Preparing

PDF files

for High Resolution

Printing Workflows.

(Version 11b)

This document has been prepared by
Universal Print Group South Africa.

Although every effort has been made to ensure that all information and settings are correct, if you have any comments that could be used to improve this document we would appreciate your feedback.

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PDF/Postscript Workflow

The modern prepress workflow is moving towards using PDF documents as a reliable method of transporting files to bureau and print shops.

What is a PDF?

PDF is the shortened arcanum for Portable Document Format. It is a very flexible and convenient file format because it is not device dependent (which means, no matter where it was originally created, it can be read on different computers that have different operating systems eg: Apple, Windows, Unix etc). It has imbedded in it all the information and data required to view it and to print it. This means that if I create a document on my computer in an application program and I have the software that allows me to create a PDF file, I can then send that PDF file to a printing company and they will be able to print the document without having to have the application program that I originally created it with. Plus they do not have to have the font sets that I used. This information gets imbedded in the document. Picture and graphic files are also embedded in the PDF file so that I can send one file which contains all the information, rather then sending application files, plus fonts, plus picture files etc.
Another benefit of using PDF files is that the information can be compressed to create smaller files. This means that they can be sent via e-mail or placed onto the internet via a web page.

Proofing: If your client is on e-mail you can e-mail them a PDF file which they can then open on their computer using a small software module (Acrobat Reader) which is freely available from various sources. When they open the PDF file, they will see a proof of their job in full colour with the correct fonts, graphics and layout etc. If they have access to a colour printer they can then print a copy of this file. This is a very convenient feature which is becoming the preferred way of working for many companies. There is no cost involved to the client as the program that allows the PDF to be viewed and printed is available free-of-charge.
For companies that have a lot of proofs and would require more sophistication, they have the option of purchasing the full version of the Acrobat program. The full version will allow the customer receiving the digital proof to mark it digitally by highlighting different elements and making comments of changes to be made etc. Exactly the way they would do if they received a physical proof. The PDF file can then be security signed, password protected by the customer and sent back to the printing company. Further updated proofs can be sent or the signed proof can be used as a signed approval to print the job.

Hopefully this has given you a better understanding of the benefits of using a PDF workflow.

BUT!! Before you get too excited and wonder why has this not been done sooner, I would also like to point out that although it is a very powerful, flexible and convenient way of working, it is very important that you know a little more about PDF workflows before you can implement it successfully in your workflow. I have heard people refer to PDF as meaning Pretty Darn Frustrating.
The important thing to know is that PDF is not exactly a new way of saving files, it was originally designed for the office environment only. And because the printers found in most offices are just black and white laser printers. The file was pretty small and did not need that much information or sophistication.
But now that PDF has evolved and is starting to be used in the Repro and Printing industry the files are actually very different and have to hold a lot more information. The reason I am telling you this is because, there are PDF files and there are PDF files. And if we just go out to our customers and say we can accept PDF files we are probably going to be in for some unpleasant

surprises and what should have been more convenient and an easier way of working, will turn into something very different. The method used to create a PDF file is very important. An example is that a PDF file created for proofing on a monitor or printing on a low resolution printer could not be used to print on a printing press. Although they would look the same on a monitor, the file for monitor proofing would be at a much lower resolution (72 dpi) as opposed to the one used to print positives or plates (300 dpi).
The success of a Postscript/PDF file is dependent on a good working relationship between companies. If the systems can be set up to create good reliable PDF files, then both parties are going to benefit from this technology.
Too often systems fail because people do not like change and especially when it comes to MY COMPUTER and the way I DO THINGS! The success of the latest Technology requires that people are willing to change the way they are doing something today. It is no different with the PDF workflow.

The following pages have been prepared to show you, our customer exactly how to create reliable Postscript/PDF files.
The reason we talk about Postscript is that a good reliable PDF that is intended for use on a high resolution output unit must be created from Postscript data. There are various products available on the market that can create PDF files without using Postscript data or they use their own brand of Postscript and these must not be used.
(Eg: PDFWriter) If you are working on a DTP system and you do not have the Acrobat Distiller software that allows you to create PDF files you can follow the steps listed below to create a Postscript file (.PS or .PRN) and we will convert it to a PDF file.

Some important information File Origination:

• All digital work supplied must conform to normal DTP/Printing practices.
This means that the person generating the initial document, should have some understanding of the printing process. For example if a file is created using the RGB colour set rather then the CMYK set, the file will look correct on the monitor (as monitors use RGB colours), but problems will be encountered, when the file must be prepared for the printing press that uses the CMYK colour set. Another problem that often occurs is that the operator who is creating a colour job using colour pictures also uses the Pantone Spot colour range rather then the CMYK method. This again will generate a nice display on the monitor and a good colour proof, but will cause problems on the system that must generate the material for the printing press. Spot colours can be used - but remember that each spot colour is an extra colour in the job and it is unusual to have more than 1 or 2 spot colours in addition to the CMYK set.

- Pictures and Graphics - These must be in a CMYK, Tiff or 1 part EPS Binary format without any form of compression (LZW/JPEG etc.) - Compression will take place and be allowed once the PDF document is created. The required minimum effective resolution for any pixle based image is 200 dpi. But 300 dpi is preferred. No RGB or LAB colour should be used on any of the graphic or picture files in the document. Page documents must be made up to trim size with a minimum of 3 mm bleed where necessary. Check your trap information (Spreads and Chokes) and Overprint settings are correct. That is Black Drop Shadows, Coloured text on Coloured Tint lays etc.

- Fonts - Fonts come in different formats, some more reliable and better behaved then others. In the past, fonts were big business, generating large amounts of money. On the systems prior to the advent of DTP systems 1 font would cost well over R1000. They could not be copied and so the companies that could afford large font type libraries had the advantage over the smaller companies. Now days every company with a DTP system seems to have every font

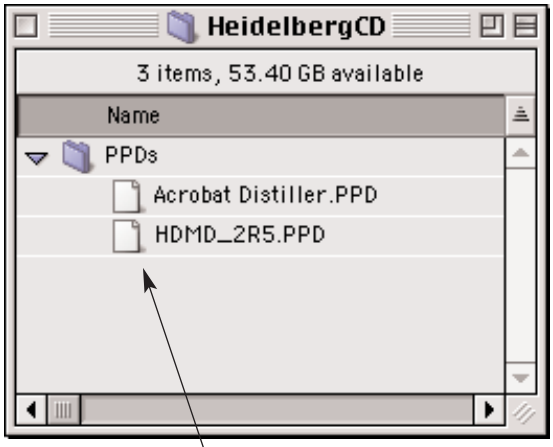
available and if they don't have a specific font, someone somewhere will give it to them. As with software packages, fonts are actually copyright and it is illegal to swop or supply fonts free-of-charge. The importance of this information for people using PDF workflows is that certain font manufacturers are starting to place code inside the font that prevents it from being imbedded inside a PDF file. This is not the norm - although it may become more popular to do. You will find at present this only happens with some TrueType fonts. So if possible please use Type 1 font sets, if possible.

Adobe Postscript Driver

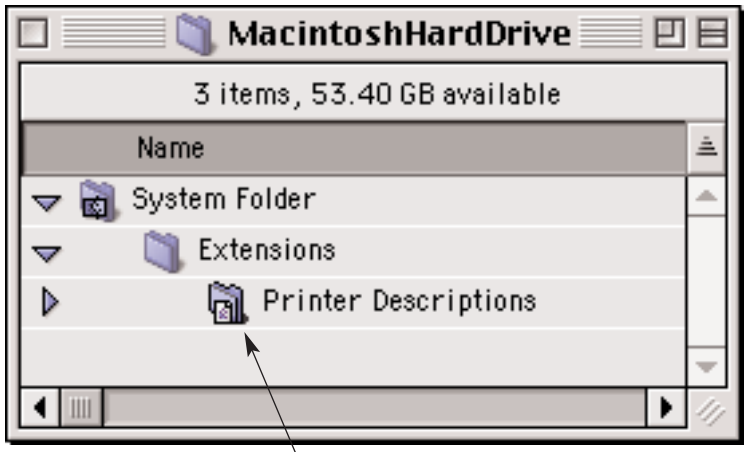
The first element of ensuring that the Postscript file you create is going to be reliable and free from errors is to ensure that you are using he latest Adobe_Postscript_Driver (Adobe are the original developers of Postscript and PDF files) This file can be obtained by contacting us or by downloading a copy for your specific operating system from the Adobe web site (www.adobe.com) and (Heidelberg.com).

Installing the Heidelberg PPD on the Apple Macintosh.

Once downloaded you will find a folder called PPDs. Inside this folder you will find the latest Heidelberg Metadimension PPD (Printer Description File) as well as the Acrobat Distiller PPD. These files need to be copied into the correct folder on each Apple Macintosh on the Network.



On the CD supplied you will see a folder called PPDs. Inside this folder you will find two PPD files. These files need to be copied into the Printer Descriptions Folder on your Macintosh Computer.

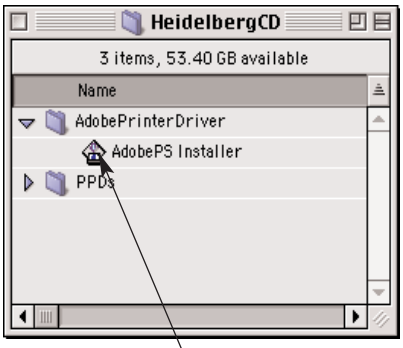


Drag the ppd files into the Printer Description Folder. This folder is found inside your Extensions Folder which is found inside the System Folder.

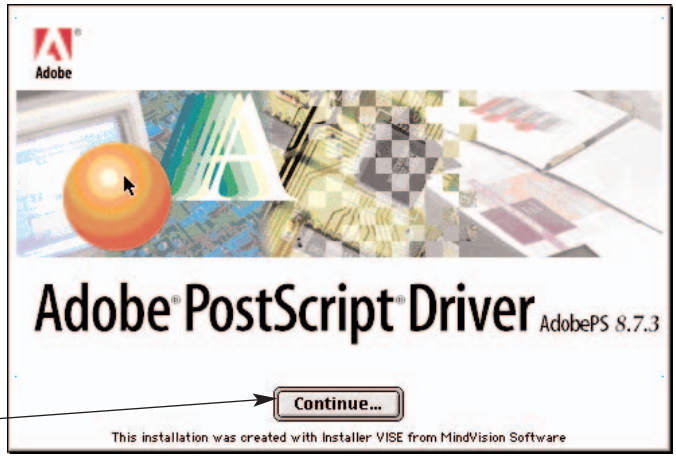
Installing the Adobe Printer Driver on an Apple Macintosh System

To ensure a reliable Postscript file is created it is important to ensure that you are always using the latest version of the Adobe Printer Driver. Because Adobe is the original developers of Postscript, you can be assured that this will be a reliable Printer Driver to use.

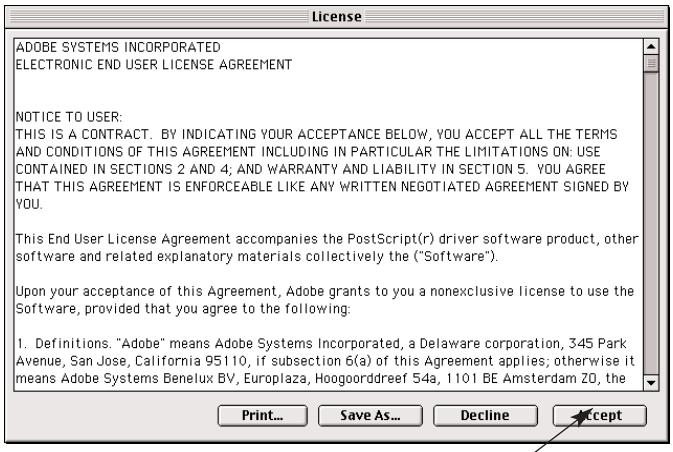
On the CD Supplied you will find the latest Adobe Driver for Macintosh and Windows Operating Systems. If these are not available, they can be download from the Adobe Web Site. www.adobe.com). Both of these files may be compressed and should install with a double click.



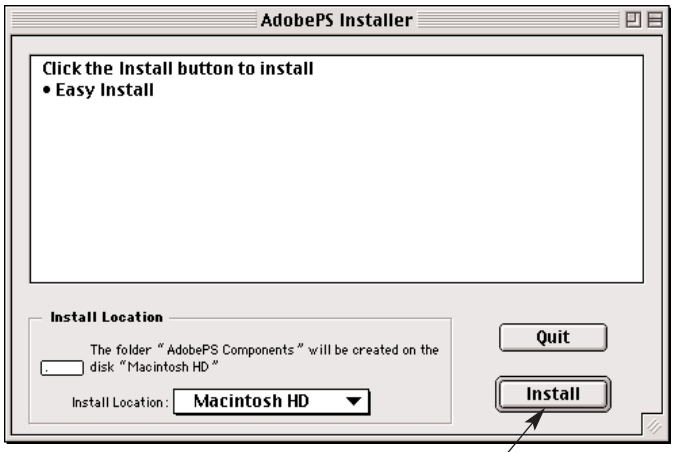
Double Click on the AdobePS Installer



Installer opens Click Continue



The License Agreement must be accepted to continue. Click Accept.



Driver will be installed on you Hard Disk - Click Install

Once the installation is complete. - Click Quit.

You will now notice that you have a folder on your hard disk called AdobePS Components. Inside this folder you will find the Desktop Printer Utility, which you will use to create a Virtual Printer.

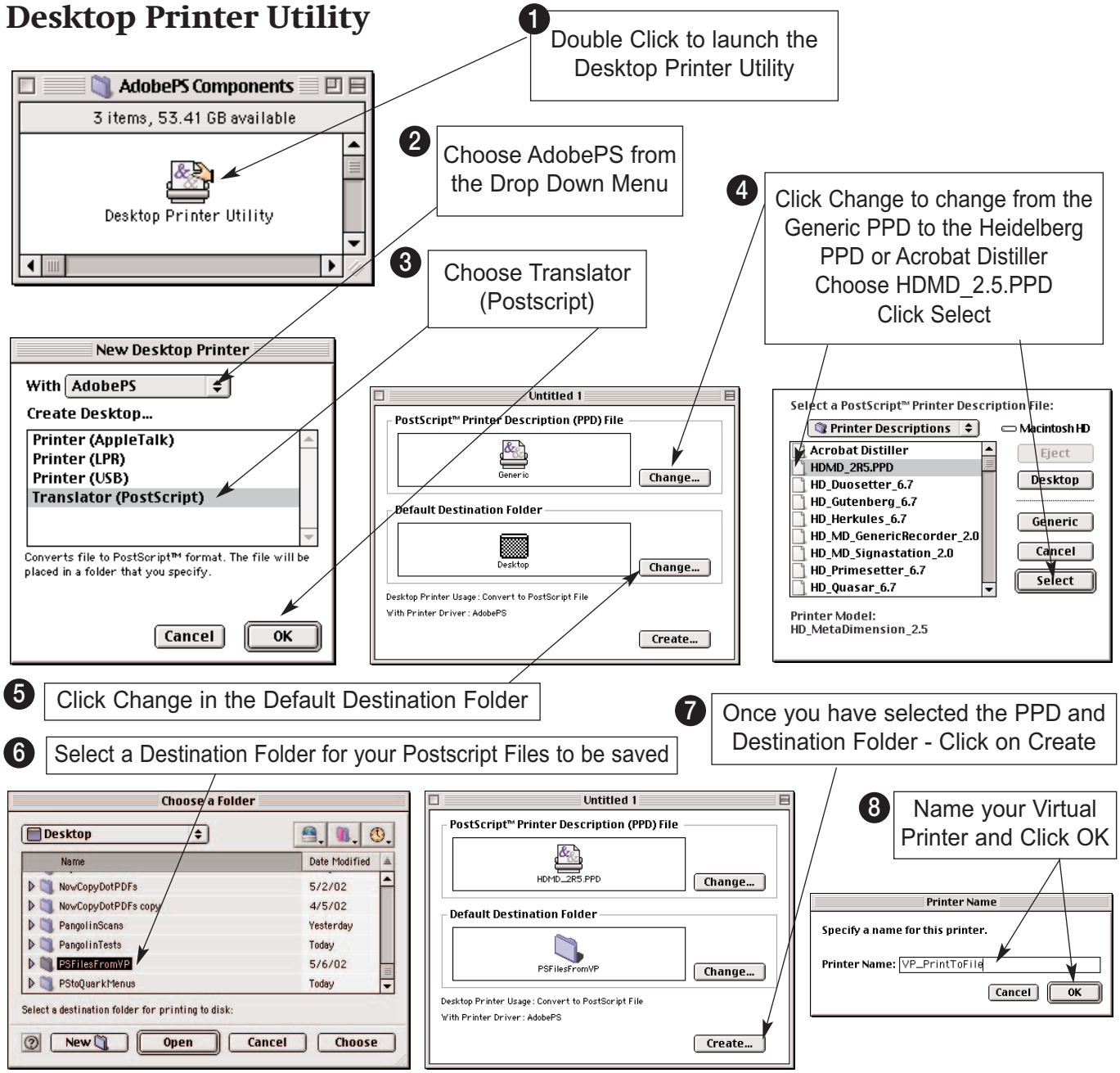
In your CHOOSER you will also notice that you now have the latest AdobePS driver.

Creating a Virtual Desktop Printer

When you install the AdobePS Driver that you received on the CD that accompanied these notes it would have created a Desktop Printer with the name of “Virtual Printer”. This Virtual Printer can be used to create Postscript Files, but we recommend that you create your own Virtual Printer with a linked PPD (Printer Description File).

When you installed the AdobePSDriver a utility called “Desktop Printer Utility” will also have installed. Look for this utility in a folder called “AdobePS Components”.

Desktop Printer Utility



This Virtual Printer “VP_PrintToFile” will be available in your printer setting button on your various DTP applications.

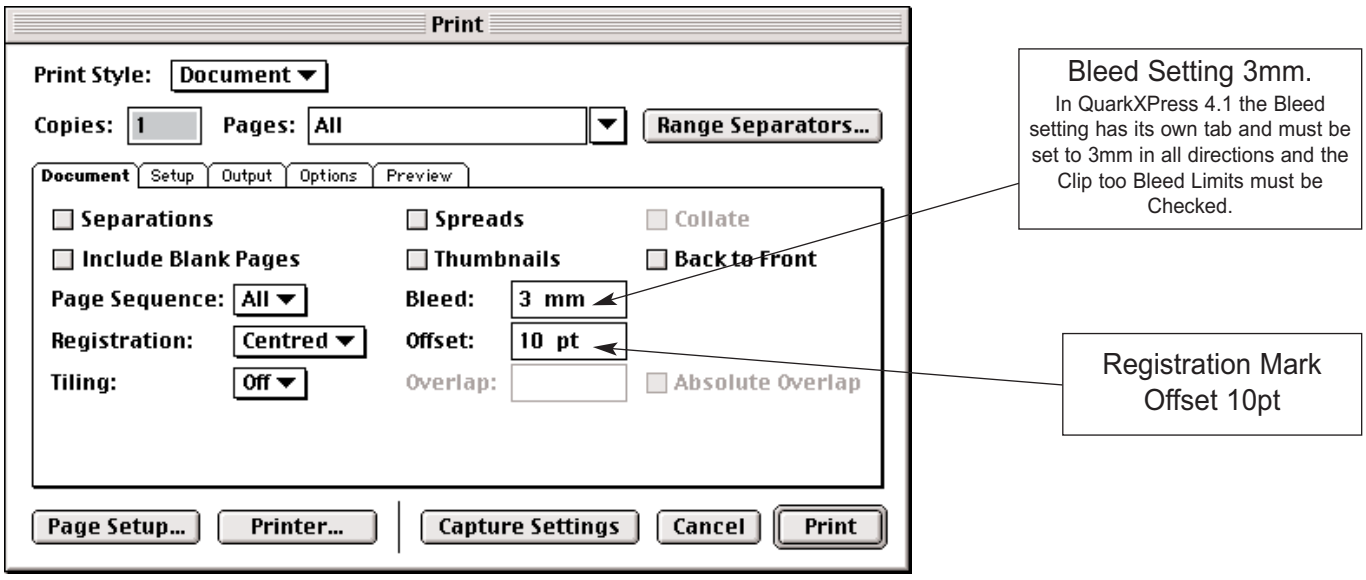
Read in the following pages how to use this printer in your various application programs.

Writing a Postscript File (.ps) from QuarkXPress 4.***

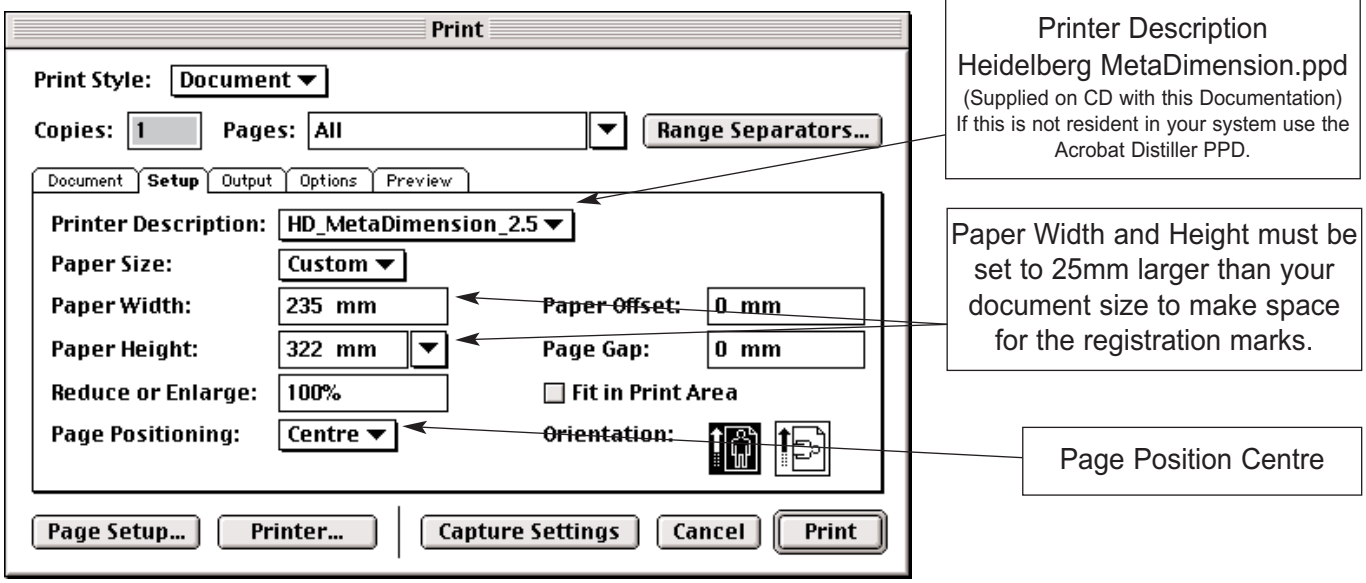
To get a reliable PDF file it is very important that the Postscript file is created in the right way. A problem Postscript file can lead to a problem PDF file.
Listed below is the correct procedure to create a reliable Postscript file from the QuarkXPress application.
It is a good idea to have some sort of preflight software that will check the Quark document prior to printing. This preflight software will allow you to find certain problems prior to creating the Postscript file. Their are various programs available to preflight files.
The sooner the problem is caught, the better.

The following menu screenshots show the correct settings necessary to create a good Postscript file. The version of QuarkXPress used to create these diagrams is 4.04. No dramatic changes have been made to the later versions of Quark (prior to 5) so these notes should suffice for these versions as well.

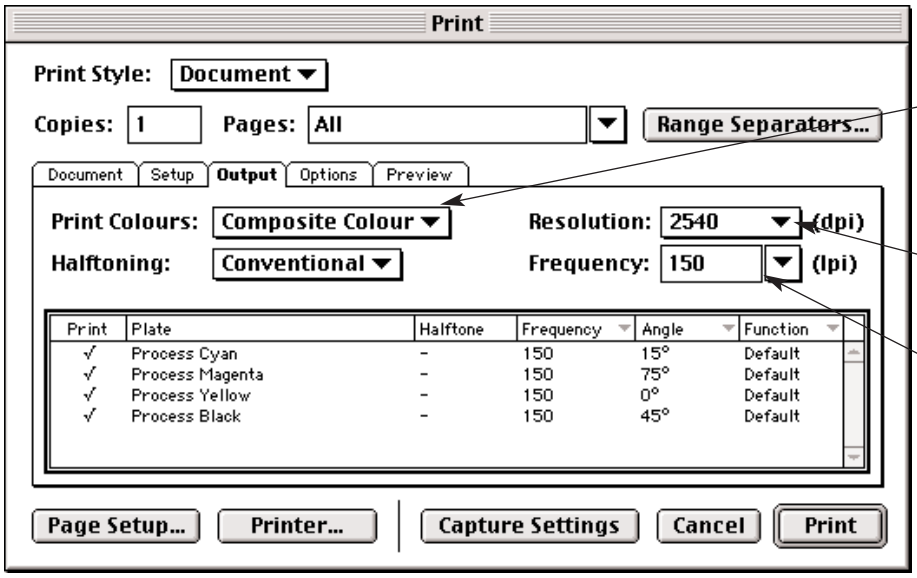
Document Tab



Setup Tab



Output Tab



Composite Colour Output will create a single page colour PDF.

If separations are used a 4 page PDF will be crated. (1 Page per Colour)

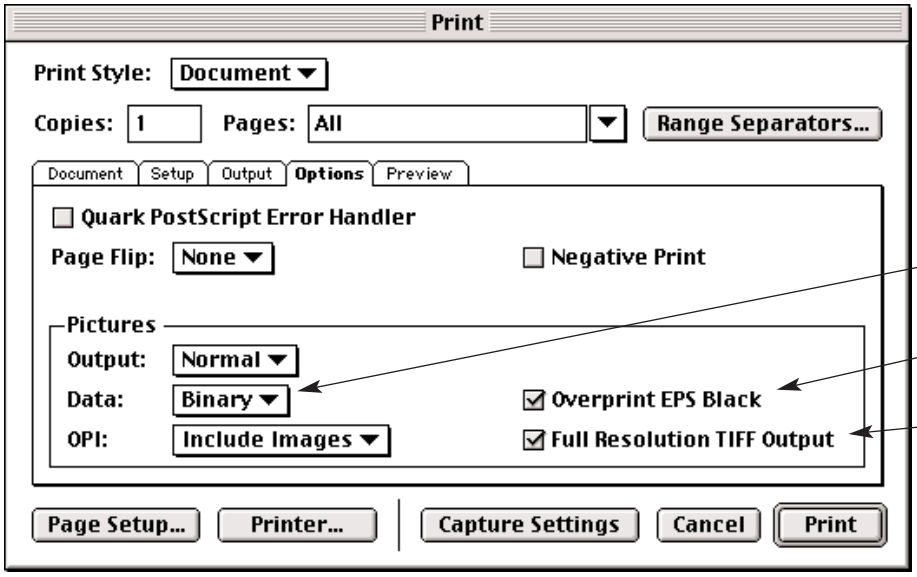
Resolution should default to 2540. - Set by the PPD.

If you use the Distiller PPD you will notice that the default resolution will be 2400.

Frequency: 150 lines per inch.

This setting is for the majority of print jobs. The default for Distiller is 175.

Options Tab

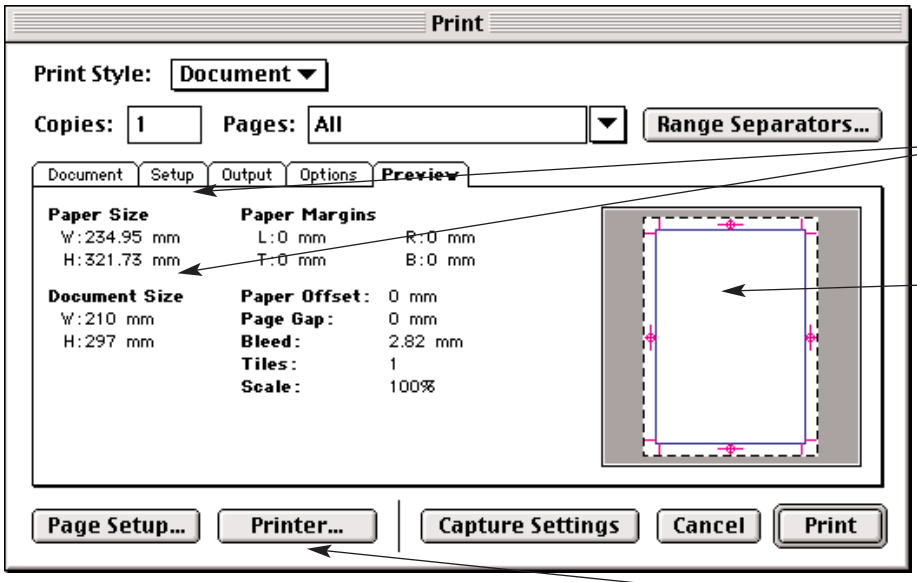


Data: Binary

Overprint EPS Black

Full Resolution Tiff Output

Preview Tab



Check to see that your Paper size is 25mm larger in Width and Height than the Document Size

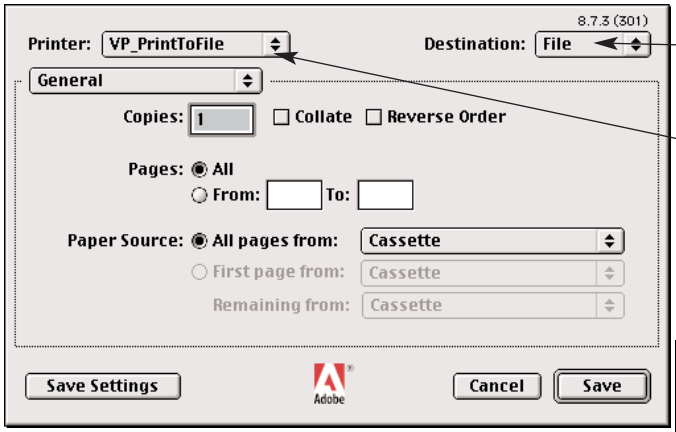
This miniature diagram of your document is a good guide that your settings are correct.

Before you Print you must select the Virtual Printer that you created earlier.
Click Printer and see the next page for further instructions.

Printing to PS File from DTP Program
Printer Configuration

With the specific print settings setup in your application program, you can now Configure the Desktop Printer that you created earlier (See Setting Up Desktop Printer). In this explanation we called our printer VP_PrintToFile.
Start by clicking on the Printer Button at the bottom of the print dialog window.

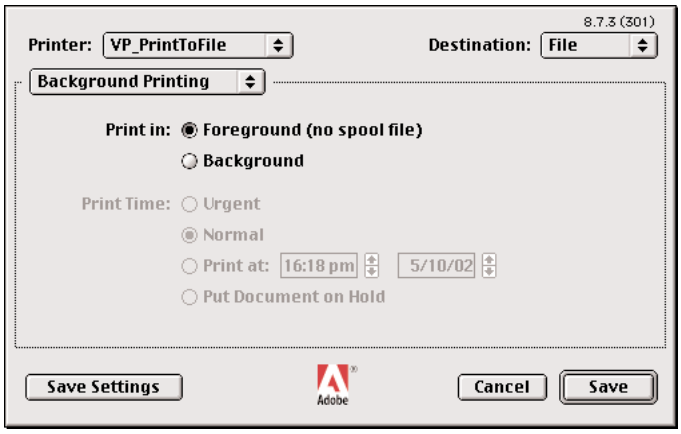
Click on the Printer Button



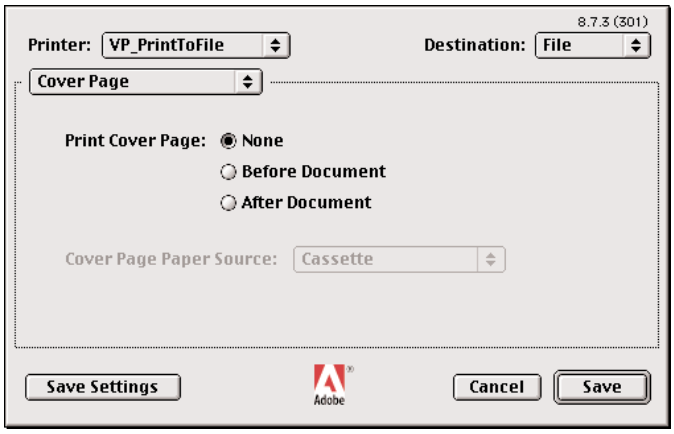
Ensure that this says File

Select the VP_PrintToFile Virtual Printer Here

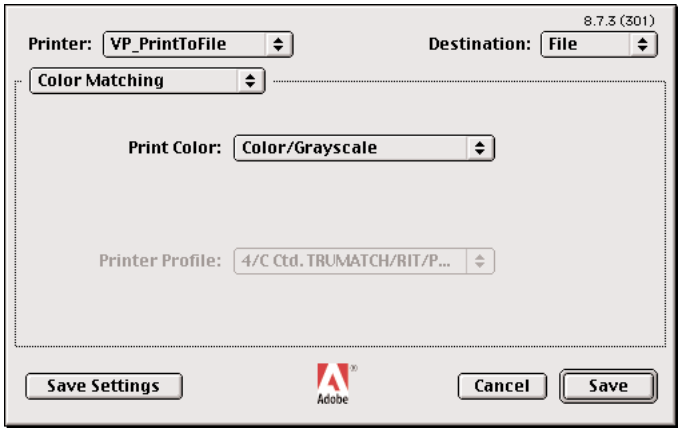
Printer General Tab



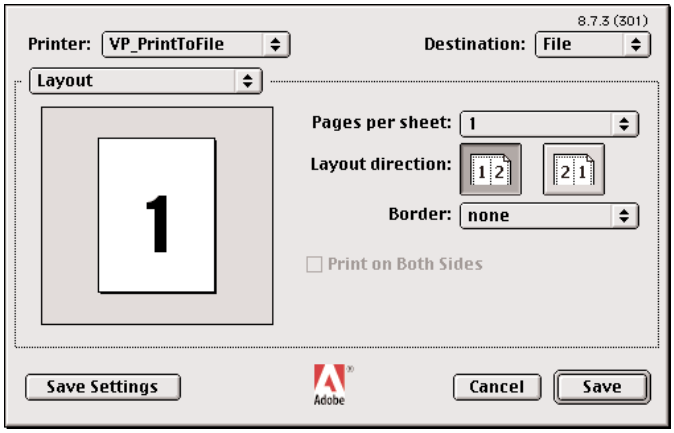
Background Printing



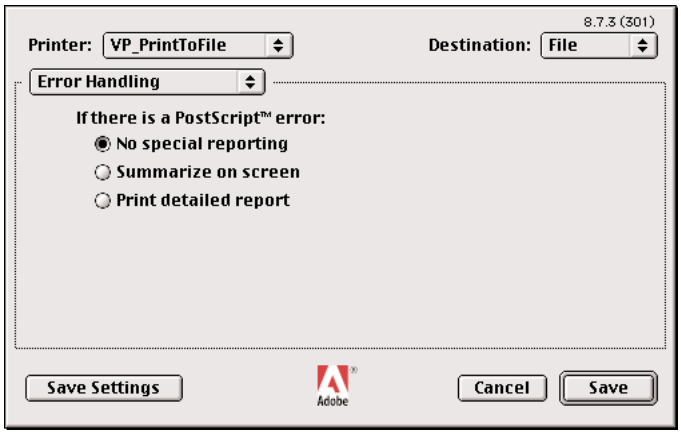
Cover Page



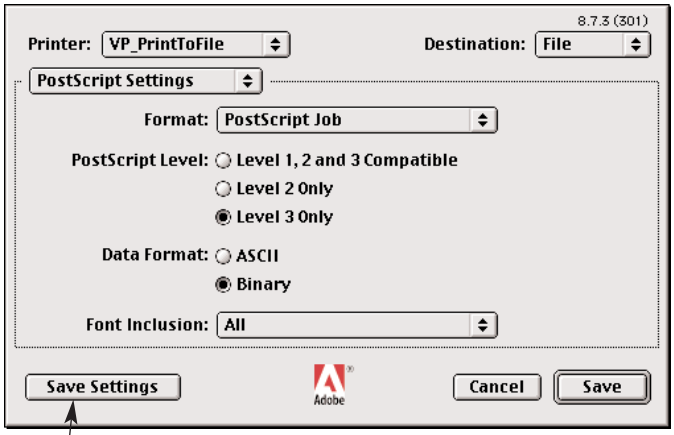
Colour Matching



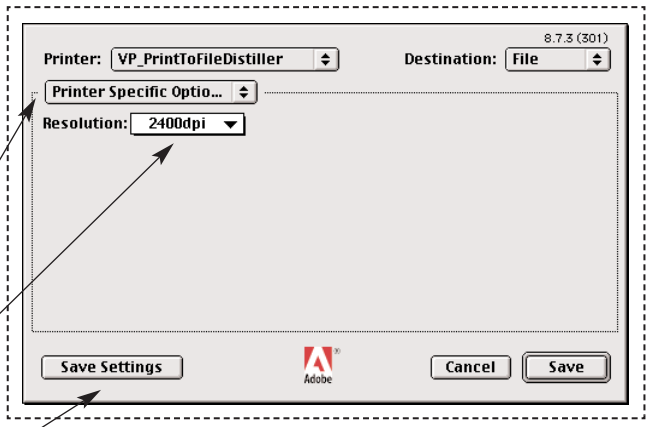
Layout Tab



Error Handling



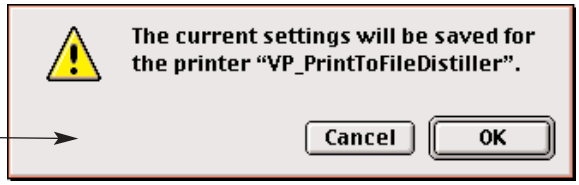
Postscript Settings



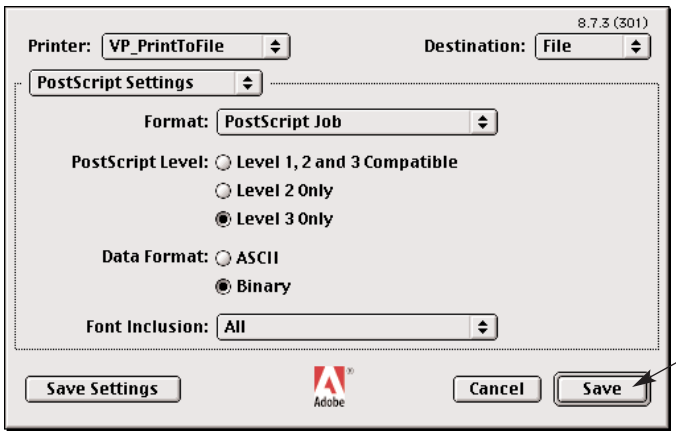
Printer Specific Options

This Tab only appears if you have selected the Distiller PPD. You must select 2400 Resolution.

Click the save Settings Button to save the above settings for the VP_PrintToFile Virtual Printer you are using



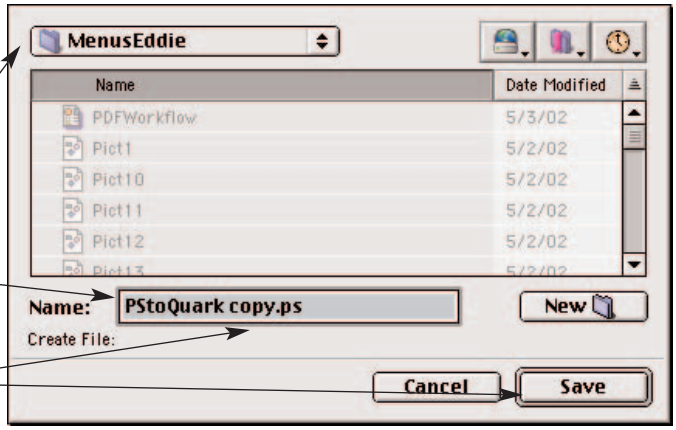
With the specific print settings setup in yo

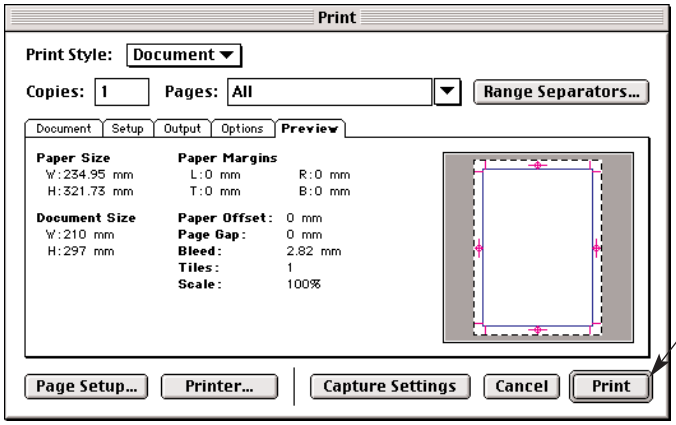


Once the Virtual Printer Menus have been set up you select the Save Button.

You are now prompted to give a name and specify where you want the Postscript file (.ps) to be saved. Although you did specify a default folder, when you created your Virtual Printer this path can now be changed. If Acrobat Distiller is operating with a Hot Folder, you can save the Postscript File directly into this folder.

Enter a Name and click Save.





The Save Button will now take you back to the print menus. To continue and start the process, Click Print.

QuarkXPress will now behave as it normally does when printing a file. Once it is complete you should find your Postscript file in the folder that was specified. If you are using Hot Folders via Distiller the PDF file will automatically be generated as soon as the Distiller Program is started.

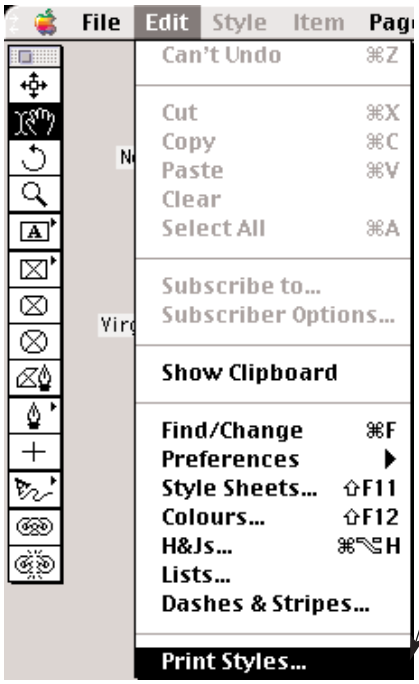
If you are not using Hot Folders via Acrobat Distiller you will have to manually distil this file by dragging opening it in the Distiller program.

The easiest way is to open the Acrobat Program and then drag the Postscript File onto the Distiller Menu. This will immediately activate Distiller and the PDF file will be created and stored in the same folder as the Postscript file.

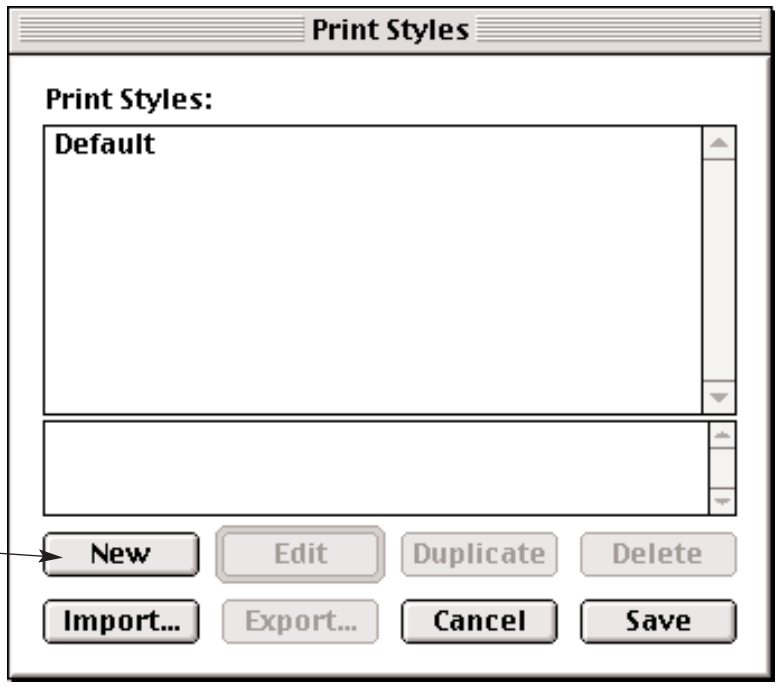
If an error occurs during the distilling process, check the error message to see what the problem is. (Common Error List is found at the end of this document.)

Setting Up A Print Style in QuarkXPress.

This whole process can be saved as a Print Style and given a descriptive name.
This will then speed up the process and ensure that the information does not change and is not open to wrong settings being typed in.
How to create a Print Style.



Click on Edit and Select Print Styles.....

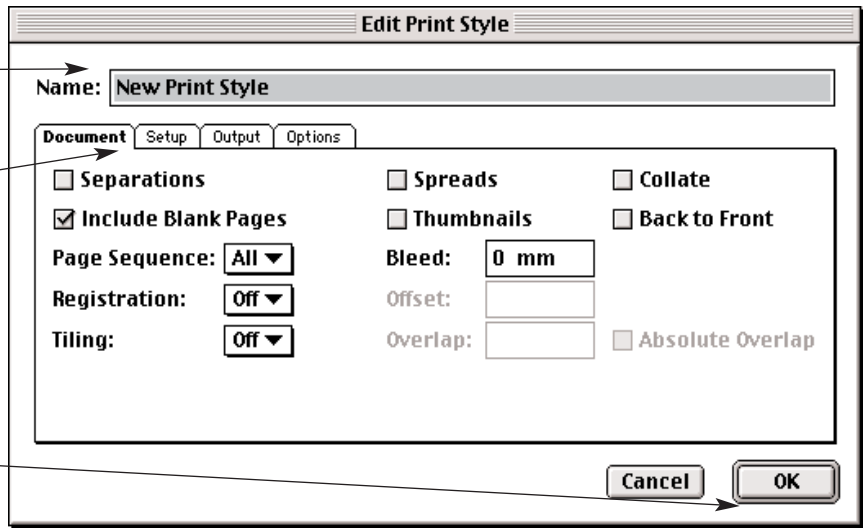


Click New
To create a
New Print Style

Give your Print Style a descriptive Name.

Fill in the details for each of these tabs as per the information given earlier in this document.

Click OK to return to the Print Styles Menu.



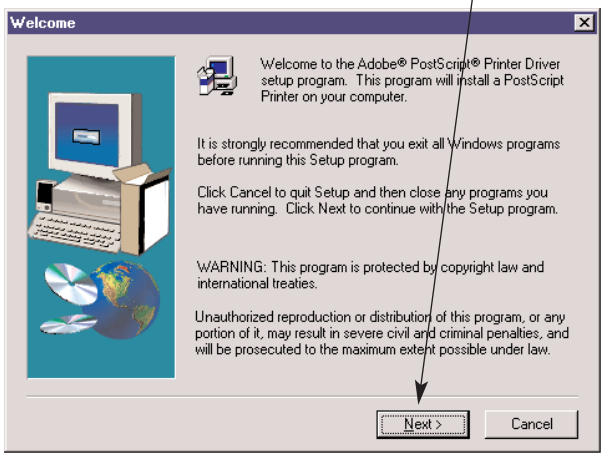
From the Print Styles Menu. Click Save. This Print Style will now be available when you open your Print menu. The top entry of this Print Menu is that of Print Style. Click and Select the Print Style you have just created.

Installing the Adobe Postscript Driver on Windows.

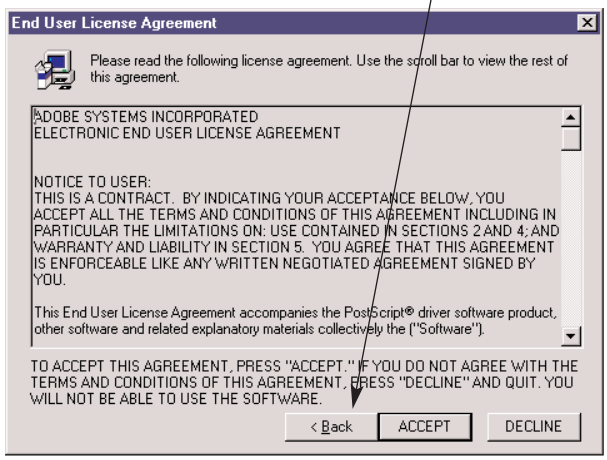
Adobe Postscript Driver is compressed and packed in an Exe file. To launch the installer double click on the winsteng.exe icon.

Double Click on the winsteng.exe Icon.

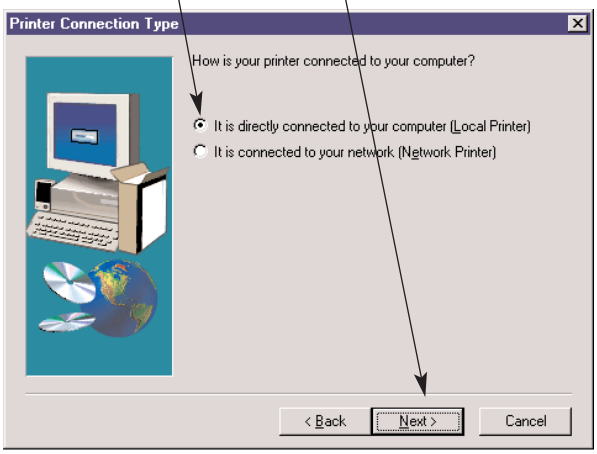
The program will lauch the installer. This installer will guide you through the setup. Click the Next Button.



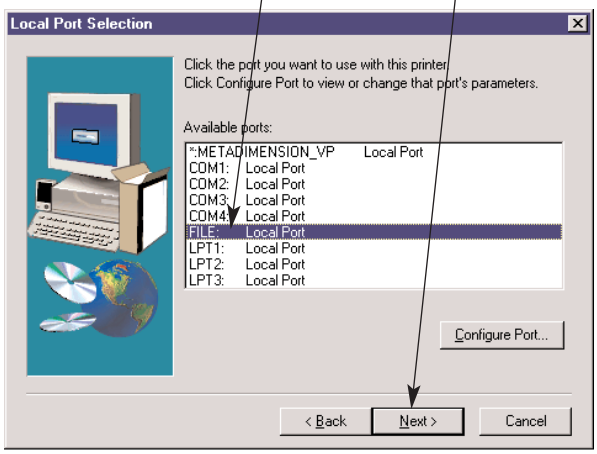
The Software agreement then appears. To allow the installation to continue, you must Accept the conditions.

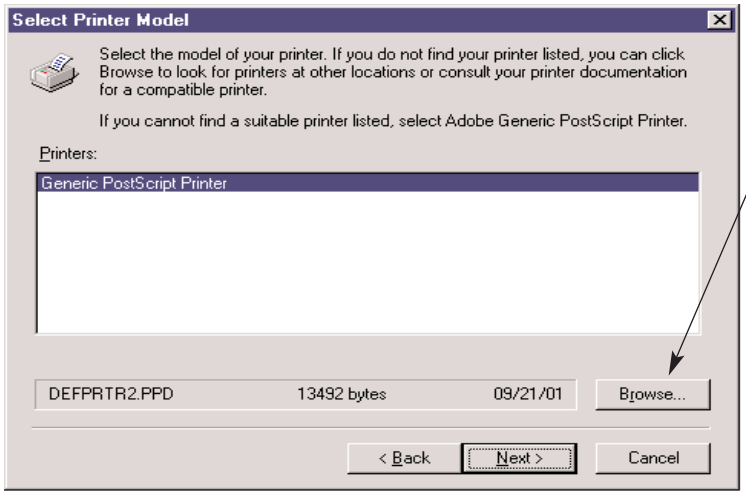


Select Local Printer - directly connected to your computer. Click Next



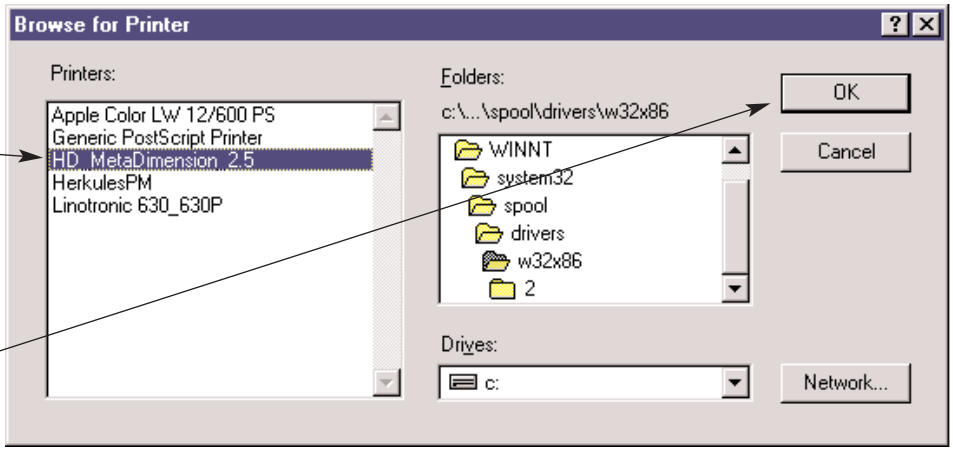
Choose FILE: Local Port. Click Next.

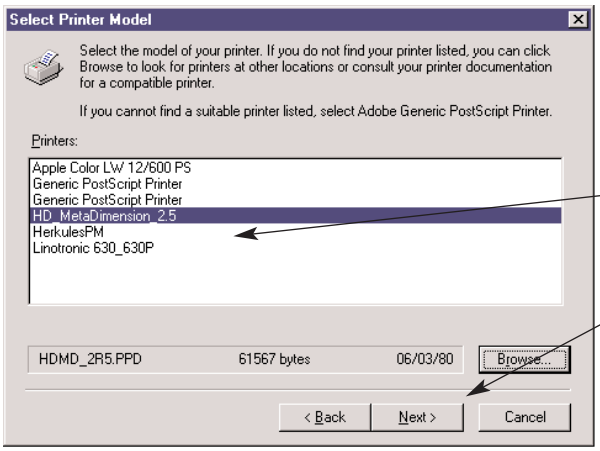




Select Printer Model Menu Appears.
The default printer is a Generic Postscript Printer. We want to change this default by adding our Meta PPD or the Distiller PPD.
Click Browse.

Browse to find the supplied PPD file.
If you have not copied these files onto your hard drive - place the supplied CD into the drive and load the PPD from the CD.
Then click OK

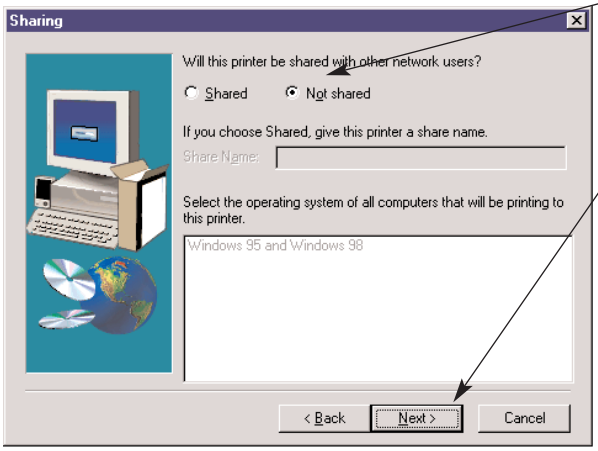


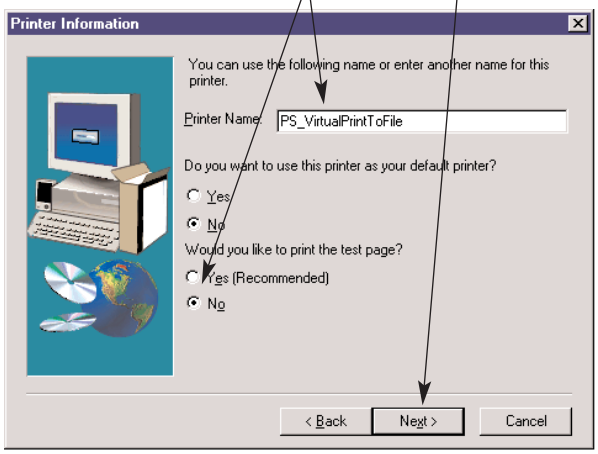


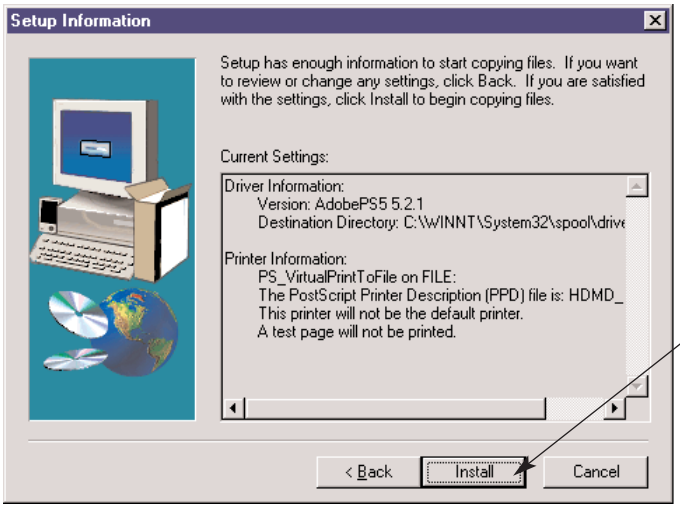
Once you have selected the correct PPD file (either the Heidelberg MetaDimention.ppd or the Acrobat Distiller.ppd.
Click Next.

Select Not Shared.
Click Next.

Give your Printer a Descriptive name.
Default Printer? Yes or No.
Select No for Test Page.
Click Next

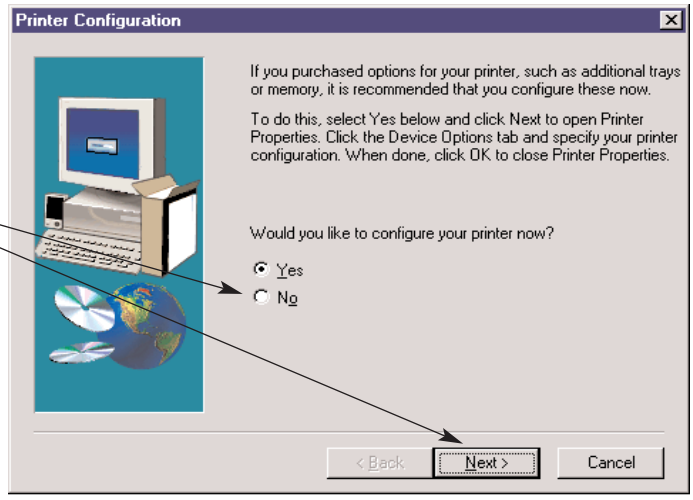




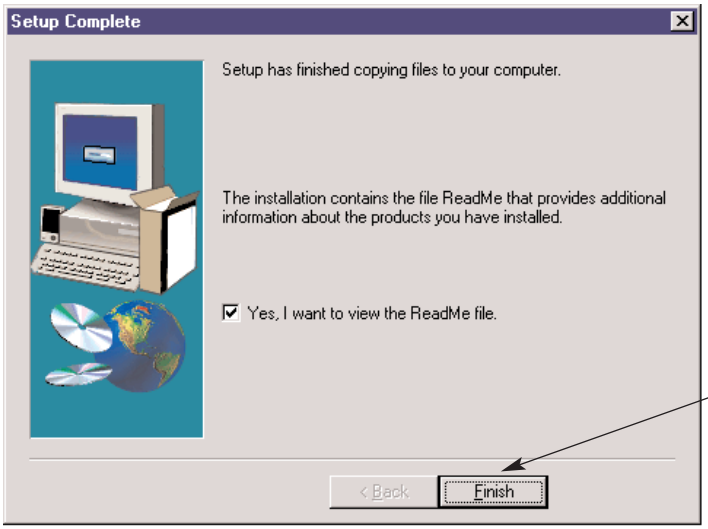


You have now entered the required information.
Click Install.

Select NO to configure your Printer. The configuration is done via the PPD file, so it is not neccessary to change these.
Click Next.



Click Finish.



You have now successfully installed a Virtual Printer on your Windows system. This printer will be used from your different applications to print to Postscript Files.

Click Finish

How to setup and create PDF files using Adobe Acrobat Distiller.

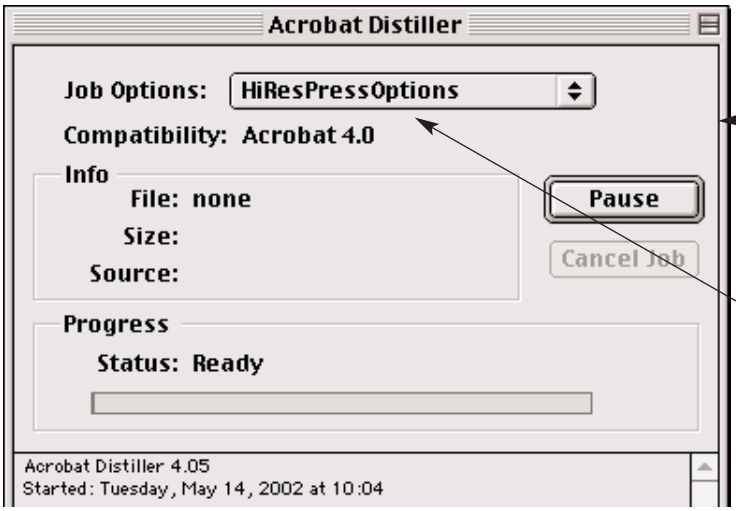
Acrobat Distiller is a part of the Adobe Acrobat Program that allows you to create PDF files from Postscript Files. This program can be purchased to run on a Apple Macintosh or a Windows PC. Do not confuse this with the Adobe Acrobat Reader program which is available Free of Charge from Adobe. (It is often supplied with other software programs, as many software houses are supplying their operating documentation in PDF format. They then also supply the Acrobat Reader that allows you to read these files.

The reader can read and print PDF files, it cannot edit them, save them, or create them.
PDF is a multifunctional file format and can be used purely for reading on screen (Low Resolution), or printed to a Laser Printer (Medium Resolution), or used to output to Film and Plate Recorders for the Printing industry (High Resolution).

Because the PDF can be created for different devices, it is very important that when they are going to be used on a High Resolution Recorder, certain rules are followed. These special settings are done via the Distiller Options settings.

Open the Acrobat Distiller Progam:

Double Click on Distiller Icon to open the Application.

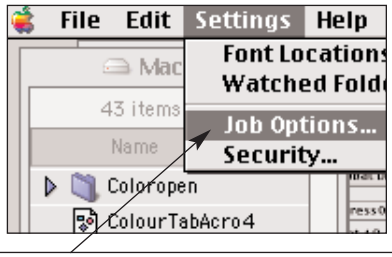


The Acrobat Distiller Menu Opens and is ready to create PDF files from Postscript Files.

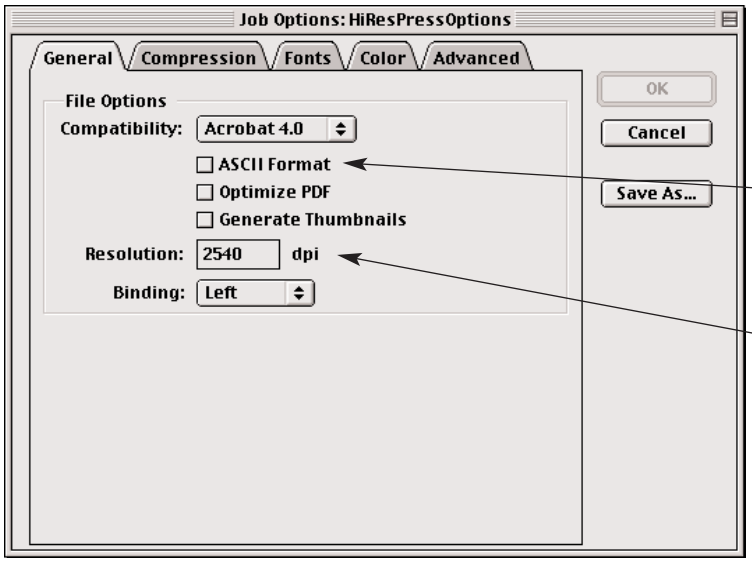
Notice the Job Options setting being used. You will see that their are various settings that can be selected in this area.

Distiller Options Setup

**The following menus show the correct settings to select.
A detailed descripton and explanation for these settings is given at the back of this manual.**



Select Job Options.



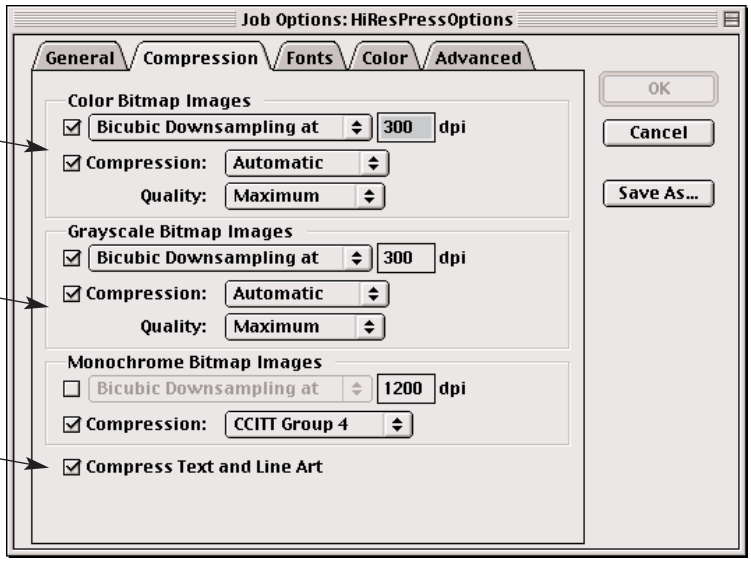
Leave all of these 3 selections blank.

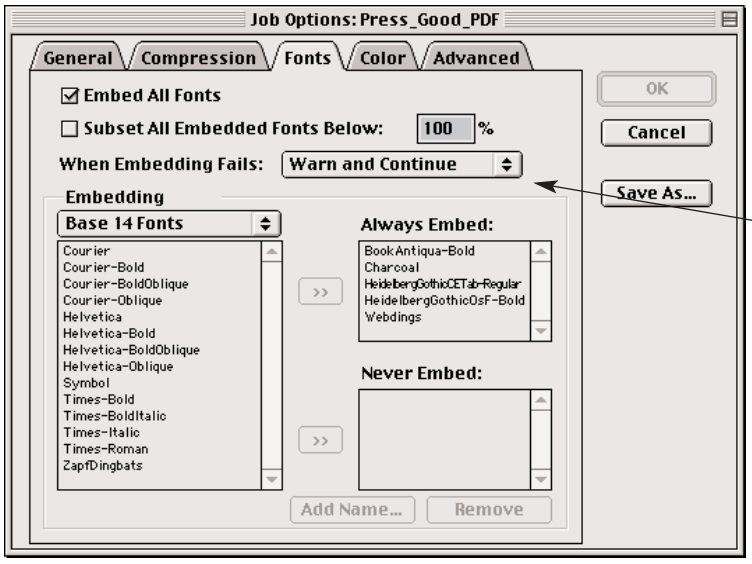
Select 2400 or 2540 dpi Resolution. Depends on the resolution of the imagesetter or platesetter that is going to be used.

Selectt Bicubic Downsampling 300 dpi
Compression Automatic.
Quality: Maximum.

Selectt Bicubic Downsampling 300 dpi
Compression Automatic.
Quality: Maximum.

Switch off Downsampling - select 1200.
Compression: CCIT Group 4
Compress Text and Line Art.





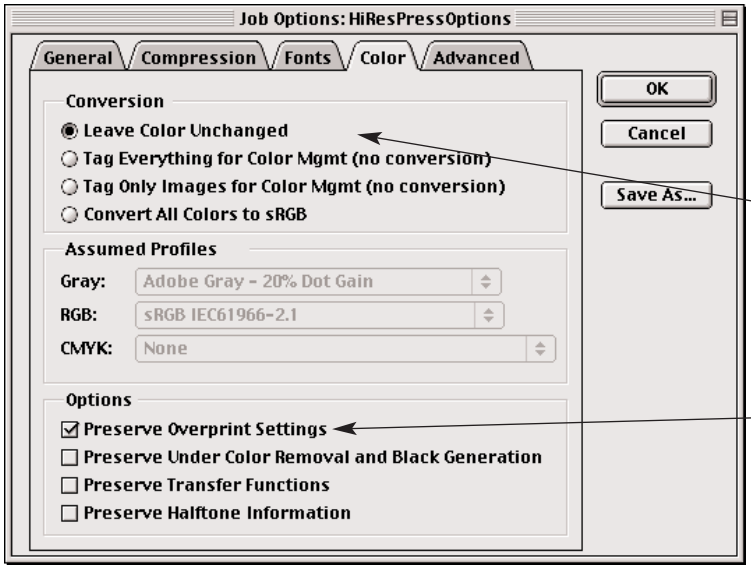
X Embed All Fonts.

Y/N? - Subset all Embedded Fonts Below 100%

NB: It was popular in the past to Subset Embedded Fonts and many people still do this. But recently it has been found that less problems occur when processing the complete font set. This does make the PDF larger, but it is safer in the long run. If you are Distilling a file that has a large amount of fonts you can still turn this on.

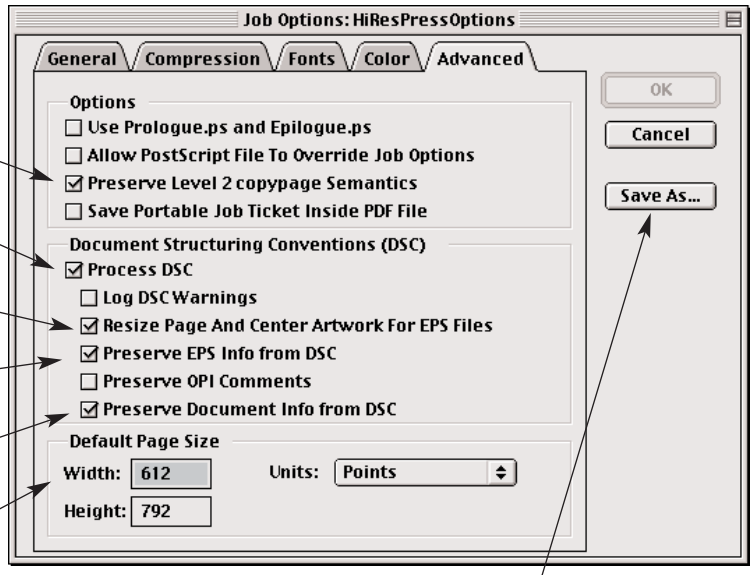
When Embedding Fails: Cancel Job

This is also an optional selection. Many application programs have default fonts imbedded in the file. This means that even if you are not using a particular font in the document - this font is asked for. You can select to Warn & Continue. This then at least allows the PDF to be generated. You just have to check that it is not warning you about a font that is really missing from the job.



Leave Colour Unchanged.

Preserve Overprint Settings



Preserve Level 2 copypage Semantics

Process DSC

Resize Page and Centre Artwork for EPS

Preserve EPS info from DSC

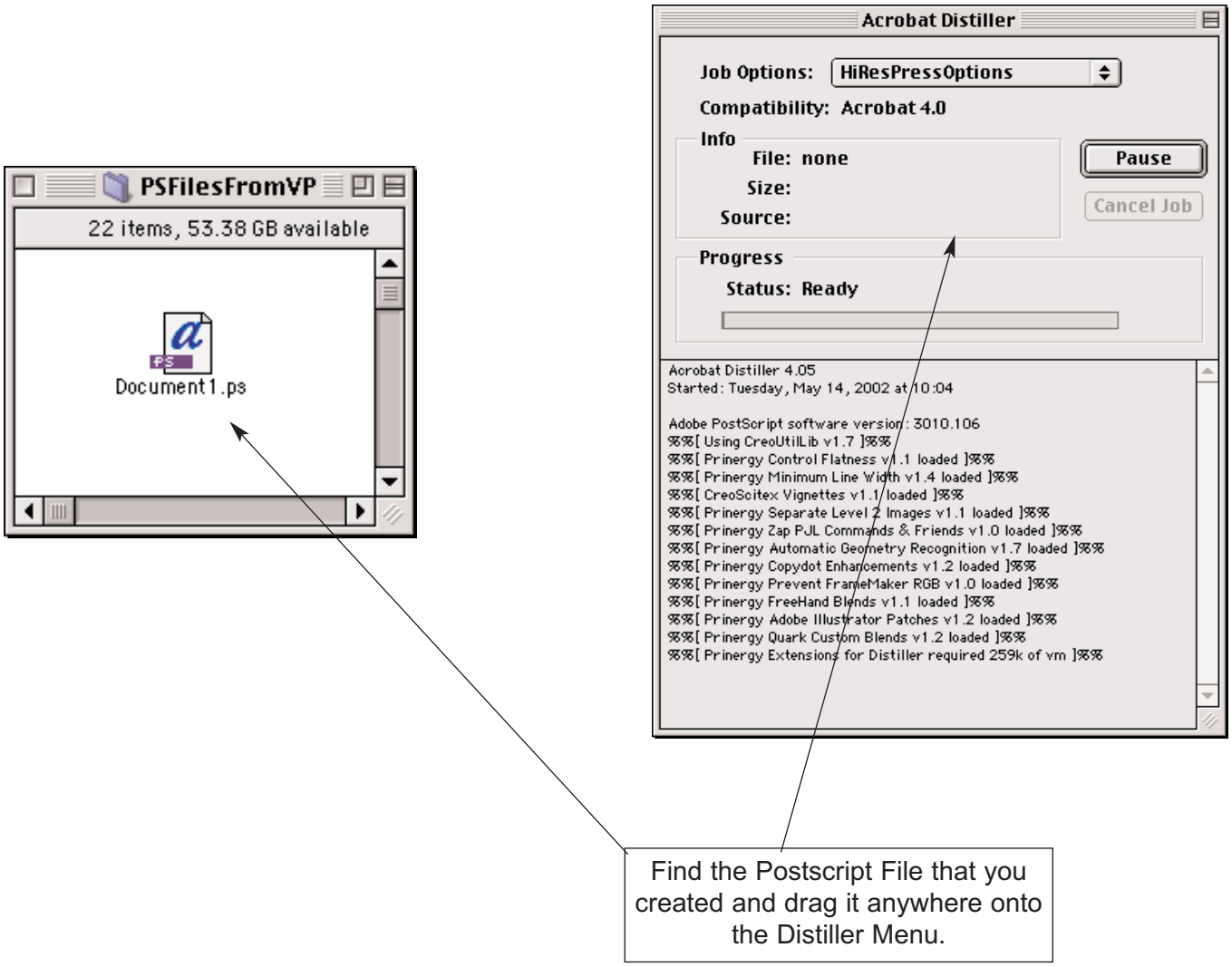
Preserve Document Info from DSC

Default Page Size: 612 x 792 pts

Once you have setup all the tabs, click the Save As.... button and give your settings file a descriptive name.
The file will automatically be stored in the Settings folder of the Distiller Program.
If you are only creating High Resolution files, it is advisable to delete all the default settings, this will prevent the common error of selecting the wrong settings file.

Using Distiller

You are now ready to use Distiller to create your PDF file.
Although the newer versions of many of the Application Programs are adding the option to Save a File to PDF directly from the Application. This is still not the most reliable method to use, and until it does become more reliable, we suggest that you make your PDF files as shown.
Possibly the latest versions of Adobe products (Photoshop, Illustrator, FrameMaker, PageMaker and InDesign) will be more reliable with regard to writing PDF files directly from the Application, but to make it easier for the operators, it is better to find one reliable method and use it for all applications.



The status bar will run and you will see a string of messages in the bottom half of the menu.
If the process fails you will see the reason for the error in the message window.
If the process succeeds you will see the message that the process was successful and that a PDF file has been created. The PDF file will be placed in the folder with the Postscript file.

More advanced features and the use of Hot Folders etc will be added to this document shortly.

This document is currently under construction.
Additional pages will be added shortly.