



Printing Guide



COLOR/MONO



PRINT



INFORMATION

PREFACE

Every effort has been made to ensure that the information in this document is complete, accurate, and up-to-date. The manufacturer assumes no responsibility for the results of errors beyond its control. The manufacturer also cannot guarantee that changes in software and equipment made by other manufacturers and referred to in this guide will not affect the applicability of the information in it. Mention of software products manufactured by other companies does not necessarily constitute endorsement by the manufacturer.

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CONTENTS

Preface	2
Contents	3
Notes, cautions and warnings	5
Introduction	6
About this book	6
What this book describes	6
How to access the driver screens	7
PCL or Postscript	8
Printing preferences in Windows applications	8
PCL saved driver settings	11
Setting the driver device options	12
Windows	12
Mac OS X	12
Blacks and greys	14
Black overprint	14
Black printing (black generation)	15
Fine lines enhancement	17
Greyscale printing	18
Color printing (basics)	20
Factors that affect the appearance of prints	20
Tips for printing in color	21
Accessing the color matching options	22
Setting the color matching options	22
Using the color swatch feature	23
Using the Color Correct Utility	24
Color matching (advanced)	25
Basics	25
What this guide describes	25
Printer color management	26
Office color	27
Graphic pro	30
Overlays and macros (windows only)	40
What are overlays and macros?	40
Creating PostScript overlays	40
Printing with PostScript overlays	42
Creating PCL overlays	44
Printing with PCL overlays	46
Finishing options	47
Booklet printing (imposition)	48
Collating	50
Color separation	52
Separating queued print jobs	53
Cover print	54
Banner printing	55
Custom page size	56
Duplex (double-sided) printing	59
Printing multiple pages on one sheet (n-up)	61
Poster printing	63
Scale to page	64
Watermarks	65
Trapping	66
Secure printing	68

Sending the document . . . . .	.69
Printing the document . . . . .	.70
Deleting a secure print document . . . . .	.71
Store to storage device . . . . .	.72
Sending the document . . . . .	.73
Printing the document . . . . .	.73
Deleting a stored document . . . . .	.73
Encrypted secure printing . . . . .	.74
Sending the document . . . . .	.75
Printing the document . . . . .	.76
Index . . . . .	.77

NOTES, CAUTIONS AND WARNINGS

NOTE

A note provides additional information to supplement the main text.

CAUTION!

A caution provides additional information which, if ignored, may result in equipment malfunction or damage.

WARNING!

A warning provides additional information which, if ignored, may result in a risk of personal injury.


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INTRODUCTION

ABOUT THIS BOOK

This book is delivered as an Adobe Acrobat PDF file.

There are many cross-references within this book, each highlighted as [blue text](#). When you click on a cross-reference within Adobe Acrobat or Adobe Reader (also supplied on the Manuals CD/DVD) the display will instantly jump to the part of the manual containing the referenced material.

By using the  button in Adobe Reader, you can navigate directly back to where you were before.

If you need to print a part of this manual, use Adobe Reader's print command, and choose which pages you want to print. Some pages are deliberately left blank so that the page format is appropriate for duplex (double-sided) printing if you wish.

WHAT THIS BOOK DESCRIBES

This book provides a convenient on-screen reference to the many features of the driver software supplied with your machine.

NOTE

This guide is written to cover a number of products and as such may contain information about features that your product does not have installed or does not support.

Operating system support varies between products. Please check with your support website for the latest information.

Where possible the instructions for both Windows and Mac operating systems have been combined, where there is a significant difference these have been split out and described individually.

NOTE

Terminology may vary between operating systems. Windows 2000, XP and Vista use tabbed dialogue boxes, whereas Mac OS X uses pop-up menus. For consistency throughout this manual we will refer to tabs.

NOTE

This guide makes reference to "storage devices", this may be a hard disk drive or an SD card installed in your machine.

Example driver screenshots are used throughout this manual and as such may not represent the driver screens for your machine. Some of the features shown on the example screenshots may not be available on your machine.

HOW TO ACCESS THE DRIVER SCREENS

Most of the features described are accessed via the printer driver screens. How you access them depends on your computer and its operating system.

The driver windows are dialogue boxes offering a wide range of choices about how you want to print your documents. Within Windows these dialogue boxes are tabbed, within Mac the dialogue boxes use pop-up menus.

NOTE

Example driver screenshots are used throughout this manual and as such may not represent the driver screens for your machine. Some of the features shown on the example screenshots may not be available on your machine.

There are two ways to access the driver features from within Windows:

1. Directly from the Windows "Printers" folder ("Printers and Faxes" folder in Windows XP).

If you choose this method any changes you make will become the driver defaults. This means they will remain active for all your applications unless you specifically change them from within the application's Print dialogue.

2. From your application's Print dialogue.

If you choose this method any changes you make will usually only last for as long as the particular application is running, or until you change them again. In most cases, once you quit the application the driver defaults will return.

NOTE

*Settings made from the printer's own control panel are the **printer defaults**. They determine how your printer will behave unless you specify otherwise from your computer.*

*The **driver defaults** override the printer defaults.*

***Application Print settings** override both the printer defaults and the driver defaults.*

PCL OR POSTSCRIPT

There are a number of drivers supplied with your machine, check with your support website for details.

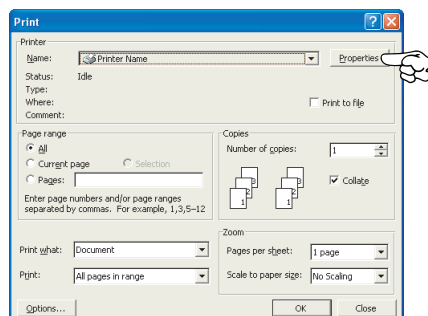
If you print mainly from general "Office" applications choose one of the PCL drivers. For faster printing of PDF documents, choose PostScript. If you print mainly from professional DTP and graphics applications, choose PostScript.

PRINTING PREFERENCES IN WINDOWS APPLICATIONS

When you choose to print your document from a Windows application program a print dialogue box appears. This dialogue usually specifies the name of the printer on which you will print your document. Next to the printer name is a **Properties** button.

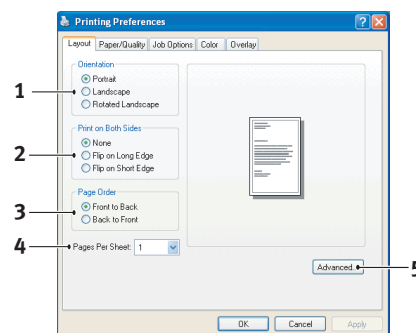
When you click **Properties** a new window opens which contains a short list of the printer settings available in the driver, which you can choose for this document.

The window which opens when you click **Properties** depends on which printer driver has been installed. The PostScript driver offers different choices to the PCL driver.



POSTSCRIPT EMULATION

1. Page orientation sets portrait (tall) or landscape (wide) page orientation. The "rotated" rotates the paper through 90 degrees anticlockwise.
2. When printing double sided pages (duplex unit required). You can flip the paper either on its long edge or short edge.
3. Pages can be printed in forward or reverse order. If using the face down (top) paper stacker, forward order is usually appropriate to ensure that pages are stacked in numerical order. If using the face up (rear) paper stacker, reverse order would normally stack your pages in numerical order.
4. You can specify how many pages to print on a sheet. Pages will be scaled to fit the number you choose. If you choose booklet printing (requires duplex unit) two pages will automatically be set, and pages will be printed with the correct pages opposite one another so that folding the stacked printout produces a booklet.
5. Advanced options are also available, such as how to download TrueType fonts, and whether advanced options such as booklet printing are available.

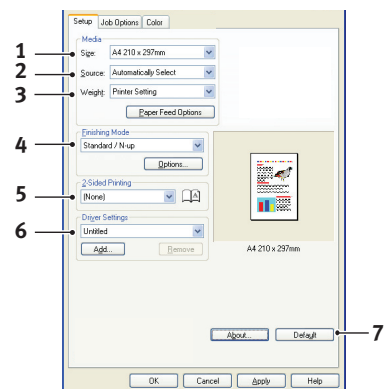


The printer driver contains extensive on-line help for these items to help you make the most appropriate choices.

PCL EMULATION

When you click the **Properties** button from your application's Print dialogue, the driver window opens to allow you to specify your printing preferences for this document.

1. Paper size should be the same as the page size of your document (unless you wish to scale the printout to fit another size), and should also be the same as the size of paper you will feed into the printer.
2. You can choose the source of the paper to feed. You can also click on the appropriate part of the screen graphic to select your preferred tray.
3. If applicable, the setting for paper weight should match the type of paper on which you intend to print.
4. A variety of document finishing options can be selected, such as normal one page per sheet, or N-up (where N can be any number up to 16) for printing scaled down pages at more than one page per sheet. Booklet printing prints two pages per sheet on each side of the paper so that when folded they make up a booklet. Booklet printing requires the duplex unit to be installed in your printer. Poster printing will print large pages as tiles spread over multiple sheets.
5. For two-sided printing, you can choose to flip the page by the long edge or the short edge. Of course, this requires that a duplex unit be installed in your printer.
6. If you have changed some printing preferences before and saved them as a set, you can recall them to avoid having to set them individually each time you need them.
7. A single on-screen button restores the default settings.



CHANGING THE DRIVER DEFAULTS

Windows XP/2000

1. Click **Start > Settings > Printers and Faxes** to open the Printers and Faxes window.
2. In the Printers and Faxes window, right-click on the appropriate printer driver icon, and choose **Printing Preferences** from the context menu.

Windows Vista

1. Click **Start > Control Panel > Printers** to open the Printers and Faxes window.
2. In the Printers and Faxes window, right-click on the appropriate printer driver icon, and choose **Printing Preferences** from the context menu.

CHANGING THE APPLICATION'S DRIVER SETTINGS

Windows

1. In your application, open the file you want to print.
2. On the **File** menu, choose **Print...**
3. In the application's Print dialogue, make sure the printer shown is the appropriate one, and click **Properties**.

Mac

1. In your application, open the file you want to print.
2. On the **File** menu, choose **Print...**
3. In the application's **Print** dialogue, make sure the printer shown is the appropriate one, and click **Printer:**.

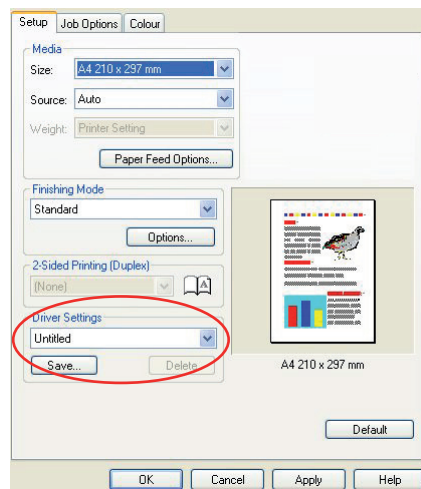
PCL SAVED DRIVER SETTINGS

This feature, unique to the Windows PCL drivers, allows you to save the printer driver settings and reuse them later. This could be useful if you frequently print many different types of document that require different printer driver settings.

Recalling saved settings in the PCL drivers is a simple task that must be done first, before any job-specific changes are made. Rather than repeat the procedure throughout this manual, it is described here.

SAVING A SET OF DRIVER SETTINGS

1. Make any changes to the driver settings you want, as described in the relevant section of this manual.
2. In the driver's **Setup** tab, click **Save...**



3. Enter a meaningful name for the settings you are saving, and click **OK**.

RECALLING SAVED DRIVER SETTINGS

1. In the driver's **Setup** tab, choose any previously saved *driver settings* you need.
2. Proceed to make any other adjustments for this job, as described in the relevant section in this manual.

SETTING THE DRIVER DEVICE OPTIONS

This section explains how to ensure that your printer driver can utilize all of the hardware features installed in your printer.

Accessories such as additional paper trays will only be usable if the printer driver on your computer knows they are there.

In some cases the hardware configuration of your printer is automatically detected when the driver is installed. However, it is advisable to at least check whether all of the available hardware features are listed in the driver.

This procedure is essential if you subsequently add extra hardware features to your printer after the drivers have been installed and set up.

Remember that if your machine is shared between users on different computers, the driver must be adjusted on each user's machine.

WINDOWS

1. Access the driver's **Properties** window. (See ["Changing the driver defaults" on page 10.](#))
2. Select the **Device Options** tab.
In the Windows XP PostScript driver the tab may be called "Device Settings".
3. Set the options for any devices you have installed, including the correct number of paper trays, high capacity feeder, duplex unit, etc.
4. Click **OK** to close the window and save your changes.

MAC OS X

Snow Leopard (Mac OS X 10.6) and Leopard (Mac OS X 10.5)

1. Open the Mac OS X Print & Fax Preferences.
2. Ensure your machine is selected.
3. Click **Options & Supplies**.
4. Click **Driver**.
5. Select all hardware options appropriate to your machine and click **OK**.

Tiger (Mac OS X 10.4)

1. Open the Mac OS X Print & Fax Preferences.
2. Ensure your machine is selected.
3. Click **Printer Setup....**
4. Click the menu and choose **Installable Options....**
5. Select all hardware options appropriate to your machine and click **Apply Changes....**

Panther (Mac OS X 10.3)

- 1.** Open the Mac OS X Print & Fax Preferences.
- 2.** Click **Printing**.
- 3.** Click **Set Up Printers....**
- 4.** Ensure your machine is selected and click **Show Info....**
- 5.** Click the menu and choose **Installable Options....**
- 6.** Select all hardware options appropriate to your machine and click **Apply Changes....**

Jaguar (Mac OS X 10.2)

- 1.** Open the Printer Setup Utility (Print Center on OS X 10.2.x).
This is located in the **Applications > Utilities** folder.
- 2.** Ensure your machine is selected.
- 3.** Click the Printers menu and click **Show Info....**
- 4.** From the pop-up menu, choose **Installable Options....**
- 5.** Select all hardware options appropriate to your machine and click **Apply Changes....**

BLACKS AND GREYS

BLACK OVERPRINT

Black overprint eliminates the white edge between the printed fonts and the colored background.

Black overprint can only be used when printing 100 percent black text over a background color.

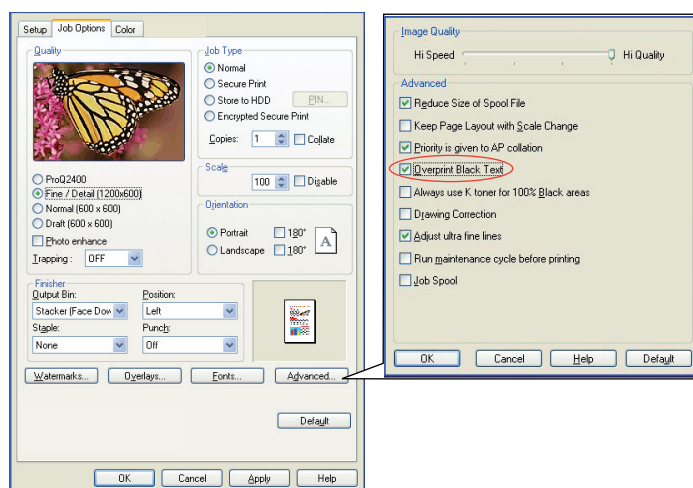
Black overprint may not be available with some software applications.

NOTE

1. The Black Overprint feature is not included in the Windows PCL 6 driver.
 2. When the background color is very dark, the toner may not fuse correctly. Change the background to a lighter color.
-

WINDOWS

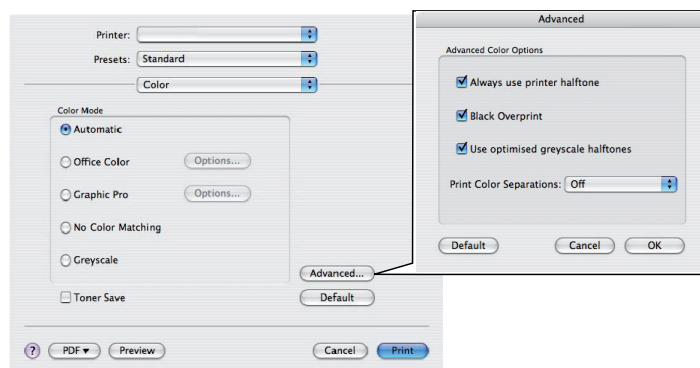
1. On the **Job Options** tab, click **Advanced**.



2. Check **Black Overprint**.

MAC OS X

1. From the **Color** menu, click **Advanced**.



2. Check **Black Overprint** checkbox.

BLACK PRINTING (BLACK GENERATION)

To use Black Generation, Office Color or Graphic Pro must be the selected Print Mode.

Your printer prints the color black in one of two ways: **Composite Black** or **True Black**.

COMPOSITE BLACK

The cyan, magenta, yellow, and black toners are *combined* to create composite black.

This will sometimes give a glossier finish, due to the increased amount of toner. It can also sometimes appear as a slightly brownish black.

Use composite black when printing photographs.

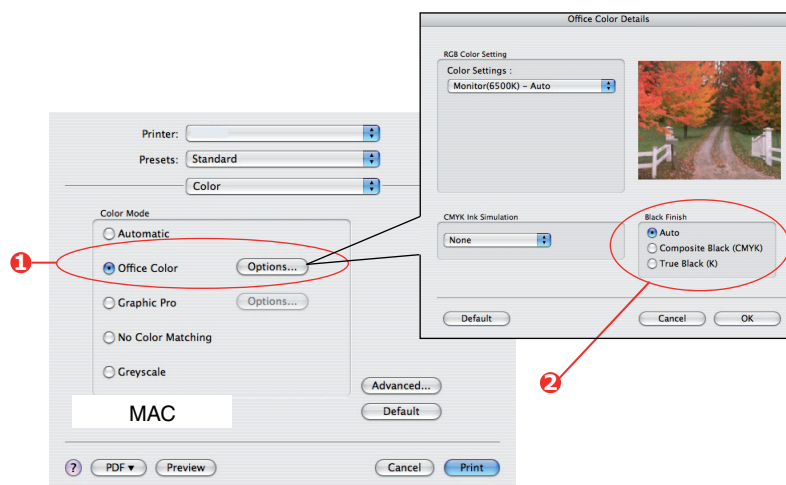
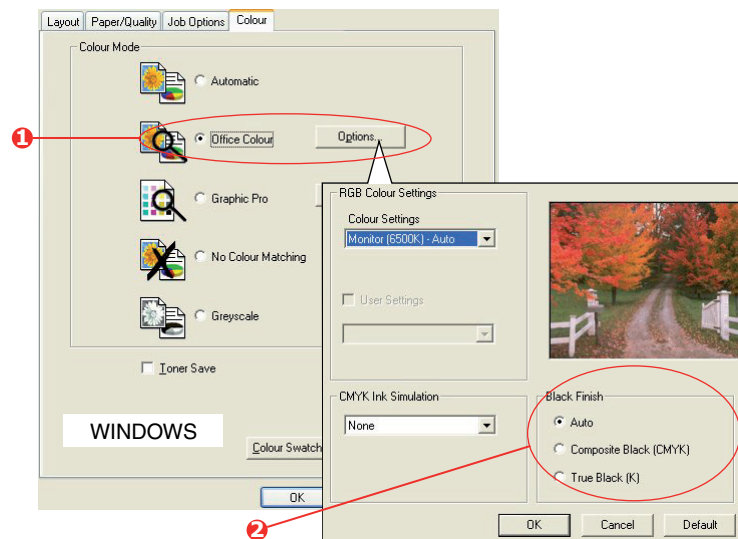
TRUE (PURE) BLACK

Only black toner is used to print true black.

Use True Black when printing a combination of text and graphics. If you use True Black to print photographs, dark sections of the photos may appear black.

Office Color

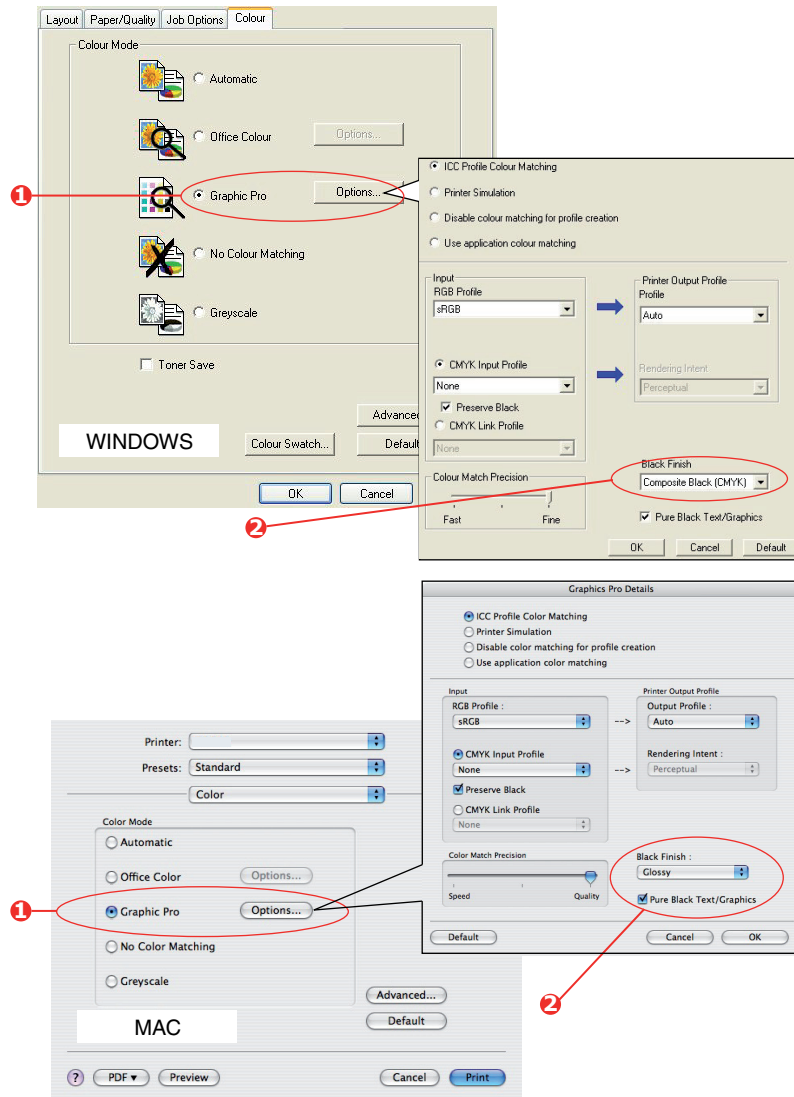
1. On the driver's **Color** tab, select **Office Color** (1) and click the **Options** button.



2. On **Black Finish** (2), make your selection: **Auto** (allow printer to choose the best method depending on page content), **True Black** or **Composite Black**.

Graphic Pro

1. On the driver's **Color** tab, select **Graphic Pro** (1) and click the **Options** button.



2. From the **Black Finish** menu (2), choose your preferred setting.

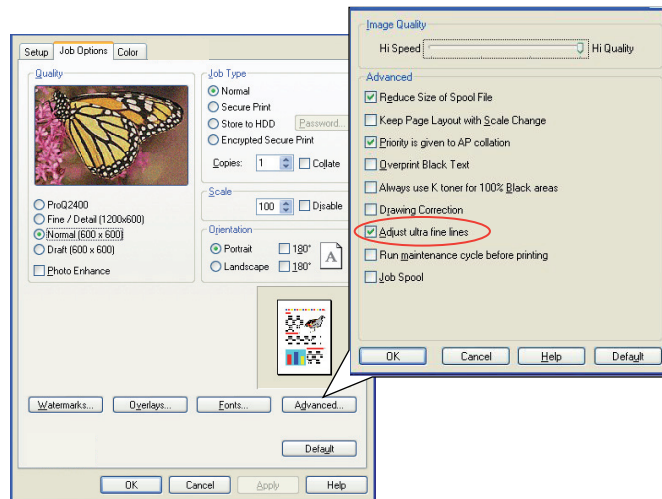
FINE LINES ENHANCEMENT

This feature can be used to emphasize the pen width of very fine lines (minimum line width).

With some software applications, if this feature is turned ON, the spaces in bar codes may become too narrow. If this happens, turn **Adjust Ultra Fine Lines** OFF.

WINDOWS

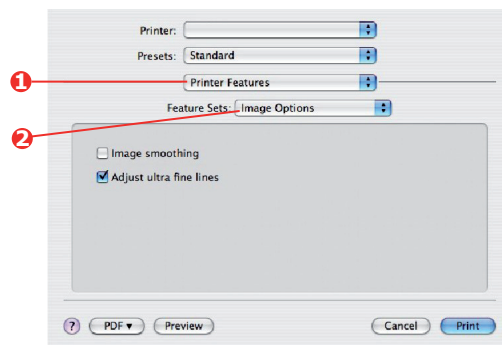
1. In the driver's **Job Options** tab, click **Advanced**.



2. Click the checkbox to turn on **Adjust Ultra Fine Lines**.

MAC

1. Select **Printer features**.



2. Select **Image Options**.
3. Click the checkbox to turn on **Adjust Ultra Fine Lines**.

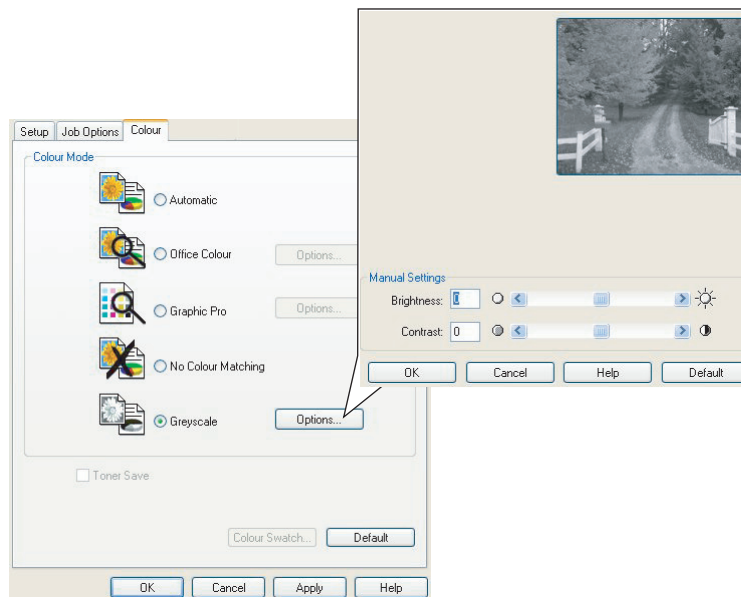
GREYSCALE PRINTING

If you select **Greyscale**, the printer converts all colors into shades of grey, and prints using only black toner.

Use Greyscale to speed up printing of proof copies or when you do not need to print a color document in color.

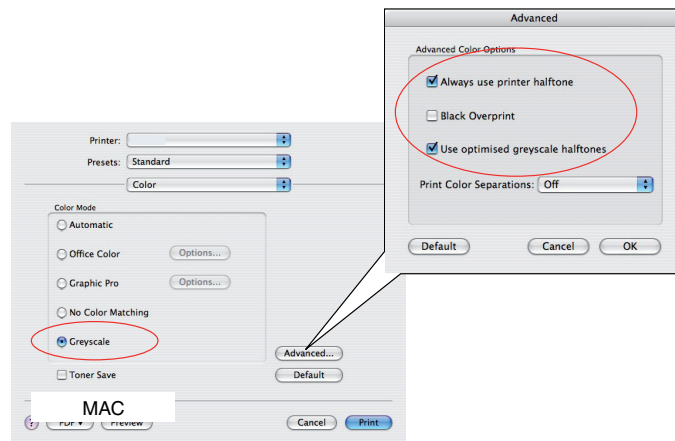
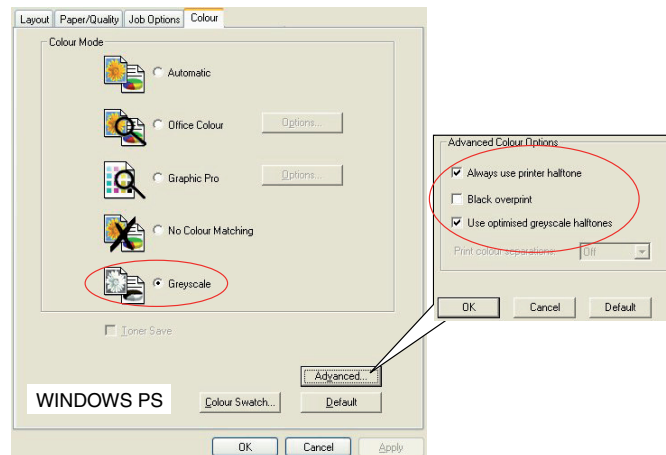
WINDOWS PCL

1. If using the PCL driver, in the driver's **Setup** tab, choose any previously saved *driver settings* you need. See ["Recalling saved driver settings" on page 11.](#)
2. On the **Color** tab, click **Greyscale**, and then click **Options** if you want to adjust brightness and contrast.



WINDOWS PS AND MAC

On the driver's **Color** tab, click **Greyscale**, then click **Advanced**.



Some applications will attempt to set the halftone screen information for the printer. If the option to **use printer halftones** is left at ON, the printer will set its own halftone screen value, giving a smoother result. It is recommended to leave this option on.

NOTE

If you are using the ProQ resolution setting, **Always use printer halftone** is always ON and cannot be disabled.

Optimised greyscale halftones may take slightly longer to print but will give best quality.

COLOR PRINTING (BASICS)

The printer drivers supplied with your printer provide several controls for changing the color output. For general use the automatic settings will suffice, providing reasonable default settings that will produce good results for most documents.

Many applications have their own color settings, and these may override the settings in the printer driver. Please refer to the documentation for your software application for details on how that particular program's color management functions.

FACTORS THAT AFFECT THE APPEARANCE OF PRINTS

If you wish to manually adjust the color settings in your printer driver, please be aware that color reproduction is a complex topic, and there are many factors to take into consideration. Some of the most important factors are listed below.

Differences between the range of colors a monitor or printer can reproduce

- > Neither a printer nor a monitor is capable of reproducing the full range of colors visible to the human eye. Each device is restricted to a certain range of colors. In addition to this, a printer cannot reproduce all of the colors displayed on a monitor, and vice versa.
- > Both devices use very different technologies to represent color. A monitor uses Red, Green and Blue (RGB) phosphors (or LCDs), a printer uses Cyan, Magenta, Yellow and Black (CMYK) toner or ink.
- > A monitor can display very vivid colors such as intense reds and blues and these cannot be easily produced on any printer using toner or ink. Similarly, there are certain colors, (some yellows for example), that can be printed, but cannot be displayed accurately on a monitor. This disparity between monitors and printers is often the main reason that printed colors do not match the colors displayed on screen.

Viewing conditions

A print can look very different under different lighting conditions. For example, the colors in a print may look different when viewed standing next to a sunlit window, compared to how they look under standard office fluorescent lighting.

Printer driver color settings

The driver settings for manual color can change the appearance of a print. There are several options available to help match the printed colors with those displayed on screen.

Monitor settings

The brightness and contrast controls on your monitor can change how your document looks on-screen. Additionally, your monitor's color temperature influences how "warm" or "cool" the colors look.

There are several settings found on a typical monitor:

- > 5000k Warmest; yellowish lighting, typically used in graphic art environments.
- > 6500k Cooler; approximates daylight conditions.
- > 9300k Cool; the default setting for many monitors and television sets.

(k = degrees Kelvin, a measurement of temperature.)

How your software application displays color

Some graphics applications such as Corel Draw or Adobe Photoshop may display color differently from "Office" applications such as Microsoft Word. Please see your application's on-line help or user manual for more information.

Paper type

The type of paper used can also significantly affect the printed color. For example, a printout on recycled paper can look duller than one on specially formulated glossy paper.

TIPS FOR PRINTING IN COLOR

The following guidelines may help you to achieve good color output from your printer.

PRINTING PHOTOGRAPHIC IMAGES

Use the Monitor (6500k) Perceptual setting.

If the colors look too dull, try the Monitor (6500k) Vivid or Digital Camera settings.

PRINTING FROM OFFICE APPLICATIONS

Use the Monitor (9300k) setting. This may help if you are having problems with specific colors from applications such as Microsoft Excel or Microsoft PowerPoint.

PRINTING SPECIFIC COLORS (E.G. A COMPANY LOGO)

There are 2 utilities on your printer driver CD/DVD-ROM that can help match specific colors:

- > Color Correct Utility
- > Color Swatch Utility

ADJUSTING THE BRIGHTNESS OR INTENSITY OF A PRINT

If the print is too light/dark, you can use the Brightness control to adjust it.

If the colors are too intense/not intense enough, use the Saturation control.

ACCESSING THE COLOR MATCHING OPTIONS

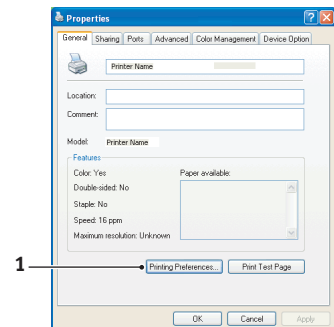
The color matching options in the printer driver can be used to help match your printed colors to the ones displayed on your monitor or from some other source, such as a digital camera.

To open color matching options from the Windows Control Panel:

1. Open the **Printers** window (called "Printers and Faxes" in Windows XP).
2. Right-click the printer name and choose **Properties**.
3. Click the **Printing Preferences** button (1).

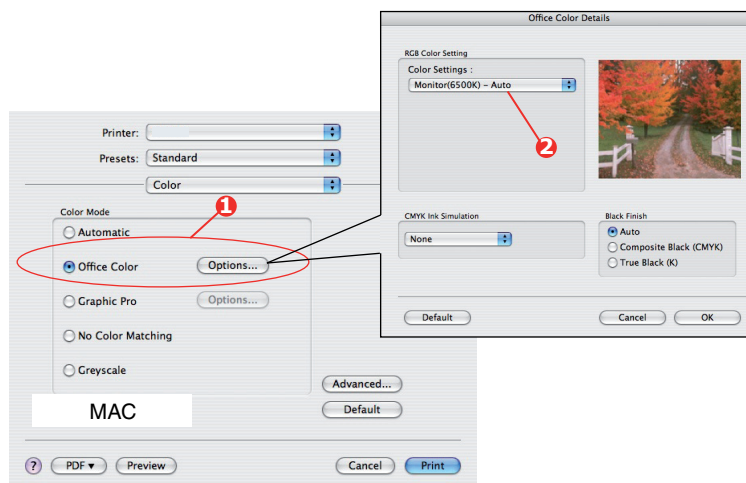
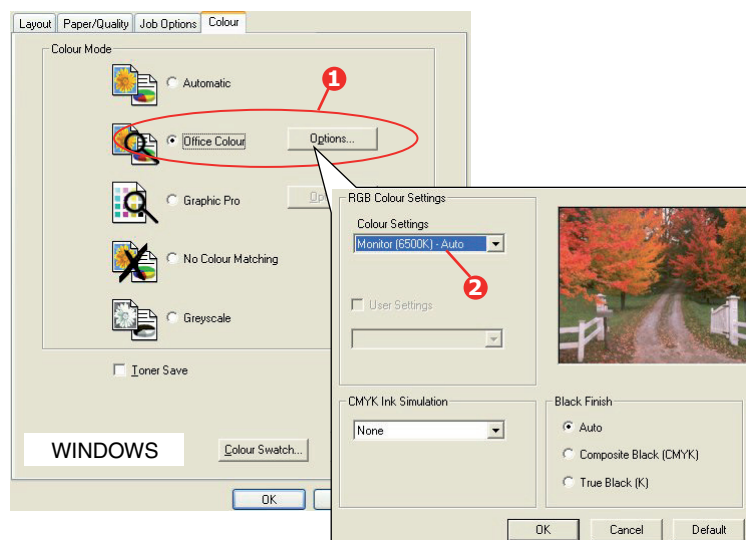
To open color matching options from within a Windows application:

1. Choose **File > Print...** from the application's menu bar.
2. Click the **Properties** button next to the printer name.



SETTING THE COLOR MATCHING OPTIONS

1. On the **Color** tab select **Office Color** for color matching.

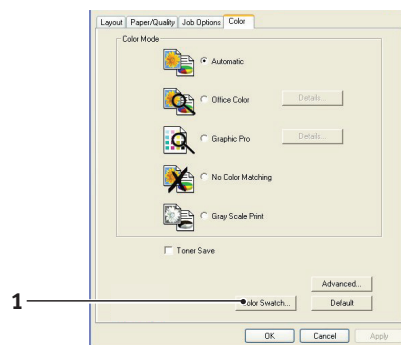


2. Choose **Options** (1) and select an options from the drop-down menu (2):
 - (a) **Monitor (6500k) Perceptual**
Optimised for printing photographs. Colors are printed with emphasis on saturation.
 - (b) **Monitor (6500k) Vivid**
Optimised for printing photographs, but with even more saturated colors than the Monitor (6500k) Perceptual setting.
 - (c) **Monitor (9300k)**
Optimised for printing graphics from applications such as Microsoft Office. Colors are printed with emphasis on Lightness.
 - (d) **Digital Camera**
Optimised for printing photographs taken with a digital camera.
Your results will vary depending on the subject and the conditions under which the photograph was taken.
 - (e) **sRGB**
The printer will try to reproduce the sRGB color space. This may be useful if color matching from an sRGB input device such as a scanner or digital camera.

USING THE COLOR SWATCH FEATURE

To use the Color Swatch feature, you must install the Color Swatch Utility. This is supplied on the CD/DVD-ROM that was supplied with your printer.

The Color Swatch function prints charts which contain a range of sample colors. Note that this is not the full range of colors that the printer can produce. Listed on each sample color are the corresponding RGB (Red, Green, Blue) values. This can be used to pick specific colors in applications that allow you to choose your own RGB values. Simply click the **Color Swatch** button (1) and choose from the options available.



An example of using the color swatch function:

You wish to print a logo in a particular shade of red. The steps you would follow are:

1. Print a color swatch, then select the shade of red that best suits your needs.
2. Take a note of the RGB value for the particular shade that you liked.
3. Using your program's color picker, enter these same RGB values, and change the logo to that color.

The RGB color displayed on your monitor may not necessarily match what was printed on the color swatch. If this is the case, it is probably due to the difference between how your monitor and printer reproduce color. Here, it is unimportant since your primary objective is to print the required color.

USING THE COLOR CORRECT UTILITY

The Oki Color Correct Utility is provided on your printer driver CD/DVD-ROM. You must install it separately since it is not installed along with the printer driver.

The Color Correct utility has the following features:

- > Microsoft Office palette colors can be individually adjusted. This is useful if you want to change how a specific color is printed.
- > Colors can be adjusted by changing Hue, Saturation and Gamma. This is useful if you wish to change the overall color output.

Once these color adjustments have been made, the new settings can be selected from the printer driver **Color** tab.

To select adjustments made with the Color Correct Utility:

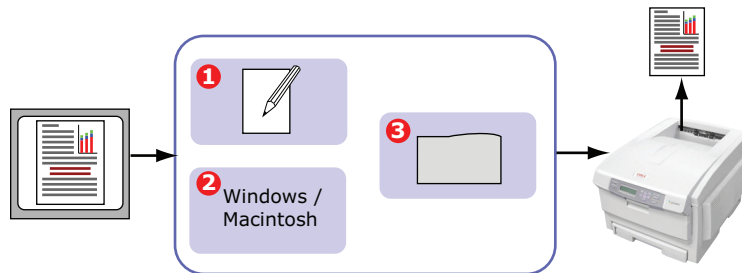
1. From your application program, click **File** and point to **Print**.
2. Click **Properties**. This displays the printer driver options.
3. Click the **Color** tab.
4. Click **Advanced Color**.
5. Click **User Defined**.

Select the color adjustment you made with the Color Correct Utility.

COLOR MATCHING (ADVANCED)

BASICS

There are three methods by which your document's color can be managed and adjusted:



1. Application Color Management (1).

Some graphics and desktop publishing programs such as Adobe Photoshop, Adobe Illustrator, and Quark Xpress have their own built-in color management systems. [See page 39.](#)

Most applications do not have these color management features and rely instead on the printer or operating system.

2. Operating System Color Management (2).

Windows 2000, XP and Vista have Windows ICM Color Management.

Mac OS X has Apple ColorSync.

3. Printer Color Management (3).

When you print your document and modify settings in the printer driver, the printer performs color adjustments.

NOTE

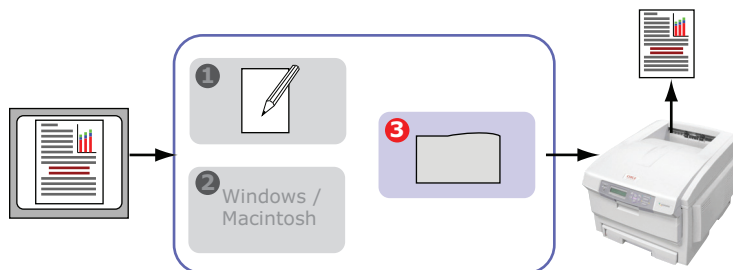
Only use one color management system if you want the best results from your printer.

If you wish to use your printer's color management system, ensure that your application or operating system color management is switched off.

Applying color management in multiple places will give unpredictable results.

WHAT THIS GUIDE DESCRIBES

This guide only discusses the printer color management system.

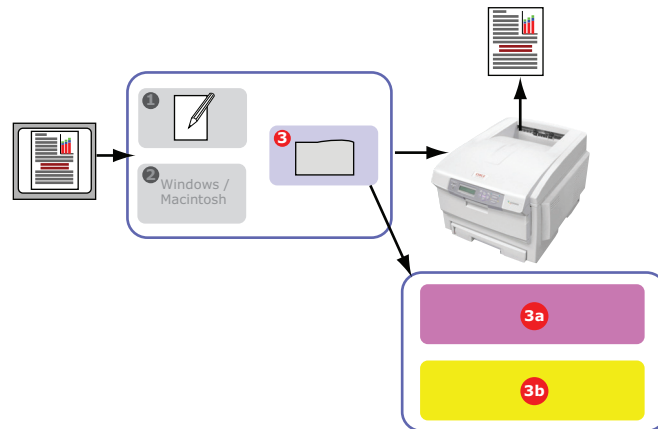


If you wish to learn more about your application program or operating system color management, please see the documentation that was supplied with your application software or computer.

PRINTER COLOR MANAGEMENT

INTRODUCTION

Your printer has two separate color management systems – Office Color and Graphic Pro.



- > Office Color (3a) – See “Office color” on page 27.

This is a simpler color management system designed for ease of use. Office Color is recommended for users who are not experts in color but want good results when printing from programs such as Microsoft Office.

- > Graphic Pro (3b) – See “Graphic pro” on page 30.

This is a powerful color management system based on ICC color profiles.

Profiles can be downloaded to the printer storage device using a special utility, and then color matching can be applied to all incoming print jobs.

The Graphic Pro color management system is recommended for users who are already familiar with ICC profile-based color matching and require more control over color.

ABOUT RGB AND CMYK COLOR

Some application programs give you the choice to create and edit documents using either RGB color or CMYK color. Typically, only professional graphics and desktop publishing software support CMYK color. Most application programs only support RGB color, for example Microsoft Office programs or web browsers.

If your application program does not give you the choice of RGB or CMYK color, you should assume that it only supports RGB.

The RGB color model is based on the three primary colors of light; **Red**, **Green** and **Blue**. This model is used by scanners, digital cameras and computer monitors.

The CMYK color model is based on **Cyan**, **Magenta**, **Yellow** and **Black** printer inks or toners.

About the printer drivers

Depending on your operating system, you may have the choice of different drivers to use with your printer. You may wish to select a printer driver based on whether it supports CMYK data.

	SUPPORT FOR RGB DATA	SUPPORT FOR CMYK DATA
PCL 5c driver (Windows)	✓	✗
PCL 6 driver (Windows)	✓	✗
PostScript driver (Windows)	✓	✓
PostScript driver (Mac)	✓	✓

OFFICE COLOR

This section describes the features in the printer driver for “Office Color” printer color management.

There are two different sets of options in Office Color:

RGB OPTIONS	CMYK OPTIONS (POSTSCRIPT ONLY)
Monitor (6500K) – Auto	SWOP
Monitor (6500K) – Perceptual	Euroscale
Monitor (6500K) – Vivid	Japan Color
Monitor (9300K)	
Digital Camera	
sRGB	

NOTE

The options for CMYK data are not present in the Windows PCL 5c or PCL 6 printer drivers. These printer drivers only support RGB color data.

Although the Office Color options contain controls for CMYK data, it is strongly recommended that you use the Graphic Pro options instead. If you are printing CMYK data, the Graphic Pro options provide more power and flexibility.

OFFICE COLOR - RGB OPTIONS

Office Color provides a collection of several different color matching presets for RGB data.

These presets each change the color of your print in a slightly different way.

These RGB color matching options are available in all printer drivers.

PRESET	EXPLANATION
Monitor (6500K) – Auto	The best color match preset will be selected based on the type of document. 6500K - Perceptual will be selected if printing photographs. 6500K - Vivid will be selected if printing graphics and text.
Monitor (6500K) – Perceptual	Optimized for printing photographs. Colors are printed with emphasis on saturation.
Monitor (6500K) – Vivid	Optimized for printing photographs and for office graphics. The printer uses even more saturation than the Monitor (6500k) Perceptual setting.
Monitor (9300K)	Colors are printed with emphasis on Lightness. Use this setting if you are having problems achieving the correct color when printing from Microsoft Office applications.
Digital Camera	Optimized for printing photos taken with a digital camera. Your results will vary depending on the subject and the conditions under which the photograph was taken.
sRGB	The printer will try to reproduce the sRGB color space. This may be useful if color matching from an sRGB input device such as a scanner or digital camera.

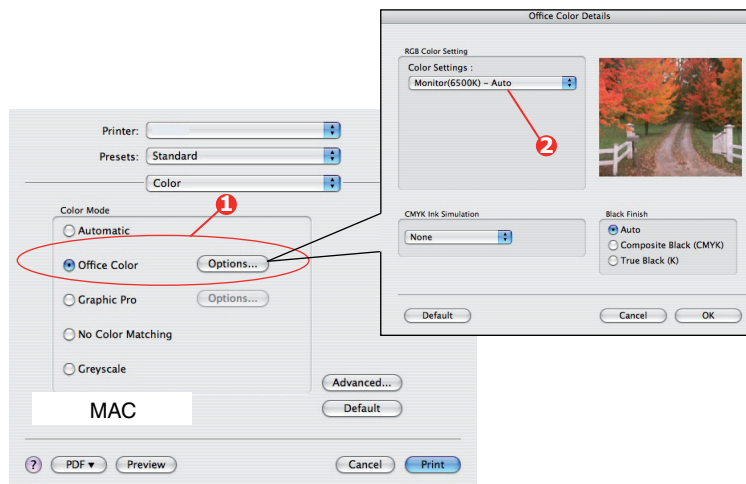
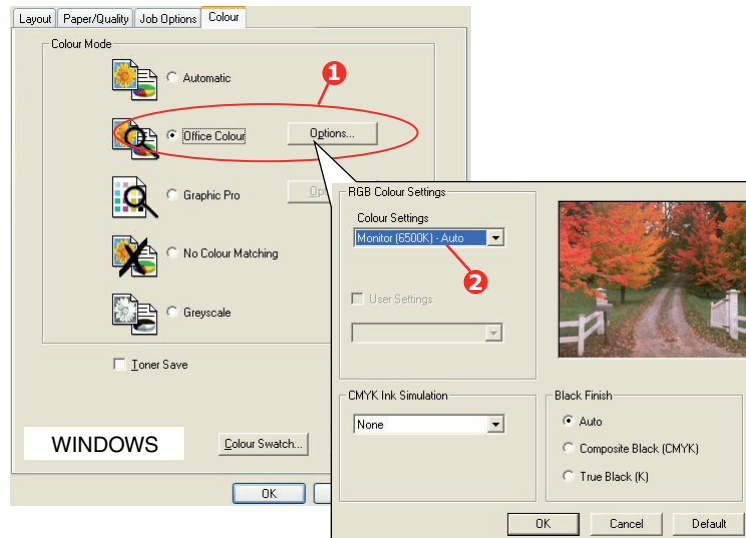
This information applies to the Windows PCL 5c, PCL 6, PostScript and Mac OS X drivers.

NOTE

When printing from some applications on Mac OS X, these RGB color match options may not affect the color of your print. If you discover that the color of your print has not changed after applying one of the Office Color Match presets, then the application is incompatible with this type of printer color matching.

As an alternative, Mac OS X 10.3.x users may be able to adjust the color of their document using ColorSync Quartz filters.

1. On the printer driver **Color** tab, select **Office Color** (1) and click the **Options** button.



2. Select a preset from **Color matching options** (2).

CUSTOMISING RGB OFFICE COLOR WITH THE COLOR CORRECT UTILITY

If the Office Color presets are not sufficient for your needs, the Color Correct utility provides a means of further adjustment. The Color Correct utility provides two methods for adjusting the Office Color settings:

1. You can adjust the overall appearance of the print by modifying Hue, Saturation and Gamma.
2. You can adjust the specific palette colors used in Microsoft Office applications. These adjustments only affect one specific palette color at a time.

GRAPHIC PRO

This section describes the color matching options available for Graphic Pro.

The Graphic Pro color matching system is based around ICC profiles. These profiles are downloaded to the printer using the Profile Assistant utility and then selected in the printer driver. When a job is sent to the printer, the ICC profiles are applied to the print job on the printer.

NOTE

- > *Some features of Graphic Pro color matching can only be used if your printer is fitted with a storage device. The printer storage device is required if you wish to download and use your own ICC profiles to the printer.*
 - > *If your printer does not have a storage device fitted, you will only be able to select the factory default profiles that are built-in to the printer.*
-

WHAT CAN YOU DO WITH GRAPHIC PRO COLOR MATCHING?

The Graphic Pro color matching system is both powerful and flexible. Here are some examples of how the Graphic Pro color matching system can be used:

Matching printer color to an RGB input device

By using the ICC profiles of a scanner, digital camera or monitor, the printer's color can be matched to the input device.

Printer simulation

Your printer can be used to simulate the color output of another printer, even when printing RGB documents. For best results, use CMYK documents when simulating the color output of other printers.

CMYK ink simulation

Your printer can be used to simulate the color output of a commercial printing press (SWOP, Euroscale or Japan Color inks).

More accurate printer color

If you have created your own profiles with third-party ICC profile creation software, these can be downloaded to the printer and used when printing.

TYPES OF ICC PROFILE SUPPORTED

There are four classes of ICC profile supported by the Graphic Pro color matching system:

PROFILE TYPE	DESCRIPTION
RGB Source (RGB Input)	These profiles describe the device that was used to capture RGB data (e.g. scanner or digital camera). The RGB Input Profile may also be your monitor profile if you are trying to match to your screen.
CMYK Simulation (CMYK input)	These profiles describe the CMYK device whose colors you are trying to simulate. Typically this would be another manufacturer's printer or an offset printing press. Profiles are already built-in to the printer for commercial printing press inks such as SWOP or Euroscale.
Printer (CMYK Output)	This profile describes the color characteristics of your own printer. The printer already has factory default profiles built-in, but you can replace these profiles with your own if required.
Link Profile	This is a special type of ICC profile that converts directly from CMYK to CMYK. For example, a link profile could convert directly from the CMYK space of another printer to the CMYK space of your printer.

GRAPHIC PRO WORKFLOW – OVERVIEW

There are three steps to using the Graphic Pro color matching system:

1. Gather or create ICC profiles (see [page 31](#))
2. Download ICC profiles to the printer storage device ([page 32](#))
3. Select the ICC profiles in the printer driver when printing ([page 32](#))

Step 1 - Gather or create the ICC profiles

Where can I get the profiles I need?

PROFILE TYPE	WHERE TO GET PROFILES
RGB Source (RGB Input)	Obtain your RGB source profiles from your scanner, camera or monitor manufacturer.
CMYK Simulation (CMYK input)	Obtain the simulation profile from the manufacturer of the printer you wish to simulate.
Printer (CMYK Output)	The factory default profiles for your printer are built-in. If you need greater accuracy, you should create your own printer profile using third-party ICC profile creation software.
Link Profile	You can create Link profiles using third-party ICC profile creation software. Note that not all ICC profile creation software can create Link profiles.

Step 2 - Downloading ICC profiles to the printer storage device

You can download profiles to the printer storage device using the Profile Assistant utility.

Using Profile Assistant

1. Launch Profile Assistant.
2. Select a printer.

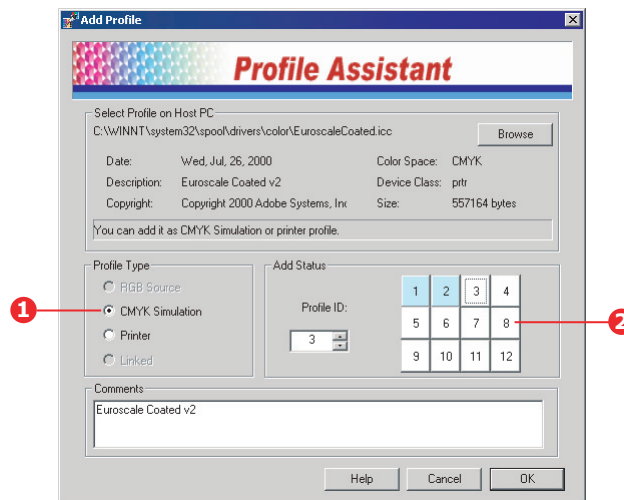
If this is the first time you have used Profile Assistant, you should allow the utility to search for compatible printers. Select the connection types that you wish to search – Parallel, USB or Network (TCP/IP), and click **Start**.

If you know the Printer's IP address, you can enter it manually.

3. The main screen of Profile Assistant displays the profiles resident on the selected printer's storage device. To download a new profile to the printer:
 - (a) Click **Add**.
 - (b) Select an ICC profile from your computer's hard disk.
 - (c) Once you have selected a profile, you can add it to the printer as one of the 4 profile types - RGB Source, CMYK Simulation, Printer or Linked.

The options available will depend on which ICC profile you have selected. For example, if you have selected a CMYK profile, you may only be able to add this to the printer as a CMYK Simulation or Printer output profile.

- (d) Select a number from 1 to 12. This number is used to identify the profile in the printer driver.



- (e) Click **OK** to download the ICC profile to the printer.

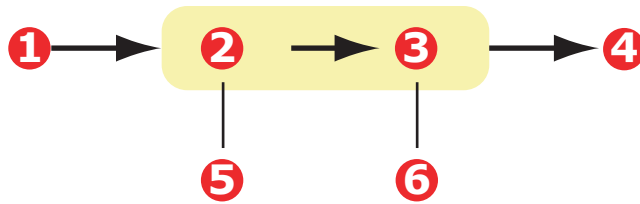
Step 3 - Select ICC profiles in the printer driver

What you select in the printer driver depends on the color matching task that you wish to perform.

Examples of selecting ICC profiles for different color matching tasks are shown in the next sections of this guide.

MATCHING THE COLOR OF A MONITOR, SCANNER OR CAMERA

The Graphic Pro color matching system can be used to match the printer color to an RGB input device such as a monitor, scanner or digital camera.



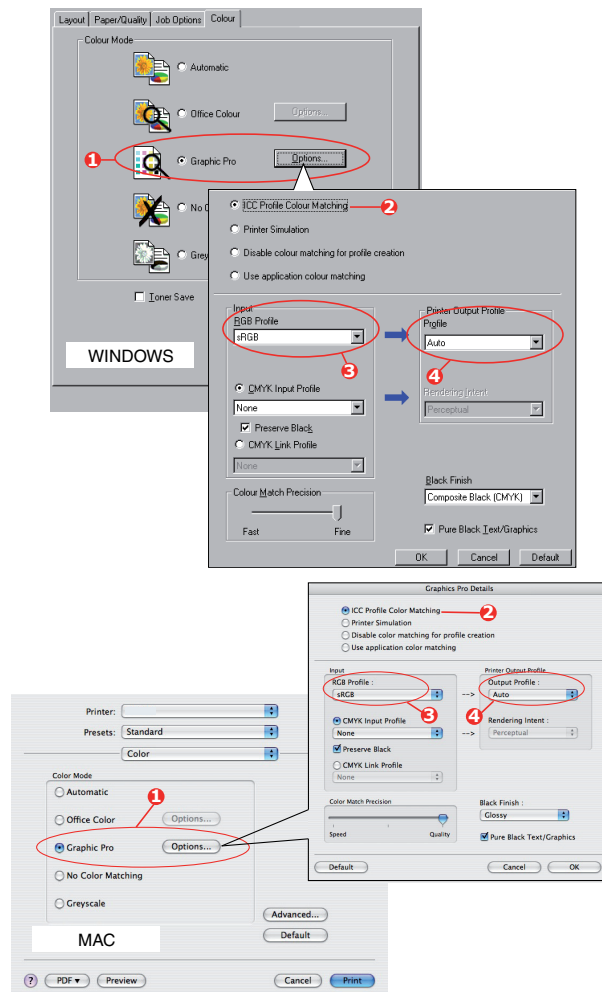
- | | |
|---------------------------|---|
| 1. RGB data | 4. Printed document |
| 2. RGB source profile | 5. Scanner, monitor, camera, etc. |
| 3. Printer output profile | 6. Leave on Auto or select your custom profile. |

To match an RGB input device, first download the RGB source profile and printer profile (optional) to the printer storage device using Profile Assistant. See ["Using Profile Assistant" on page 32](#).

Once the profile(s) have been downloaded, make the appropriate selections in the printer driver.

To match the color of an input RGB device such as a monitor, scanner or digital camera, make the following selections in the printer driver:

1. On the printer driver **Color** tab, select **Graphic Pro** (1) and click **Options**.



2. Select **ICC Profile Color Matching** (2).
3. Select the ICC profile that corresponds to the device you are trying to match such as your monitor, scanner or digital camera (3).

Remember that the names "RGB Source 1", "RGB Source 2" and so on relate to the number assigned to the profile using Profile Assistant. See ["Using Profile Assistant" on page 32](#).

4. Select a **Printer Output Profile** (4).

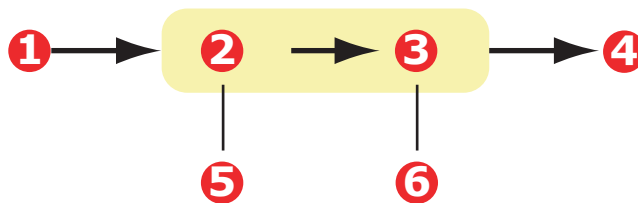
If **Auto** is selected, the factory default profiles that are embedded in the printer will be used. If you have created a printer profile yourself using profile creation software, select it here.

NOTE

If you have selected your own printer output profile (4), you will also be able to adjust the rendering intent. See ["Rendering intents" on page 38](#).

SIMULATING ANOTHER PRINTER – RGB SOURCE DATA

The Graphic Pro color matching system can be used to simulate the color output of another printer.



- | | |
|---------------------------|---|
| 1. RGB data | 4. Printed document |
| 2. RGB source profile | 5. Scanner, monitor, camera, etc. |
| 3. Printer output profile | 6. Leave on Auto or select your custom profile. |

NOTE

Be aware that if the device you are trying to simulate has different color capabilities from your own printer, exact color simulation will not be possible. For example, it may be difficult to reproduce the exact colors of an inkjet printer on a toner-based printer.

Additionally, differences in the range of printable colors between different devices can make simulation using RGB source data inaccurate. To achieve best results when simulating the color output of other printers, you are strongly advised to use CMYK data as a source. See [CMYK Ink Simulations on page 36](#).

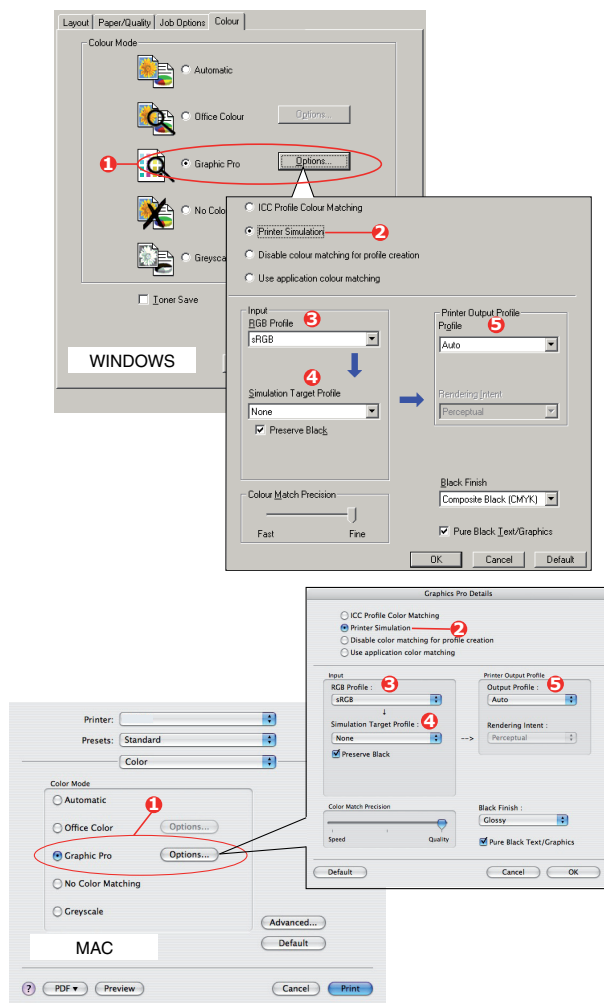
To simulate the output of another printer, you need to download at least 2 profiles to your printer using Profile Assistant:

- > RGB Source Profile
- > Simulation Target Profile
- > Printer Output Profile (optional)

Once the profile(s) have been downloaded, make the appropriate selections in the printer driver.

If you are using a source RGB document, simulate the output of another printer by making the following selections in the printer driver:

1. On the printer driver **Color** tab, select **Graphic Pro** (1) and click **Options**.



2. Select **Printer Simulation** (2).
3. Select the ICC profile that corresponds to the device used to capture or display your source document - this could be a monitor, scanner or digital camera (3).

Remember that the names "RGB Source 1", "RGB Source 2" and so on relate to the number assigned to the profile using Profile Assistant. See ["Using Profile Assistant" on page 32](#).

4. Select a Simulation Target Profile (4).

This profile corresponds to the printer you want to simulate.

If you wish to produce black and grey colors that are printed using only black toner, enable the **Preserve Black** option. Although this produces a better quality print, the black and grey colors will not be simulated accurately.

5. Select your printer output profile (5).

If **Auto** is selected, the factory default profiles that are embedded in the printer will be used. If you have created a printer profile yourself using profile creation software, select it here and choose a rendering intent ([see page 38](#)).

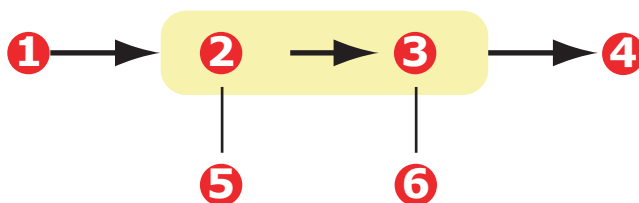
CMYK INK SIMULATIONS – CMYK SOURCE DATA

The ICC-based color matching system can be used to simulate the output on commercial printing presses.

You can select from the ink types most commonly used in different regions of the world:

- > Euroscale – Europe
- > Swop – North America
- > Toyo – Japan

To print CMYK Ink Simulations, you must use PostScript printer driver supplied.



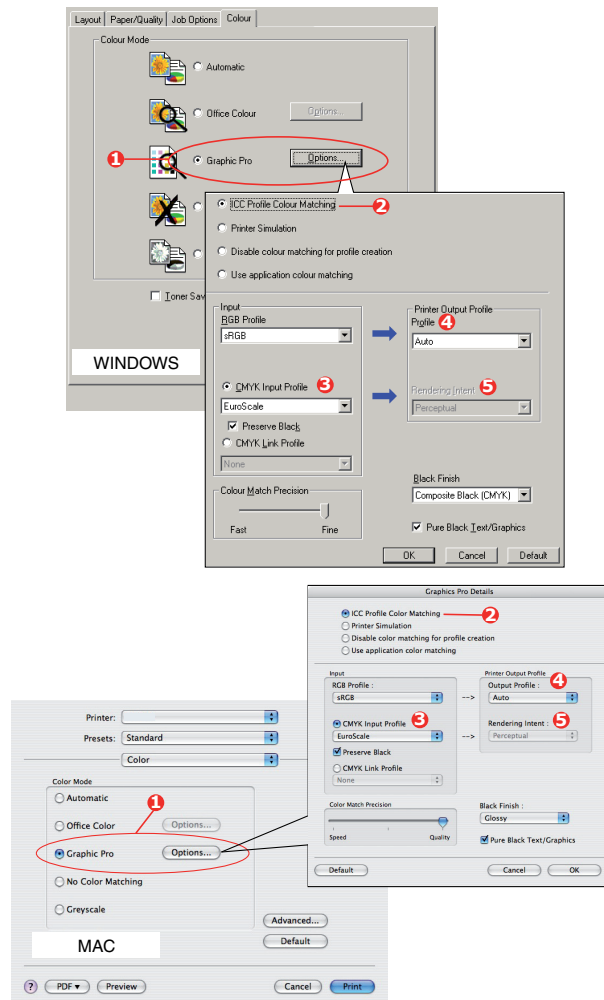
- | | |
|---------------------------|---|
| 1. CMYK data | 4. Printed document |
| 2. CMYK input profile | 5. CMYK device you wish to simulate (e.g. SWOP press) |
| 3. Printer output profile | 6. Leave on Auto or select your custom profile |

Although it is possible to perform CMYK ink simulations using the Office Color options in the printer driver, we recommend that you use the Graphic Pro color matching system to perform CMYK ink simulations, as this provides additional controls, such as using the **Preserve Black** feature, or specifying an alternative printer output profile.

NOTE

This information applies to the Windows PostScript and Mac OS X drivers only.

If you are using a source CMYK document, use the following printer driver settings to perform a CMYK Ink Simulation:



1. On the printer driver **Color** tab, select **Graphic Pro** (1) and click **Options**.
2. Select **ICC Profile Color Matching** (2).
3. Select the **CMYK Input profile** (3) that corresponds to the device you are trying to match such as a SWOP or Euroscale Press. If you have another CMYK Ink profile that you wish to use, select it here as the appropriate "CMYK Source x" profile.

Remember that the names "CMYK Source 1", "CMYK Source 2" and so on relate to the number assigned to the profile using Profile Assistant. See ["Using Profile Assistant" on page 32](#).

Use the **Preserve Black** option to keep the original grey component (K channel) information. If **Preserve Black** is disabled, the grey components may be printed using a mixture of CMYK toner, instead of just K (black) toner.

4. Select a Printer Output Profile (4).

If **Auto** is selected, the factory default profiles that are embedded in the printer will be used. If you have created a printer profile yourself using profile creation software, select it here.

If you have selected a profile other than **Auto**, select the **Rendering Intent** (5). (See ["Rendering intents" on page 38](#).)

RENDERING INTENTS

When selecting the Printer Output Profile, if you select any other profile apart from **Auto**, you can select the Rendering Intent. The rendering intents are essentially a set of rules that determine how colors that fall outside of the printable colors are treated.

Select the rendering intent that best suits the document you are printing.

Perceptual

This option is recommended for printing photographs.

Typically, perceptual rendering desaturates all the colors when printing. This brings unprintable colors into the printer's range, whilst keeping the relationships between the colors the same.

Saturation

This option is recommended for printing business graphics if you want vivid colors. This will not necessarily produce accurate color, as the emphasis is on maintaining saturation.

Relative colorimetric

This option is best for printing solid colors and tints. Use Relative Colorimetric when printing from a drawing program such as Adobe Illustrator, or Macromedia Freehand.

Absolute colorimetric

This option is recommended if you are proofing images on your printer that are intended for final output on a printing press. This may result in a visible color cast on your print as it will also try to simulate the paper white of the target device.

PURE BLACK TEXT / GRAPHICS

When your document is printed, often the pure black colors will not be printed using 100% black toner. Instead, these pure black colors are sometimes converted and printed using a mixture of CMYK toner.

Using the Pure Black Text / Graphics feature ensures that 100% black text or graphics in your document is printed using pure black toner.

This means that the following colors in your documents will be printed using only 100% black toner:

RGB	Red = 0, Green = 0, Blue = 0
CMYK	Cyan = 0%, Yellow = 0%, Magenta = 0%, Black = 100%

COLOR MATCH PRECISION

When the printer performs color matching, it must do many calculations to convert between different color formats (RGB, CMYK, etc.). These calculations can take time to process.

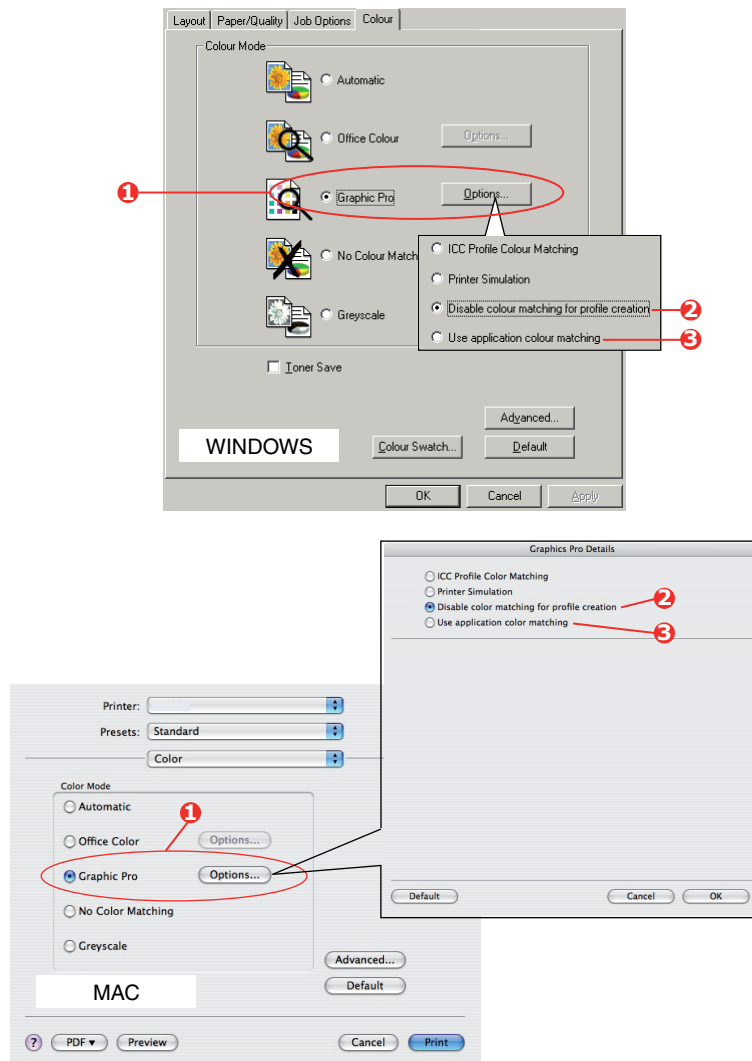
The **Color Match Precision** option allows you to choose between higher quality color matching (more time consuming) or faster but less accurate color matching.

PRINTER DRIVER SETTINGS FOR ICC PROFILE CREATION OR NO COLOR MATCHING

If you are creating ICC profiles using third-party software, select **Disable Color Matching for ICC Profile Creation**. This option switches off all printer color management and also prevents the printer from restricting toner layer thickness.

If you are using your application color matching, select **Use Application Color Matching**. This option switches off all printer color management.

1. On the printer driver **Color** tab, select **Graphic Pro** (1) and click **Options**.
2. Select **Disable Color Matching for Profile Creation** (2) if you are creating an ICC profile using third-party profile creation software. Select **Use Application Color Matching** (3) if you wish to switch off all printer color management and use your application's color matching.



OVERLAYS AND MACROS (WINDOWS ONLY)

WHAT ARE OVERLAYS AND MACROS?

If you would like to print on special stationery, such as forms and letterhead, but do not want to use pre-printed stationery, you can create your own using these advanced features.

You can use PostScript overlays to generate all your special stationery and store it in the printer for use whenever you need it. If you have chosen to install the PCL driver, macros perform a similar function.

You can create several overlays or macros, and combine them in any way you like to produce a variety of forms and other special stationery. Each image can be printed on just the first page of a document, on all pages, on alternate pages, or just the pages that you specify.

CREATING POSTSCRIPT OVERLAYS

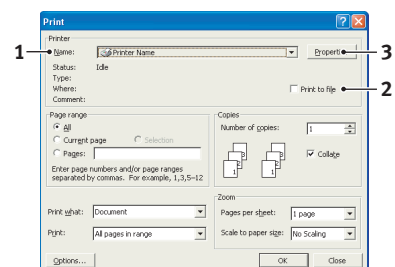
Three steps are required to create an overlay:

1. Create the form data using your own application software and print it to a printer (.PRN) file.
2. Use the Storage Device Manager utility software supplied on CD/DVD with your printer to create a "project file," import the .PRN file(s), and download the generated filter (.HST) file to the printer. The project file will contain one or more overlay images which are functionally related, such as the cover page and the continuation page images for business letters.
3. Use downloaded files to define your overlays ready for use when printing your documents.

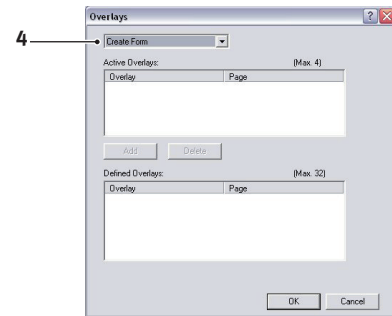
When printing overlay files to disk, do not select any special features, such as two-sided printing or multiple copies. These are not appropriate to overlays, they apply only to your final documents.

CREATING THE OVERLAY IMAGE

1. Use your preferred application, perhaps a graphics program, to create the required overlay image and save it.
2. Open your application's **Print...** dialogue.
3. Make sure that the selected printer name (1) is that of your PostScript printer driver.
4. Select the **Print To File** (2) option.
5. Click the **Properties** button (3) to open the Document Properties window.
6. On the Job Options tab, click the **Overlay** button.



7. In the Overlay window, choose **Create Form** from the drop-down list (4).
8. Click **OK** to close the Document Properties window.
9. Click **OK** again to close the Print dialogue.
10. When prompted for a print file name, enter a meaningful name with the extension.PRN.
11. Close your application.



CREATE AND DOWNLOAD THE PROJECT

1. From the Windows **Start** menu, start **Storage Device Manager** (SDM) and allow SDM to discover the printer.
2. Choose **Projects > New Project**.
3. Choose **Projects > Add File to Project**.
4. Set the **Files of Type** drop-down list to **PRN Files (*.prn)**.
5. Navigate to the folder where the .PRN files are stored and select one or more of these to include in your overlay set.

You can have more than one printer (.PRN) file in a project. For example, one for top pages and another for continuation pages. Use standard Windows techniques (Shift or Ctrl keys) to select multiple files simultaneously if you need to.

6. Click **Open** to add these files to the current project.
7. When a message box appears confirming that a filter file has been created, click **OK** to clear the message.
8. The project window will display one.HST file for each printer file added. Make a careful note of each of these names. Ensure that you note them *exactly* as they appear, they are case sensitive, and you will need them later.
9. Choose **Projects > Save Project** and enter a meaningful name (e.g. "Letter Stationery") so that you can recognise it later if you want to modify it.
10. Choose **Projects > Send Project Files to Printer** to download the project to the printer.

If you have a storage device in the printer, SDM will automatically download files to it. If not, SDM will download files to flash memory. If you have a storage device but still prefer to download to flash memory, double-click the file name in the Project window and under **Volume**, type in **%Flash0%** and then click **OK**.

11. When the message **Command Issued** appears confirming that the download is complete, click **OK** to clear the message.

TEST PRINTING THE OVERLAY

1. Click on the printer icon for the relevant printer and choose **Printers > Test Form**.
2. In the Test PostScript Form window, to test each overlay select it and click **OK**. There will be a short pause while the printer processes the form, and then it will print.
3. When each overlay has been tested, click **Exit**.
4. Click the standard Windows **Close (X)** button, or choose **Projects > Exit** to close Storage Device Manager.

DEFINING OVERLAYS

This is the final step before the new overlays are ready for use.

1. Open the Printers (called "Printers and Faxes" in Windows XP) window via the **Start** menu or the Windows Control Panel.
2. Right-click on the Relevant PostScript printer icon and choose **Printing Preferences** from the pop-up menu.
3. In the Overlay window, click the **New** button.
4. In the **Define Overlays** window, enter a suitable name (1) for this overlay and choose which page(s) (2) of your documents will use this overlay.

5. Enter the name of the overlay file (3) *exactly* as it appeared in the Storage Device Manager project window. Remember that this name is case sensitive.

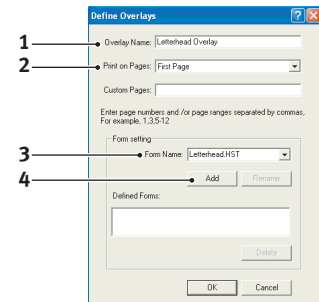
If you forgot to note the overlay names when you created them, you can find them using Storage Device Manager to view the project file, or the printer's Information Menu to print a file list and identify them from there.

6. Click **Add** (4) to add this overlay into the defined overlays list.
7. Click **OK** to close the Define Overlay window.

The new overlay now appears in the Defined Overlays list in the printer properties window.

8. Repeat the above procedure if you wish to define more overlays.
9. When done, click **OK** to close the printer properties window.

Your new overlays are now ready and available to be used for any future documents you wish.

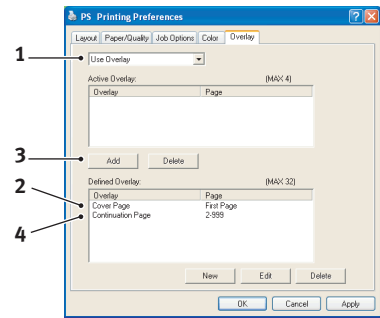


PRINTING WITH POSTSCRIPT OVERLAYS

Once you have defined your overlays you are ready to use them for any documents you wish. The example illustrated here uses two overlays for business letters. The first prints on just the top page, and the second prints on any or all subsequent pages.

1. Prepare your document in the normal way using your own application software. Remember, if necessary, to format the document so that it will fit within the appropriate space.
2. Open your application's **Print...** dialogue and choose any options you will require, ensuring that the target printer is your PostScript printer driver in which the overlays have been defined.
3. Click the **Properties** button to open the Printing Preferences window.
4. On the Job Options tab, click the **Overlay** button.

5. In the Overlay window, choose **Use Overlay** from the drop-down list (1).
6. Click on the first overlay (2) you wish to use. In this example it is the Cover Page overlay. Then click the **Add** button (3).
7. If you want to use another overlay, in this case it is the Continuation page, click the second overlay (4) and then click the **Add** button (3) again.
8. When you have selected all the overlays you want to use for this document, click **OK**.
9. Finally, in your application's print dialogue, click **OK** to begin printing.



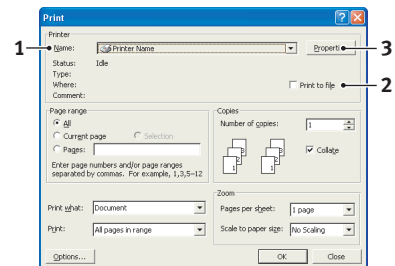
CREATING PCL OVERLAYS

Three steps are required to create an overlay:

1. Create the form data using your own application software and print it to a printer (.PRN) file.
2. Use the Storage Device Manager utility software supplied on CD/DVD with your printer to create a "project file," import the .PRN file, and download the generated filter (.BIN) files to the printer.
3. Use downloaded files to define your overlay ready for use with any future document.
When printing files to disk, do not select any special features, such as two-sided printing or multiple copies. These are not appropriate to macros, they apply only to your final documents.

CREATING THE OVERLAY IMAGE

1. Use your preferred application, perhaps a graphics program, to create the required image and save it.
2. Open your application's **Print...** dialogue.
3. Make sure that the selected printer name (1) is that of your PCL printer driver.
4. Select the **Print To File** (2) option.
5. When prompted for a print file name, enter a meaningful name with the extension .PRN .
6. Close your application.



CREATE AND DOWNLOAD MACROS

1. From the Windows **Start** menu, start **Storage Device Manager** (SDM) and allow SDM to discover the printer.
2. Choose **Projects > New Project** to start a new project.
3. Choose **Projects > Filter Macro File**. The Filter Printer Patterns dialogue box appears. Make any adjustments in the settings that you need and then click **OK**.
Example: If you create a black oval in MS Paint and leave all the color command filters checked, the black oval will print as a black rectangle when the overlay is used. To maintain the oval shape, turn off (deselect) the "Configure Image Data," "Palette ID" and "Palette Control" filters.
4. Set the **Files of Type** drop-down list to **PRN Files(*.prn)**.
5. Navigate to the folder where the overlay .PRN files are stored and select one or more of these to include in your overlay set.
You can have more than one macro file in a project. For example, one for top pages and another for continuation pages. Use standard Windows techniques (Shift or Ctrl keys) to select multiple files simultaneously if you need to.
6. Click **Open** to add these files to the current project. (You can also drag and drop files from Windows Explorer directly into the project window if you prefer.) When a message box appears confirming that a filter file has been created, click **OK** to clear the message.
7. The project window will display one .BIN file for each printer file added. Make a careful note of the name and ID number for each of the files. You will need them later.

If you wish to edit the names or ID numbers, double-click the file entry and edit the details. **Volume** details are as follows:

- 0** = printer's storage device PCL partition;
- 1** = printer's storage device Common partition;
- %disk0%** = printer's storage device PostScript partition;
- 2** = flash memory PCL
- %Flash0%** = flash memory PostScript

Note that the names are case sensitive, and will be needed later *exactly* as they appear in this list.

8. Choose **Projects > Save Project** and enter a meaningful name (e.g. "Letter Stationery") so that you can recognise it.
9. Choose **Projects > Send Project Files to Printer** to download the project to the printer.
10. When the message "Command Issued" appears confirming that the download is complete, click **OK** to clear the message.

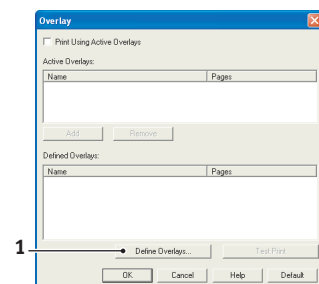
TEST PRINTING THE MACRO

1. Choose **Printers > Test Macro**.
2. In the Test Macro window, enter its ID number and click **OK**. After a short pause the printer will print the macro.
3. When each macro has been tested, click **Exit**.
4. Click the standard Windows **Close (X)** button, or choose **Projects > Exit** to close Storage Device Manager.

DEFINING OVERLAYS

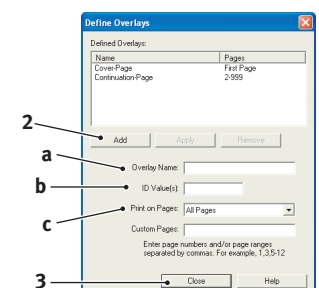
This is the final step before the new overlays are ready for use.

1. Open the Printers (called "Printers and Faxes" in Windows XP) window via the **Start** menu or the Windows Control Panel.
2. Right-click on the Relevant PostScript printer icon and choose **Printing Preferences** from the pop-up menu.
3. On the Job Options tab, click the **Overlay** button.
4. In the Overlay window, click the **Define Overlays** button (1).



5. In the Define Overlays window, enter the **name** (a) and **ID** (b) of the required overlay, and define which **page(s)** (c) of your documents will use this overlay. Then click the **Add** button (2) to add this overlay to the list of defined overlays. Repeat for any other related overlays. When done, click the **Close** button (3) to close the window.

The example illustrated shows two overlays defined, one for a cover page and one for continuation pages.



Remember that names and IDs of overlay files must be entered *exactly* as they appeared in the Storage Device Manager project window. Remember also that names are case sensitive.

If you forgot to note the overlay name or ID when you created them, you can find them using Storage Device Manager to view the project file, or the printer's Information Menu to print a file list and identify them from there.

The new overlays will now appear in the Defined Overlays list in the printer properties window.

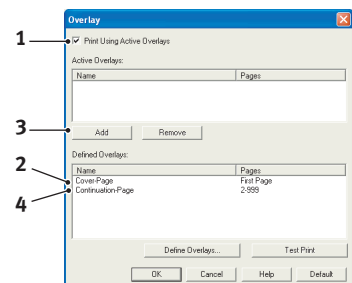
6. When done, click **OK** to close the printing preferences window.

Your new overlays are now ready and available to be used for any future documents you wish.

PRINTING WITH PCL OVERLAYS

Once you have defined your overlays you are ready to use them for any documents you wish. The example illustrated here uses two overlays for business letters. The first prints on just the top page, and the second prints on any or all subsequent pages.

1. Prepare your document in the normal way using your own application software. Remember, if necessary, to format the document so that it will fit nicely within the plain areas on your letterhead overlay.
2. Open your application's **Print...** dialogue and choose any options you will require, ensuring that the target printer is your PCL printer driver in which the overlays have been defined.
3. Click the **Properties** button to open the Printing Preferences window.
4. On the Job Options tab, click the **Overlay** button.
5. In the Overlay window, check the **Use active overlays** checkbox (1).
6. In the Defined Overlays list, click on the first overlay (2) you wish to use, and click the **Add** button (3) to add it to the Active Overlays list. (If you want a reminder of how this overlay looks, click the **Test Print** button.)
7. If you want to use another overlay with this document, in this example it is the "Continuation Page" overlay, click this overlay (4) in the list of defined overlays, and then click the **Add** button (3) again to add the second overlay to the list of active overlays.
8. When the list of active overlays contains all the items you want to use, click **OK**.
9. Finally, click the **Print** button in your application's Print dialogue to begin printing your document.



FINISHING OPTIONS

Your printer offers a wide selection of document finishing options that help you to control the final form of your printed document.

Depending on the hardware fitted, either as optional upgrades or included as standard, depending on which model you have, your system can offer the choice of double-sided (duplex) printing, booklet printing, stapling and hole punching. It can also print posters as a series of tiles that can be joined together to make a large poster, or print on very long media for banner displays.

For detailed information on finishing options see:

- > ["Booklet printing \(imposition\)" on page 48](#)
- > ["Collating" on page 50](#)
- > ["Color separation" on page 52](#)
- > ["Separating queued print jobs" on page 53](#)
- > ["Cover print" on page 54](#)
- > ["Banner printing" on page 55](#)
- > ["Custom page size" on page 56](#)
- > ["Duplex \(double-sided\) printing" on page 59](#)
- > ["Printing multiple pages on one sheet \(n-up\)" on page 61](#)
- > ["Poster printing" on page 63](#)
- > ["Scale to page" on page 64](#)
- > ["Watermarks" on page 65](#)
- > ["Trapping" on page 66](#)

BOOKLET PRINTING (IMPOSITION)

Booklet printing in the Windows drivers printing allows printing of multipage documents with their pages ordered and arranged so that final printed output can be folded into a booklet. Typically, A4 (or A3) pages would be reduced to A5 (or A4) and printed side by side on both sides of A4 (or A3) paper, so that the paper can be folded into a booklet.

Since this feature prints on both sides of the page, it requires a duplex unit to be installed in the machine, and a minimum of 512MB of memory installed.

NOTE

1. To find out how much memory is currently installed, print a Configuration Page (menu map) from the printer control panel. Refer to the User's Guide for details.
 2. A few applications do not support booklet printing, but most do.
 3. This feature is not available in the Mac drivers.
-

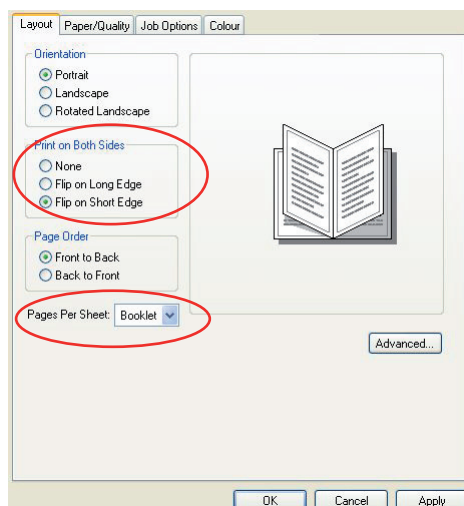
When using the PostScript driver, if you plan to print a long document, more than about 16 pages, consider printing it in sections of 8 or 16 at a time. This is called the "signature," and will avoid having too thick a stack of paper to fold to make your booklet. Your document will then be printed in a series of booklets which can be stacked one above the other. This is usually a neater arrangement.

The above considerations do not matter when using the PCL driver as the signature can be set within the driver, and a long document can be printed directly as a series of booklets.

Note that the number of pages in a booklet is always a multiple of four, since two pages are printed on each side of each sheet of paper. If your document is not a multiple of four pages long, the last one, two or three pages in your folded booklet will be blank.

WINDOWS POSTSCRIPT

1. In the driver's **Layout** tab, choose **Booklet** from the **Pages Per Sheet** drop-down list.



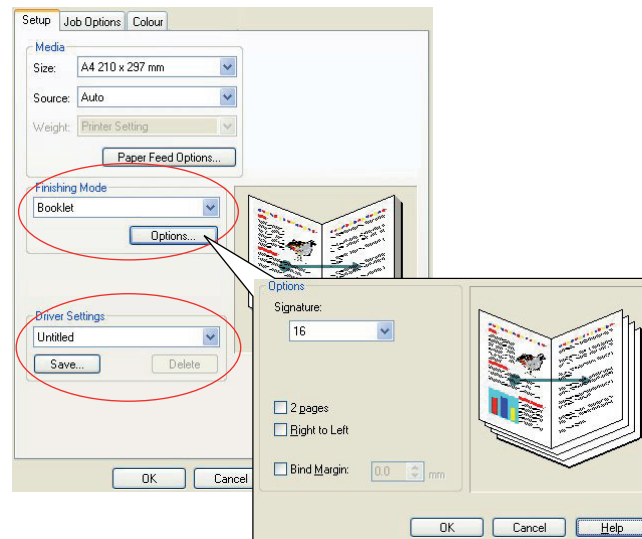
2. Check that the duplex option is set to **Flip on Short Edge**.

NOTE

If the Booklet choice is not shown, check that the Duplex option is enabled in the driver. (See "Setting the driver device options" on page 12.)

WINDOWS PCL

1. In the driver's **Setup** tab, recall any saved *driver settings* you may wish to use.



2. Choose **Booklet** from the **Finishing Mode** drop-down list, then click **Options**.
3. In the Options window you can set the **signature** size (see [page 48](#), the number of **pages** per side of paper and the **bind margin** if your document is going to be thick. The graphic in this window shows the effect of each choice you make.

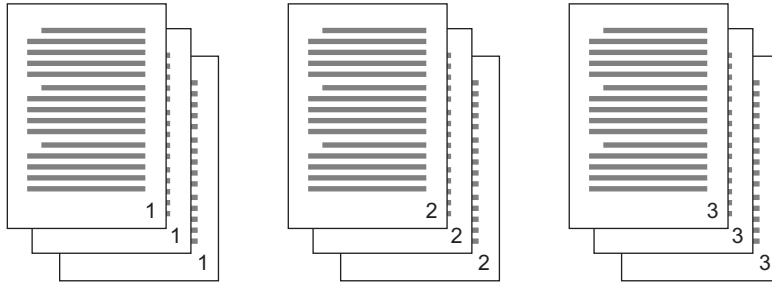
NOTE

If the Booklet choice is not shown, check that the Duplex option is enabled in the driver. (See "[Setting the driver device options](#)" on [page 12](#).)

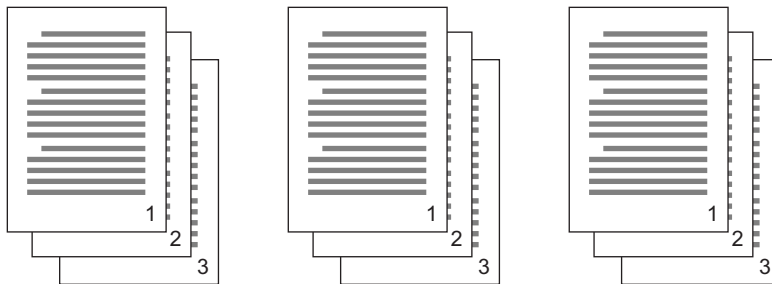
COLLATING

This feature allows multiple copies of a multipage document to be printed with the pages of each copy in sequence.

Uncollated pages print like this



Collated pages print like this



Application collate—Some application programs have a collate feature in their print options. In this case the application performs the document collation and may send the job multiple times to the printer. Generally, this method is slower but can be more reliable.

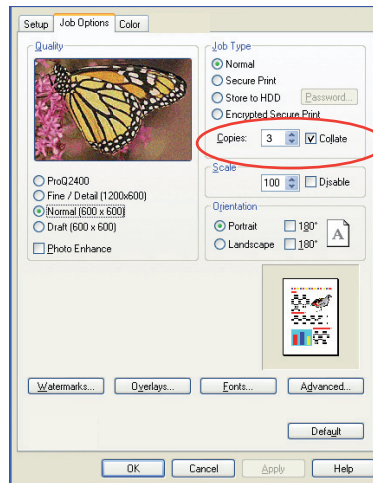
Printer collate—This section describes the collate function built into the printer driver. In this case the job is stored temporarily in printer memory or on the printer's storage device (if installed), and the printer performs collation. This method is normally faster, but may not work from all applications.

If you experience problems using printer collate, use the collate option in your application's print options instead.

WINDOWS

1. If using the PCL driver, on the **Setup** tab first choose any saved *driver settings* that you wish to use. See ["Recalling saved driver settings" on page 11.](#)

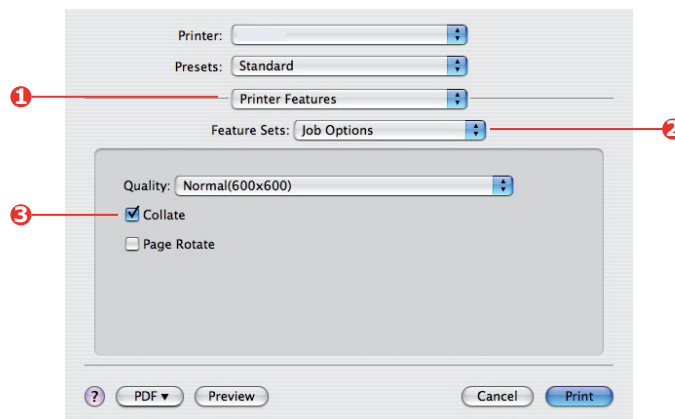
2. In the **Job Options** tab, choose how many **copies** you want to print from the scrolling list.



3. Click the **Collate** checkbox.

MAC OS X

1. Select **Printer Features** (1).



2. From the **Feature Sets** menu (2), select **Job Options**.
3. Select the **Collate** checkbox (3) to enable printer collate.

NOTE

The **Collate** option in the **Copies & Pages** dialogue is for application collate. See [page 50](#).

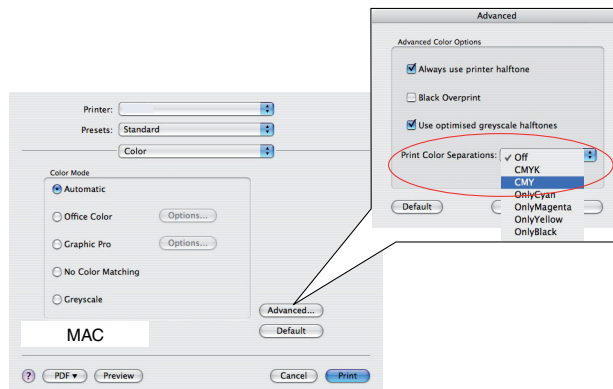
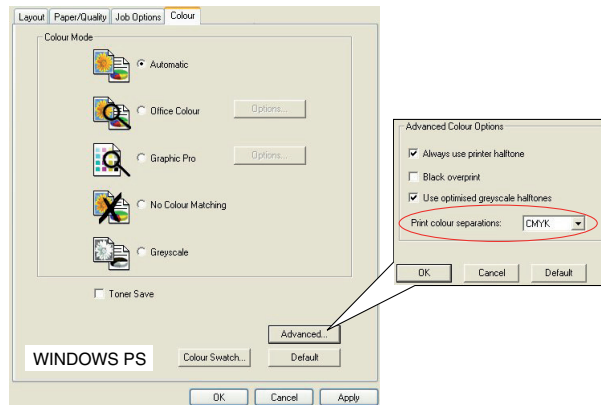
COLOR SEPARATION

The color separation feature prints each of four primary colors as separate greyscale images. This is a proofing facility that indicates the relative densities of each of the four toner colors in your print document. The darker an area appears, the more of the corresponding toner color will be used when printing in full color.

NOTE

This feature is not available in the PCL 5c or PCL 6 drivers.

1. In the driver's **Color** tab, click **Advanced**.



2. Select which **separations** you want to print from the drop-down list.

SEPARATING QUEUED PRINT JOBS

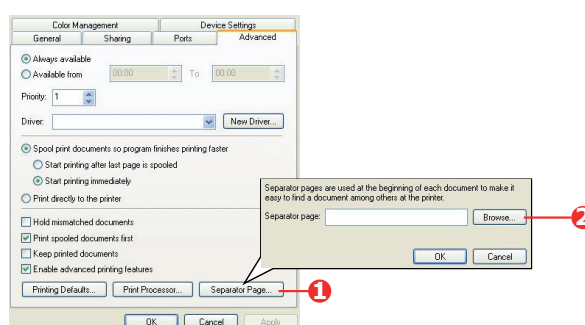
When you share a printer with other users it can be useful to print a special page between print jobs to help locate each user's job in a paper stack at the printer. In Windows this page is called a "separator page". On the Mac it is called a "cover page".

NOTE

Do not confuse Cover Page with "Cover Print". Cover Print is when the first page (cover) of a print job is fed from one paper tray, and the remaining pages of the print job are fed from a different tray. See "Cover print" on page 54.

WINDOWS SEPARATOR PAGE

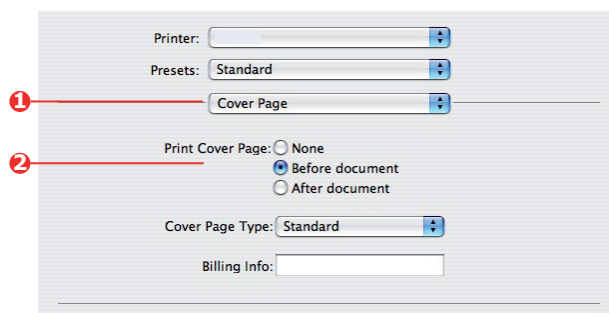
The separator page is set from the printer driver's default properties window. Access to this is directly from Windows, not from within your application program. See "Changing the driver defaults" on page 10.



1. In the driver's Advanced tab click the **Separator Page...** button (1).
2. Click **Browse** (2) and navigate to a file containing an image of the separator page you wish to use, then click **OK**.

MAC OS X COVER PAGE

The cover page is accessed from your application's print dialogue.



1. Select **Cover Page** (1).
2. Select the required options for the cover page (2).

COVER PRINT

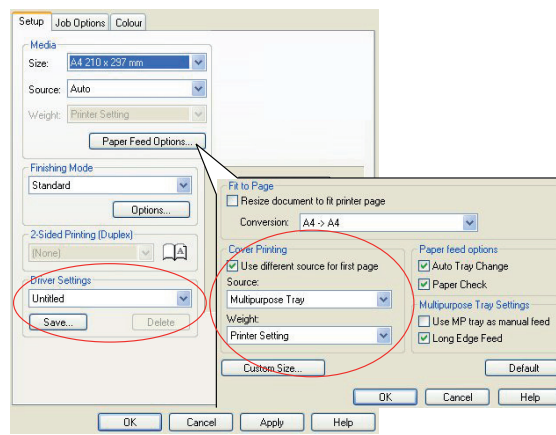
Cover print is when the first page (cover) of a print job is fed from one paper tray, and the remaining pages of the print job are fed from another paper tray.

This feature is not available in the Windows PostScript Drivers.

Do not confuse Cover Print with "Cover Page". A Cover Page is an identification sheet inserted between the print jobs of a network printer. See ["Separating queued print jobs" on page 53](#).

WINDOWS PCL

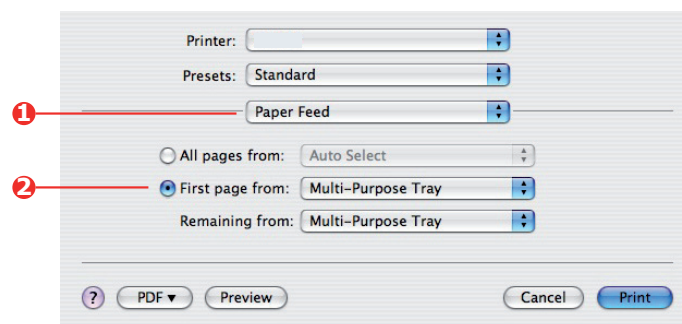
1. In the **Setup** tab, choose any saved driver settings you wish to use. See ["Recalling saved driver settings" on page 11](#).
2. Click **Paper Feed Options**.



3. Check the **Use different source for first page** checkbox.
4. Choose the tray you want to feed the cover page from and the paper type in the **Source** and **Weight** drop-down lists.

MAC OS X

1. Select **Paper Feed** (1).



2. Select the trays or paper types you wish to use for the first page and remaining pages (2).

BANNER PRINTING

This feature enables printing on standard sized banner media.

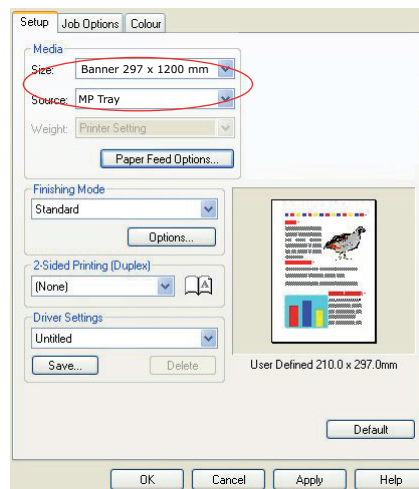
The multipurpose tray is used for feeding banner media sizes.

Some applications software may not produce the desired results with banner print media sizes, and some experimentation may be required to obtain the results you want.

NOTE

If this feature is not available in the driver, you may still print on banner media using the Custom Page Size feature. See "Custom page size" on page 56.

1. In the driver's **Setup** tab, select the required banner size from the **Size** drop-down list.



2. From the **Source** drop-down list select **Multipurpose tray**.
3. Click **OK** to accept and close the **Printing Preferences** window.

CUSTOM PAGE SIZE

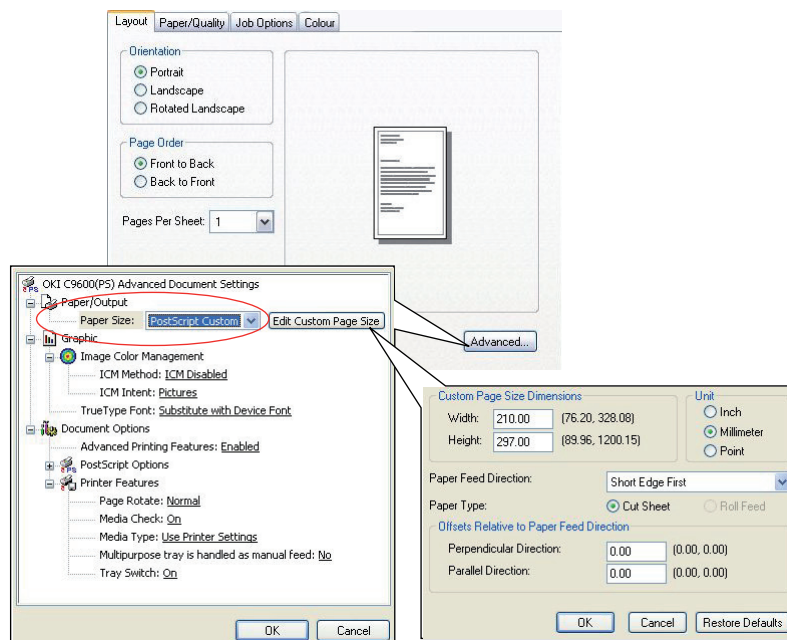
This feature enables printing on non-standard sized print media.

The multipurpose tray is used for feeding non-standard media sizes. Print media width can be from approximately 76mm to 328mm, and its length can be from 90mm to 1320mm. Actual limits vary slightly depending on which printer driver you use and your computer's operating system.

Some applications software may not produce the desired results with non-standard print media sizes, and some experimentation may be required to obtain the results you want.

WINDOWS POSTSCRIPT

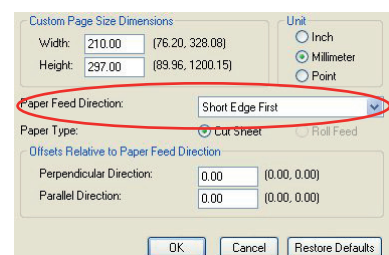
1. In the driver's **Layout** tab, click **Advanced**.



2. In the Advanced Options window, under **Paper/Output**, choose **PostScript Custom Page Size** from the **Paper Size** drop-down list.
3. In the PostScript Custom Page Size Definition window, Choose your **paper feed direction** from the drop-down list.

The available choices are:

- | | |
|---------------------------------|--|
| Short edge first | The page is portrait (tall) format and you will feed the top of the page into the printer. |
| Long edge first | The page is landscape (wide) format and you will feed the top of the page into the printer. |
| Short edge first flipped | The page is portrait (tall) format and you will feed the bottom of the page into the printer. |
| Long edge first flipped | The page is landscape (wide) format and you will feed the bottom of the page into the printer. |



Notice that the size ranges available swap places when you change the paper feed direction between a portrait and a landscape choice.

Remember that the width of the multipurpose tray is limited to the width of an A3 sheet (297mm), so if your paper is longer than this you will have to feed it short edge first.

4. You can also position the page image on the paper to avoid printing too close to the edge by choosing an **Offset**.

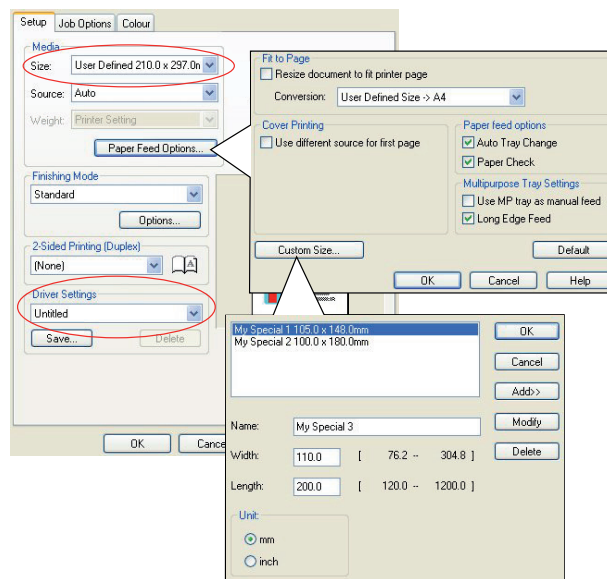
Offset relative to *perpendicular* direction adds to your left margin.

Offset relative to *parallel* direction adds to your top margin (normal feed) or bottom margin (flipped feed).

5. Click **OK** to close the **PostScript Custom Page Size Definition** window.
6. Click **OK** to close the **Advanced Options** window.
7. In the driver's window, choose the **Multipurpose Tray** as the **Paper Source**.

WINDOWS PCL

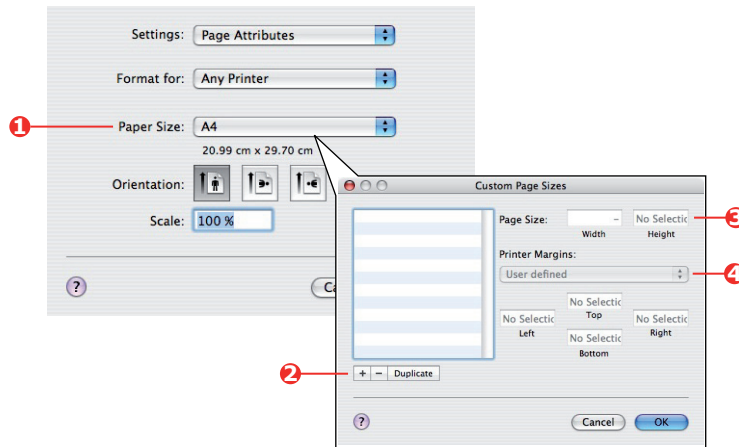
1. In the driver's **Setup** tab, select any previously saved settings you wish to use.



2. Click the **Paper Feed Options** button.
3. In the **Paper Feed Options** window, click **Custom Size**.
If you have previously saved any special custom sizes they will be listed in the **Custom Size** window.
4. To use a previously saved custom size, click its name in the list.
To create a new custom size:
 - (a) Enter its dimensions in the **Width** and **Length** boxes.
 - (b) Enter a name for the new size in the **Name** box, and click **Add** to save it in the list.
5. Click **OK** to accept your chosen size and close the **Custom Size** window.
6. If this is the size of your document but you want to scale it to fit a standard size of paper, click **Resize document to fit printer page** in the **Paper Feed Options** window, and choose the printer's actual paper size from the **Conversion** drop-down list.

MAC OS X

1. In your application program, choose **File > Page Setup**.



2. Select **Manage Custom Sizes** (1).
3. Click the **+** button (2) to define a new paper size and enter a **name** for the paper size.
4. Enter the **Width** and **Height** (3) of your paper.
5. Specify paper **margins** (4) as required.
6. Click **OK** to save the new paper size.

DUPLEX (DOUBLE-SIDED) PRINTING

If your printer has a duplex unit installed you can print on both sides of the paper, to save paper, weight, bulk and cost.

NOTE

If this choice does not appear in the driver screens, or if it is greyed out, check to ensure that the storage device is enabled in the printer driver. (See "Setting the driver device options" on page 12.)

- > Only paper can be used for duplex printing, not transparencies or other media.
- > Use paper stock of 75–188 g/m² maximum. If you experience excessive curling with 75–90 g/m² paper, use 105 g/m².

CAUTION!

Paper weights are given as a guide only and may not be available for use with your printer. Always check the paper weight specifications in your User's Guide before printing. Do not exceed the recommended paper weight specified.

- > Use standard sized paper stock only, e.g. A4, A3, Letter, etc.
- > Load the paper print side up. Ream wrappers are usually marked with an arrow, indicating which is the print side.
- > Paper can be fed from standard paper trays, including the high capacity feeder if you have one.

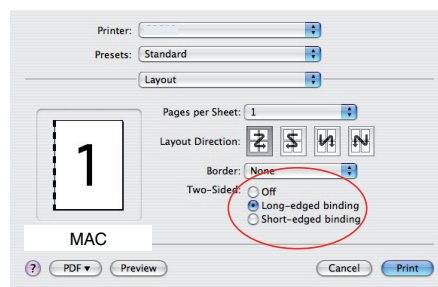
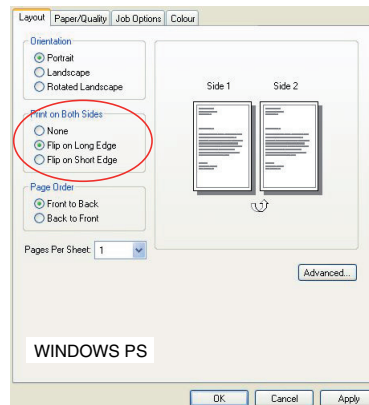
NOTE

For paper stock greater than 120 g/m² use the multipurpose tray.

- > Do not set the paper weight to Ultra Heavy.
- > Do not enable the White Page Skip function.

WINDOWS POSTSCRIPT AND MAC

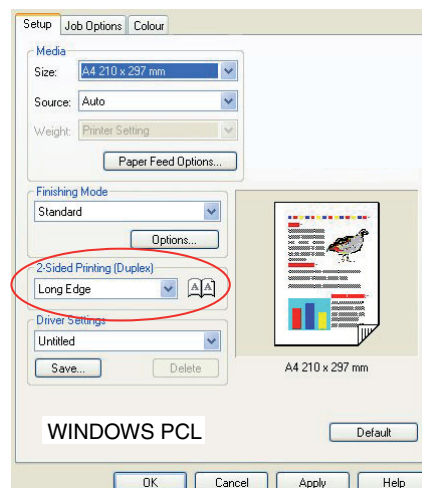
In the driver's **Layout** tab, under **2-Sided Printing**, select the binding edge you want.



For portrait (tall) page layout the usual choice is **Long Edge**. For landscape (wide) page layout the usual choice is **Short Edge**. Choosing **None** (Windows PS) or **Off** (Mac) turns off duplex printing and your document will be printed single-sided.

WINDOWS PCL

In the driver's **Setup** tab, under **2-Sided Printing**, select the binding edge you want.



For portrait (tall) page layout the usual choice is **Long Edge**. For landscape (wide) page layout the usual choice is **Short Edge**.

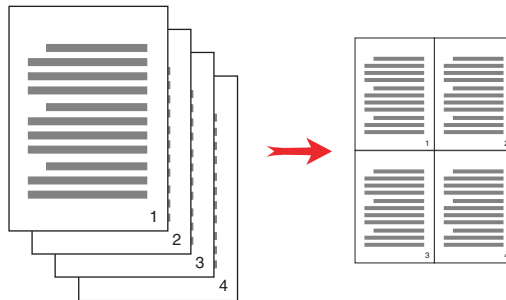
Choosing **Off** turns off duplex printing and your document will be printed single-sided.

PRINTING MULTIPLE PAGES ON ONE SHEET (N-UP)

This feature scales the page size of your document for printing and reproduces several pages per sheet.

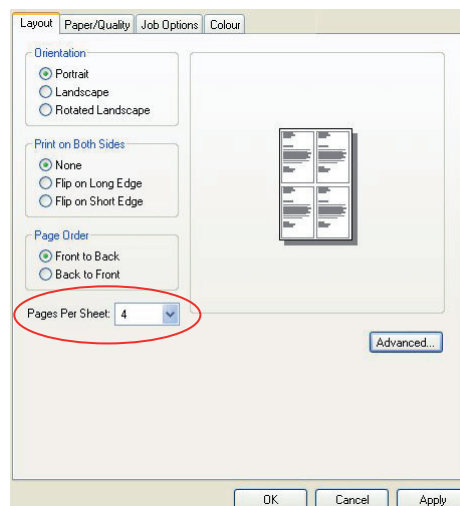
This is useful when you simply want to proof your page layout, or distribute your document in a more compact format. It saves paper, bulk, weight and cost.

If you have a duplex unit installed, you can even combine this feature with duplex printing to save even more.



WINDOWS POSTSCRIPT

In the driver's **Layout** tab, choose the number of pages (N-up) you want to print on each sheet. 1-up is normal, 16-up is maximum.

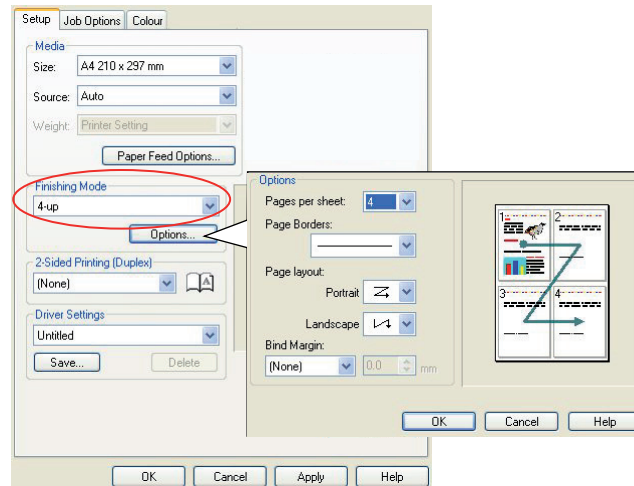


WINDOWS PCL

1. In the driver's **Setup** tab, choose the number of pages (N-up) you want to print on each sheet. 1-up is normal, 16-up is maximum.

NOTE

8-up is maximum in the PCL 6 driver.

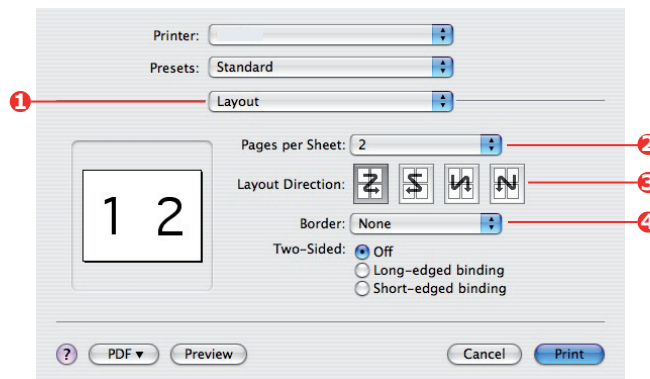


2. Click **Options** to choose from the available options for this feature.

From here you can choose the page printing order, the page layout, whether you want printed page borders, and a binding margin if you need it.

MAC OS X

1. Select **Layout** (1).

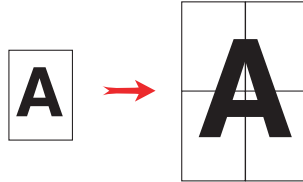


2. From the **Pages per Sheet** menu (2), select the number of pages you want to fit onto a single sheet of paper.
3. If required, change the direction (3) the document pages are laid out on each sheet of paper.
4. If required, you can surround each page with a border (4).

POSTER PRINTING

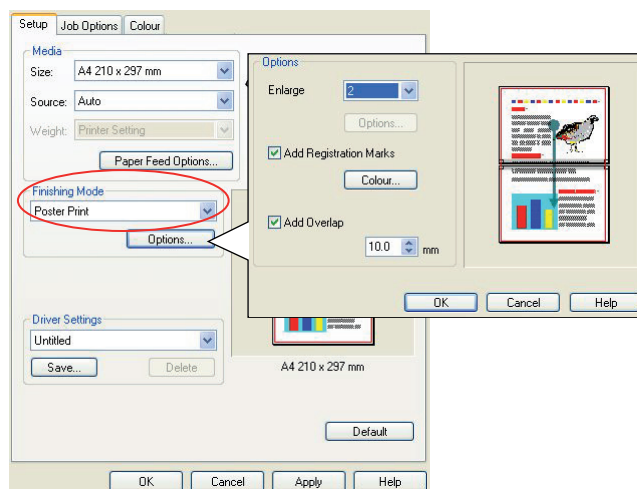
This option allows you to print posters by dividing a single document page into multiple pieces (sometimes called "tiles"). Each piece prints, enlarged, on a separate sheet. Then, you combine the separate sheets to create a poster.

Poster Print is only available with the Windows PCL 5c printer drivers.



WINDOWS PCL

1. In the driver's **Setup** tab, under **Finishing Mode**, choose **Poster Print**.



2. Click **Options** to open the Options window.
 - (a) Choose the **enlargement** required for your document to fill the poster.
 - (b) **Registration marks** can be printed if required so that your printed pages (tiles) can be trimmed exactly to the edge of the image.
 - (c) An **overlap** may help you to match adjacent tiles when making up your final poster.

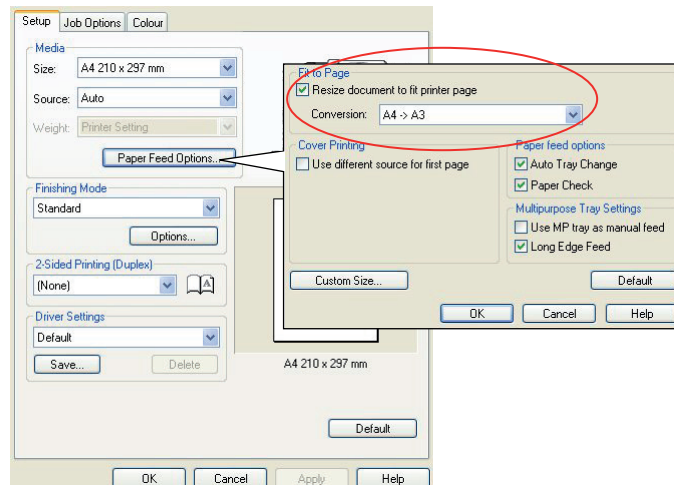
SCALE TO PAGE

Scale to Page allows you to print data formatted for one size page onto a different size page, without modifying the print data.

This feature is not available with the Windows PS driver.

WINDOWS PCL

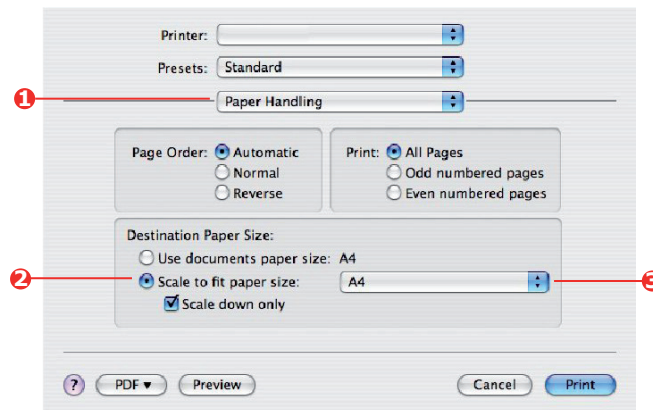
1. In the driver's **Setup** tab, click the **Options** button.



2. Check the **Fit to Page** checkbox.
3. Choose the scaling factor you need from the **Conversions** drop-down list.

MAC OS X

1. Select **Paper Handling** (1).



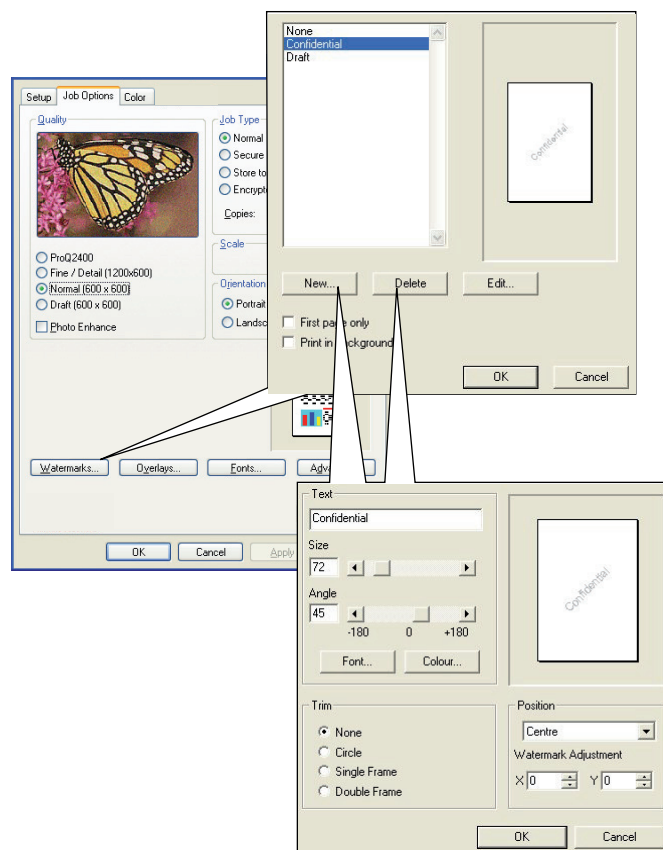
2. Check the **Scale to Fit Paper Size** checkbox (2).
3. Choose the paper size you need from the drop-down list (3).

WATERMARKS

A watermark is typically faint text that is superimposed on a printed document. This can be used to indicate that the document is "Draft", or perhaps "Confidential".

This feature is not available on Mac OS X. The illustration below shows the Windows PostScript driver. The PCL driver is very similar.

The Watermarks Feature is found in the driver's **Job Options** tab. Click the **Watermarks** button.



TO CREATE A NEW WATERMARK

1. In the **Watermarks** window, click **New...**
2. Enter the text you want for your watermark.
3. Adjust your watermark's font, size, color, angle, position and border (trim) as required.
4. Click **OK** to accept your changes.

TO CHOOSE A PREVIOUSLY CREATED WATERMARK

In the **Watermarks** window, click the watermark in the list.

TO EDIT AN EXISTING WATERMARK

1. In the **Watermarks** window, click the watermark's name in the list.
2. Click **Edit...**
3. Make any adjustments you wish, and click **OK** to accept your changes.

TO PRINT USING A WATERMARK

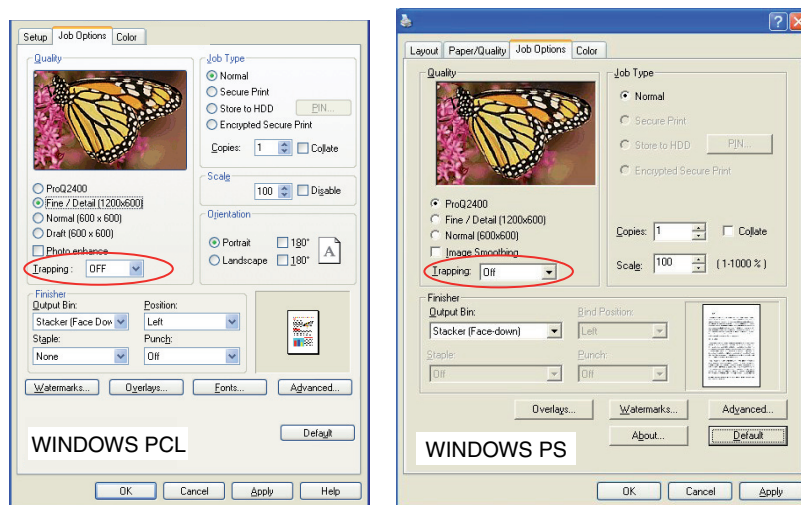
1. In the **Watermarks** window, click the watermark's name in the list.
2. Click **OK** to close the **Watermarks** window.
3. Click **OK** to close the **Printer Properties** window.
4. Print your document.

TRAPPING

Trapping is the process of adjusting the area where colors meet to compensate for registration problems when printing C, M, Y and K layers. Trapping can prevent unwanted white gaps or color lines between overlapping objects.

WINDOWS PCL & PS

1. Select the driver's **Job Options** tab.



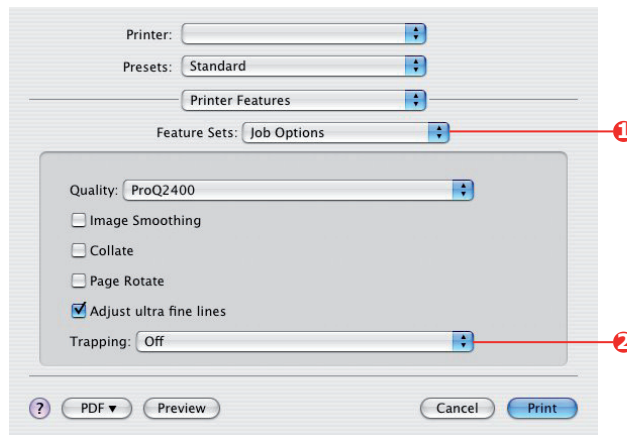
2. Choose the **Trapping** option you need from the drop-down list.
 - (a) **Off**; Trapping is disabled (default setting).
 - (b) **Wide**; A wide overlap is applied between the foreground and background objects. If this causes noticeable overlaps on your print, use the Narrow setting instead.
 - (c) **Narrow**; A narrow overlap is applied between the foreground and background objects. If unwanted white gaps or color lines are still visible on your print, use the Wide setting instead.

NOTE

1. Trapping can only be used when the Print Quality is set to the ProQ setting.
 2. If white lines appear when the foreground object is 100% black text, you should also enable the **Black Overprint** feature (See "Black overprint" on page 14.).
-

MAC OS X

1. Select **Job Options**.



2. Choose the **Trapping** option you need from the drop-down list.

- (a) **Off**; Trapping is disabled (default setting).
- (b) **Wide**; A wide overlap is applied between the foreground and background objects. If this causes noticeable overlaps on your print, use the Narrow setting instead.
- (c) **Narrow**; A narrow overlap is applied between the foreground and background objects. If unwanted white gaps or color lines are still visible on your print, use the Wide setting instead.

NOTE

1. Trapping can only be used when the Print Quality is set to the ProQ setting.
 2. If white lines appear when the foreground object is 100% black text, you should also enable the **Black Overprint** feature (See "[Black overprint](#)" on [page 14.](#)).
-

SECURE PRINTING

Secure printing allows you to print confidential documents on machines that are shared with other users in a network environment.

The document does not print until a PIN (personal identification number) is entered through the control panel. You must go to the machine and enter the PIN.

This feature requires the a storage device in your machine, this device must be enabled in the printer driver. (See ["Setting the driver device options" on page 12.](#))

If there is not enough space for the spooled data, a "Disk Full" message displays, and only one copy prints.

NOTE

1. The secure printing feature may not be available from within some PC applications.
 2. This feature is not supported on Mac OS X.
-

If your application software has a collate print option, turn it off. Otherwise secure printing will not work.

There are three parts in secure printing:

- > Sending the document to the printer ([page 69](#)).
 - > Printing the document ([page 70](#)).
 - > Deleting the document when it is not required ([page 71](#)).
-

NOTE

The menu buttons on your machine's control panel vary depending on the model.

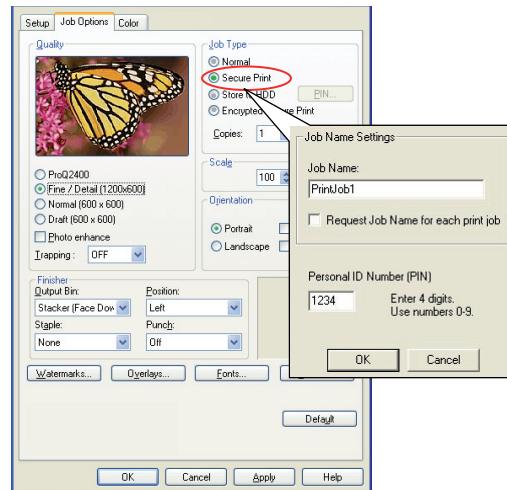
For illustration purposes we will demonstrate the Printing and Deleting procedures using the +/- and **Enter** buttons; your machine may have **Up/Down** and **Return** arrow buttons instead however the procedure is identical.

If your machine has a touch screen and numerical keypad buttons, the principle is basically the same; press the **Print** button to access the print menu options. There are on-screen instructions to guide you through the process.

SENDING THE DOCUMENT

1. If using the PCL driver, in the **Setup** tab choose any saved driver settings you wish to use. See ["Recalling saved driver settings"](#) on page 11.
2. In the driver's **Job Options** tab, click **Secure Print**.

The Job PIN (personal identification number) window opens.



3. If the PIN window does not open, click the **PIN** button.
4. In the Job PIN window, enter a **name** for this print job.
The name may be up to 16 alpha-numeric characters.
5. If you would like a prompt at the printer for the job name, click the **Request...** checkbox below the name entry.
6. Enter a number from 0000 to 9999 in the **PIN** box.
Your PIN must be unique on this machine. Each user should be allocated a PIN by the system administrator.
7. Click **OK** to accept your changes.

NOTE

Leave the number of copies set to one. You can increase the copy count from the operator panel when you print the document.

8. Click **OK** to close the **Printer Properties** window.
9. Print your document.
The print job will be sent to the machine, but will not print at this time.

PRINTING THE DOCUMENT

NOTE

The menu buttons on your machine's control panel will vary depending on the model.

*For illustration purposes we will demonstrate the following procedure using the +/- and **Enter** buttons; your machine may have **Up/Down** and **Return** arrow buttons instead however the procedure is identical.*

*If your machine has a touch screen and numerical keypad buttons, the principle is basically the same; press the **Print** button to access the print menu options. There are on-screen instructions to guide you through the process.*

Your secure print job is printed using the control panel on the front of the machine.

- 1.** When the machine is idle, use the +/- buttons to select the PRINT JOB menu, then press **ENTER**.
 - 2.** Select ENCRYPTED/STORED JOB.
 - 3.** Use the +/- buttons to enter your PIN. Press **ENTER** after each digit.
 - 4.** If necessary, use the +/- buttons to highlight the PRINT option.
 - 5.** Press **ENTER** to confirm you wish to print the document.
 - 6.** Use the +/- buttons to select the number of collated copies you require.
 - 7.** Press **ENTER** to print your document.
-

NOTE

It is also possible to print and delete secure documents remotely from your PC using the Storage Device Manager utility.

DELETING A SECURE PRINT DOCUMENT

NOTE

The menu buttons on your machine's control panel will vary depending on the model.

*For illustration purposes we will demonstrate the following procedure using the +/- and **Enter** buttons; your machine may have **Up/Down** and **Return** arrow buttons instead however the procedure is identical.*

*If your machine has a touch screen and numerical keypad buttons, the principle is basically the same; press the **Print** button to access the print menu options. There are on-screen instructions to guide you through the process.*

If you change your mind about printing a secure document, you can delete it from the machine's storage device without printing it first.

1. Follow steps 1 to 3 in the above procedure for printing the document.
2. Use the +/- buttons to highlight the `DELETE` option and press **ENTER**.
3. If necessary, use the +/- buttons to highlight the `YES` choice, and press **ENTER** to confirm the deletion.

Your document is deleted from the machine's storage device without printing.

NOTE

It is also possible to print and delete secure documents remotely from your PC using the Storage Device Manager utility.

STORE TO STORAGE DEVICE

This feature allows print jobs to be created on the PC and stored on the machine's storage device for printing on demand. This is good for forms, generic memos, letterhead, stationery, etc.

If you use this feature for standard forms, for example, you can walk up to the machine at any time and print off your forms without having to resend them from the PC.

This feature works in exactly the same way as the secure printing feature described in [Secure printing](#), and is available only in the Windows PostScript and PCL drivers. The difference with job spooling is that the document is not automatically deleted from the machine's storage device after printing. It remains there for future use until you delete it from the control panel or from your PC with the Storage Device Manager utility.

NOTE

- 1. If this choice does not appear in the driver screens, or if it is greyed out, check to ensure that the storage device is enabled in the printer driver. (See "[Setting the driver device options](#)" on page 12.)*
 - 2. This feature is not supported on Mac OS X.*
-

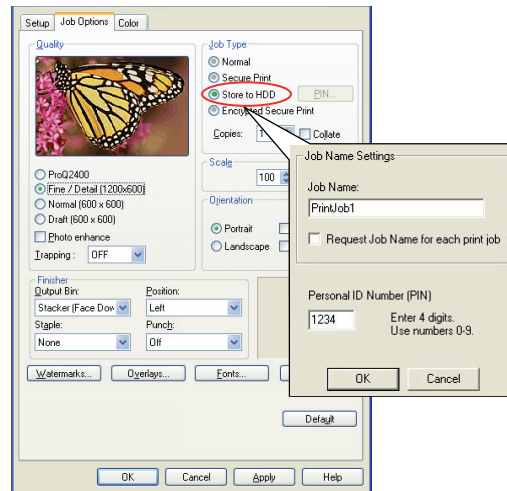
Like the secure printing feature, there are three parts in job spooling:

- > Sending the document.
- > Printing the document.
- > Deleting a stored document.

SENDING THE DOCUMENT

Follow the same procedures as described in the section starting on [page 69](#) for sending a secure document, except that on the **Job Options** tab in step 2, click:

- > **Store to HDD** if you have a hard disk drive installed
- > **Store to SD** if you have an SD card installed



PRINTING THE DOCUMENT

Follow the same procedures as described in the section starting on [page 70](#) for printing a secure document. In this case the document will **not** be deleted from the storage device after it has been printed.

DELETING A STORED DOCUMENT

Follow the procedure as described on [page 71](#) for deleting a secure print document.

Like secure print documents, any other documents stored on the machine's storage device can also be deleted remotely from the PC using the Storage Device Manager utility.

ENCRYPTED SECURE PRINTING

Security over the network is an increasing concern for some organisations. Encrypted secure printing allows you to send, store and print confidential documents on machines that are shared with other users in a network environment.

Encrypting your documents before sending them to your machine will prevent unauthorised personnel accessing confidential or sensitive information.

Print jobs are encrypted immediately before transmission to the machine, where they are stored in an encrypted format on the storage device. The documents will remain stored and unprinted until an authorised user authenticates the print job; decryption only happens when the job is actually printing.

This feature requires the storage device in your machine and enabled in the printer driver.

NOTE

- 1.** *The secure printing feature may not be available from within some PC applications.*
 - 2.** *This feature is not supported on Mac OS X.*
-

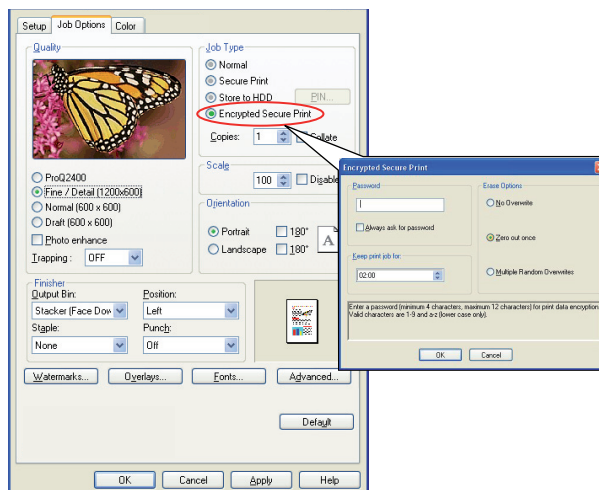
If your application software has a collate print option, turn it off. Otherwise encrypted printing may not work.

As deletion is automatic, there are only two activities in encrypted secure printing:

- > Sending the document
- > Printing the document

SENDING THE DOCUMENT

1. If using the PCL driver, in the **Setup** tab choose any saved driver settings you wish to use.
2. In the driver's **Job Options** tab, click **Encrypted Secure Print**.
The Encrypted Secure Print window opens.



3. In the Encrypted Secure Print window, enter a **Password** for this print job:
The password must be between 4 and 12 alpha-numeric characters. Numbers 1 to 9 and letters a to z are all valid.
4. If you would like a prompt at the machine for the job password, click the **Always ask for password** checkbox below the password entry.
5. Select the required erase option for your print job:
If you have a hard disk installed, select from the following options:
 - > **No overwrite**: deletes the job from the hard disk but doesn't overwrite with data. This option is faster but less secure as the print data may be recovered.
 - > **Zero out once**: deletes the job from the hard disk and overwrites with zeros. This option is more secure than "No overwrite" but it may still be possible to reconstruct the print job from the hard disk.
 - > **Multiple Random Overwrites**: deletes the job from the hard disk and overwrites it three times. This option is the slowest but the most secure.If you have an SD Card installed, select from the following options:
 - > **No overwrite**: deletes the job from the SD card but doesn't overwrite with data. This option is faster but less secure as the print data may be recovered.
 - > **Zero out once**: deletes the job from the SD card and overwrites with zeros. This option is more secure than "No overwrite".
6. Select the **Auto Erase Time-out** period.
Specify a period of time (hours:minutes) during which the print job is stored in the machine's storage device. When this period expires, the print job is automatically erased from the storage device.
7. Click **OK** to accept your changes.
8. Click **OK** to close the **Printer Properties** window.
9. Print your document.

PRINTING THE DOCUMENT

Follow the same procedures as described in the section ["Printing the document" on page 70](#) for printing a secure document. In this case you will enter your password, and the document will be erased from the storage device depending on the options you specified in ["Select the required erase option for your print job:." on page 75](#) when sending the document to print.

INDEX

A

Application collate 50

B

Banner printing 55

Black

printing black.....15, 16

Booklets, printing

Windows PCL 49

Windows PS 48

C

Collating

application collate..... 50

Mac 51

printer collate 50

Windows 50

Color

black, printing..... 15

Color Correct utility 29

Color matching

application 25

basics..... 25

choosing image source 23

CMYK 26

Color Correct utility 29

color match precision 38

general advice 20

Graphic Pro 26, 30

Graphic Pro workflow..... 31

how to access 22

ICC profiles 31

office color 26

operating system..... 25

printer..... 25, 26

printing color swatch 23

RGB 26

Color printing,

black 16

Composite black..... 15

Cover page..... 53

Windows PCL 54

Cover print

different cover page 54

Custom page size

general 56

Windows PCL 55, 57

Windows PS 56

I

ICC profiles 31

downloading to printer 32

where to obtain 31

L

Letterhead

store to storage device..... 72

M

Messages

DISK FULL 68

O

Office color

RGB options..... 28

On demand printing

store to storage device

(job spooling)..... 72

Overlays and macros

general 40

Overlays, PCL

how to create 44

printing with overlays..45, 46

Overlays, PostScript

defining in the Windows

driver..... 42

how to create 40

printing with overlays..... 42

P

Page size

custom..... 56

Photographs, printing 15

Poster printing 9

Print settings

how to save 9

Printer collate..... 50

Printing black 16

pure black..... 38

Printing combination of text

and graphics 15

Printing on demand

store to storage device

(job spooling)..... 72

Printing photographs 15

Profile Assistant utility 32

Pure (true) black..... 15

S

Secure documents

printing..... 70

sending..... 69

Separator page 53

T

Toner

Black..... 15

True (pure) black..... 15, 16



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