

Creating PDF files for Offset Printing

Adobe Acrobat/Reader/Distiller™

Adobe Acrobat is a suite of applications developed by Adobe for converting Postscript Print files (.ps or .prn files) into Portable Document Files (.pdf files). Acrobat PDF was developed by Adobe Systems to create a document exchange file format that is multi-platform and resource independent. The purpose of PDF is to encapsulate all the resources for a document (ie: fonts, raster & vector graphics, art/layout) into a single file that is portable across all computers.

Correctly prepared PDFs can be downloaded from the web or distributed on disk media and then viewed and printed on any computer running Acrobat Reader, which is freely available from the Adobe web site. (Goto: <http://www.adobe.com/support/downloads/main.html>)

The purpose of Distiller is twofold: The first is to convert postscript files into PDF files. The second is optimise the postscript by reducing the size of the file to the minimum required for the end purpose of the file. Distiller does this by flattening and compressing images that are embedded in the postscript file according to the setting chosen.

There are three (Default) Distiller settings that will produce the following types of PDF file:

- ScreenOptimised* - Suitable for publishing on the web and viewing on computers.
Not suitable for printing.
- PrintOptimised* - Suitable for publishing on the web and disk media.
Suitable for colour composite proofs on inkjet or laserwriter printers.
- PressOptimised* - Suitable for publishing on disk media.
Suitable for producing CMYK or Greyscale film separations for film and plates for offset printing.
(*Spot colour is not well supported in version 4.0*)

Fonts

All fonts used in the art/layout should be fully embedded in the pdf. The best way to ensure that this occurs successfully is threefold:

Firstly, use Adobe Type 1 fonts rather than TrueType fonts if possible. Some TrueTypes are subject to licensing restrictions which prevent them from being downloaded successfully and some Postscript RIPs are unable to process them reliably.

Second, ensure that all the fonts used in the layout are loaded correctly on your computer. The best way to determine this is to print a proof of your art/layout to your printer. If everything prints o.k. this is a good (although not completely definitive since many printers have their own fonts installed in their memory) indication that all your fonts are loaded correctly. When you print your art/layout to a postscript file ensure that any options you have in your application and printer driver software to “download all fonts” or ”include fonts” is enabled.

Third, once your postscript file has been created, convert it to a .pdf (portable document file) using Adobe Acrobat Distiller using the “Press Optimised” setting. This will embed all fonts using Adobe’s Multiple Master Font technology. If Distiller reports problems with embedding a particular font, it is recommended that you change this font in the layout and re-print your postscript file.

Raster/Vector graphics

In order for the final PDF file to be viable for print work, the linked or embedded raster or vector graphic files must be prepared correctly prior to writing postscript and converting to PDF.

Raster graphics are scanned or captured images saved as .eps or .tif files by applications such as Adobe Photoshop. Any other file formats are not recommended for print work.

There are four main colour modes used in graphics files for printing. CMYK, Duotone, Greyscale, and Bitmap. Duotone files are used in spot colour separation which is not supported in Acrobat PDF files and should not be used. Files saved in RGB colour mode are not acceptable. RGB colour does not separate correctly in a CMYK separation.

The resolution of CMYK and Greyscale files used in art/layouts should be between 150dpi-300dpi. Bitmaps used in art/layouts should be between 600dpi-1200dpi.

Any alpha channels or unused paths should be removed from Photoshop files.

Vector graphics are files created in drawing applications such as Adobe Illustrator and saved as .eps files. Any other file formats are not recommended for print work.

Vector .eps files can be saved in CMYK or Greyscale colour modes. RGB colour is not acceptable. Any fonts used in vector .eps files should be converted to outlines. It is recommended that the attributes or properties of vector line work be set to 2540dpi to ensure full resolution at output stage.

Art/Layout - Printing Postscript to file

Once you have ensured that any graphics linked to your art/layout parent file (eg: QuarkXpress, PageMaker, etc) conform to the above guidelines you should re-import or re-link them to your art/layout application. You should also remove any unused colours and ensure any colours used are set to process colour mode

Any application-based type styles that convert roman or regular fonts to italic or bold should be removed as some RIPs do not interpret these well and will produce unpredictable results. Please only use the actual italic or bold forms of the font in question,

Any large black backgrounds should be changed to Rich Blacks - usually defined as 99% Black and 40% Cyan.

Multiple page documents are o.k., Distiller will convert these to multiple-page PDFs.

The next step is to print your art/layout to file as postscript. One can think of this step as akin to printing the file to a colour inkjet or laser printer with bleeds and trims, except rather than downloading the postscript file to a printer on your network, you are writing it down a directory on your hard drive.

Rather than outline a series of steps in a particular application, I have attempted to outline a set of generalised settings that should be chosen when setting up to print postscript to file. (*See page 3*)

Print settings for writing Acrobat - Ready Postscript files

<i>Trim Marks/Registration marks</i> -	On
<i>Bleed</i> -	On (Should be at least 3mm but ideally 5mm beyond the edges of the page.)
<i>Page Tiling</i> -	Off
<i>Spreads</i> -	Off
<i>Printer Description/Type</i> -	Acrobat Distiller/Acrobat Distiller 3.0
<i>Paper Size</i> -	Should be larger than the trimmed size of your document with trims and bleeds (eg: If your finished size is A4, A3 will do. However, the Distiller Printer Description will allow you to define a custom page size to suit unusual formats.)
<i>Reduce/Enlarge</i> -	100%
<i>Page Positioning</i> -	Centred
<i>Orientation</i> -	Portrait
<i>Print Colours</i> -	CMYK or Greyscale (Choose one of the two to suit the art/layout.)
<i>Halftoning</i> -	Conventional
<i>Resolution</i> -	1200-2540dpi
<i>Screening/Frequency</i> -	150lpi
<i>Page Flip</i> -	None
<i>Negative Print</i> -	Off
<i>Output</i> -	Normal
<i>Data</i> -	Binary
<i>OPI</i> -	Include Images
<i>Overprint EPS Black</i> -	On (Off if the areas of Black are backgrounds)
<i>Full Resolution Tiff Output</i> -	Off
<i>Format</i> -	Postscript Job
<i>Postscript Level</i> -	1,2 or 1 & 2
<i>Data Format</i> -	(Binary if MacOs, ASCII if Windows)
<i>Font Inclusion/Download Fonts</i> -	On or All

Once the postscript file has been written to disk, Launch Adobe Distiller, choose the "PressOptimised" setting and open the postscript file. Watch carefully for any error messages, especially relating to the embedding of fonts. Distiller will prompt you choose a directory where you would like the PDF saved.

When Distiller has finished saving the PDF file, open it in Acrobat and check that it looks o.k. It should look something like this. (See Figure 1)

As a final check, it would be a good idea to print the PDF to a black and white or colour printer to check that all is well.

If the size of the file is lower than 2Mb in size you may wish to email it as attachment to us, or if it is larger you should send on a 100Mb Zip disk, or better still on CD.

Figure 1.

