



**African Books Collective  
PDF File Production Manual**

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Print-on-Demand Production  
July 2006**

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## Introduction

One role of ABC, and the purpose of this manual, is to provide the necessary technical knowledge needed to make use of the Print-on-Demand and Portable Data Format (PDF) technologies, which some publishers may not possess.

ABC will provide the missing link in the Publisher to Print-on-Demand chain, and also enable the publisher to reach a level of knowledge and technology to become self reliant in the production of PDF files for Print-on-Demand.

We hope to make using PDF and producing to the Print-on-Demand printer specifications and delivery terms, a simple and cost effective method of printing books. ABC will act as a quality control and delivery agent for the publisher, ensuring proper delivery to the Print-on-Demand provider.

By supplying ABC with PDF files, the publisher to print ready time is considerably reduced. This is therefore the desired file format.

## What is PDF?

Adobe® Portable Document Format (PDF) is the open standard for electronic document distribution worldwide. Adobe PDF is a universal file format that includes all fonts, formatting, graphics, and colour of any source document, regardless of the application and platform used to create it. Adobe PDF files are compact and can be shared, viewed, navigated, and printed exactly as intended by anyone with the freely available Adobe Acrobat® Reader® software. You can convert any document to Adobe PDF using Adobe Acrobat Distiller.

Adobe PDF files can be published and distributed anywhere: in print, attached to e-mail, on corporate servers, posted on Web sites, or on CD-ROM. Adobe Acrobat Reader is a freely available software package for viewing and printing PDF files.

Adobe Acrobat® is a complete package for creating, indexing and editing advanced PDF documents which includes Acrobat® and Distiller®.

Adobe Distiller® converts all printable media to PDF format and is included with Adobe Acrobat®, Adobe PageMaker® & Adobe InDesign® DTP software. Third-Party PDF creators can be obtained but Lightning Source recommends Adobe products for compatibility reasons.



## 1.0 Hardware and Software Requirements for Windows

- Intel® Pentium® processor.
- Microsoft® Windows® 95 OSR 2.0, Windows 98, Windows ME, Windows NT® 4.0 with Service Pack 5 or 6, Windows 2000®, or Windows XP®.
- 32 MB of RAM (with Windows 95, 64 MB of RAM with Windows 98 and upwards).
- 150 MB of available hard-disk space.
- CD-ROM drive.
- Internet Explorer 4.0.1 or later is required for Windows NT users.
- Adobe Distiller (part of the Acrobat package but also comes with Adobe PageMaker).
- PostScript printer drivers installed.
- QuarkXpress, PageMaker, InDesign or Word installed.



## Installing Adobe Acrobat (including Distiller)

Initiate the installation by double clicking the setup.exe file on the Acrobat CD-Rom.

Allow Acrobat to install to its default folder. You may have to restart your system after installing.

Create a new folder on your desktop called 'Distiller'. Start Distiller and select 'Settings – Watched folders' Select 'ADD' then browse to the Distiller folder on your desktop. After selecting the folder, click the 'OK' button twice until the main window appears.

Distiller automatically creates an 'In' and an 'Out' folder within the selected folder. The 'In' folder is where you will print your PostScript files (Print to file). The 'Out' folder is where Distiller will place the PDF file and the original postscript file that was compiled.



## Print-on-Demand trim sizes and requirements.

Many ABC publishers already create PDF files from their DTP software for print. The difference with the Print-on-Demand printing method is that there are only a few formats to choose from.

The ABC project partner, Lightning Source, provides the following formats:

- \* 5 x 8” (203 x 127mm) Perfect Bound
- \* 5.5 x 8.5” (216 x 140mm) Perfect Bound
- \* 6 x 9” (229 x 152mm) Perfect Bound
- \* 6.14 x 9.21” (234 x 156mm) Perfect Bound
- \* 6.69 x 9.61” (244 x 170 mm) Perfect Bound
- \* 7 x 10” (254 x 178 mm) Perfect Bound
- \* 7.44 x 9.69” (246 x 189mm) Perfect Bound
- \* 7.5 x 9.25” (235 x 191mm) Perfect Bound
- \* 8.25 x 11” (280 x 210mm) Perfect Bound
- \* 8.268 x 11.693 “ (297 x 210 mm) Perfect Bound

Lighting Source recommends 0.5 inches white-space on all sides of the text block, i.e. for a 5 x 8” book, the text block ‘should’ be 4 x 7”. In the case of a 3 x 7” text block for example there would be an ½ inch ‘more’ white-space than necessary either side of the text block as the minimum trim size is 5 x 8”, but this is acceptable. The same rule applies for a wider text block. The result would be more white-space at the top and bottom.

Text block Postscript settings for the various DTP software can be found at <https://www.lightningsource.com/ResourcesBookDesigner.htm> under the “Prepare Your Book” heading.



## Settings for Acrobat Distiller for PDF Production

This process enables the creation of a PDF file.

### General Tab

Compatibility: Acrobat 5.0 (PDF 1.4)

- Optimize PDF: selected
- Embed Thumbnails: not selected
- Auto Rotate Pages: not selected

Page Range: All

- Binding: Left
- Resolution: 1200 dpi

Default Page Size:

- Width: 8.5" Units: Inches
- Height: 11"

### Compression

Color Images

- Bicubic Downsampling to: 300 dpi...selected
- Compression: Automatic...selected
- Quality: High

Grayscale Images

- Bicubic Downsampling to: 300 dpi...selected
- Compression: Automatic...selected
- Quality: High

Monochrome Images

- Bicubic Downsampling to: 1200 dpi... selected
- Compression: CCITT Group 4...selected
- Anti-Alias to gray: not active
- Compress Text and Line Art: selected

Fonts

- Embed All Fonts: selected
- Subset All Embedded Fonts Below: 100%...selected
- When Embedding Fails: Warn and Continue
- Embedding: Base 14 Fonts



## Colour

### Adobe Color Settings:

- Settings File: None
- Color Management Policies
  - Tag Everything for Color Management
  - Intent: Default
- Working Spaces
  - Gray: None
  - RGB: sRGBIEC61966-2.1
  - CMYK: US Web Coated (SWOP) v2

### Device-Dependent Data:

- Preserve Overprint Settings: selected
- Preserve Under Color Removal and Black Generation Settings: selected
- “Preserve” Transfer Functions
  - Preserve Halftone Information: not selected

## Advanced

### Options

- Use Prologue.ps and Epilogue.ps: not selected
- Allow PostScript File To Override Job Options: selected
- Preserve Level 2 copypage Semantics: selected
- Save Portable Job Ticket Inside PDF File: selected
- Illustrator Overprint Mode: selected
- Convert gradients to smooth shades: selected

### Document Structuring Conventions (DSC)

- Process DSC: selected
- Log DSC Warning: not selected
- Resize Page and Center Artwork For EPS Files: selected
- Preserve EPS Info from DSC: selected
- Preserve OPI Comments: selected
- Preserve Document Info from DSC: selected

## Do you have “Embedded Fonts”?

The best way to determine whether or not the fonts have been embedded properly is to open the PDF file in Acrobat or Acrobat Reader and scroll through the document (if there are multiple pages). Select “File” - “Document Info.” and then “Font Info”. Under “Used fonts”, the list should say “Embedded or Embedded Subset” this is great. If there is a font name instead this font has been replaced and was not embedded correctly and the file is not good for postscript printing.



## Print Quality and Guidelines

### Images

Internal images should be scanned at 300dpi and converted to grey scale before adding to text block layouts. This is optional to a degree but will speed up the production process. PDFs will have to be reproduced at ABC to convert colour to grayscale which can take more time than ensuring this step is done during the layout process.

### Jpg Compression (see Delivery of PDF files on page 9, §4)

Using .jpg images should be avoided during layout of text blocks as these are generally lower in quality than .tif or .bmp. Jpg compression causes smaller picture blocks to be grouped together, saving on file size but sacrificing picture quality. BMP or bit map files are RGB colours only and tif's can be either RGB or CMYK. If jpg cannot be avoided, they must be of a high quality setting.

Covers should always be generated using CMYK or converted to CMYK as this is the colour process used to print the on-demand jackets at Lightning Source. Sending covers in tif or bmp format should be avoided as their file size will be too large.

Instead, save as a jpg using a high quality setting. As an example, a tif file of 35Mb converted to RGB then saved as a jpg at setting 8 (high) gives a jpg file of 4.8Mb. A file this size can be sent easily attached to an e-mail. If each element of the cover is scanned separately (front, spine and back cover), these can be sent attached to 3 individual e-mails which increases the probability of the cover arriving at ABC.

### E-mail Attachments

Generally, the rule when sending attachments to e-mails is no larger than 10MB. The reasoning behind this is that some routers and e-mail servers don't allow larger files for traffic reduction reasons.



## Font Embedding

Font embedding is the reason a majority of PDF's fail during the first production attempt. Lightning Source do not store any fonts as replacing of font's during the conversion to postscript for printing can cause re-flow problems due to line and letter spacing differences in the various versions of the same font types.

Flawless and consistent font embedding is achieved with 100% success if a few distiller configuration steps are taken.

On the distiller settings 'Job Options' menu, click the font tab. Select all the fonts in the font list below the drop-down menu "Embedding". Then click the arrow >> button. They should then appear in the "Always embed" list.

Click the drop-down menu under "Embedding" and select any other locations where fonts are installed on your system and repeat with all the fonts which appear in the window below the Embedding drop-down menu. Doing this sets all the fonts on your system to embed except for those which appear with a padlock next to them. These cannot be embedded as they are protected.

Select 'Cancel Job' in the 'When Embedding Fails' drop-down menu. This will not allow pdfs to be created without fully embedded fonts. During distilling, font issues are displayed in the Distiller status window. Use this information for a guideline as to why compiling the PDF has failed.

There will be various font locations on your computer which will need setting in Distiller. These may be:

c:\winnt\fonts ('c:\windows\fonts' on older operating systems)  
c:\Program Files\Adobe\PageMaker 7.0\Extras\Fonts (or your PageMaker version folder)

There may be other locations on your system. These can be added to Distiller by selecting the Settings - Font Locations menu item. Browse to the font location on your system and click OK to select then OK again to confirm. Distiller then adds these fonts to its collection. Font embedding, as above, will then have to be repeated for this new location.



## Guidelines for PDF creation

The text block should be sized to the trim size of the book minus the border. LSUK recommend a minimum of 9.5mm (3/8") on each side, top and bottom to provide a margin of error for the cutters. In other words, if the final trim size of the book were to be 152 x 229 (6 x 9"), we would recommend that the text block be no larger than 142.9 x 219.1mm (5.625 x 8.625").

During the process of printing, the book will be automatically cropped and aligned to the trim size. In order for this process to work properly, the text blocks should be aligned exactly in the center of a 216 x 280mm page (8.5 x 11").


There are several programs that will create a PDF document, but we recommend using Adobe Distiller 4.0 or later, which comes with Adobe Acrobat and Adobe PageMaker. We recommend against using a built-in PDF-creator because of certain font embedding issues.

From your source program (Quark, PageMaker etc.) select print and choose Acrobat Distiller as your printer and select 'Print to file'. According to which source program you are printing from, your options will be different. When given the options, be sure to select the following:

Embed all fonts – if the fonts are not correctly embedded the file will either fail to print (if there is no equivalent font available) or choose what it thinks is an equivalent, but won't be and will cause all sorts of problems.

Be sure to deselect any option that would create page spreads – deactivate any options that allow 2-page layout and deselect any crop marks but allow the inclusion of any blank pages.

Select the option 'Print to File'. This will create a PostScript file. Place it in the Distiller watched 'In' folder. Start Distiller and watch the conversion to ensure no errors are displayed. The created PDF file can be found in the Distiller 'Out' folder.



## Delivery of PDF files

The easiest and cheapest way to transfer print ready files to ABC is by attaching them to e-mails. Considering some internet connections may be very slow, files will need to be compressed before sending.

This can be achieved using Distiller to create a PDF of any cover element (front, back or spine. Paste the image into your dtp software and print using the method described on page 8 of this manual, but using an A4 sized document. This document size should allow all image sizes needed for book production using the Lightning Source specifications. If the file is still too large to send, distil using 'medium' quality settings on the distiller compression tab.

A front cover of 6 x 9 inch dimensions at 300dpi, cmyk colour should compress down to about 1.5MB and be reasonably quick to send on a modem connection.

Using this method ensures jpg compression is done at the best level for print output rather than manually converting to a jpg as described on page 6.

## Glossary

Gutter - Page offset to allow for binding.

Margins - Distances from edges of the text block to page edge.

Page size - The target page size, set within DTP software (page size after trimming).

Print page size - The printed page size before trimming.

Dpi - Resolution measured in Dots Per Inch for print or screen.

FTP - The File Transfer Protocol used for transmitting complete files over the Internet.

CMYK colours - The standard printing colours Cyan, Magenta, Yellow and Key (Black)

RGB colours - Composite colours used for screen, Internet, televisions and home printing, but not for professional print processes.