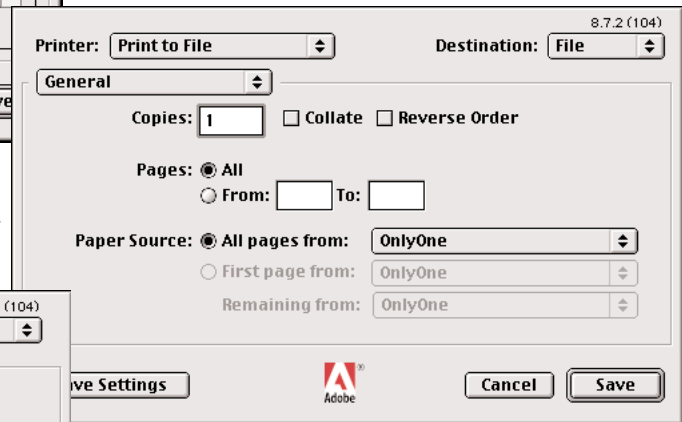
5. Click **“OK”** to save the settings.

## InDesign "Print Dialog" Settings

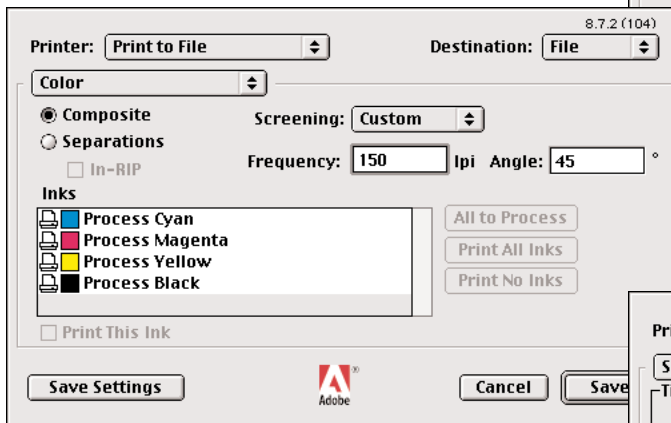
Once the Desktop Printer "Print to File" has been selected as the default printer and a "Custom Paper Size" has been created for the job, it is ready to print. The following are the suggested settings for the various printer control tabs of AdobePS and InDesign:



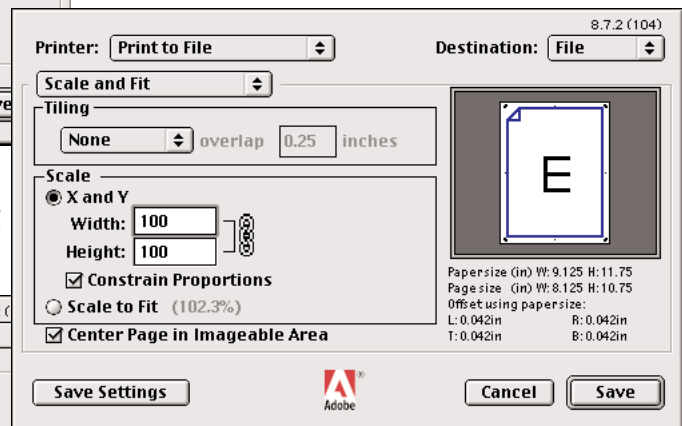
Printer..., **Advance Page Control**



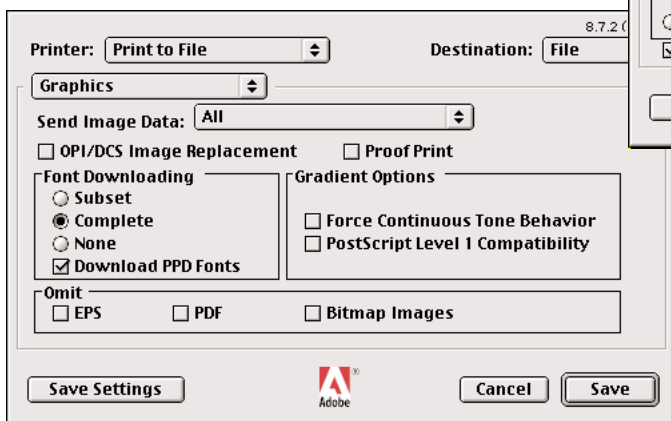
Printer..., **General**



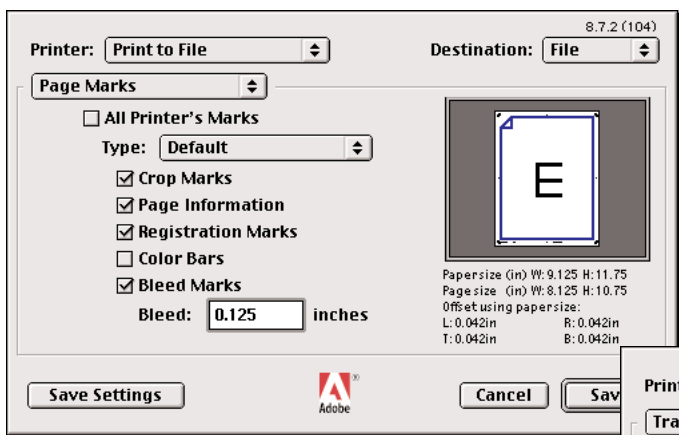
Printer..., **Color**



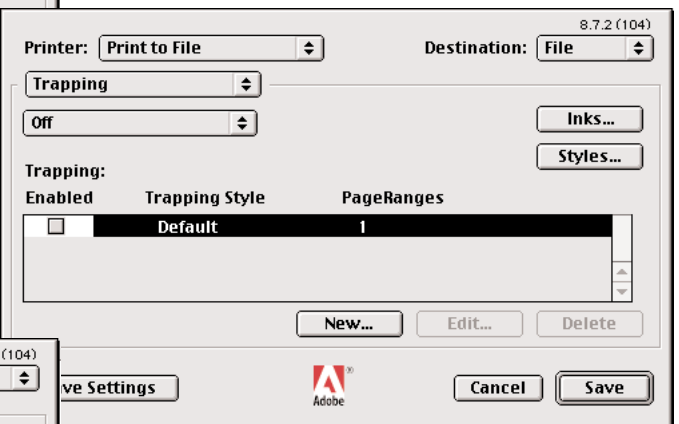
Printer..., **Scale and Fit**



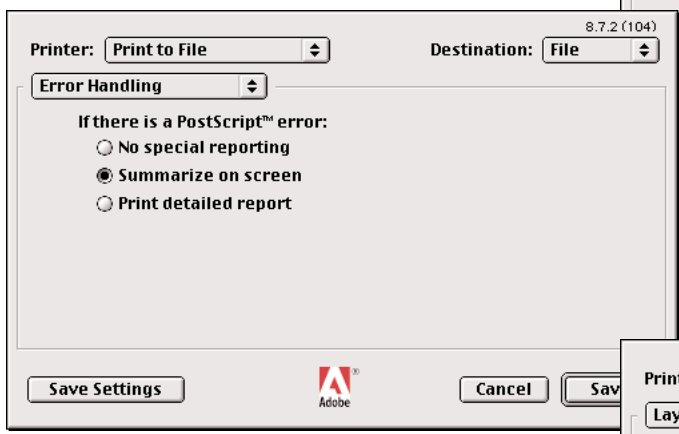
Printer..., **Graphics**



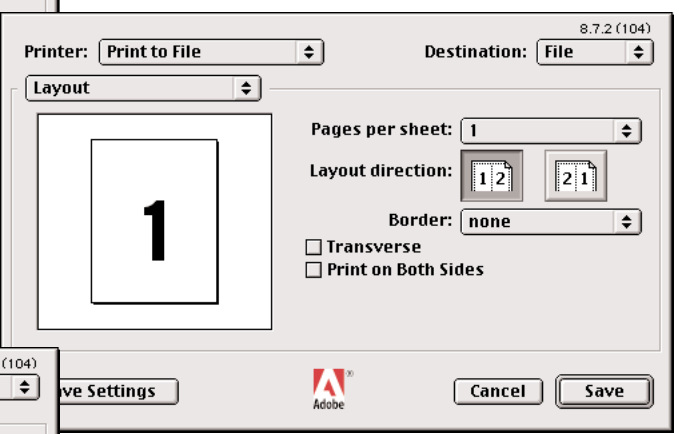
Printer..., Page Marks



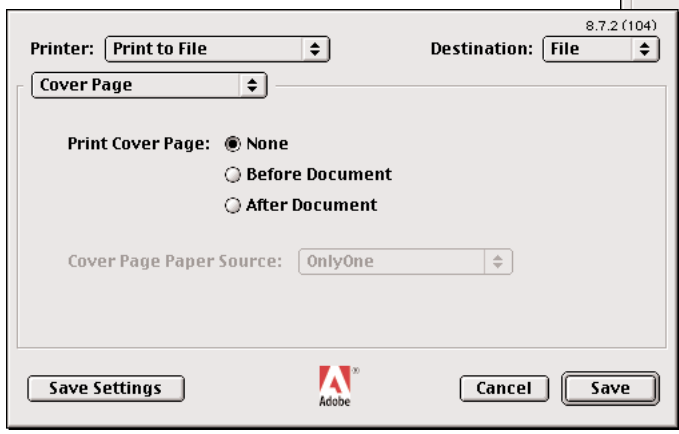
Printer..., Trapping



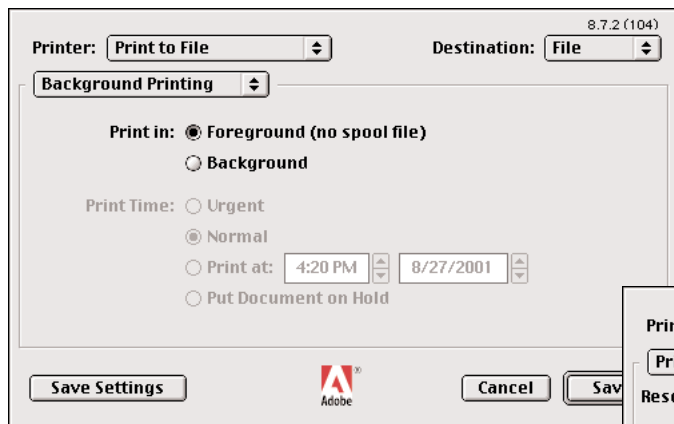
Printer..., Error Handling



Printer..., Layout

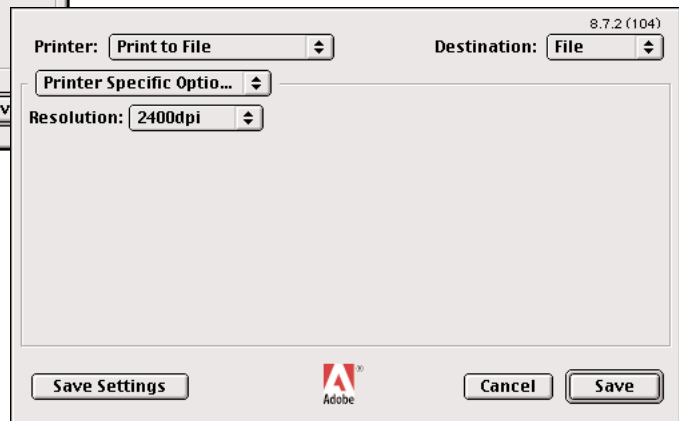


Printer..., Cover Page



Printer..., Background Printing

Printer..., Printer Specific Options



To save these tab settings as the printer defaults, click the **“Save Settings”** radio button. Check out InDesign’s *“Printer Styles,”* by creating a *“Custom Printer Style.”* You do not have to worry that your default printer settings have been accidentally overwritten.

## Creating a PDF file from Adobe PageMaker 7.0

The following diagrams show proper print dialog settings necessary to create good PostScript from PageMaker 7.0. To get the latest updater for PageMaker 7.0, downloaded it from Adobe’s web site at [www.adobe.com/support/downloads/pmmac.htm](http://www.adobe.com/support/downloads/pmmac.htm). Both of Adobe’s page layout applications, InDesign and PageMaker, allow you to export PDF directly. Previous versions of these applications sometimes exported PDF files insufficient for print. In order to standardize the process, this section explains how to create PDF from PostScript only. The following instructions will explain this procedure. It is assumed that the user is knowledgeable regarding the PageMaker application and has created the document correctly.

These settings assume that your Pagemaker document(s) were built to trim. The final trim size of the book is the values entered in the *“File>Document Setup...”* window of PageMaker. As with other page layout applications, the document’s bleed extends into the pasteboard area.

When pages are output from PageMaker, the *“Paper Size,”* not the *“Document Size,”* will define the size of the PDF file. Therefore, our *“Paper Size”* must be a user defined custom paper size that is proportional to the PageMaker *“Document Size.”* As with QuarkXPress, the *“Paper Size”* will be made exactly 1” larger (height and width) than the document to allow space for bleed and all appropriate marks.

### Defining a Custom Page Size

For this guide, we will continue to use a example document trimmed size of 8.125” by 10.75”. The page will need to include a .125” bleed area and extra space to accommodate for the bleed and trim marks. To maintain consistency of PDF files coming from various page layout programs (i.e. QuarkXPress, InDesign, or PageMaker), the final page size of the PDF will be exactly one inch larger than the area described in the

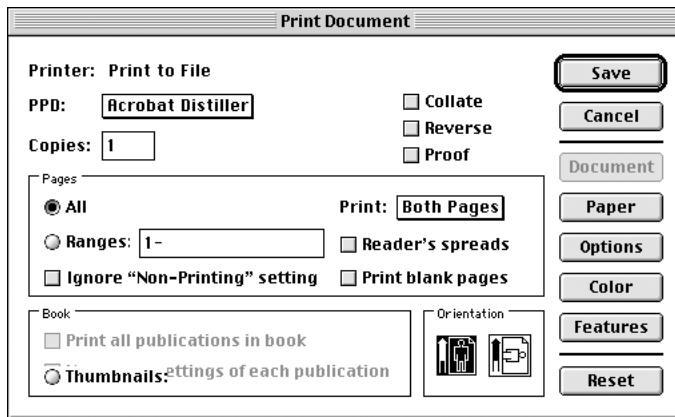
“Document Setup.” These settings include consistent page sizes and page offsets for the digital imposition process. This will create consistent PDF’s for the print manufacturing facilities. For this example our custom “Paper Size” will be 9.125” by 11.75” or exactly 1” larger than the PageMaker document. This will create a PDF to the same 9.125” by 11.75” document size.

Unlike QuarkXPress and InDesign, PageMaker has a unique printer interface. Because of this, use the PageMaker print dialog boxes to print your PostScript file to disk instead of the previously created “Print to File” Desktop Printer.

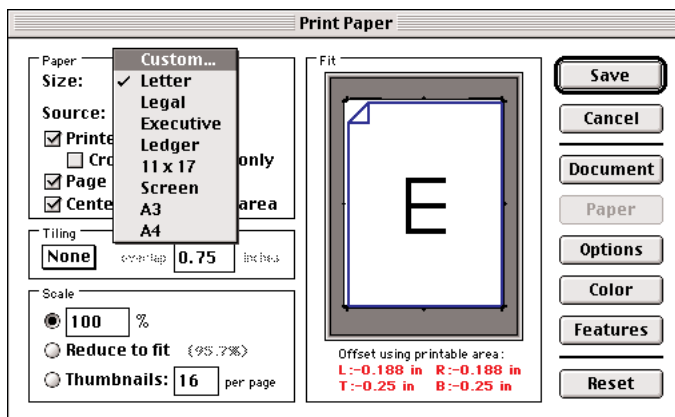
Verify the PageMaker document size by opening the “**Document Setup...**” of the document. Remember to write down the exact page size dimensions.

Choose “**Print...**” from the “File” menu. PageMaker’s unique print dialog box will open to the “**Document**” tab.

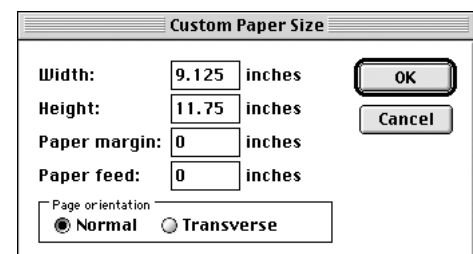
Select the “**Acrobat Distiller**” PPD and configure the remaining selections as shown.



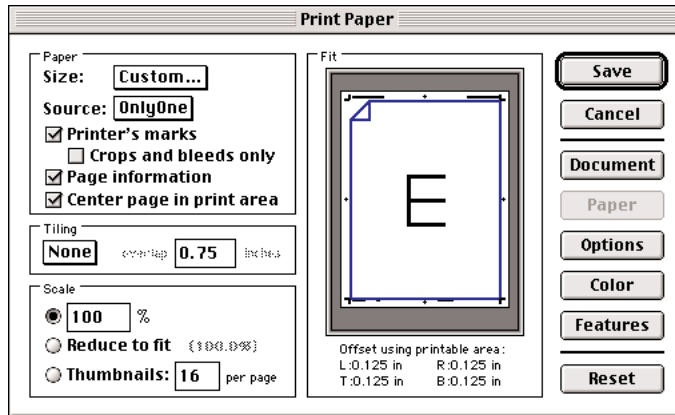
Click on the “**Paper**” tab and select “**Paper Size: Custom...**”



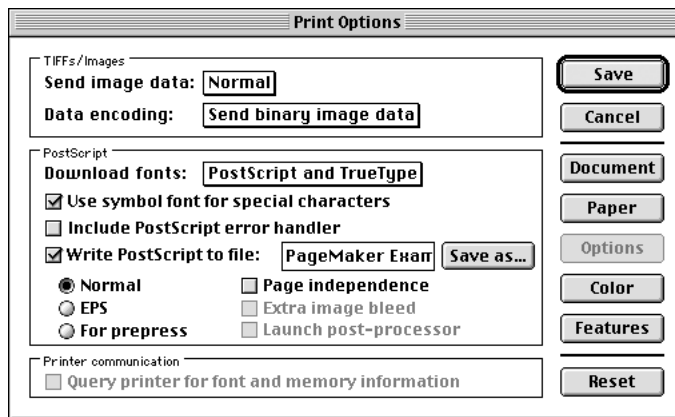
Enter the PageMaker document size plus one inch. For this example the PageMaker document size was 8.125” by 10.75”, therefore the **Custom Paper Size** needs to be **9.125” by 11.75”**.



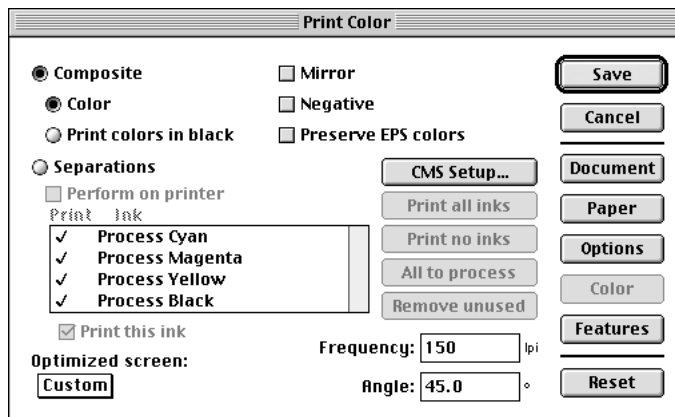
Select **OK** to save the Custom Paper Size.



Select **Options** tab and configure settings as follows:



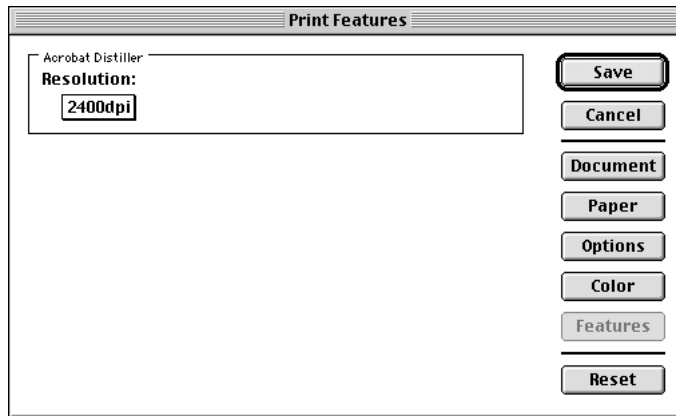
Select **Color** tab and configure settings as follows:



Select **CMS Setup...** and turn **Color Management: Off**



Select **Color** tab and configure settings as follows:



PageMaker's print dialog boxes now have been properly configured. In order to save these settings as printer defaults, it is best to use PageMaker's Printer Styles. To save these settings as Printer Styles, simply hold down the [Command] key and the "Save" button turns into a "Style..." button. With the [Command] key selected, click "Style..." and name your Printer Style accordingly.

Note, Printer Styles are saved as application specific defaults, not document specific, and do not have to be created for each document.

To print a page using a Printer Style, simply select "**Printer Styles>Your Style Name**" from the "**File**" menu.

# Quick Start Reference: Adobe Acrobat Distiller 4.05

To use version **Adobe Acrobat 4.0**, you need to have the update to the last release, **Adobe Acrobat 4.05a**. This version is a major patch release and is highly recommended. If you do not have this upgrade, contact Adobe Customer Services at (800) 272-3623.

## Features New to Acrobat 4.0 or later

**Prologue.ps** and **Epilogue.ps** - these .ps files are no longer required to preserve spot colors. With version 4.0, this happens automatically. The use of prologue.ps and epilogue.ps in version 4.0 is for custom applications.

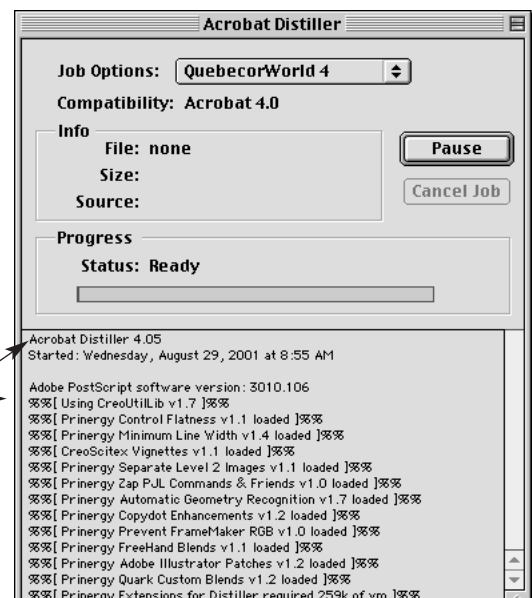
**Font Substitution** - Acrobat 3.0 could silently substitute fonts without your knowledge. Distiller 4.0 will not do this if Cancel Job is selected in the 'When Font Embedding Fails' tab.

**Font Embedding** - some fonts from certain font foundries have a special tag that tells Distiller 4.0 that embedding is not permitted (based on the font license). Adobe fonts do not have this tag. If you're having trouble embedding fonts you may want to look into the license agreement with the font manufacturer. This primarily applies to TrueType fonts and OpenType fonts.

**Duotones, Tritones and Colorized TIFF's**, - in Acrobat 3.0, duotones were always converted to CMYK images. Acrobat 4.0 supports a new PostScript construct called DeviceN that supports this type of image. The image must be created in Adobe PhotoShop 5.02 or higher and the PostScript file (from layout application) must be saved as PostScript 3. In order to image properly, your printer must use an Adobe PostScript 3 RIP with in-RIP separation capability. When using colorized TIFF's, check with the software vendor to ensure that your application supports the DeviceN operator.

## Software Requirements

1. Be sure to use the most recent version of **Adobe Acrobat Distiller 4.0**. The version number in the start-up screen should read **Acrobat Distiller 4.05**.
2. Prinerger Distiller Plug-in (optional, but highly recommended). This free plug-in, compliments of CreoScitex and Heidelberg, adds several enhanced graphic art features to Acrobat. These features include tiling enhancements for copy-dot, controls for legacy flatness settings, and controls that ensure all "hairline" rules have a minimal line width of .216 points. This plug-in is free and may be downloaded from the Prinerger web site at [www.prinerger.com](http://www.prinerger.com).
3. Preflight software (optional, but highly recommended) There are several good PDF preflight software packages available. These packages verify that your final PDF is print ready. They will identify problems and enable you to correct them before the final PDF files are sent to the printing plant.

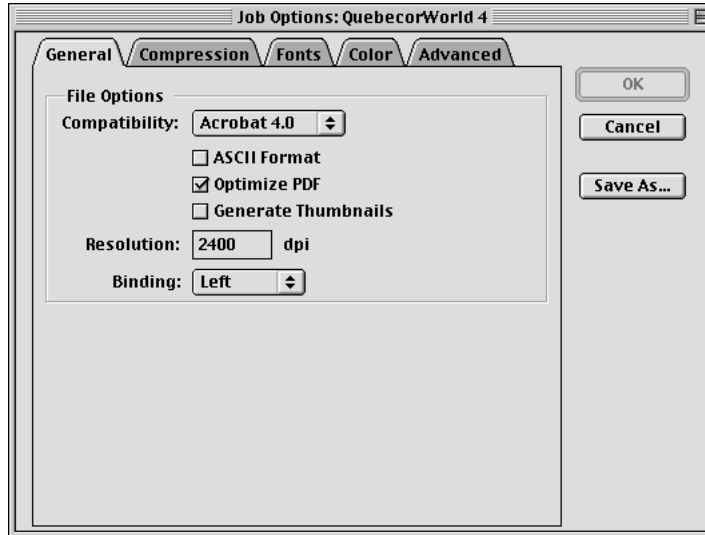


Shows **version status**

Indicates that the **Prinerger Plug-in** has been installed and is active (optional, but highly recommended).

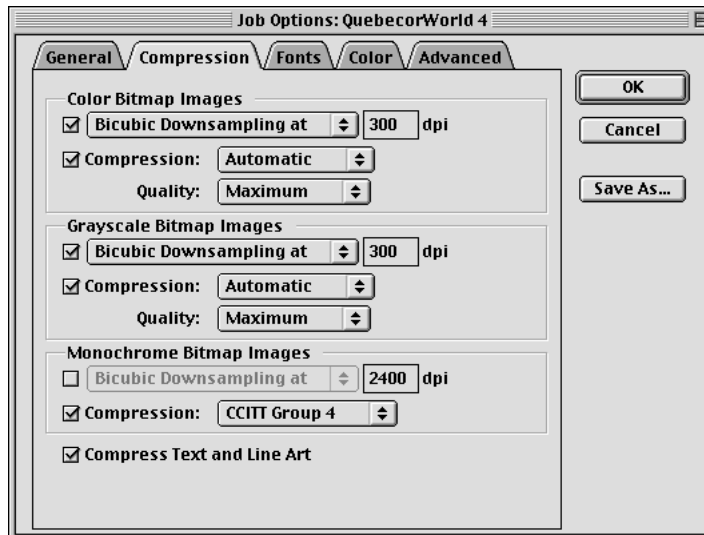
# Quick Start Reference: Adobe Acrobat Distiller 4.05 *(cont.)*

## General Setting



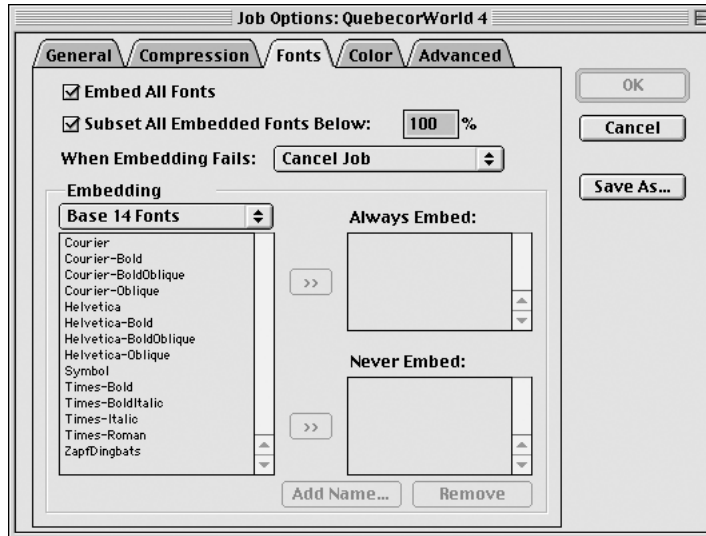
## Compression Settings

Refer to **Appendix A** for an explanation of the various compression settings.

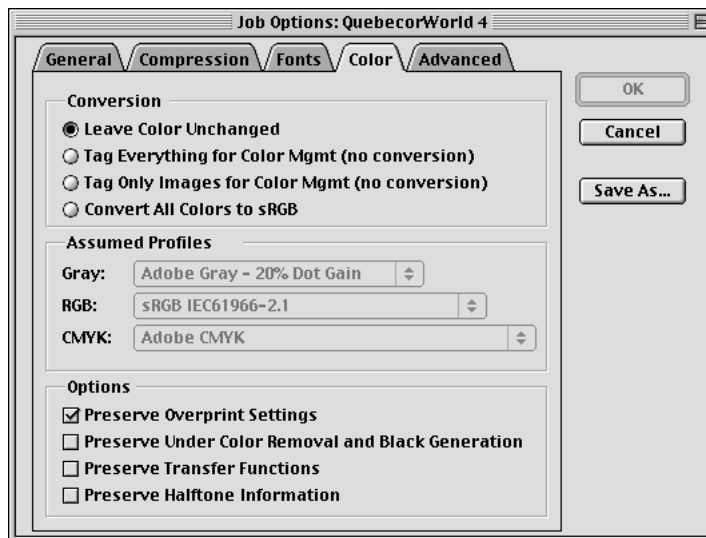


# Quick Start Reference: Adobe Acrobat Distiller 4.05 *(cont.)*

## Fonts Settings

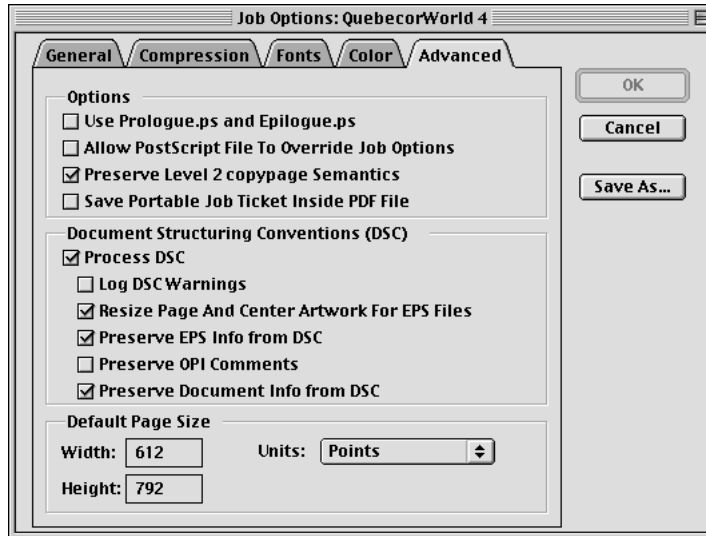


## Color Settings



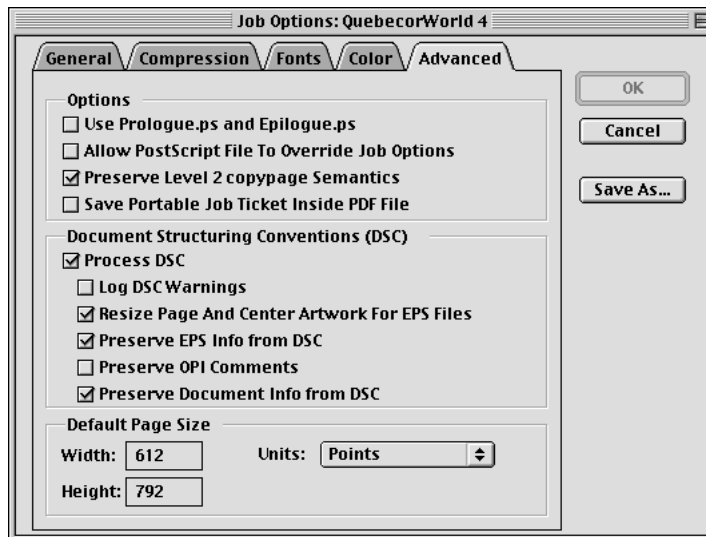
# Quick Start Reference: Adobe Acrobat Distiller 4.05 *(cont.)*

## Advance Settings



## Saving Your Job Options File

Save your newly created "Job Options" file back to your local hard drive. On a Macintosh the path will be "*Macintosh HD:Applications (MacOS 9):Adobe Acrobat 4.0:Distiller/Settings*" and for the PC the path will be "*C:\Programs\Files\Adobe\Acrobat 4.0\Distillr\Settings*."



# Appendix A

If you do not want image compression applied to your job or you are uncomfortable with lossy compression, this section will supply the facts to help you in your decision making process.

The “**Alternative Compression Tab Settings**” section provides you two alternative settings. The first, shows how to configure Distiller so your images are not compressed during the distilling process. The second, applies only lossless compression schemes to your images.

The “**Different Compression Schemes in Distiller**” section explains the various image compression options and how they work.

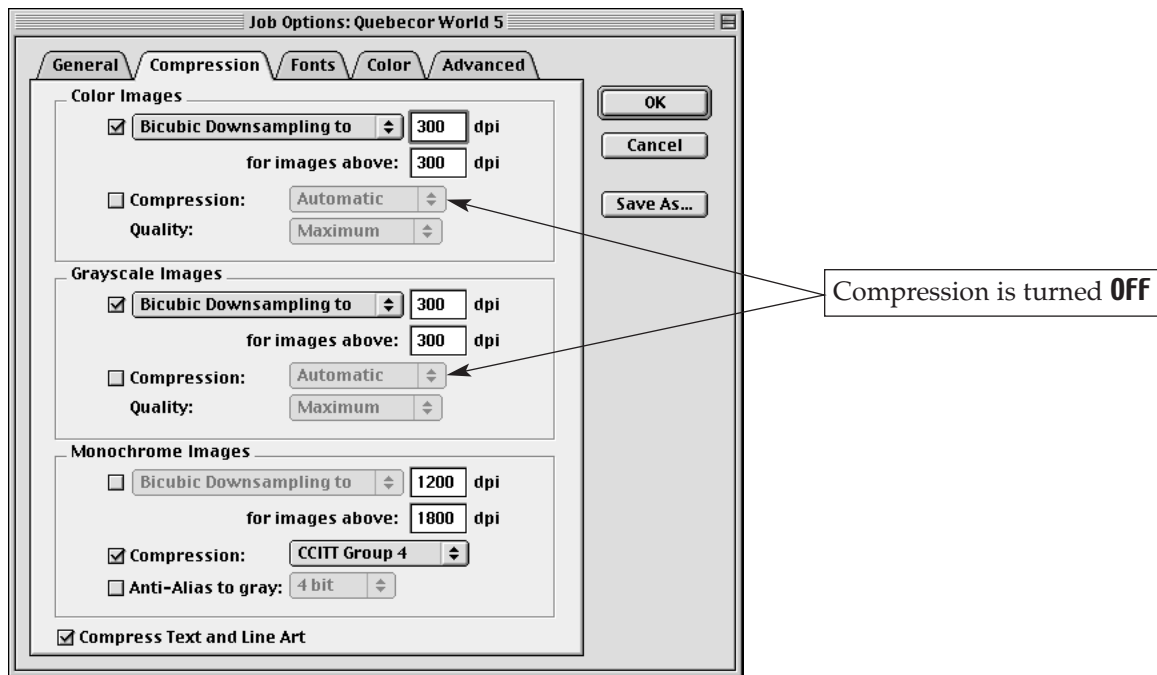
The “**Resampling Algorithms**” section explains the differences in the three algorithms and how they impact both performance and quality.

## Alternative Compression Tab Settings

The following settings demonstrate how to configure the “Compression Tab” so that no compression will be applied to your continuous tone images. Note that the Monochrome Images are still compressed, but with a lossless compression.

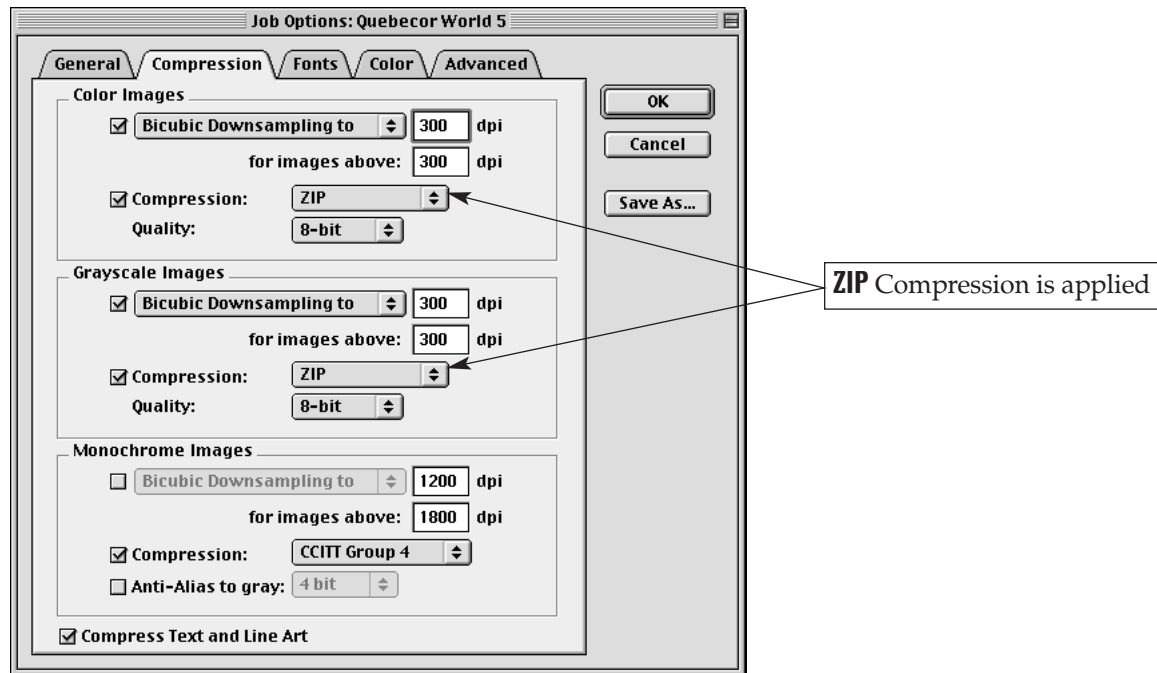
### Continuous Tone Images Without Data Compression

In the setting shown below, Downsampling was intentionally left active. If both the Compression and Downsampling were turned off, PDF files can become extremely large. Even with Downsampling on, these PDF files can be quite large and unmanageable.



## Continuous Tone Images With LossLess Data Compression

In the setting shown below, the compression has been set to **ZIP**. This is a lossless compression scheme that will not harm your image. PDF files that are distilled with these setting will be much smaller than the uncompressed images, but larger than a JPEG (lossy) compressed PDF. Warning - the quality level **MUST** be set to **8-bit**. Any other setting will destroy the quality of the images. Also, Downsampling is intentionally left active.



## Different Compression Schemes in Distiller

Part of Acrobat's robust functionality is the various ways it can store an image. Among them you have the option to not compress the images, apply a lossless compression scheme, or apply various levels of lossy compression to continuous tone images. Monochrome images have an entirely different set of available compression schemes. This section provides a brief explanation of the different compression schemes. If you do not feel comfortable with the compressions suggested in this guide, this section will help.

### For Color Bitmap and Grayscale Images

**None** - this setting implies that image(s) will not be stored with any type of compression. If individual images were compressed before the distilling process they will be decompressed during the distilling process.

**ZIP** - a lossless compression method that works well with large areas of single colors. Screenshots are a good example of images that compress well using ZIP. When this compression method is applied to image(s), no data is lost and they are not altered in any way. You **must** use **8-bit Quality** when using ZIP. If you select 4-bit Quality, data will be lost which reduces the quality of your images. The "busier" the image, the less compression will be applied.

**JPEG** (Joint Photographic Experts Group) - a lossy compression. It works well with continuous tone images and should be used in moderation. When images are stored with JPEG compression, data is removed and this may

reduce image quality. The greater the compression value, the more data that is removed and the smaller the file size becomes. JPEG uses very complicated compression algorithms to minimize visual quality loss. Acrobat supplies five levels of quality and it is recommended that you use the “**Maximum Quality**” setting to maintain image quality.

**Automatic** - this setting is not a compression method. When “Automatic” is chosen, it allows Acrobat Distiller to analyze the image and determine which compression scheme (ZIP or JPEG) would best suit the image.

## For Monochrome Images

**CCITT G3** (International Coordinating Committee for Telephony and Telegraph - Group 3) - a black and white compression method originally developed for Fax machines. It is a lossless compression scheme that only works with 1-bit images. G3 is used by most fax machines and compresses images one row at a time.

**CCITT G4** (International Coordinating Committee for Telephony and Telegraph - Group 4) - another black and white compression scheme for 1-bit images. It is also a lossless compression scheme that will not alter the quality of your images. G4 is more of a general-purpose compression scheme that creates smaller file sizes than G3.

**ZIP** - refer to this definition in the previous “**For Color Bitmap and Grayscale Images**” section.

**Run-Length** - a lossless compression that produces the best results for images that contain large areas of black and white. This compression scheme is rarely used for PDF.

## Resampling Algorithms

The term resampling refers to the changing of the pixel dimensions of an image. Images are resampled to achieve the proper ppi (pixels per inch) to the lpi (lines per inch) ratio. The ratio of ppi to lpi is doubled. For a 150 lpi output, you need a 300 dpi image. The Distiller application will not increase the number of pixels in an image which is referred to as “upsampling.”

Distiller has the optional ability to downsample images as specified by application settings. When an image is downsampled, data (pixels) are deleted from the image. To downsample an image, Distiller looks at the surrounding pixels and calculates a new pixel. The “*interpolation method*” that is specified, determines how the pixels are added. Distiller has three different downsampling routines:

**Subsampling** - the application looks at a sample area of an image and chooses a pixel in the center. It then replaces the entire area with that pixel at a specified resolution. Subsampling is the fastest sampling method but the resulting images that are less smooth and continuous. - This form of sampling IS NOT recommended.

**Average Downsampling** - the application looks at a sampled area of an image and averages the pixels. It then replaces the entire area with the average pixel color at a specified resolution. Average downsampling is the middle of the road option when it comes to both sampling time and quality. - This form of sampling IS NOT recommended.

**Bicubic Downsampling** - the application looks at a sampled area of an image and uses a weighted average to determine pixel color. It yields better results than the simple averaging method of downsampling. Bicubic is the slowest but most precise method of downsampling, resulting in the smoothest tonal gradations. - This form of sampling IS recommended.

# The Job Options File

**Warning**, do not read this section unless you want to manually edit PostScript Commands. Read this section if you determine that this is the only way to modify Distiller settings critical to your workflow.

If you are using **Acrobat 5.0**, there is typically no need to modify your “Job Options” file. **Acrobat 4.0** users may want to edit the “Job Options file to change the default downsampling threshold from 1.5 to 1.0.

Never modify the **eBook.joboptions**, **Press.joboptions**, **Print.joboptions**, or **Screen.joboptions** (Acrobat 5.0) or the **ScreenOptimized.joboptions**, **PrintOptimized.joboptions**, or **PressOptimized.joboptions** files (Acrobat 4.0). Keep these job options “files” locked on Macs, and read only on PCs.

Where to find them:

Mac Acrobat 5.0 - Macintosh HD:Applications:Adobe Acrobat 5.0:Distiller:Settings  
Acrobat 4.0 - Macintosh HD:Applications:Adobe Acrobat 4.0:Distiller:Settings

PC Acrobat 5.0 - C:\Program Files\Adobe\Acrobat 5.0\Distillr\Settings  
Acrobat 4.0 - C:\Program Files\Adobe\Acrobat 4.0\Distillr\Settings

What tools do you need to modify them? Any ASCII text editor can open and edit a joboptions file.

There is a PDF on your computer called distparm.pdf. This outlines in detail all of the parameters allowable in a JobOptions file. It is located:

Mac Acrobat 5.0 - Macintosh HD:Applications:Acrobat 5.0:Help:ENU  
Acrobat 4.0 - Macintosh HD:Applications:Acrobat 4.0:Help:ENU

PC Acrobat 5.0 - C:\Program Files\Adobe\Acrobat 5.0\Help\ENU  
Acrobat 4.0 - C:\Program Files\Adobe\Acrobat 4.0\Help\ENU

## Inside the “PressOptimized.joboptions” File

The actual Job Options commands are in the left column and an explanation of the comments are in the right column. The location of each command in the user interface is identified, and if the setting is not available in the user interface, it is specified as such. There are several extra carriage returns to aid in reading the code. Keep in mind that the Acrobat 4.0 *PressOptimized.joboptions* is used only as an example, you may want to create your own job options file based on recommendations discussed earlier and then refine those settings with a text editor.

<<

/ASCII85EncodePages false

*Save as ASCII format.*

/AutoPositionEPSFiles true

*Resize EPS Page And Center Artwork.*

/AutoRotatePages /None

*This is not available in the Acrobat 4.0 user interface. This is also one of the reasons to start with pressoptimized.joboptions when creating a joboptions file for use in prepress. Any setting other than “/None” can cause Distiller to rotate pages based on the predominate text orientation. This can create imposition problems.*

<code>/Binding /Left</code>	<i>Binding to Left Side of Document.</i>
<code>/CalGrayProfile (Adobe Gray - 20% Dot Gain)</code> <code>/CalRGBProfile (sRGB IEC61966-2.1)</code> <code>/CalCMYKProfile (Adobe CMYK)</code> <code>/sRGBProfile (sRGB IEC61966-2.1)</code>	<i>If Leave Color Unchanged is checked on the color tab, these are ignored.</i>
<code>/CannotEmbedFontPolicy /Error</code>	<i>When Embedding Fails. Any other setting can result in font substitutions based on data contained in SuperATM.db or Distsadb.dos (depending on platform).</i>
<code>/CompatibilityLevel 1.3</code>	<i>PDF Compatibility Level.</i>
<code>/CompressPages true</code>	<i>Compress Text and Line Art.</i>
<code>/ConvertImagesToIndexed true</code>	<i>This is not available in the user interface. It converts images to indexed color if 256 colors or less are used. The result is a smaller file. This also affects Distiller's overall performance when enabled. Neither setting will affect the usability of the PDF.</i>
<code>/CreateJobTicket true</code>	<i>Save Portable Job Ticket Inside PDF File.</i>
<code>/DefaultRenderingIntent /Default</code>	<i>This is not available in the user interface. "/Default" means that distiller should use the value of the PostScript graphics state command Rendering Intent. Changing this value is not recommended. Typically, RelativeColormetric is the default.</i>
<code>/DetectBlends true</code>	<i>This is not available in the user interface. If compatibility mode is set to Acrobat 4.0, then blends are converted to smooth shadings. This is a new feature in PostScript 3 and is desirable.</i>
<code>/ColorConversionStrategy /LeaveColorUnchanged</code>	<i>Leave Color Unchanged.</i>
<code>/DoThumbnails true</code>	<i>Generate Thumbnails.</i>
<code>/EmbedAllFonts true</code>	<i>Embed All Fonts.</i>
<code>/EmitDSCWarnings false</code>	<i>Log DSC Warnings. If Process DSC is checked.</i>
<code>/EndPage -1</code>	<i>This is not available in the user interface. Do not change this value because it could result in lost pages.</i>
<code>/ImageMemory 524288</code>	<i>This is not available in the user interface. This is a read only value used by distiller. It is a kind of virtual memory setting.</i>
<code>/LockDistillerParams false</code>	<i>Allow PostScript to Override Job Options.</i>

<code>/MaxSubsetPct 100</code>	<i>Sets Subset Embedded Fonts threshold value.</i>
<code>/Optimize true</code>	<i>Optimize PDF for web.</i>
<code>/OPM 1</code>	<i>This is not available in the user interface. It defines the overprint mode strategy. Do not change this setting without fully understanding it's use. This is a new feature in Acrobat 4.0</i>
<code>/ParseDSCComments true</code>	<i>Process DSC.</i>
<code>/ParseDSCCommentsForDocInfo true</code>	<i>Preserve Document Info from DSC.</i>
<code>/PreserveCopyPage true</code>	<i>Preserve Level 2 copypage Semantics.</i>
<code>/PreserveEPSInfo true</code>	<i>Preserve EPS Info from DSC.</i>
<code>/PreserveHalftoneInfo false</code>	<i>Do not Preserve Halftone Information.</i>
<code>/PreserveOPIComments true</code>	<i>Preserve OPI Comments.</i>
<code>/PreserveOverprintSettings true</code>	<i>Preserve Overprint Settings.</i>
<code>/StartPage 1</code>	<i>This is not available in the Acrobat 4.0 user interface. Do not change this value because it could result in lost pages.</i>
<code>/SubsetFonts true</code>	<i>Subset All Embedded Fonts.</i>
<code>/TransferFunctionInfo /Preserve</code>	<i>Preserve Transfer Functions.</i>
<code>/UCRandBGInfo /Preserve</code>	<i>Preserve Under Color Removal and Black Generation.</i>
<code>/UsePrologue false</code>	<i>Do not use Prologue.ps and Epilogue.ps files.</i>
<code>/AlwaysEmbed [ true ]</code>	<i>Fonts to Always Embed.</i>
<code>/NeverEmbed [ true ]</code>	<i>Fonts to Never Embed.</i>
<code>/AntiAliasColorImages false</code>	<i>This is not available in the user interface. Changing this value could give unexpected results.</i>
<code>/DownsampleColorImages true</code>	<i>Downsample Color Bitmap Images.</i>
<code>/ColorImageDownsampleType /Bicubic</code>	<i>Use Bicubic Downsampling algorithm for Color Images.</i>
<code>/ColorImageResolution 300</code>	<i>Color Image Bicubic Downsampling value is set to 300.</i>
<code>/ColorImageDepth -1</code>	<i>This is not available in the user interface. Changing this value could give unexpected results. -1 means leave the image as is.</i>
<code>/ColorImageDownsampleThreshold 1.50</code>	<i>Color Image Downsampling Threshold value is set to</i>

```

/EncodeColorImages true

/ColorImageFilter /DCTEncode

/AutoFilterColorImages true

/ColorACSImageDict <<
  /QFactor 0.25
  /HSamples [1 1 1 1] /VSamples [1 1 1 1]
>>

/AntiAliasGrayImages false

/DownsampleGrayImages true

/GrayImageDownsampleType /Bicubic

/GrayImageResolution 300

/GrayImageDepth -1

/GrayImageDownsampleThreshold 1.50

/EncodeGrayImages true

/GrayImageFilter /DCTEncode

/AutoFilterGrayImages true

/GrayACSImageDict <<
  /QFactor 0.25
  /HSamples [1 1 1 1] /VSamples [1 1 1 1]
>>

/AntiAliasMonoImages false

/DownsampleMonoImages true

```

1.5. This setting is not available in the Acrobat 4.0 user interface. Changing this value to 1.0 would result in the smallest PDF possible. However, distiller performance may suffer.

Color Images Compression is on.

Color Image Compression filter is JPEG. This is only used if Automatic is off and Compress is on.

Color Image Compression is set to Automatic.

Color Image Compression Quality is set to .25 (Maximum Quality). For our purposes, the QFactor is the significant value here. Changing the value to 0.10 will result in less compression, but quality will not suffer as much.

This is not available in the user interface. Changing this value could give unexpected results.

Downsample Grayscale Bitmap Images.

Use Bicubic Downsampling for Grayscale Images.

Grayscale Bicubic Downsampling value is 300 dpi.

This is not available in the user interface. Changing this value could give unexpected results. -1 means leave the image as is.

Grayscale Downsampling Threshold is set to 1.5. This setting is not available in the Acrobat 4.0 user interface. Changing this value to 1.0 results in the smallest PDF possible. However, distiller performance may suffer.

Grayscale Images Compression is on.

Grayscale Image Compression filter is JPEG. This is only used if Automatic is off and Compress is on.

Grayscale Image Compression is set to Automatic.

Grayscale Image Compression Quality is set to .25 (Maximum Quality). For our purposes, the QFactor is the significant value here. Changing the value to 0.10 will result in less compression but quality will not suffer as much.

Do not Anti-Alias Monochrome Image. This is not available in the Acrobat 4.0 user interface.

Compression, Monochrome Bitmap Images, Bicubic Downsampling.

`/MonoImageDownsampleType /Bicubic`

*Use Bicubic Downsampling for Monochrome Images.*

`/MonoImageResolution 1200`

*Monochrome Downsampling value is set to 1200 dpi.*

`/MonoImageDepth -1`

*This is not available in the user interface. Changing this value could give unexpected results. -1 means leave the image as is.*

`/MonoImageDownsampleThreshold 1.50`

*Monochrome Downsampling Threshold is set to 1.5. This setting is not available in the Acrobat 4.0 user interface. Changing this value to 1.0 would result in the smallest PDF possible. However, distiller performance may suffer.*

`/EncodeMonoImages true`

*Monochrome Image Compression is on*

`/MonoImageFilter /CCITTFaxEncode`

*Use CCITT G4 compression for Monochrome Images.*

`/MonoImageDict <<`

`/K -1`

`>>`

*Compression, Monochrome Bitmap Images, Quality. For our purposes the value K is the significant parameter. The value is set to -1 indicating the use of Group 4.*

`>> setdistillerparams`

*Command executes all of the commands listed above.*

`<<`

`/HWResolution [2400 2400]`

*Sets vector Resolution to 2400 dpi.*

`/PageSize [612.000 792.000]`

*Sets Default Page Size to 612 points by 792 points (8.5" by 11"). Always use points for the unit of measurement when manually editing.*

`>> setpagedevice`

*Execute 612 pt. by 792 pt. as the Default Page Size. This setting is only used when PostScript file does not contain a setpagedevice parameter.*

# PostScript Printer Description (PPD)

People often question which PPD to use when they configure their computer to create PostScript or PDF files. This question is really two questions in one. The driver is a piece of software that helps to create PostScript files. When the print command is issued, the driver makes an inquiry to the PPD file. The PPD identifies the printer and its capabilities; it then tells the driver which printer options may be installed; these options are then made available to the user. For high resolution imagesetting/platesetting, you need to use a relatively generic PPD that is high resolution and works in the CMYK color space. As far as PPD's are concerned, spot colors are included in the CMYK color space. You will not need a PPD that defines envelope trays or collated mailboxes.

The **AdobePS PostScript Driver** is recommended for use with this guide and the latest version can be downloaded from [www.adobe.com/support/downloads/main.html](http://www.adobe.com/support/downloads/main.html). There you can find PostScript drivers for both the Macintosh and Windows platforms.

When creating PDF's, use the Adobe supplied **Acrobat Distiller PPD**. If you are using Windows, there is no way to use this PPD with the built in 'Add Printer' function in the control panel. You need to download the PS driver from Adobe. In the Macintosh environment, you may use this PPD with the LaserWriter PostScript Driver, but it is recommend to stay with Adobe's.

The primary needs in a PPD suitable for high resolution imaging are:

**Color Space**  
**PostScript Level**  
**Resolution**  
**Fonts**  
**Page Size**  
**Custom Page Sizes**

## A Look Inside the Acrobat Distiller PPD

The following table describes the components of the **Acrobat Distiller PPD**. There are settings inside a PPD that can be changed to make your job easier, but it is best to edit PPD's with caution. The Acrobat Distiller PPD used through out this manual has not been edited in any way.

Use the search function in your text editor to find the lines in the left column. In the following table, many lines have been deleted from the PPD, allowing you to focus on specific areas of particular interest. Syntax to the right of a "%" sign (same line) is programmer's comment and will not be read by a PostScript Interpreter:

*PPD-Adobe: "4.3"	<i>PPD Version number.</i>
*% PPD file last updated 5 December 2000	<i>Comment stating when PPD was last updated.</i>
*PCFileName: "ADIST5.PPD"	<i>Provides information to the various PostScript Drivers.</i>
*Manufacturer: "Adobe"	
*Product: "(Acrobat Distiller)"	
*PSVersion: "(3011.104) 0"	
*ModelName: "Acrobat Distiller"	
*ShortNickName: "Acrobat Distiller"	
*NickName: "Acrobat Distiller 3011.104"	
*% PPD for Acrobat Distiller 5, Roman	

\*% ==== Device Capabilities =====

\*ColorDevice: True

*Informs PostScript Driver that output device is color.*

\*DefaultColorSpace: CMYK

*States the Default Color Space.*

\*LanguageLevel: "3"

*Defines the maximum usable PostScript Language.*

\*VariablePaperSize: True

*Output device supports variable (custom) paper sizes.*

\*TTRasterizer: Type42

\*?TTRasterizer: "(Type42) ="

*This line tells the PostScript Driver that the machine supports TrueType fonts (Type42) and it is OK to send TrueType fonts to the RIP.*

*If the line would read:*

\*TTRasterizer: None

\*?TTRasterizer: "(Type42) ="

*This informs the PostScript Driver that the machine DOES NOT support TrueType fonts (Type42). If TrueType fonts are used, the PostScript driver will automatically translate the TrueType fonts to PostScript Type 1 fonts.*

\*% Multiple Resolution support for Distiller 3.0 =

*Supplies the Driver with all available output resolutions in a "pop-down" window format. 1200 dpi is the default resolution. 72 dpi and 2400 dpi are just two samples of the many resolutions available.*

\*OpenUI \*Resolution: PickOne

\*OrderDependency: 50 AnySetup \*Resolution

\*DefaultResolution: 1200dpi

\*Resolution 72dpi:

"1 dict dup /HWResolution [72 72] put setpagedevice"

\*Resolution 2400dpi:

"1 dict dup /HWResolution [2400 2400] put setpagedevice"

\*?Resolution: "

save

currentpagedevice /HWResolution get

0 get

( ) cvs print (dpi) = flush

restore"

\*End

\*CloseUI: \*Resolution

\*ResScreenFreq 2400dpi: "60.0"

*Sample: Resolution Screen Frequencies available.*

\*% Color Separation Information =====

\*DefaultColorSep: ProcessBlack.71lpi.600dpi/71 lpi / 600 dpi

*Default color separation is Black output at 71 lpi / 600 dpi. In general, most RIP's overwrite this setting.*

\*% GuaranteedMaxSeparations =====

\*DefaultGuaranteedMaxSeparations: 8

\*GuaranteedMaxSeparations 8: ""

*Defines the maximum number of color separations allowed.*

\*% Font Information =====

\*% Base fonts

\*DefaultFont: Courier

*Defines the default font.*

```

*Font Courier: Standard "(004.000)" Standard ROM   Informs PostScript Driver of the fonts that are resident in
*Font Courier-Bold: Standard "(004.000)" Standard ROM ROM (Read Only Memory). Before a font is downloaded, the
*Font Courier-BoldOblique:                               PostScript Driver checks here for fonts resident on the Printer.
    Standard "(004.000)" Standard ROM                By deleting everything but the Courier default font, you force
*Font Courier-Oblique:                                   the PostScript Driver to download all fonts every time. The
    Standard "(004.000)" Standard ROM                fonts displayed here are the base 13 fonts.
*Font Symbol: Special "(001.008)" Special ROM
*Font ZapfDingbats: Special "(002.000)" Special ROM

*% End of PPD file for Acrobat Distiller           This comment informs the programmer that the PPD has ended.

```

This section is intended to be informative regarding the types of printer controls that reside in a PPD. If you decide to edit this, or any other PPD, be sure to rename the actual PPD and the PostScript Driver file names inside the PPD. If you edit a PPD and decide to rename your file 3CMYK.PPD, it should look like this:

```

*PCFileName: "3CMYK.PPD"
*ModelName: "3CMYK.PPD"
*ShortNickName: "3CMYK.PPD"
*NickName: "3CMYK.PPD"

```

PPD's, like joboption files, are platform independent. Therefore, you can use the exact same file for both PC and Mac applications. If DOS icons on Mac files confuse your user, here is a cross-reference list of file types and creators:

	<u>File Type</u>	<u>Creator</u>
Job Options File	'JOpt'	'DSTL'
PPD	'TEXT'	<i>leave blank</i>
PostScript File	'TEXT'	'rBDG'
PDF	'PDF '	'CARO'

Note: There is a space after PDF for the file type. Carousel was the original code name for Acrobat, that is were CARO comes from.

# PDF Resources

## PDF Creation

Adobe Distiller & Distiller Server	www.adobe.com
Apogee Create	www.agfa.com
Jaws PDF Creator	www.globalgraphics.com
Synapse Pro	www.creoscitex.com

## Distiller Plug-ins

Prinergy Distiller Plug-in	www.prinergy.com
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## Colorized TIFF XTensions for Quark

Prinergy Print XT	www.prinergy.com
Agfa CTIFF	www.agfa.com

## Independent Resources

DDAP	www.ddap.org
PDF Information	www.pdfzone.com
PDF Information	www.planetpdf.com
PDF Evangelist Michael Jahn's Personal Site	www.jahn.org
PDF/X Information	www.npes.org

## Preflight Software

pdfInspektor2	www.callas.de
Preflight Online	www.extensis.com
PitStop Professional and PitStop Server	www.enfocus.com
FlightCheck	www.markzware.com

## Reference Books

Adobe Acrobat 5 PDF Bible	Author: Ted Padova
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# History of How2PDF Guidelines

- Spring, 1997  
Document was created by book division for Acrobat 3.0.
- Spring, 2000  
Document was updated to include Acrobat 4.0.
- October 23, 2000  
Document updated to include all divisions of Quebecor World.
- September 2001  
Document was redesigned and updated to include Acrobat 5.0.
- October 2001  
Minor corrections to September 2001 release

## Disclaimer

Adobe's Acrobat application is a very robust software package with numerous capabilities and options. These guidelines explain how to create a typical PDF for print. Some of these settings may not be appropriate for your use. Always **consult** your printer and **test** before **going live** with a job.

