

C5300n

➔ USER'S GUIDE



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.

While all reasonable efforts have been made to make this document as accurate and helpful as possible, we make no warranty of any kind, expressed or implied, as to the accuracy or completeness of the information contained herein.

The most up-to-date drivers and manuals are available from the Oki Europe website:

<http://www.okieurope.com>

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As an Energy Star Program Participant, the manufacturer has determined that this product meets the Energy Star guidelines for energy efficiency.



This product complies with the requirements of the Council Directives 89/336/EEC (EMC) and 73/23/EEC (LVD) as amended where applicable on the approximation of the laws of the member states relating to electromagnetic compatibility and low voltage.

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NOTES, CAUTIONS AND WARNINGS

NOTE

A note appears in this manual like this. A note provides additional information to supplement the main text which may help you to use and understand the product.

CAUTION!

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

WARNING!

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

INTRODUCTION

Congratulations on buying an Oki colour printer. Your new printer is designed with advanced features to give you clear, vibrant colour prints and crisp black and white pages at high speed on a range of print media for the office.

Your printer includes these features:

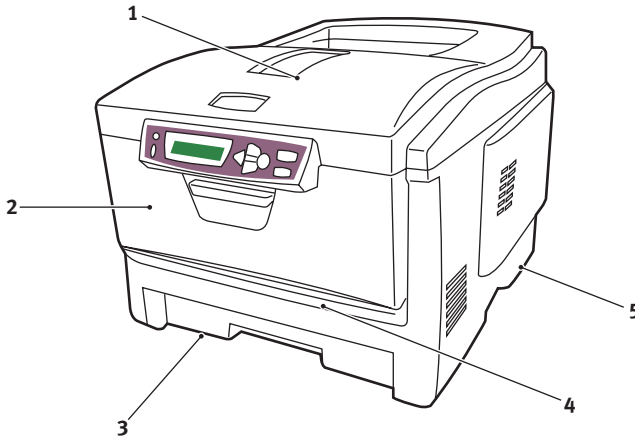
- › Up to 12 pages per minute in full colour for fast printing of high impact colour presentations and other documents;
- › Up to 20 pages per minute in black and white for fast and efficient printing of all general purpose documents not requiring colour;
- › 600 x 1200dpi (dots per inch) print resolution for high quality image production showing the finest detail;
- › Single Pass Colour Digital LED technology for high speed processing of your printed pages;
- › PostScript 3, PCL 5C and Epson FX emulations for industry standard operation and wide compatibility with most computer software;
- › 10Base-T and 100Base-TX network connection lets you share this valuable resource among users on your office network;

Additionally, the following optional features are also available:

- › Automatic two-sided (duplex) printing for economical use of paper and compact printing of larger documents;
- › Additional paper tray for loading a further 530 sheets at a time to minimise operator intervention, or different paper stocks for letterhead stationery, alternative paper sizes or other print media.
- › Additional memory allows printing of more complex pages, including two sided and booklet pages with the optional duplex unit.
- › Internal 10GB hard disk drive for storage of overlays, macros and downloadable fonts, and automatic collation of multiple copies of multipage documents.

PRINTER OVERVIEW

FRONT VIEW

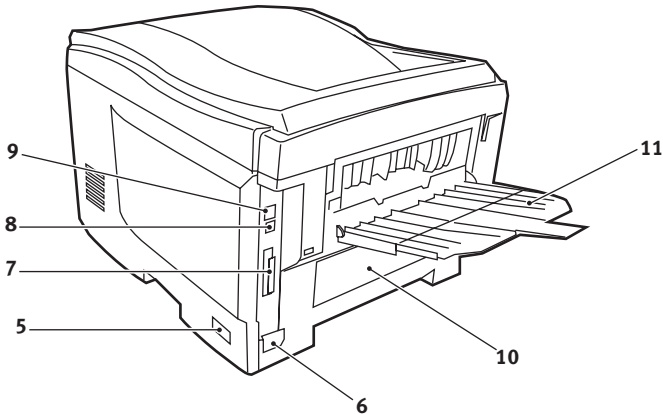


- 1. Output stacker, face down.**
Standard printed copy delivery point. Holds up to 250 sheets at 80g/m².
- 2. Operator panel.**
Menu driven operator controls and LCD display panel.
- 3. Paper tray.**
Standard blank paper tray. Holds up to 300 sheets of 80g/m² paper.
- 4. Multipurpose feeder.**
Used for feeding heavier paper stocks, envelopes and other special media. Also for manual feeding of single sheets when required.
- 5. ON/OFF switch.**

The LCD display language can be changed to show any of 12 different languages. (See “Changing the display language” on page 12.)

REAR VIEW

This view shows the connection panel, the rear output stacker and the location of the optional duplex (two-sided printing) unit.



5. ON/OFF switch.

6. AC power socket.

7. Parallel data interface.

8. USB interface.

9. Network interface.*

10. Location of optional duplex unit.

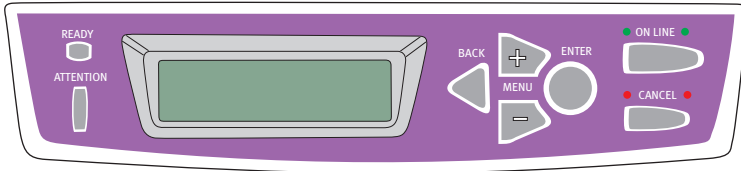
11. Rear, face up, 100 sheet stacker.

** The Network Interface has a protective "plug" which must be removed before connection can be made.*

When the rear paper stacker is folded down paper exits the printer through the rear of the printer and is stacked here face up. This is mainly used for heavy print media. When used in conjunction with the multipurpose feed tray, the paper path through the printer is essentially straight. This avoids bending the paper around curves in the paper path and enables feeding of up to 203g/m² media.

CHANGING THE DISPLAY LANGUAGE

The language used by your printer for display messages and for report printing can be changed quickly and easily as follows:



1. Press the **+** key repeatedly to access the System Configuration Menu.
2. Press the **ENTER** key to enter the System Configuration Menu.
3. Press the **-** key to move directly to the last item in this menu: LANGUAGE.
4. Press **ENTER** to change this setting.
5. Use the **+/-** keys to move in either direction through the list of available languages until the language you want is displayed.
6. Press the **ENTER** key to select this language.
7. Press the **ON LINE** key to exit the menu system and return the printer to standby.

The LCD display language can be changed to any of these languages:

English	Norwegian
German	Danish
French	Dutch
Italian	Turkish
Spanish	Portuguese
Swedish	Polish

PAPER RECOMMENDATIONS

Your printer will handle a variety of print media, including a range of paper weights and sizes, transparencies and envelopes. This section provides general advice on choice of media, and explains how to use each type.

The best performance will be obtained when using standard 75~90g/m² paper designed for use in copiers and laser printers. Suitable types are:

- › Ajro Wiggins Colour Solutions 90g/m²;
- › Colour Copy by Neusedlier.

Use of heavily embossed or very rough textured paper is not recommended.

Pre-printed stationery can be used, but the ink must not offset when exposed to the high fuser temperatures used in the printing process.

Envelopes should be free from twist, curl or other deformations. They should also be of the rectangular flap type, with glue that remains intact when subjected to hot roll pressure fusing used in this type of printer. Window envelopes are not suitable.

Transparencies should be of the type designed for use in copiers and laser printers. We strongly recommend Oki transparencies (Order No. 01074101). In particular, avoid office transparencies designed for use by hand with marker pens. These will melt in the fuser and cause damage.

Labels should also be of the type recommended for use in copiers and laser printers, in which the base carrier page is entirely covered by labels. Other types of label stock may damage the printer due to the labels peeling off during the printing process. Suitable types are:

- › Avery White Laser Label types 7162, 7664, 7666 (A4), or 5161 (Letter);
- › Kokuyo A693X series (A4) or A650 (B5).

CASSETTE TRAYS

Size	Dimensions	Weight (g/m ²)	
A6 (Tray 1 only)	105 x 148mm		
A5	148 x 210mm		
B5	182 x 257mm	Light	64-74g/m ²
Executive	184.2 x 266.7mm	Medium	75-90g/m ²
A4	210 x 297mm	Heavy	91-120g/m ²
Letter	215.9 x 279.4mm	Ultra heavy	121-176g/m ²
Legal 13in.	216 x 330mm		(Tray 2 only)
Legal 13.5in.	216 x 343mm		
Legal 14in.	216 x 356mm		

If you have identical paper stock loaded in another tray (2nd tray if you have one, or multipurpose tray) you can have the printer automatically switch to the other tray when the current tray runs out of paper. When printing from Windows applications, this function is enabled in the driver settings. (See “Printer Settings in Windows” later in this guide.) When printing from other systems, this function is enabled in the Print Menu. (See “Menu Functions” later in this guide.)

MULTIPURPOSE TRAY

The multipurpose tray can handle the same sizes as the cassette trays but in weights up to 203g/m². For very heavy paper stock use the face up (rear) paper stacker. This ensures that the paper path through the printer is almost straight.

The multipurpose tray can feed paper widths as small as 100mm and lengths up to 1200mm (banner printing).

For paper lengths exceeding 356mm (Legal 14in.) use paper stock between 90g/m² and 128g/m² and the face up (rear) paper stacker.

Use the multipurpose tray for printing on envelopes and transparencies. Up to 50 sheets of transparencies or 10 envelopes can be loaded at one time, subject to a maximum stacking depth of 10mm.

Paper or transparencies should be loaded print side up and top edge into the printer. Do not use the duplex (two sided printing) function.

FACE DOWN STACKER

The face down stacker on the top of the printer can hold up to 250 sheets of 80g/m² standard paper, and can handle paper stocks up to 176g/m². Pages printed in reading order (page 1 first) will be sorted in reading order (last page on top, facing down).

FACE UP STACKER

The face up stacker at the rear of the printer should be opened and the tray extension pulled out when required for use. In this condition paper will exit via this path, regardless of driver settings.

The face up stacker can hold up to 100 sheets of 80g/m² standard paper, and can handle stocks up to 203g/m².

Always use this stacker and the multipurpose feeder for paper stocks heavier than 176g/m².

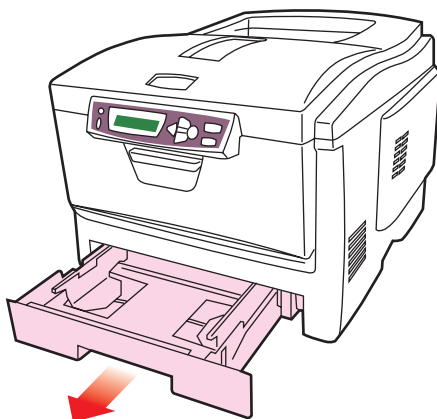
DUPLEX UNIT

This option provides automatic two sided printing on the same range of paper sizes as tray 2 (i.e. all cassette sizes except A6), using paper stocks from 75-105g/m².

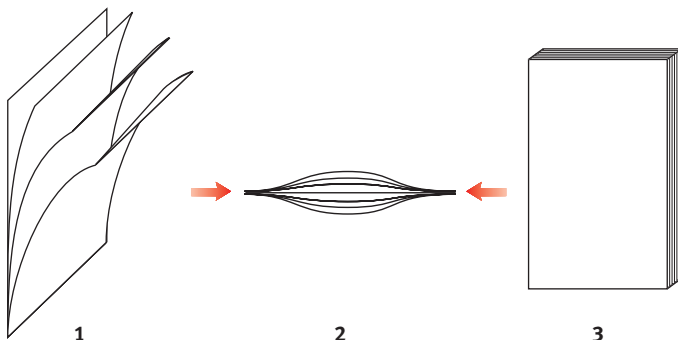
LOADING PAPER

CASSETTE TRAYS

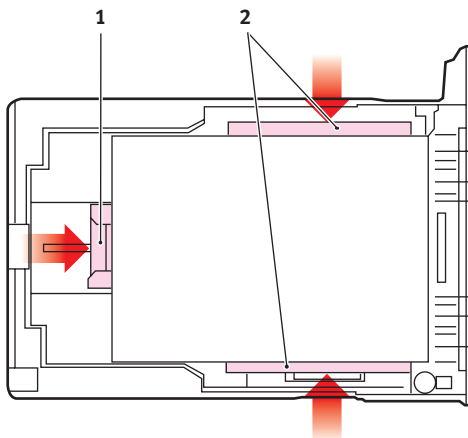
1. Remove the paper tray from the printer.



2. Fan the paper to be loaded at the edges (1) and in the middle (2) to ensure that all sheets are properly separated, then tap the edges of the stack on a flat surface to make it flush again (3).



3. Load letter headed paper face down and top edge towards the front of the printer, as shown.

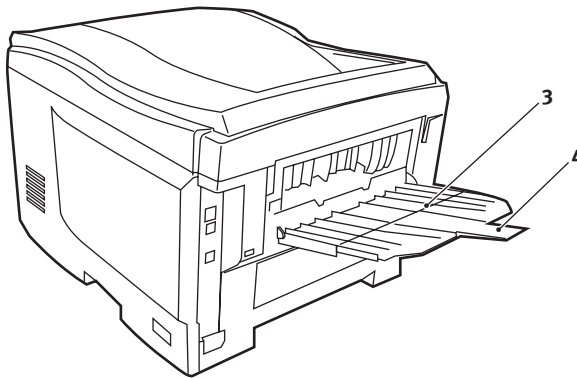


4. Adjust the rear stopper (1) and paper guides (2) to the size of paper being used.

To prevent paper jams:

- › Do not leave space between the paper and the guides and rear stopper.
 - › Do not overfill the paper tray. Capacity depends on the type of paper stock.
 - › Do not load damaged paper.
 - › Do not load paper of different sizes or types at the same time.
 - › Do not pull the paper tray out during printing (except as described below for the 2nd tray).
 - › Close the paper tray gently.
5. If you have two trays and you are printing from the 1st (upper) tray, you can pull out the 2nd (lower) tray during printing to reload it. However, if printing from the 2nd (lower) tray, do not pull out the 1st (upper) tray. This will cause a paper jam.

6. For face down printing, make sure the face up (rear) stacker (3) is closed (the paper exits from the top of the printer). Stacking capacity is approximately 250 sheets, depending on paper weight.
7. For face up printing, make sure the face up (rear) stacker (3) is open and the paper support (4) is extended. Paper is stacked in reverse order and tray capacity is approximately 100 sheets, depending on paper weight.
8. Always use the face up (rear) stacker for heavy paper (card stock etc.)

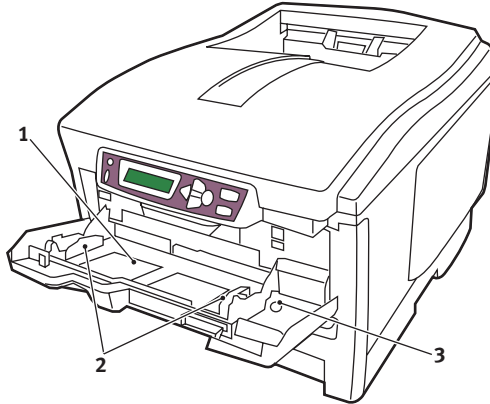


CAUTION!

Do not open or close the rear paper exit while printing as it may result in a paper jam.

MULTIPURPOSE TRAY

1. Open the multi purpose tray and press gently down on the paper platform (1) to ensure it is latched down.



2. Load the paper and adjust the paper guides (2) to the size of paper being used.
 - › For single sided printing on headed paper load the paper into the multipurpose tray with pre-printed side up and top edge into the printer.
 - › For two sided (duplex) printing on headed paper load the paper with pre-printed side down and top edge away from the printer. (Optional duplex unit must be installed for this function.)
 - › Envelopes should be loaded face up with top edge to the left and short edge into the printer. Do not select duplex printing on envelopes.
 - › Do not exceed the paper capacity of about 50 sheets or 10 envelopes. Maximum stacking depth is 10mm.
3. Press the tray latch button (3) inwards to release the paper platform, so that the paper is lifted and gripped in place.

Set the correct paper size for the multipurpose tray in the Media Menu (see “Menu Functions”).

PRINTER SETTINGS IN WINDOWS

Your printer's operator panel menus provide access to many options. The Windows printer driver also contains settings for many of these items. Where items in the printer driver are the same as those in the operator panel menus, and you print documents from Windows, the settings in the Windows printer driver will override those items in the operator panel menus.

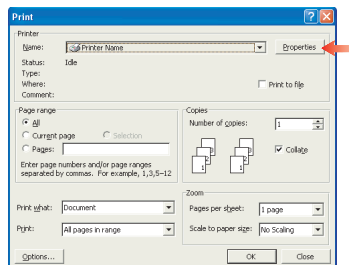
The illustrations in this chapter show Windows XP. Windows 2000 versions may appear slightly different, but the principles are the same.

PCL OR POSTSCRIPT

Two printer drivers are supplied with your printer: one for PCL emulation, and the other for PostScript 3 emulation. If you print mainly from general "Office" applications choose the PCL driver. 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.

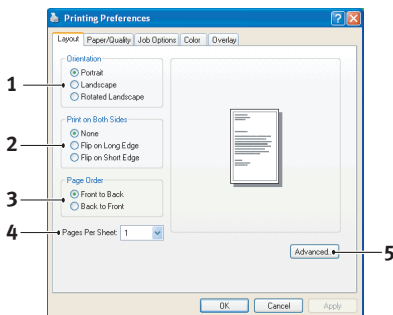


When you click **Properties** a new window opens which contains a short list of the printer settings available in the driver, which you can choose for this document.

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 anti-clockwise.
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.

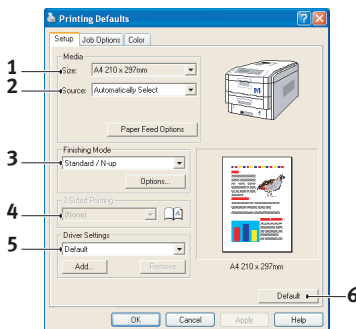


The printer driver contains extensive on-line help for these items to help you make the most appropriate choices.

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, which may be Tray 1 (the standard paper tray), Tray 2 (if you have the optional 2nd paper tray installed) or the multipurpose feeder. You can also click on the appropriate part of the screen graphic to select your preferred tray.
3. 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.
4. 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.
5. 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.
6. A single on-screen button restores the default settings.

SECURE PRINTING FEATURE

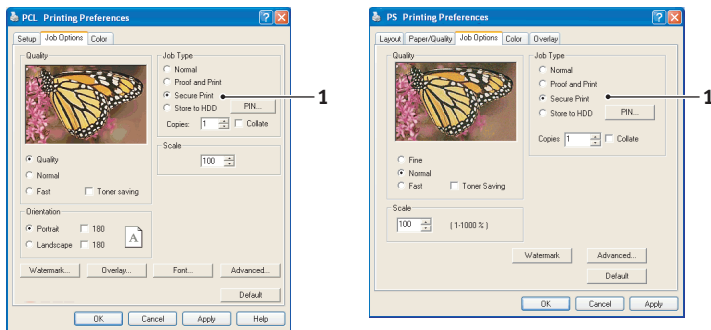
With this feature you can send confidential documents to print and have them stored in the printer until you are ready to print them. Documents sent in this way are protected by a PIN (personal identification number), which must be entered before they will print. This is useful when you need to print confidential documents on a printer which is shared with, or accessible to, other people.

NOTE

This feature requires the optional internal hard disk.

SENDING THE DOCUMENT TO PRINT

1. From your application's Print dialogue, select your printing choices in the normal way, and then click the **Properties** button.
2. In the driver window, on the **Job Options** tab and select **Secure Print (1)**.



3. In the small pop-up window which appears, enter a name for this print job (16 characters maximum) and a 4-digit PIN using any combination of digits from 0 to 7 (do not use 8 or 9), and click **OK**.
4. Click **OK** again to close the driver window, and again to close your application's Print dialogue.

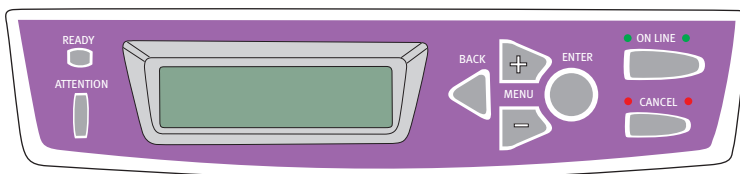
The document will be sent to the printer's hard disk but will not print until you request it.

PRINTING SECURE DOCUMENTS

Secure documents stored on the printer's hard disk may be printed in either of two ways:

- › From the printer's operator panel;
- or...*
- › From your PC desktop, using the Storage Device Manager utility supplied on CD1 (Drivers and Utilities) with the printer.

Printing from the operator panel



1. Press the **+** button to access the Print Jobs menu.
2. Press **ENTER** to select this menu.
3. Use the **+/-** buttons to display the first digit of your PIN, and then press **ENTER** to enter this digit. Repeat this procedure for each of the four digits.
4. Use the **+/-** buttons to display each of your stored secure documents in turn, or to select all documents. When the required selection is displayed, press **ENTER** to print the document(s).
5. If you have only selected a single document to print, the display will prompt you for the number of collated copies you wish to print (default is 1 copy). Use the **+/-** buttons to choose the number of copies you want and press **ENTER** to begin printing.

After a short pause the selected document will print. When printing is complete the document will automatically be deleted from the printer's hard disk.

Printing from your PC desktop

If you have installed the Storage Device Manager software from the supplied CD, you can also print secure documents directly from your PC desktop. You might do this, perhaps, when the office is empty and your confidential documents can safely be printed remotely.

1. From the Windows **Start** menu, run Storage Device Manager.
2. If necessary, use the **SDM Printer Discovery** window to find all available printers on your network or connected to your computer.
3. Select the icon for the printer holding your secure documents.
4. From the **Printers** menu, choose **HDD Print Jobs**.
5. In the HDD Print Jobs window, choose the **View User Jobs** option button and enter your PIN in the text box provided. After a short pause, a list of your print jobs will appear.
6. In the list of print jobs, select the job you wish to print and click **Print Job(s)**. If necessary, adjust the number of copies you want when the prompt appears.

After a short pause the selected document will print. When printing is complete the document will automatically be deleted from the printer's hard disk.

PROOF AND PRINT FEATURE

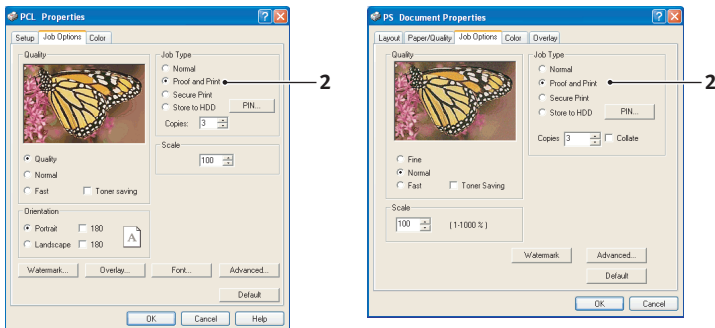
This feature allows you to send multiple copies of a document to print but only print the first copy so that you can check the output quality before printing the rest.

NOTE

This feature requires the optional internal hard disk in the printer.

SENDING THE DOCUMENT TO PRINT

1. From your application's Print dialogue, select the number of copies you need, and then click the **Properties** button.
2. In the driver window, on the **Job Options** tab and select **Proof and Print (2)**.



3. In the small pop-up window which appears, enter a name for this print job (16 characters maximum) and a 4-digit PIN using any combination of digits from 0 to 7 (do not use 8 or 9), and click **OK**.
4. Click **OK** again to close the driver window, and again to close your application's Print dialogue.

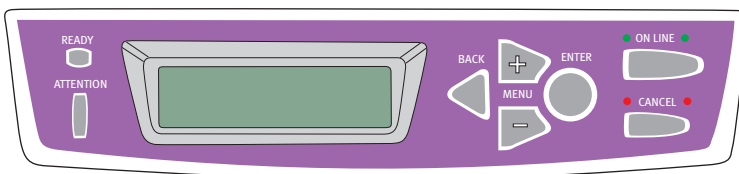
The document will be sent to the printer's hard disk but only the first copy will print.

PRINTING THE REMAINING COPIES

Documents stored on the printer's hard disk may be printed in either of two ways:

- › From the printer's operator panel;
- or...*
- › From your PC desktop, using the Storage Device Manager utility supplied on CD1 (Drivers and Utilities) with the printer.

Printing from the operator panel



1. Press the **+** button to access the Print Jobs menu.
2. Press **ENTER** to select this menu.
3. Use the **+/-** buttons to display the first digit of your PIN, and then press **ENTER** to enter this digit. Repeat this procedure for each of the four digits.
4. Use the **+/-** buttons to display each of your stored documents in turn. When the required selection is displayed, press **ENTER** to print the document(s).
5. Use the **+/-** buttons to choose the number of copies you want and press **ENTER** to begin printing.

After a short pause while the selected document is processed it will begin printing. When printing is complete the document will automatically be deleted from the printer's hard disk.

Printing from your PC desktop

If you have installed the Storage Device Manager software from the supplied CD, you can also print the remaining copies directly from your PC desktop.

1. From the Windows **Start** menu, run Storage Device Manager.
2. If necessary, use the **SDM Printer Discovery** window to find all available printers on your network or connected to your computer.
3. Select the icon for the printer holding your secure documents.
4. From the **Printers** menu, choose **HDD Print Jobs**.
5. In the HDD Print Jobs window, choose the **View User Jobs** option button and enter your PIN in the text box provided. After a short pause, a list of your print jobs will appear.
6. In the list of print jobs, select the job you wish to print and click **Print Job(s)**. If necessary, adjust the number of copies you want when the prompt appears.

After a short pause while the selected document is processed it will begin printing. When printing is complete the document will automatically be deleted from the printer's hard disk.

PERMANENT PRINT DOCUMENTS

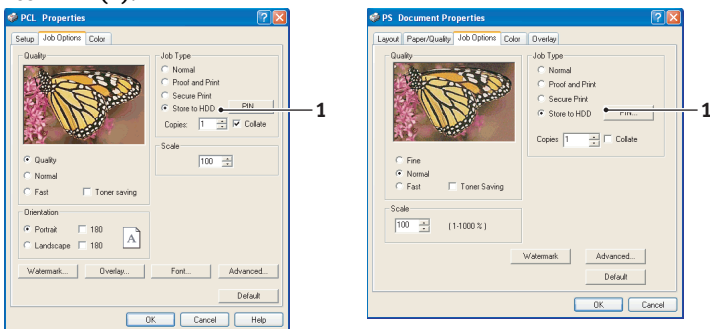
With this feature you can create standard documents that you often need to print and store them on your printer's internal hard disk. You can then print them at any time without having to send them again from your computer.

NOTE

This feature requires the optional internal hard disk.

SENDING THE DOCUMENT TO PRINT

1. From your application's Print dialogue, select your printing choices in the normal way, and then click the **Properties** button.
2. In the driver window, on the **Job Options** tab and select **Store to HDD (1)**.



3. In the small pop-up window which appears, enter a name for this print job (16 characters maximum) and a 4-digit PIN using any combination of digits from 0 to 7 (do not use 8 or 9), and click **OK**.
4. Click **OK** again to close the driver window, and again to close your application's Print dialogue.

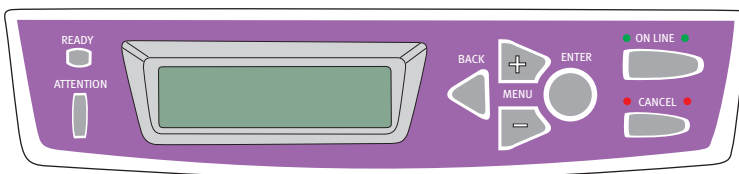
The document will be sent to the printer's hard disk but will not print.

PRINTING STORED DOCUMENTS

Documents stored on the printer's hard disk may be printed in either of two ways:

- › From the printer's operator panel;
- or...*
- › From your PC desktop, using the Storage Device Manager utility supplied on CD1 (Drivers and Utilities) with the printer.

Printing from the operator panel



1. Press the **+** button to access the Print Jobs menu.
2. Press **ENTER** to select this menu.
3. Use the **+/-** buttons to display the first digit of your PIN, and then press **ENTER** to enter this digit. Repeat this procedure for each of the four digits.
4. Use the **+/-** buttons to display each of your stored secure documents in turn, or to select all documents. When the required selection is displayed, press **ENTER** to print the document(s).
5. If you have only selected a single document to print, the display will prompt you for the number of collated copies you wish to print (default is 1 copy). Use the **+/-** buttons to choose the number of copies you want and press **ENTER** to begin printing.

After a short pause the selected document will print.

Printing from your PC desktop

If you have installed the Storage Device Manager software from the supplied CD, you can also print permanently stored documents directly from your PC desktop.

1. From the Windows **Start** menu, run Storage Device Manager.
2. If necessary, use the **SDM Printer Discovery** window to find all available printers on your network or connected to your computer.
3. Select the icon for the printer holding your secure documents.
4. From the **Printers** menu, choose **HDD Print Jobs**.
5. In the HDD Print Jobs window, choose the **View User Jobs** option button and enter your PIN in the text box provided. After a short pause, a list of your print jobs will appear.
6. In the list of print jobs, select the job you wish to print and click **Print Job(s)**. If necessary, adjust the number of copies you want when the prompt appears.

After a short pause the selected document will print.

WINDOWS 9X DIFFERENCES

Screen presentations of Windows 9x, together with some procedures, are significantly different than other versions of Windows (2000/XP etc.). This Chapter deals mainly with these variations. If necessary, reference should be made to the relevant subject or online help for more information.

PRINTER SETTINGS IN WINDOWS

PCL OR POSTSCRIPT

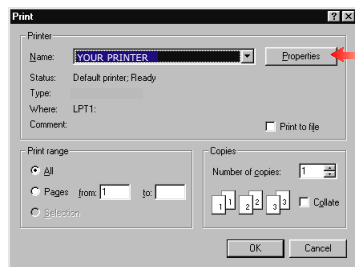
Two printer drivers are supplied with your printer: one for PCL emulation, and the other for PostScript 3 emulation. If you print mainly from general “Office” applications choose the PCL driver. For faster printing of PDF documents, choose PostScript. Also choose PostScript if you print mainly from professional DTP and graphics applications.

NOTE

With both drivers - if optional accessories such as a Hard Disk or Duplex unit are fitted, ensure that they are enabled in the Start/Settings/Printers/Properties/Device options dialogue.

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.

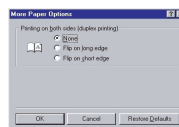
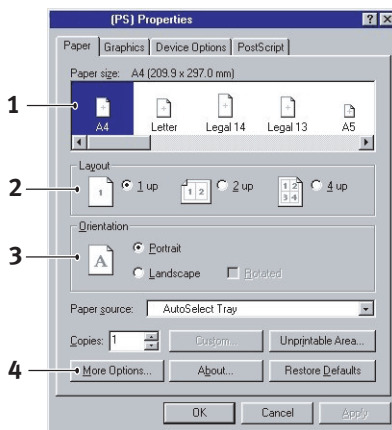


When you click **Properties** a new window opens which contains a short list of the printer settings available in the driver, which you can choose for this document.

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

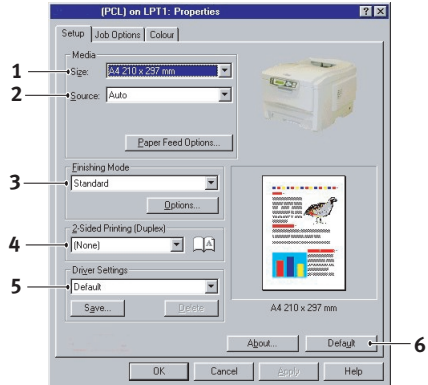
1. Paper size should be the same as the page size of your document (unless you wish to scale the printout to fit another size), and should also be the same as the size of paper you will feed into the printer.
2. You can specify how many pages to print on a sheet. Pages will be scaled to fit the number you choose.
3. Page orientation sets portrait (tall) or landscape (wide) page orientation. Rotated turns the paper through 90 degrees anti-clockwise.
4. By selecting the More Options Tab you can flip the paper either on its long edge or short edge when printing double sided pages (duplex unit required).



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, which may be Tray 1 (the standard paper tray), Tray 2 (if you have the optional 2nd paper tray installed) or the multi-purpose feeder. You can also click on the appropriate part of the screen graphic to select your preferred tray.

3. 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.

4. 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.
5. 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.
6. A single on-screen button restores the default settings.

SECURE PRINTING FEATURE

With this feature you can send confidential documents to print and have them stored in the printer until you are ready to print them. Documents sent in this way are protected by a PIN (personal identification number), which must be entered before they will print. This is useful when you need to print confidential documents on a printer which is shared with, or accessible to, other people.

NOTE

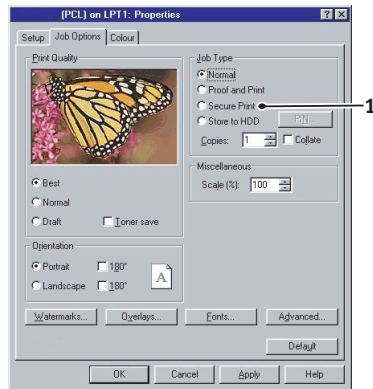
With both PS and PCL drivers, this feature requires the optional internal hard disk to be fitted and enabled in the Start/Settings/Printers/Properties/Device options dialogue.

SENDING THE DOCUMENT TO PRINT

From your application's Print dialogue, select your printing choices in the normal way, and then click the **Properties** button.

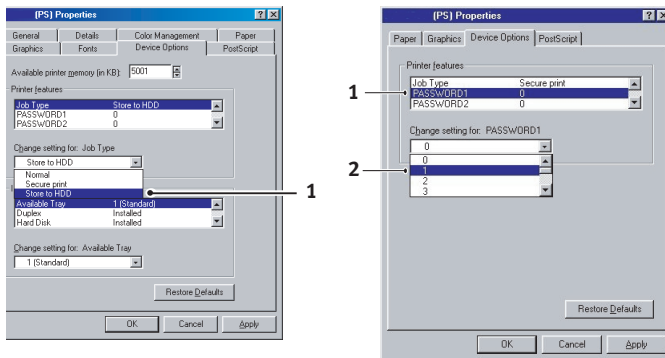
PCL Emulation

1. In the driver window, on the **Job Options** tab, select **Secure Print (1)**.
2. In the small pop-up window which appears, enter a name for this print job (16 characters maximum) and a 4-digit PIN using any combination of digits from 0 to 9, and click **OK**.
3. Click **OK** again to close the driver window, and again to close your application's Print dialogue.



PostScript Emulation

1. In the driver window, on the Device Options tab, select Secure Print (1).



2. In Printer Features, select Password 1 and select a number from 0 - 9 in the Change Setting for: drop-down box. Repeat for passwords 2 - 4.
3. Click OK again to close the driver window, and again to close your application's Print dialogue.

The document will be sent to the printer's hard disk, but will not print until you request it.

See Chapter "Printer Settings in Windows" for information on printing secure documents.

Proof and print feature

This feature allows you to send multiple copies of a document to print but only print the first copy so that you can check the output quality before printing the rest.

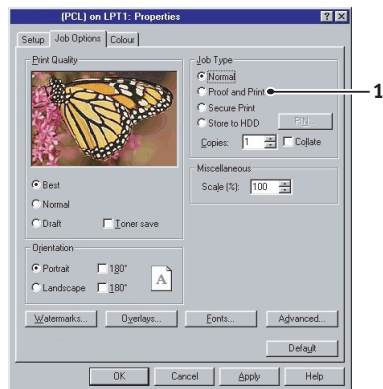
NOTE

With both PS and PCL drivers, this feature requires the optional internal hard disk to be fitted and enabled in the Start/Settings/Printers/Properties/Device options dialogue.

SENDING THE DOCUMENT TO PRINT

From your application's Print dialogue, select the number of copies you need, and then click the **Properties** button.

1. In the driver window, on the **Job Options** tab, select **Proof and Print** (1).
2. In the small pop-up window which appears, enter a name for this print job (16 characters maximum) and a 4-digit PIN using any combination of digits from 0 to 9, and click **OK**.
3. Click **OK** again to close the driver window, and again to close your application's Print dialogue.



The document will be sent to the printer's hard disk but only the first copy will print.

See Chapter "Printer Settings in Windows" for information on printing the remaining copies.

STORE TO HARD DISK

With this feature you can create standard documents that you often need to print and store them on your printer's internal hard disk. You can then print them at any time without having to send them again from your computer.

NOTE

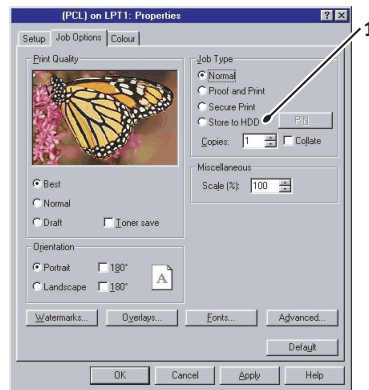
With both PS and PCL drivers, this feature requires the optional internal hard disk to be fitted and enabled in the Start/Settings/Printers/Properties/Device options dialogue.

SENDING THE DOCUMENT TO PRINT

From your application's Print dialogue, select your printing choices in the normal way, and then click the **Properties** button.

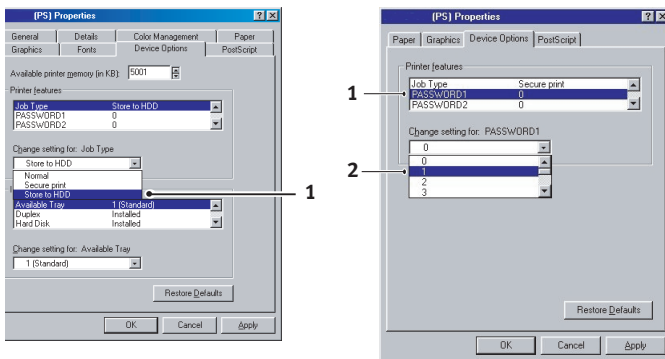
PCL Emulation

1. In the driver window, on the **Job Options** tab, select **Store to HDD** (1).
2. In the small pop-up window which appears, enter a name for this print job (16 characters maximum) and a 4-digit PIN using any combination of digits from 0 to 9, and click **OK**.
3. Click **OK** again to close the driver window, and again to close your application's Print dialogue.



PostScript Emulation

1. In the driver window, on the Device Options tab, select Store to HDD (1).



2. In Printer Features, select Password 1 (1 above) and select a number from 0 - 9 in the Change Setting for: drop-down box (2 above). Repeat for passwords 2 - 4.

NOTE

A “Password” is part of a PIN.

Password 1 is the first digit of a PIN, Password 2 is the second digit of a PIN etc.

3. Click OK again to close the driver window, and again to close your application’s Print dialogue.

The document will be sent to the printer’s hard disk but will not print.

See Chapter “Printer Settings in Windows” for information on printing stored documents.

COLOUR PRINTING

CHOOSING A COLOUR MATCHING METHOD

There is no correct way to achieve a good match between the document displayed on your monitor, and its printed equivalent. There are many factors involved in achieving accurate and reproducible colour.

The following guidelines may help in achieving good colour output from your printer. There are several suggested methods, depending on the type of document you are printing.

These suggestions are for guidance only. Your results may vary depending on the application from which you are printing. Some applications will override any colour matching settings in the printer driver without warning.

RGB or CMYK?

The guidelines for choosing a colour matching method makes distinctions between Red, Green, Blue (RGB) and Cyan, Magenta, Yellow, Black (CMYK).

Generally, most documents you print will be in RGB format. This is the most common, and if you do not know your document's colour mode, assume that it is RGB.

Typically CMYK documents are only supported in professional Desktop Publishing and Graphics applications.

MATCHING PHOTOGRAPHIC IMAGES

RGB only

Oki Colour Matching is a generally a good choice. Select a matching method appropriate to your monitor.

RGB or CMYK

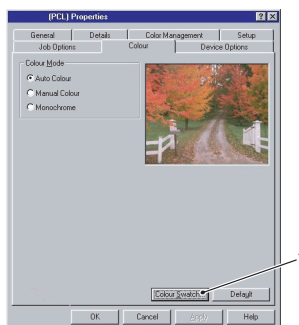
If you are printing photographic images from a graphics application such as Adobe Photoshop, you may be able to use Soft-Proofing to simulate the printed image on your monitor. To do this, you can use the ICC-Profiles provided by Oki, and then print using the ICC profiles as the Print Space (or Output space).

MATCHING SPECIFIC COLOURS

(For instance, a Company logo.)

RGB only

- › Oki Colour Matching, and the sRGB setting (PCL or PS driver).
- › PostScript Colour Matching using the Relative Colorimetric option.
- › Use the Colour Swatch Utility (1) to print out a chart of RGB swatches and enter your desired RGB values in your application's colour picker.



PRINTING VIVID COLOURS

RGB only

- › Use Oki Colour Matching, with either the Monitor 6500k Vivid, sRGB or Digital Camera settings (PCL or PostScript emulations).

PCL DRIVER

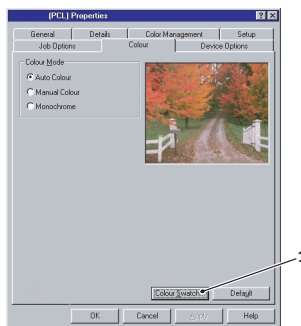
ACCESSING THE COLOUR MATCHING OPTIONS

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

The PCL driver's colour options are only designed to work with RGB data. If you are printing CMYK data, we recommend you use the PostScript driver.

To open colour matching options from the Windows Control Panel:

1. Open the **Printers** window. Right-click the printer name and choose **Properties**.
2. Click the **Printing Preferences** button (1).



To open colour 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 COLOUR MATCHING OPTIONS

1. On the **Colour** tab select **Manual** for Colour Matching.
2. Choose from the available options:

(a) **Monitor (6500k) Perceptual**

Optimised for printing daylight photographs.

(b) **Monitor (6500k) Vivid**

Optimised for printing bright colours. Good for office graphics.

(c) **Monitor (9300k)**

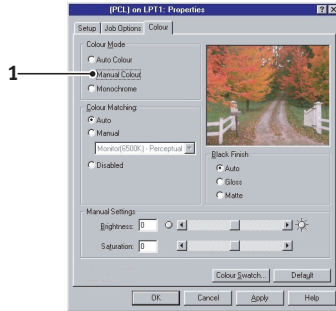
Optimised for printing photographs when using a professional graphics monitor.

(d) **Digital Camera**

Optimised for printing photographs taken with a digital camera. This tends to produce prints with lighter and brighter colours. For some photographs, other settings may be better depending on the subjects and the conditions under which they were taken.

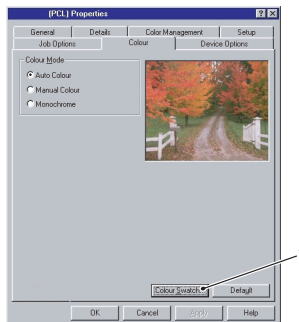
(e) **sRGB**

Optimised for matching specific colours, such as a company logo colour. The colours within the printer's colour gamut are printed without any modification, and only colours that fall outside the printable colours are modified.



USING THE COLOUR SWATCH FEATURE

The Colour Swatch function prints charts which contain a range of sample colours. Note that this is not the full range of colours that the printer can produce. Listed on each sample colour are the corresponding RGB (Red, Green, Blue) values. This can be used to pick specific colours 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 Colour Swatch function:

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

1. Print a colour 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 colour picker, enter these same RGB values, and change the logo to that colour.

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

POSTSCRIPT DRIVER

COLOUR MATCHING OPTIONS

The PostScript driver offers several different methods of controlling the colour output of the printer.

Some of the colour matching options only work on certain types of data. The table below summarises the various options available, and what types of data they affect.

Colour Matching Option	RGB data	CMYK data
Oki Colour Matching	Yes	No
PostScript Colour Matching	Yes	Yes
CMYK Ink Simulation	No	Yes
Windows ICM Matching	Yes	No

Oki Colour Matching

This is Oki's proprietary colour matching system, and affects RGB data only.

- › **Perceptual** settings are best for printing photographic images.
- › **Vivid** or **Digital Camera** settings produce brightest colours.
- › **sRGB** is the best choice for matching specific colours (such as printing logos).

Monitor (6500k) Perceptual

Optimised for printing photographs when using a monitor with a colour temperature of 6500K.

Monitor (6500k) Vivid

Optimised for printing bright colours when using a monitor with a colour temperature of 6500K. Good for office graphics and text.

Monitor (9300k)

Optimised for printing photographs when using a monitor with a colour temperature of 9300K.

Digital Camera

Optimised for printing photographs taken with a digital camera. This tends to produce prints with lighter and brighter colours. For some photographs, other settings may be better depending on the subjects and the conditions under which they were taken.

sRGB

Optimised for matching specific colours, such as a company logo colour.

The colours within the printer's colour gamut are printed without any modification, and only colours that fall outside the gamut (set of printable colours) are modified.

POSTSCRIPT COLOUR MATCHING

This uses PostScript Colour Rendering Dictionaries built into the printer, and affects both RGB and CMYK data.

Rendering Intents

When a document is printed, a conversion takes place from the document's colour space to the printer colour space. The rendering intents are essentially a set of rules that determine how this colour conversion takes place.

The rendering intents that the printer driver provides are listed below:

› **Perceptual**

Best choice for printing photographs. Compresses the source gamut into the printer's gamut whilst maintaining the overall appearance of an image. This may change the overall appearance of an image as all the colours are shifted together.

› **Saturation**

Best choice for printing bright and saturated colours, but less accurately matched. This makes it the recommended choice for graphs, charts, diagrams etc. Maps fully saturated colours in the source gamut to fully saturated colours in the printer's gamut.

› **Absolute Colorimetric**

Best for printing solid colours and tints, such as Company logos etc. Matches colours common to both devices exactly, and clips the “out of gamut” colours to their nearest printed equivalent. Tries to print white as it appears on screen. The white of a monitor is often very different from paper white, so this may result in colour casts, especially in the lighter areas of an image.

› **Relative Colorimetric**

Good for proofing CMYK colour images on a desktop printer. Much like Absolute Colorimetric, except that it scales the source white to the (usually) paper white. Unlike Absolute Colorimetric, this attempts to take the paper white into account.

CMYK INK SIMULATION

Affects CMYK data only.

This option simulates what the output will look like on a printing press using the ink types SWOP, Euroscale or Toyo. If using CMYK Ink Simulation, it is recommended that you switch off all other Printer Colour Matching. Select the No Colour Matching option under the Colour Match option in the printer driver.

WINDOWS ICM COLOUR MATCHING

Affects RGB data only.

ICM is the colour management system built into Windows.

Windows ICM uses ICC profiles for your monitor and printer; these profiles describe the colours that your device is capable of reproducing. ICC profiles can be associated with your printer via the Colour Management tab of the printer driver.

Depending on how you have installed the printer driver, the colour profiles may already be associated with the driver.

To associate ICC Colour Profiles with the printer driver:

1. Access the printer settings via the **Start** menu.

2. Right-click the printer name and choose **Properties**.
3. Click the Colour Management tab.
4. Under “Colour Profiles currently associated with this printer”, you should see the names of profiles that match your printer model. If you do not see any profiles associated with the driver, click “Add...” and locate the ICC profiles for your printer.

Windows ICM uses the information in these profiles to convert colours in your documents to colours that the printer can reproduce. The way in which this conversion is performed can be controlled via the ICM Intent control in the printer driver.

6. Click **OK**, and when prompted for a print file name, enter a meaningful name with the extension .PRN.
7. Close your application.

Step 2: Create and download macros

NOTE

Ensure that the Storage Device Manager has been installed (on the Printer Drivers CD, “Software Utilities”).

1. From the Windows **Start/Programs/Okidata** 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 colour 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 disk drive PCL partition;
- 1** = printer's disk drive Common partition;
- %disk0%** = printer's disk drive PostScript partition;
- 2** = flash memory PCL
- %Flash0%** = flash memory PostScript

NOTE

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

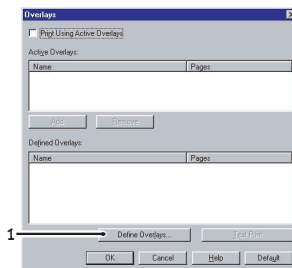
1. Choose **Printers**→**Test Macro**.
2. In the Test Macro window, enter its ID number and click **OK**. After a short pause the printer will print the macro.
3. When each macro has been tested, click **Exit**.
4. Click the standard Windows **Close (X)** button, or choose **Projects**→**Exit** to close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

Step 3: Defining overlays

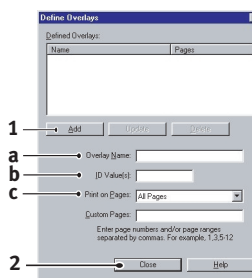
This is the final step before the new overlays are ready for use.

1. Open the **Printers** window via the **Start** menu or the Windows Control Panel.

2. Right-click on the relevant PCL 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, *as noted in step 2, para 7*, and define which **page(s) (c)** of your documents will use this overlay. Then click the **Add button (1)** to add this overlay to the list of defined overlays. Repeat for any other related overlays (this will create a “group” of overlays). When done, click the **Close button (2)** to close the window.



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.

INSTALLING UPGRADES

ADJUSTING WINDOWS PRINTER DRIVERS

Once your new upgrade has been installed, you may need to update the Windows printer driver so that the additional features are available to your Windows applications.

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

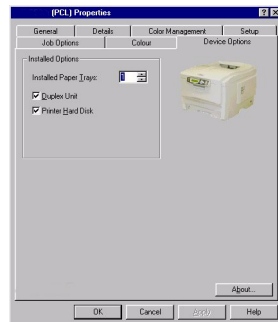
The illustrations shown here are for Windows XP. Other Windows versions may appear slightly different, but the principles are the same.

PCL driver

If you have installed a memory upgrade it is not necessary to change the PCL printer driver, and you can ignore this section.

If you have installed a duplex unit or hard disk, proceed as follows:

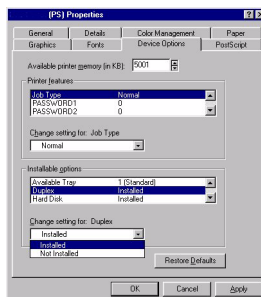
1. Open the Printers window via the **Start Menu** or from the Windows Control Panel.
2. Right-click the printer icon for this printer, and choose **Properties** from the pop-up menu.
3. On the **Device Options** tab, check the box for the upgrade you have just installed.
4. Click **OK** to close the properties window, and then close the Printers window.



PostScript driver

This driver must be adjusted for any upgrade just installed.

1. Open the Printers window via the **Start Menu** or from the Windows Control Panel.
2. Right-click the printer icon for this printer, and choose **Properties** from the pop-up menu.
3. On the Device Settings tab, select the upgrade you have just installed from the list of “Installable Options”. Select “Installed” in the “Change Settings for:” box.
4. Click **OK** to close the Properties window, and then close the Printers window.



MAC OS 9.X / CLASSIC

PRINTER DRIVERS

CD1 contains the printer drivers. Please refer to the readme file on this CD for the latest information on printer driver installation.

If the settings selected manually in the printer differ from those selected in the printer driver, the printer will not print and the LCD will display an error message.

The following printer driver instructions are given as a guide only. Some software applications require the paper feed, size and media settings to be selected from within the software (Page Setup).

NOTE

- › Switch off antivirus software before installing a printer driver.
- › Take time to note the facilities available on the CD. For example, the Help facility briefly describes each of the Software Utilities.

SOFTWARE INSTALLATION

1. Place the software CD-ROM in the CD-ROM drive.
2. Double click the CD icon.
3. Double click **Language** folder.
4. Double click the “Install Oki Software” shortcut icon.

This launches the installer program. Follow the on-screen instructions.

If you wish to find out more about the software that is included, please refer to the **Help** facility.

SOFTWARE CONNECTION

APPLETALK CONNECTION

If you have not already done so, run the installer program to install the software.

Restart your computer if prompted to do so.

1. In the **Apple** menu, select **Chooser**.
2. In the left-hand side of the **Chooser** window, select the LaserWriter printer driver that you use.
3. If you are on a network with multiple AppleTalk zones, select the appropriate zone for the printer in the bottom left side of the Chooser. If your network does not have multiple AppleTalk zones, this option will not be visible.
4. Click **Create**; the Chooser tries to locate the printer on the network, and tries to select the appropriate PPD (PostScript Printer Description) file.

The correct PPD should be discovered automatically, and installable hardware options are detected and configured as appropriate. If the correct PPD cannot be located automatically, you will be asked to manually select a file.

NOTE

If the printer cannot be discovered by the Chooser, it is most likely a connection problem.

5. Close .

TCP/IP CONNECTION

The printer can be connected over TCP/IP using LPR.

LPR is simply a method of printing directly over TCP/IP, without the need for a print server.

NOTE

This installation procedure uses Apple's Desktop Printer Utility to connect the printer to your Mac. You cannot connect to a printer over TCP/IP using the Chooser.

To setup the printer using a TCP/IP network connection:

- (a) If you have not already done so, run the installer program to install the software.
- (b) Restart your computer if prompted to do so.

1. Launch the **Desktop**.

NOTE

- › The Desktop Printer Utility is not provided by Oki. There may be a copy of the Desktop Utility on your Mac hard disk, located in the “Applications (Mac OS 9)” folder, under “Utilities”. Alternatively, the utility can be installed by performing Custom installation from the Mac OS 9 Installation CD.
- › At this step you are given the choice of creating a Desktop Printer using either the Adobe PostScript driver (if installed) or the LaserWriter driver. Choose the LaserWriter driver.

- 2. Select **Printer (LPR)** and click **OK**.
- 3. In the **PostScript Printer Description (PPD) File** section, click **Change...** and select the PPD file for your printer.
- 4. In the **LPR Printer Selection** section, click **Change....**
- 5. Enter the printer's IP address in the **Printer Address** section.
- 6. Enter the queue name in the **Queue** section. If you don't know the Queue name, leave it blank.
- 7. Click **Verify** to confirm the connection to the printer.
- 8. Click **OK**.
- 9. Click **Create**.

This prompts you to give the printer a name.

10. Enter the name you wish to use and click **Save....**

A printer icon is created on your Desktop.

USB CONNECTION

This installation procedure uses Apple's Desktop Printer Utility to connect the printer to your Mac. You cannot connect to a PostScript printer over USB using the Chooser.

To set up the printer using a USB connection:

- (a) If you have not already done so, run the installer program to install the software.
 - (b) Restart your computer if prompted to do so.
1. Launch the **Desktop Printer Utility**.

NOTE

- › The Desktop Printer Utility is not provided by Oki. There may be a copy of the Desktop Utility on your Mac hard disk, located in the “Applications (Mac OS 9)” folder, under “Utilities”. Alternatively, the utility can be installed by performing Custom installation from the Mac OS 9 Installation CD.
- › At this step you are given the choice of creating a Desktop Printer using either the Adobe PostScript driver (if installed) or the LaserWriter driver. Choose the LaserWriter driver.

2. Select **Printer (USB)** and click **OK**.
3. Click on the bottom **Change** button to select the printer.
4. Select the printer that is connected to your Mac and click **OK**.
5. The Desktop Printer Utility should have automatically located the correct PPD file for your printer. If the PPD file does not correspond to your printer model (for example if “Generic” is listed), click the uppermost **Change...** button and select the appropriate file for your printer.
6. Click **Create**.
This prompts you to give the printer a name.
7. Enter the name you wish to use and click **Save....**

A printer icon is created on your Desktop.

INSTALLED OPTIONS

CONFIGURING INSTALLED HARDWARE OPTIONS

If you have added optional hardware to your printer, these must be enabled in the printer driver. Examples of additional hardware that can be added to your printer include:

- › Additional paper trays
- › Printer hard disk
- › Additional printer memory
- › Duplex unit

There are 2 ways of configuring installed hardware options, depending on how printing is setup on your Mac.

CONFIGURING INSTALLED HARDWARE OPTIONS FROM THE DESKTOP:

1. On the Desktop, select the printer icon for your printer.
2. From the **Printing** menu, choose **Change Setup....**
3. In the **Change** menu, select the hardware item(s) that you have installed, and change the **To...** values as appropriate.

NOTE

If your printer is connected via USB or AppleTalk, click the Auto Setup button. This queries the printer, and sets the options automatically.

4. Click **OK** to save your settings.

CONFIGURING INSTALLED HARDWARE OPTIONS FROM THE CHOOSER:

1. In the Apple menu, select **Chooser**.
2. Select the printer LaserWriter driver in the left-hand side of the **Chooser** window.

3. If you are on a network with multiple AppleTalk zones, select the appropriate zone for the printer in the bottom left side of the **Chooser** (if your network does not have multiple AppleTalk zones, this option will not be visible).
4. Select the name of your printer in the right-hand side of the **Chooser**.
5. Click **Setup....**
6. Click **Configure**.

Make changes to the installed hardware options as appropriate for your printer.

7. Click **OK**, and close the Chooser window to save your settings.

PAPER FEED, SIZE AND MEDIA

To select Paper Size:

1. From the **File** menu, choose **Page Setup**.
2. Select the **Paper Size** and **Orientation**.

If you wish to use a custom paper size, select **Custom Page Sizes** from the menu.

3. Once you've chosen your preferred page size, click **OK**.

If you wish to save these paper settings as default, hold down the Option (Alt) key as you click **OK**.

To select Paper Feed and Media Type:

1. From the **File** menu, choose **Print**.
2. In the **General** section, use the **Paper Source** option to select either the paper tray, or the media type to use for your print job.

If you select a paper tray (e.g. Tray 1), the printer takes paper from that source for your print job.

If you select a media type (e.g. Plain), the printer takes paper from a tray that contains that type of media. To assign media types to specific paper trays, you need to use the printer's operator panel.

If you choose **Auto Select**, the printer automatically chooses a tray in the printer that contains the correct size of paper.

If you choose a paper source manually, ensure that the paper tray in the printer contains paper of the correct size.

OPERATION

This section explains how to change the printer's operation for specific print jobs when required.

The PostScript printer drivers supplied with this machine provide several controls for changing the colour output of your printer. Generally, using the default settings will suffice, producing good results for most documents.

Many applications have their own colour 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 colour management functions.

COLOUR MATCHING

FACTORS THAT AFFECT THE APPEARANCE OF PRINTS

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

1. **Differences between the range of colours a monitor or printer can reproduce**

- › Neither a printer nor a monitor is capable of reproducing the full range of colours visible to the human eye. Each device is restricted to a certain range of colours. In addition to this, a printer cannot reproduce all of the colours displayed on a monitor, and vice versa.
- › Both devices use very different technologies to represent colour. A monitor uses Red, Green and Blue (RGB) phosphors (or LCDs), a printer uses Cyan, Yellow, Magenta and Black (CMYK) toner or ink.
- › A monitor can display very vivid colours such as intense reds and blues and these cannot be easily produced on any printer using toner or ink. Similarly, there are certain colours, (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 colours do not match the colours displayed onscreen.

2. **Viewing conditions**

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

3. Monitor settings

The brightness and contrast controls on your monitor can change how your document looks on-screen. Additionally, your monitor colour temperature influences how “warm” or “cool” the colours look.

NOTE

Several of the Printer Driver’s Colour Matching options make reference to your monitor’s Colour Temperature. Many modern monitors allow the colour temperature to be adjusted using the monitor’s control panel.

There are several settings found on a typical monitor:

- › **5000k** Warmest; yellowish lighting, typically used in graphics/ arts environments.
- › **6500k** Cooler; approximates daylight conditions.
- › **9300k** Cool; the default setting for many monitors and television sets.

(k = degrees Kelvin, a measurement of temperature)

4. How your software application displays colour

Some graphics applications such as Corel Draw or Adobe Photoshop may display colour differently from “office” applications such as Microsoft Word. Please see your application’s online help or user manual for more information.

5. Paper type

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

CHOOSING A COLOUR MATCHING METHOD

There is no correct way to achieve a good match between the document displayed on your monitor, and it's printed equivalent. There are many factors involved in achieving accurate and reproducible colour.

However, the following guidelines may help in achieving good colour output from your printer. There are several suggested methods, depending on the type of document you are printing.

NOTE

These suggestions are for guidance only. Your results may vary depending on the application from which you are printing. Some applications will override any colour matching settings in the printer driver without warning.

RGB OR CMYK?

The guidelines for choosing a colour matching method makes distinctions between Red, Green, Blue (RGB) and Cyan, Magenta, Yellow, Black (CMYK).

Generally, most documents you print will be in RGB format. This is the most common, and, if you do not know your document's colour mode, assume that it is RGB.

Typically CMYK documents are only supported in professional Desktop Publishing and Graphics applications.

MATCHING PHOTOGRAPHIC IMAGES

RGB only

Oki Colour Matching is a generally a good choice. Select a matching method appropriate to your monitor.

RGB or CMYK

If you are printing photographic images from a graphics application such as Adobe Photoshop, you may be able to use Soft-Proofing to simulate the printed image on your monitor. To do this, you can use the ICC-Profiles provided by Oki, and then print using the ICC profiles as the Print Space (or Output space).

MATCHING SPECIFIC COLOURS

(For instance, a Company logo.)

RGB only

- › Oki Colour Matching, and the sRGB setting.
- › PostScript Colour Matching using the Relative Colorimetric option.
- › Use the Colour Swatch Utility to print out a chart of RGB swatches and enter your desired RGB values in your application's colour picker.

RGB or CMYK

- › If you are printing from a graphics application such as Adobe Photoshop, you may be able to use Soft-Proofing to simulate the printed image on your monitor. To do this, you can use the ICC-Profiles provided by Oki, and then print using the ICC profiles as the Print Space (or Output space).
- › Alternatively, use PostScript Colour Matching with the Relative Colorimetric setting.

PRINTING VIVID COLOURS

RGB only

- › Use Oki Colour Matching, with either the Monitor 6500k Vivid, sRGB or Digital Camera settings.

RGB or CMYK

- › Use PostScript Colour Matching with the Saturation option.

OKI DRIVER OPTIONS

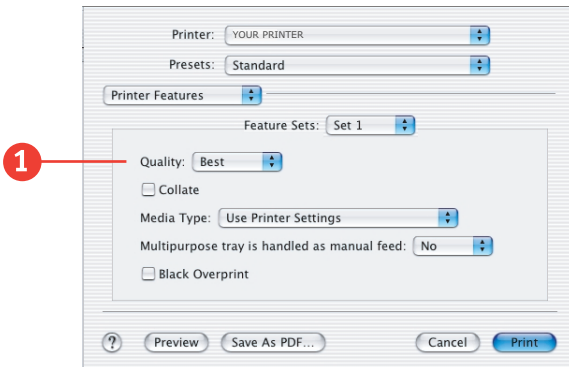
This section references only the OKI-specific driver selections.

OKI PRINTER FEATURES

1. From within your application, select **File** then **Print**.
2. Then open the drop-down menu at left and select **Printer Features**.

Feature Set 1

The tab's features are explained below.



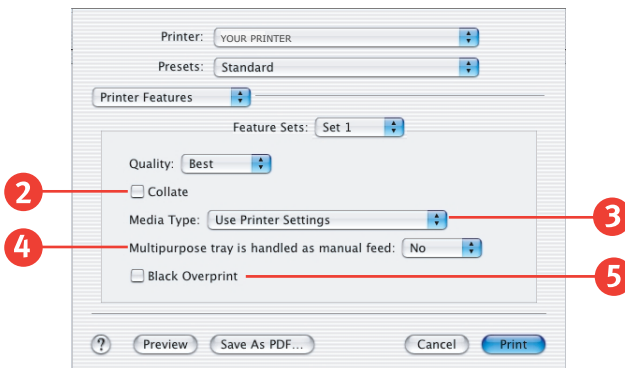
1. Quality

A straightforward selection of the print quality desired.

Normal: normal resolution, fast speed: choose this for quick proofing of drafts.

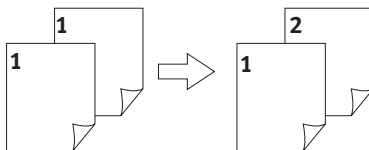
Best: high resolution, slower speed: provides optimum results when printing graphics.

Select your desired print quality.



2. Collate

Collating can be carried out with or without a hard disk drive installed. However, printers with a hard disk drive will provide greater performance. This option is useful when printing multiple copies of large documents and you want to print them in sequence. Click to enable collation of your documents.



3. Media Type

Many options are available for selecting the thickness of the paper type. Normally the Printer Setting is sufficient.

Select your desired Media Type. Any option, other than “Use Printer Settings”, will override the setting at the printer.

4. Multipurpose tray is handled as manual feed

When this is checked, the printer waits until the **Online** button is pressed before feeding paper from the Multipurpose Tray. This is useful for printing on stationery such as envelopes.

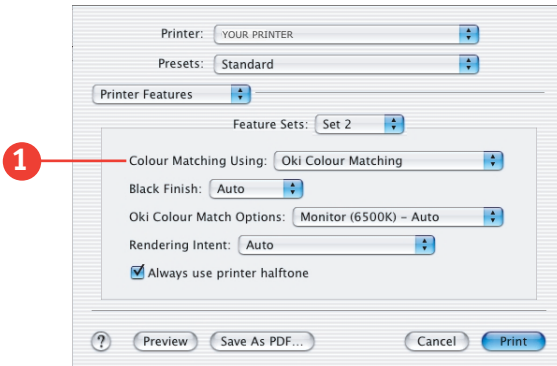
If the manual feed timeout is exceeded, the print job is discarded, and the printer goes back **Online**.

5. Black Overprint

This option prevents registration errors and only works for 100% black text. Click on the checkbox to enable the option.

Feature Set 2

The tab's features are explained below.



1. Colour Matching

No Colour Matching

No colour correction occurs when selected. This option is beneficial when other matching regimens are used, specifically if you select a Ink Simulation option. Also use this option if using an application program's Colour Matching.

OKI Colour Matching

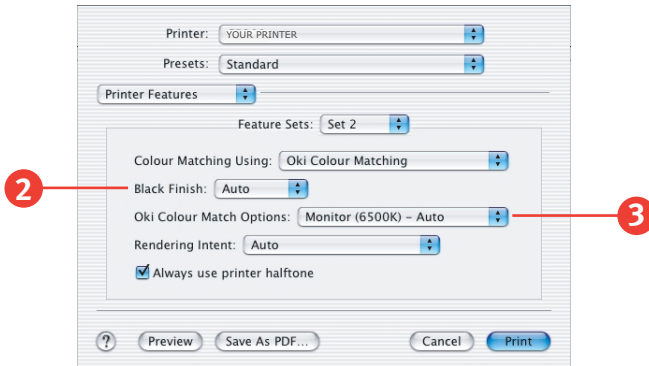
This is Oki's proprietary colour matching system and affects RGB data only. This is the default setting and provides the best colour matching for your printer.

Postscript Colour Matching

This uses PostScript Colour Rendering Dictionaries built into the printer, and affects both RGB and CMYK data.

Print In Grayscale

No colour will print. The printer will interpret all colours as a variation of grays.



2. **Black Finish**

This setting determines Black Toner usage only.

Auto

This option is best for an office environment, with the printer determining which style is better.

Matte

This option produces a True Black (K only).

Gloss

This option uses CMY to produce a Composite Black.

3. **Oki Colour Match Options**

These options are available when **Oki Colour Matching** is selected in “Colour Match Using...”. You can match to a device such as a Monitor or Digital Camera. Select the option desired based upon the information below.

Digital Camera

Optimised for printing photographs taken with a digital camera. This tends to produce prints with lighter and brighter colours. For some photographs, other settings may be better depending on the subjects and the conditions under which they were taken. Vivid or Digital Camera settings produce the brightest colours.

Monitor (6500k) Auto

The default setting that selects the best options for your printer. This selection works best for office graphics.

Monitor (6500k) Perceptual

Optimised for printing photographs when using a monitor with a colour temperature of 6500K. This is best for printing photographic images.

Monitor (6500k) Vivid

Optimised for printing bright colours when using a monitor with a colour temperature of 6500K. Ideal for office graphics and text. Vivid or Digital Camera settings produce the brightest colours.

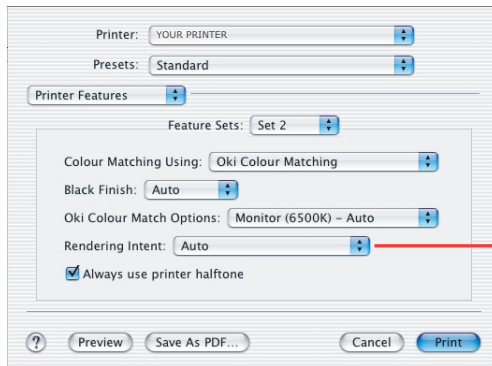
Monitor (9300k)

Optimised for printing photographs when using a monitor with a colour temperature of 9300K.

sRGB

Optimised for matching specific colours, such as a company logo colour. This option attempts to simulate RGB colour. The colours within the printer's colour gamut are printed without any modification, and only colours that fall outside the printable colours are modified.

4. Rendering Intent



Rendering Intents are only used when “Postscript Colour Matching” is selected.

When a document is printed, a conversion takes place from the document's colour space to the printer colour space. The rendering intents are essentially a set of rules that determine how this colour conversion takes place.

Select the option desired.

Absolute Colorimetric

Matches colours common to both devices exactly, and clips the out of gamut colours to their nearest printed equivalent. Tries to print white as it appears on screen. The white of a monitor is often very different from paper white, so this may result in colour casts, especially in the lighter areas of an image.

Auto

The best default selection, as this selects the optimal settings for a general office environment.

Perceptual

Best choice for printing photographs. Compresses the source gamut into the printer's gamut whilst maintaining the overall appearance of an image. This may change the overall appearance of an image as all the colours are shifted together.

Relative Colorimetric

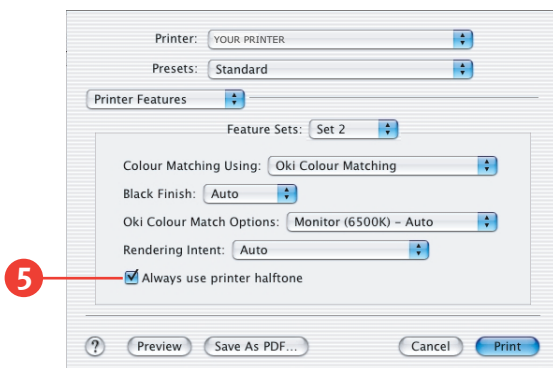
Good for proofing CMYK colour images on a desktop printer. Best for solid colours and tints.

Much like Absolute Colorimetric, except that it scales the source white to the (usually) paper white; i.e. unlike Absolute Colorimetric, this attempts to take the paper white into account.

Saturation

Best choice for printing bright and saturated colours if you don't necessarily care how accurate the colours are. This makes it the recommended choice for graphs, charts, diagrams etc. Maps fully saturated colours in the source gamut to fully saturated colours in the printer's gamut.

5. Always use Printer Halftone

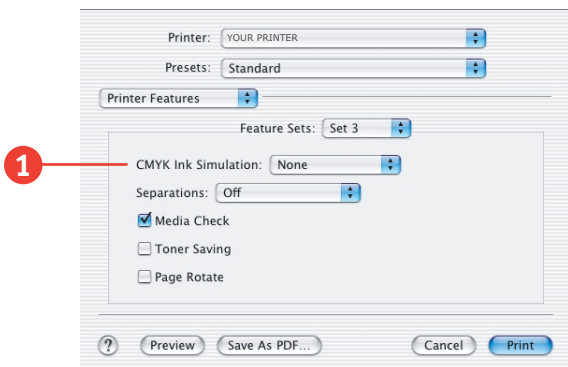


This option prevents the halftone of a high-end graphic application from printing by using the printer's halftone pattern instead of the application's one.

Click on the checkbox to enable the option.

Feature Set 3

The tab's features are explained below.

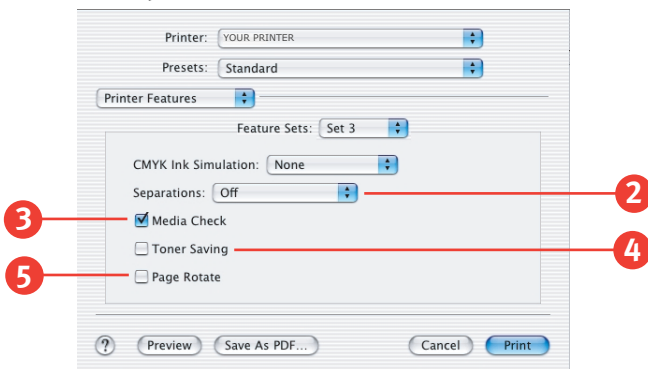


1. Ink Simulation

Affects CMYK output only and is usually used in offset printer environments only.

This option simulates how the output will look on a printing press using the ink types SWOP, Euroscale or Japan. If using CMYK Ink Simulation, it is recommended that you switch off all other Printer Colour Matching by selecting the No Colour Matching option under the “Colour Match Using” option in the printer driver.

Select the option desired.



2. Separations

This option affects output only, allowing you to print all colours or separate plates.

Select the option desired.

3. Media Check

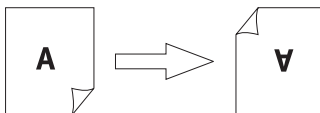
Sets whether the printer checks the matching of paper size to that of the tray. Only standard sizes are checked.

4. Toner Saving

Checking this will enable toner saving, but reduce print quality and provide a much lighter print.

5. Page Rotate

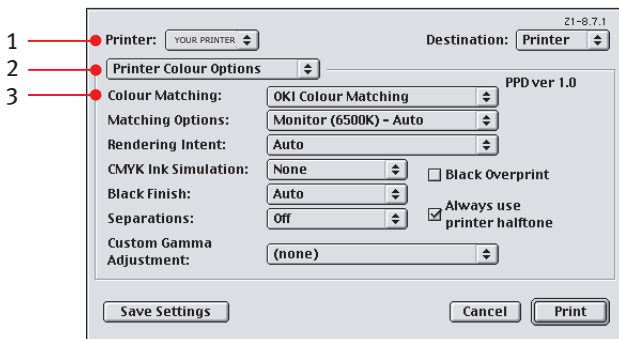
Checking this will rotate the printed material on the page 180 degrees.



COLOUR MATCHING OPTIONS

The PostScript driver offers several different methods of controlling the colour output of the printer.

Some of the colour matching options only work on certain types of data. The table below summarises the various colour-matching options available in the PostScript driver, and what types of data they affect.



To access Colour Options:

1. Select the desired printer from an application using **File**→**Print**.
2. Open the drop down Menu and select **Printer Colour Options**.
3. Select the option required.

COLOUR MATCHING OPTION	RGB DATA	CMYK DATA
OkI Colour Matching	Yes	No
PostScript Colour Matching	Yes	Yes
CMYK Ink Simulation	No	Yes

OKI COLOUR MATCHING

This is Oki's proprietary colour matching system, and affects *RGB data only*.

- › Perceptual settings are best for printing photographic images.
- › Vivid or Digital Camera settings produce the brightest colours.
- › sRGB is the best choice for matching specific colours (such as printing logos).

Monitor (6500k) Perceptual

Optimised for printing photographs when using a monitor with a colour temperature of 6500K.

Monitor (6500k) Vivid

Optimised for printing bright colours when using a monitor with a colour temperature of 6500K. Ideal for office graphics and text.

Monitor (9300k)

Optimised for printing photographs when using a monitor with a colour temperature of 6500K.

Digital Camera

Optimised for printing photographs taken with a digital camera. This tends to produce prints with lighter and brighter colours. For some photographs, other settings may be better depending on the subjects and the conditions under which they were taken.

sRGB

Optimised for matching specific colours, such as a company logo colour.

The colours within the printer's colour gamut are printed without any modification, and only colours that fall outside the printable colours are modified.

POSTSCRIPT COLOUR MATCHING

This uses PostScript Colour Rendering Dictionaries built into the printer, and affects both RGB and CMYK data.

Rendering Intents

When a document is printed, a conversion takes place from the document's colour space to the printer colour space. The rendering intents are essentially a set of rules that determine how this colour conversion takes place.

The rendering intents that the printer driver provides are listed below:

› **Auto**

The best default selection, as this selects the optimal settings for a general office environment.

› **Perceptual**

Best choice for printing photographs. Compresses the source gamut into the printer's gamut whilst maintaining the overall appearance of an image. This may change the overall appearance of an image as all the colours are shifted together.

› **Saturation**

Best choice for printing bright and saturated colours if you don't necessarily care how accurate the colours are. This makes it the recommended choice for graphs, charts, diagrams etc. Maps fully saturated colours in the source gamut to fully saturated colours in the printer's gamut.

› **Absolute Colorimetric**

Matches colours common to both devices exactly, and clips the "out of gamut" colours to their nearest printed equivalent. Tries to print white as it appears on screen. The white of a monitor is often very different from paper white, so this may result in colour casts, especially in the lighter areas of an image.

› **Relative Colorimetric**

Best for printing solid colours and tints, such as company logos etc. Good for proofing CMYK colour images on a desktop printer. Much like Absolute Colorimetric, except that it scales the source white to the (usually) paper white; i.e. unlike Absolute Colorimetric, this attempts to take the paper white into account.

CMYK INK SIMULATION

Affects CMYK data only.

This option simulates how the output will look on a printing press using the ink types SWOP, Euroscale or Japan. If using CMYK Ink Simulation, it is recommended that you switch off all other Printer Colour Matching by selecting the No Colour Matching option under the “Colour Match Using” option in the printer driver.

Select the option desired.

BLACK FINISH

Controls the way in which black is printed in colour documents.

Auto

This option is best for an office environment, with the printer determining which style is better.

Glossy

This option uses CMYK to represent black. Best for photographic images.

Matte

This option uses black toner to represent black. Best for business graphics.

SEPARATIONS

This option affects output only, allowing you to print all colors or separate plates.

Select the option desired.

If an application does not have a colour separation feature, you can still print four colour separations (Cyan, Magenta, Yellow and Black) with the printer driver.

Each colour separation is printed using black toner; the blacker the area, the more of the relevant colour toner will be used in the composite.

CUSTOM GAMMA ADJUSTMENT

NOTE

This option requires the installation and use of the Oki PostScript utility. See the relevant section for further instructions.

You will need to create a custom gamma profile using the Oki PostScript Utility before selecting one here.

Black Overprint

This option prevents registration errors and only works for 100% black text.

Click on the checkbox to enable the option.

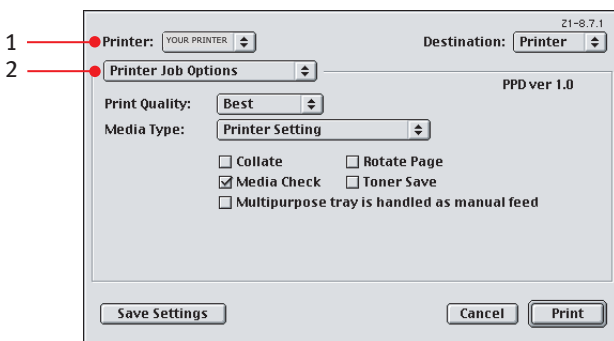
Printer Halftone

This option prevents the halftone of a high-end graphics application from printing.

Click on the checkbox to enable the option.

PRINTER JOB OPTION

To access Printer Job Options:



Select **File** then **Print**.

1. Select the relevant printer
2. Open the drop down Menu and select **Printer Job Options**.
3. Select the option required.

Quality

A straightforward selection of the print quality desired.

- › **Best** = high resolution, slower speed: the default. Provides optimum results when printing graphics.
- › **Normal** = lower resolution, fast speed: choose this one for quick proofing of drafts. Select the desired print quality.

Media Weight

Select the appropriate Media Weight. If you are printing on regular paper, do not select Labels or Transparency. Because fusing temperature is lower on this this type of media, doing so will cause toner smearing and paper jams.

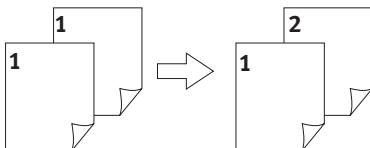
Media Type

Many options are available for selecting the thickness of the paper type. Normally the Printer Setting is sufficient.

1. Select your desired Media Type. Any option, other than Printer Setting, will override the setting at the printer.

Collate

1. Collating can be carried out with or without a hard disk drive installed. However, printers with a hard disk drive will provide greater performance. This option is useful when printing multiple copies of large documents and you want to print them in sequence. Click to enable collation of your documents. Click to enable collation of your documents.



NOTE

If your software application has a collate option, use it instead of the collate option in the printer driver.

Media Check

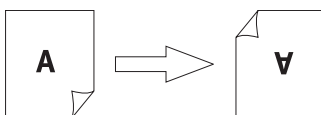
Sets whether the printer checks the matching of paper size to that of the tray. Only standard sizes are checked.

MP tray is handled as manual feed

Checking this will cause the MP tray to be used in manual feed situations. The MP tray *cannot* be used for duplex printing.

Page Rotate

Checking this will rotate the printed material on the page 180 degrees.



Toner Saving

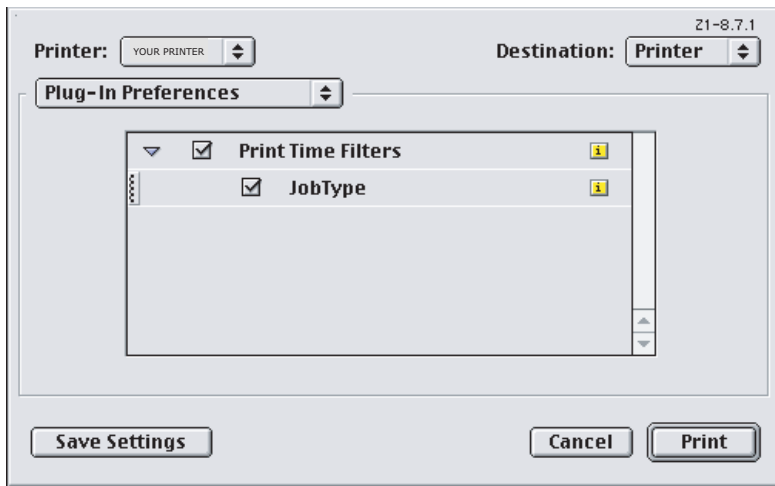
Checking this will enable toner saving.

TO ENABLE THE JOB TYPE PLUG-IN

NOTE

This procedure can only be carried out from Mac OS 9.x or earlier. It cannot be performed from the Classic Environment.

1. On the Desktop, click the icon of the printer you wish to enable the printing plug-in for.
2. From the **Printing** menu, select **Set Default Printer**.
3. Select **File**→**Print Desktop**.
4. Select **Plug-In Preferences** from the pop-up menu.



5. Select **Print Time Filters**.

6. Select **JobType**.

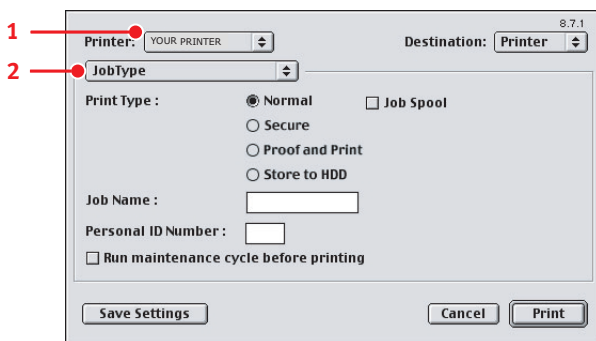
NOTE

To use the Job Type functions, you need to have a hard disk installed in the printer.

7. Click **Save Settings**. and then **Cancel** to return to the Desktop.

JOB TYPE

This plug-in allows you to utilise the options of the built-in hard drive of the printer.



NOTE

- › The internal hard disk must be installed in the printer and enabled to allow for spooling of the print job before final printing.
- › If the hard disk memory is insufficient for the spooled data, DISK FULL is displayed and only one copy printed.
- › If the software application being used has a collate print option, **this must be turned OFF** for Secure Printing to operate correctly.
- › Secure printing may not be available in some software applications.

1. To access Job Type, first select your desired printer from an application using **File**→**Print**.
2. Then open the drop-down menu directly underneath the printer and select **Job Type**.

Each option on the Job Type screen is detailed below.

Normal

This is the default setting for which no further action is required.

Job Spool

If you wish to spool your print job to the printer's hard drive, select Job Spool.

Secure Print Setup

This option allows you to print confidential documents on printers that are shared with other users in a network environment.

1. Select the Secure option.
2. Enter a job name of up to 16 characters next to Job Name and a four-digit personal ID number (4-digit password (0000 to 9999)) in the ID Number box.
3. Press Print to proceed with your print job. The document will be stored on the printer's hard disk.
4. Use the printer front panel controls to print out the document.

Proof and Print

Proof and print allows printing of a single copy of a document for checking before printing multiple copies. First the document is assigned a password and processed to a print file. The file is saved on the hard disk drive and one copy printed. If the document is okay for printing, the remaining copies are printed on demand by entering the password through the printer's front panel.

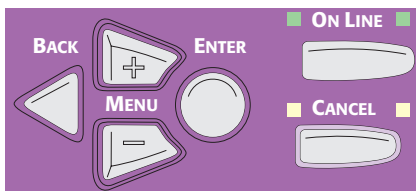
Once the document is printed, it is deleted from the hard drive. If you wish to retain the document on the hard disk drive after printing it, use the Store to Hard Disk feature.

NOTE

- › The internal hard disk must be installed in the printer and enabled to allow for spooling of the print job before final printing.
- › If the hard disk memory is insufficient for the spooled data, DISK FULL is displayed and only one copy is printed.
- › If the software application being used has a collate print option, **this must be turned OFF** for Proof and Print to operate correctly.
- › Proof and Print may not be available in some software applications.

1. Select Proof and Print.
2. Enter a job name of up to 16 characters under Job Name Setting and a four-digit personal ID number (0000 to 9999).
3. Click Print to proceed with your print job. Print the document from the software application being used. The document will be stored on the printer's hard disk and one copy will print for your perusal.
4. After checking the proof, you can then print or delete (if incorrect) the remaining copies of the document using the procedures given below.

At the Printer.



1. Press + to enter the menu mode.
PRINT JOBS MENU
....will appear on the display.

2. Press **ENTER**.
ENTER PASSWORD ****
....will appear on the display.
3. Use + / - to set the number for the first digit of the password, then press **ENTER** to enter the number and move to the next digit:
ENTER PASSWORD 5***
....will be displayed (showing first digit selection).
4. Repeat step 3 for each of the remaining digits in the password.
SELECT JOB
ALL JOBS
....will be displayed when all digits have been selected.
5. To print all jobs stored under your password, press **ENTER**. To print a specific job, press + / - until the job you wish to print appears on the second line of the display, then press **ENTER**. The document will print and be deleted from the HDD.

Deleting the Confidential Document Before Printing it.

1. Press + to enter the menu mode.
PRINT JOBS MENU
....will appear on the display
2. Press **ENTER**.
ENTER PASSWORD ****
....will appear on the display
3. Use + / - to set the number for the first digit of the password, then press **ENTER** to enter the number and move to the next digit:
ENTER PASSWORD 5***
....will be displayed (showing first digit selection).
4. Repeat step 3 for each of the remaining digits in the password.

SELECT JOB

ALL JOBS

...will be displayed when all digits have been selected.

5. Press **CANCEL**.

DELETE THE JOB

Y = ENTER/N = CANCEL

...will be displayed.

6. Press **ENTER** to delete the job, then press **ON LINE**.

Store to Hard Disk

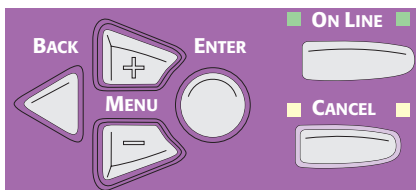
Store to HDD (job spooling) allows print jobs to be temporarily stored on the hard disk before printing. This is ideal for forms, generic memos, letterhead stationery, etc.

NOTE

- › The internal hard disk must be installed in the printer and enabled to allow for spooling of the print job before final printing.
- › If the hard disk memory is insufficient for the spooled data, DISK FULL is displayed and only one copy printed.
- › If the software application being used has a collate print option, this must be turned OFF for Store to Hard Disk to operate correctly.
- › Store To Hard Disk may not be available in some software applications.

1. Select **Store to HDD**.
2. Enter a job name of up to 16 characters under Job Name and a four-digit personal ID number (0000 to 9999).
3. Click **Print** to proceed with your print job. The document will be stored on the printer's hard disk.
4. The document can then be printed or deleted using the procedures given below.

Printing the Stored document from the printer Front Panel.



1. Press **+** to enter the menu mode.
PRINT JOBS MENU
....will appear on the display.
2. Press **ENTER**.
ENTER PASSWORD ****
....will appear on the display.
3. Use **+ / -** to set the number for the first digit of the password, then press **ENTER** to enter the number and move to the next digit:
ENTER PASSWORD 5***
....will be displayed (showing first digit selection).
4. Repeat step 3 for each of the remaining digits in the password.
SELECT JOB
ALL JOBS
....will be displayed when all digits have been selected.
5. Press **+ / -** until the job you wish to print appears on the second line of the display, then press **ENTER**.
The document will print.

Deleting the Confidential Document from the Hard Disk Drive (HDD).

1. Press **+** to enter the menu mode.
PRINT JOBS MENU
....will appear on the display.

2. Press **ENTER**.
ENTER PASSWORD ****
...will appear on the display.
3. Use + / – to set the number for the first digit of the password, then press **ENTER** to enter the number and move to the next digit:
ENTER PASSWORD 5***
...will be displayed (showing first digit selection).
4. Repeat step 3 for each of the remaining digits in the password.
SELECT JOB
ALL JOBS
...will be displayed when all digits have been selected.
5. Press **CANCEL**.
DELETE THE JOB
Y = ENTER/N = CANCEL
...will be displayed.
6. Press **ENTER** to delete the job, then press **ON LINE**

Run Maintenance Cycle Before Printing

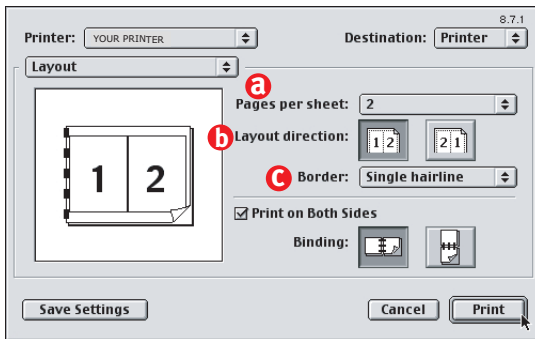
This option allows you to improve your print quality if you suspect there is a problem with printing, such as too much graininess in the print.

1. Select **Run Maintenance Cycle Before Printing** to force the printer to automatically clean itself before printing.

MULTIPLE PAGES ON ONE SHEET

The printer driver allows you to print multiple pages in one sheet, with each page image reduced in size. This is sometimes known as “n-up” printing.

1. From the File menu, select **Print**.
2. From the pop-up menu, select **Layout**.



- (a) Enter the number of sheets you want to print on a single page.
 - (b) Select the desired print direction.
 - (c) For selections other than 1, you may select a page border to surround each individual page image that will be printed on the single sheet of paper.
3. Click **Print** to print or **Save Settings** to save, and close the printer dialog box.

DUPLEX PRINTING

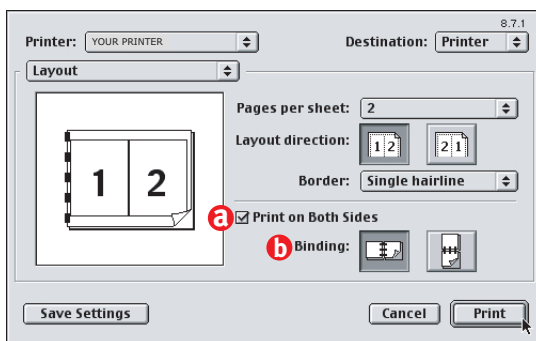
Duplex Printing is printing on both sides of the paper.

NOTE

- › The optional Duplex Unit must be installed in the printer, and configured in the printer driver.
- › Paper weight must be from 75 to 105 g/m². Printing with heavier or lighter paper weights can cause paper jams.
- › Paper must be loaded into the paper tray with the print side facing upwards. The multi purpose tray cannot be used for duplex printing.

To carry out Duplex printing:

1. From the File menu, select **Print**.
2. From the pop-up menu, select **Layout**.
3. From the Layout screen, select the desired options:



- (a) Select **Print on Both Sides** to enable Duplex printing.
 - (b) Choose which side to bind the paper, (Long-edge or Short-edge).
4. Click **Print** to print or **Save Settings** to save, and close the printer dialogue box.

CUSTOM PAGE SIZES

The printer driver allows you to create your own custom paper sizes. Once defined, these appear at the bottom of the Paper menu in the Page Setup section of the printer driver.

1. From the File menu, choose Page Setup.
2. Select Custom Page Sizes from the menu.
3. Define your custom page sizes.

These are saved in the printer driver, and can be selected just as the predefined paper sizes.

NOTE

- › Click the graphic in the Page Setup dialogue to view information about the current page size in centimetres.
- › Click a second time to display information in inches.
- › Click a third time to return to the graphic.

NOTE

Custom page sizes can only be printed from the multi purpose tray (manual feed). The printer setting for the multi purpose tray must be manually set to custom paper size before use. Width of a custom page size can be from 76.2mm to 216mm and length from 127mm to 900mm.

PRINT RESOLUTION

The print resolution affects the quality of your printouts. Select the highest print resolution to get the optimum quality.

1. From the **File** menu, select **Print**.
2. From the pop-up menu select **Printer Job Options**.
3. Under the **Resolution** setting, choose from either:
 - Best** - The highest resolution your printer is capable of.
 - Normal** - A medium resolution, suitable for most documents.
4. Click **Print**.

NOTE

Higher print resolutions require more memory, and the job may take longer to be sent to the printer.

COLLATING

Collating can be carried out with or without a hard disk drive fitted. However, fitting a HDD will achieve greater performance.

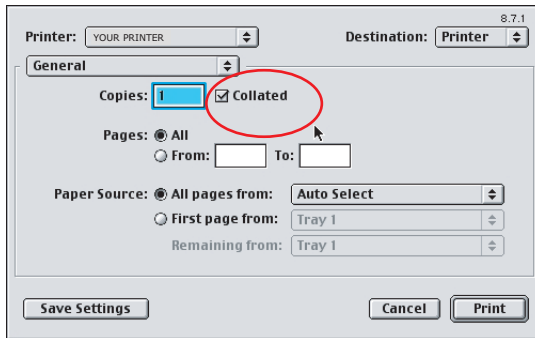
If the software application being used has a collate print option, it is recommended to use only one collate option to prevent any conflicts in printing, i.e. collate from the software application or collate from the printer driver.

The following instructions explain how to select collating using a printer driver.

To setup collate:

1. From the File menu, choose **Print**.

The General dialogue box should be displayed. If not, select General from the menu.



2. Type the number of Copies you wish to print.

3. From the pop-up menu, select **Job Options**.

4. Select the **Collate** option.

5. Click **Print**.

NOTE

There may also be a collate option provided in the printer driver's General options. This should be disabled. Similarly if your application has a collate option in it's print settings, this should also be disabled.

Why are there several Collate options?

Setting Collate within the Job Options enables printer collate. This causes the printer to do the actual collating, rather than the driver. When the printer collates print jobs, this increases the print speed mainly because the job is only processed once.

Selecting Collate in the General options enables driver collate. When the driver collates, the print job may be sent to the printer multiple times, thereby decreasing print speed.

BACKGROUND PRINTING

Background printing allows you to print documents and continue to use your Mac at the same time. It does this by saving a temporary print file to your hard disk, and then sending it to the printer.

This has the advantage of freeing up your computer much more quickly, enabling you to do other things whilst your document is printing. The disadvantage of Background printing is that it is slower, and your computer's performance may temporarily be affected whilst the print job is processed.

You can enable and disable Background printing on an individual print job basis by using the printer driver:

1. From the **File** menu, select **Print**.
2. From the pop-up menu, select **Background Printing**.
3. From Print In, select the **Background** option.
4. If you want to enable background printing as default, click **Save Settings**.
5. Click **Print**.

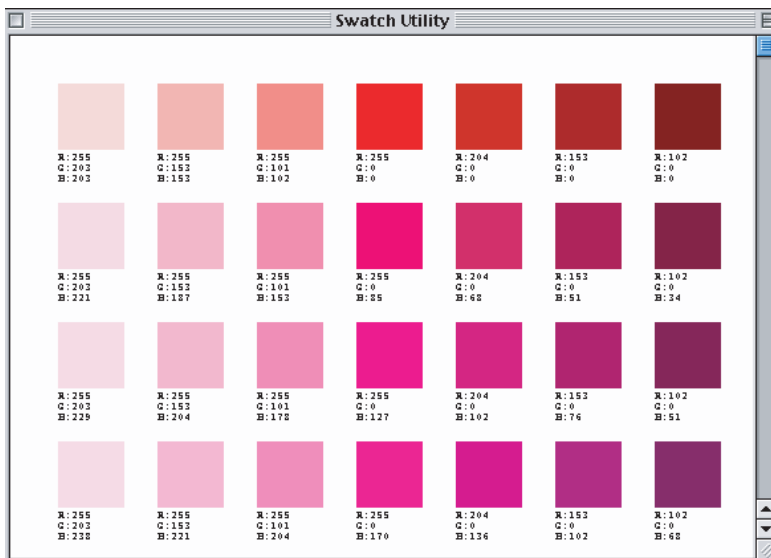
UTILITIES

Two utilities are provided on your printer driver's CD-ROM; the Colour Swatch Utility and the Oki PostScript Utility. The installer programs for these utilities are found in the "Utilities" folder on your CD-ROM.

COLOUR SWATCH UTILITY

The Colour Swatch Utility prints out charts that contain a range of sample colours. Listed below each sample colour are the corresponding RGB (Red, Green, Blue) values. This can be used to pick

specific colours in applications that allow you to choose your own RGB values.



An example of using the Colour Swatch Utility

Suppose you wished to print a logo in a particular shade of red. Here are the steps you would follow to accomplish a good colour match using the Colour Swatch utility.

1. Print a colour swatch, taking care to note the printer driver colour settings that you use.
2. Select a shade of red that best suits your needs.
3. Take a note of the RGB value below the particular shade of red that you prefer.

4. Using your application program's colour picker, enter these same RGB values (from Step 3) and change the logo to that colour.

NOTE

The RGB colour on your monitor may not necessarily match what was printed on the colour swatch. In this case, don't worry; you are using the printed colour swatch to pick a colour instead of judging the colour by the way it appears on screen.

5. Print your document using the same driver settings as you originally used (see Step 1).

OKI POSTSCRIPT UTILITY

The Oki PostScript Utility works with printers connected via USB or AppleTalk. It does not work with printers connected via TCP/IP.

The utility has the following features:

- › Adjusts Gamma curves for the printer.
- › Allows several printer options to be changed, including trays and paper types.
- › Downloads PostScript and PDF files directly to the printer.
- › Displays font lists.
- › Initialises (formats) the printer hard disk.
- › Allows the printer AppleTalk name and Zone to be changed.

About Gamma Curves Created with the PostScript Utility

The Gamma curves function effectively allows fine control over the printer's brightness and colour output. All printer colours can be adjusted together (CMYK), or each colour can be adjusted separately.

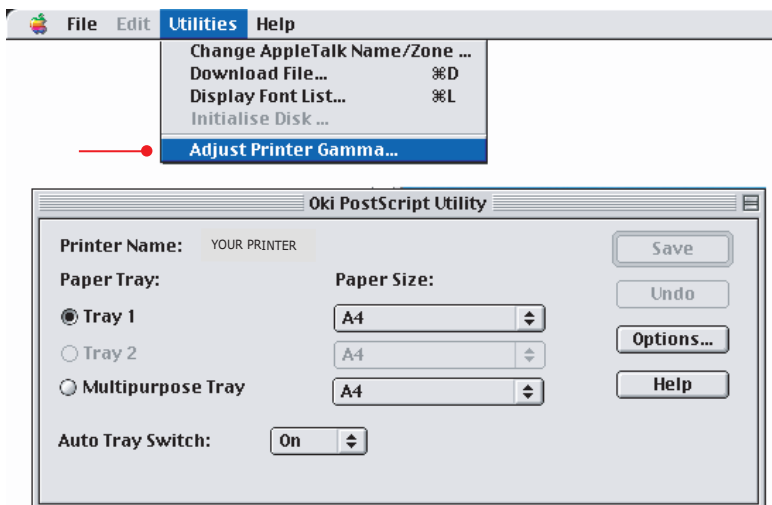
Adjusting printer gamma is similar to performing a CMYK Curves adjustment in an image-editing program such as Adobe® Photoshop®.

Once a custom gamma adjustment has been made, the settings can be saved to the printer's PPD (PostScript Printer Description) file, and can be selected from the Printer Driver Colour options.

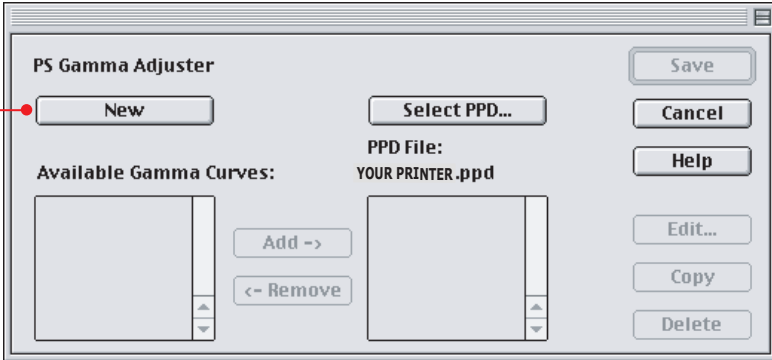
Creating a Gamma Adjustment, Step-by-step

Ensure that your Oki printer is selected as default on your Desktop.

1. You can do this by selecting the printer icon, and from the **Printing** menu select **Set Default Printer**.
2. Launch the **Oki PostScript Utility**.
3. From the **Utilities** menu, select **Adjust Printer Gamma...**

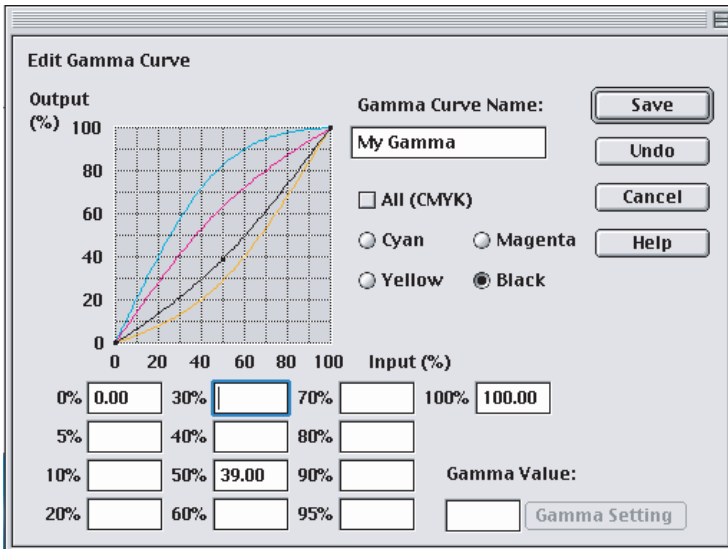


4. Click the New button.



5. The printer's gamma can be adjusted globally (all CMYK values together), or each separate primary printer colour can be adjusted individually. The gamma curves plot the input values (%) on the X axis against the output values (%) on the Y axis.

The curves can be adjusted by either clicking and dragging the curves with the mouse, or by manually entering values into the text fields. To remove points on the curve, either double click on the points, or delete the corresponding values in the appropriate text fields.



Tips on Adjusting Colour

To adjust the entire image using a particular colour as a reference, manually enter the desired values in the text fields.

For example, if you print a red colour composed of the following values:

10% cyan, 90% magenta, 80% yellow and 5% black.

You decide that it needs 5% more magenta and 3% less yellow. This means you would need to enter the following new values manually:

For magenta, $90\% + 5\% \text{ extra} = 95\%$

For yellow, $80\% - 3\% \text{ less} = 77\%$

Enter these new values in the text fields, replacing the current values;

change 90% ->95% for magenta, and change 80%->77% for yellow.

This can be used to help compensate for dot gain if proofing for later output to press.

If you are adjusting based on **RGB** values:

To make the entire image redder, increase cyan.

To make the entire image bluer, increase yellow.

To make the entire image greener, increase magenta.

Similarly, you can eliminate tints on your printouts:

To reduce a red tint, decrease cyan.

To reduce a blue tint, decrease yellow.

To reduce a green tint, decrease magenta.

NOTE

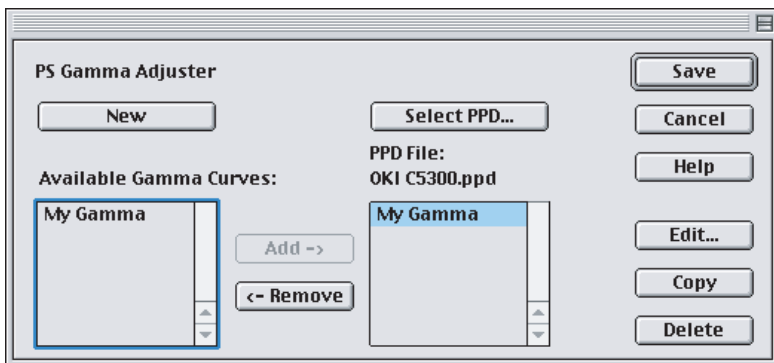
You will not be able to save a gamma adjustment if:

- › The gamma adjustment has not been named.
- › Any of the values entered in text boxes are outside the acceptable range (0%-100%).
- › All of the text boxes are blank; there must be at least 0% and 100% levels entered.

Gamma adjustments are stored in the printer's PPD (PostScript Printer Description) file.

Ensure that the correct PPD file for your printer is selected - if not, you may select it manually by clicking the **Select...** button.

6. Click **Add->** to add your Custom Gamma adjustment to the PPD file.

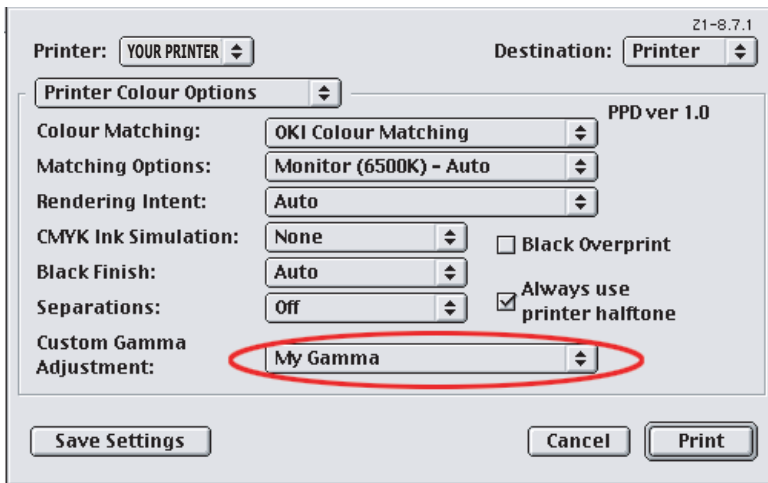


7. Click **Save**.
8. From the **File** menu, select **Quit** to exit the Oki PostScript Utility.

To use the gamma adjustment when printing:

1. From your application's File menu, choose **Print...**

2. From the printer driver's pop-up menu, choose **Printer Colour Options**.
3. Under the **Custom Gamma Adjustment** selection, choose the gamma adjustment you created.



MAC OS X

PRINTER DRIVERS

CD1 contains the printer drivers. Please refer to the readme file on this CD for the latest information on printer driver installation.

If the settings selected manually in the printer differ from those selected in the printer driver, the printer will not print and the LCD will display an error message.

NOTE

- › Switch off antivirus software before installing a printer driver.
- › You need Administrator rights to install the Printer Software. This is because the installer has to copy files into your Mac OS X system and needs the appropriate permissions.

INSTALLING THE PRINTER SOFTWARE

1. Place the software CD-ROM in your computer's CD-ROM drive.
2. Double click the CD icon that appears on your Desktop.
3. Double click the **Language** folder.
4. Double click the Mac OS X installer icon to launch the software installer.

Follow the on-screen instructions.

SETTING UP THE PRINTER

There are 3 ways in which you can connect your printer to your Mac:

- Network connection using AppleTalk
- Network connection using TCP/IP (using LPR protocol)
- USB cable connection

Choose the connection method most suitable for your needs.

NOTE

If the printer model is already displayed in the Print Center, Mac OS X may have automatically discovered it.

Although Mac OS X may automatically discover the printer, it may not be using the correct PPD (PostScript Printer Description) file.

In this case, you should delete the printer from Print Center, and then perform the following steps.

NETWORK CONNECTION USING APPLE TALK

1. Launch the Print Center utility.
This is located in the **Applications/Utilities** folder.
2. Click **Add Printer...**
3. From the pop-up menu, choose **AppleTalk**.
4. Choose a printer to connect to.
5. Click **Add**.

NOTE

The correct PPD (PostScript Printer Description) file should be automatically selected for your printer.

6. From the **Print Center** menu, select **Quit Print Center**.

NETWORK CONNECTION USING TCP/IP

The printer can be connected over TCP/IP using LPR. LPR is simply a method of printing directly over TCP/IP, without the need for a print server.

1. Launch the **Print Center** utility.
This is located in the **Applications/Utilities** folder.
2. Click **Add Printer...**

3. From the pop-up menu, choose **LPR Printers using IP**.
4. Enter the printer's IP address.

You can find out the printer's IP address as follows:

- (a) Press the **Menu+** button repeatedly until the display shows **INFORMATION MENU**.
- (b) Press the **Enter** button. The printer display reads
PRINT MENU MAP
EXECUTE
- (c) Press **Enter** to print the menu map.

The Network Card Information sheet shows the printer's IP address.

5. Enter the queue name. If you do not know the queue name, leave it as **Use Default Queue** on Server.
6. From the pop-up menu, choose your printer model.
7. Click **Add**.
8. From the **Print Center** menu, select **Quit Print Center**.

USB CABLE CONNECTION

1. Launch the **Print Center** utility.
This is located in the **Applications/Utilities** folder.
2. Click **Add Printer...**
3. From the pop-up menu, choose **USB**.
4. Choose a printer to connect to.
5. Click **Add**.

NOTE

The correct PPD (PostScript Printer Description) file should be automatically selected for your printer.

6. From the **Print Center** menu, select **Quit Print Center**.

CONFIGURING INSTALLED HARDWARE OPTIONS

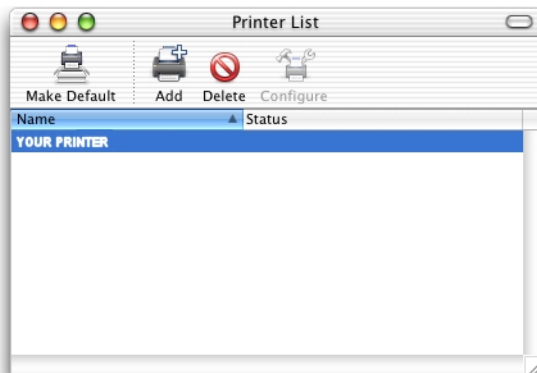
NOTE

This information is for Mac OS X 10.2 or higher only. This feature is not available on Mac OS X 10.0 - 10.1.5.

When you set up a printer using AppleTalk or USB, the printer's installed hardware options are normally detected and automatically configured. However, if you are setting up a printer using TCP/IP, or have added any additional hardware options since setting up the printer, you need to manually configure installed hardware options.

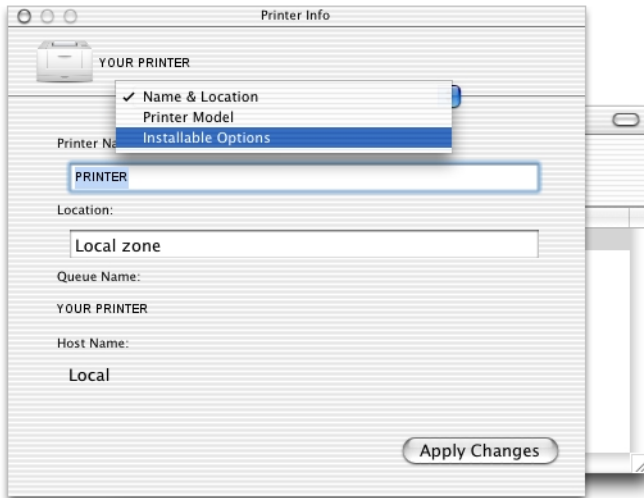
TO MANUALLY CONFIGURE INSTALLED HARDWARE OPTIONS:

1. Launch the **Print Center** utility. This is located in the **Applications/Utilities** folder.
2. Select the printer model in **Print Center**.

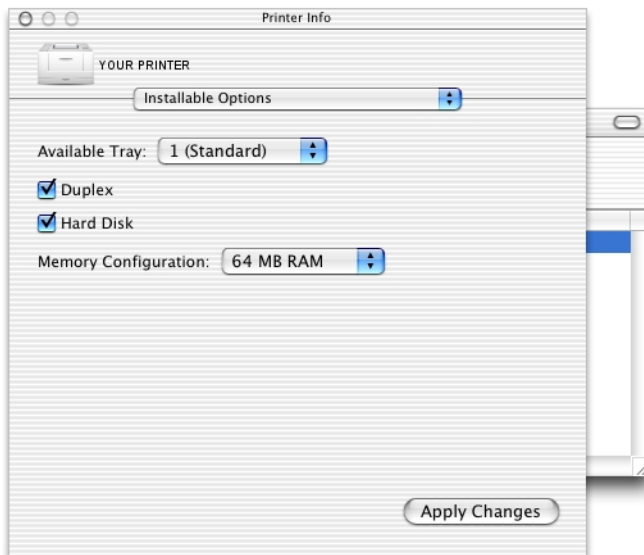


3. From the **Printers** menu, select **Show Info**.

4. From the menu, select **Installable Options**.



5. Select all the relevant hardware options that are installed in your printer.



6. Click **Apply Changes**.
7. From the **Print Center** menu, choose **Quit Print Center**.

OPERATION

This section explains how to change the printer's operation for specific print jobs when required.

The PostScript printer drivers supplied with this machine provide several controls for changing the colour output of your printer. Generally, using the default settings will suffice, producing good results for most documents.

Many applications have their own colour 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 colour management functions.

COLOUR MATCHING

FACTORS THAT AFFECT THE APPEARANCE OF PRINTS

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

1. **Differences between the range of colours a monitor or printer can reproduce**

- › Neither a printer nor a monitor is capable of reproducing the full range of colours visible to the human eye. Each device is restricted to a certain range of colours. In addition to this, a printer cannot reproduce all of the colours displayed on a monitor, and vice versa.
- › Both devices use very different technologies to represent colour. A monitor uses Red, Green and Blue (RGB) phosphors (or LCDs), a printer uses Cyan, Yellow, Magenta and Black (CMYK) toner or ink.
- › A monitor can display very vivid colours such as intense reds and blues and these cannot be easily produced on any printer using toner or ink. Similarly, there are certain colours, (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 colours do not match the colours displayed onscreen.

2. **Viewing conditions**

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

3. Monitor settings

The brightness and contrast controls on your monitor can change how your document looks on-screen. Additionally, your monitor colour temperature influences how “warm” or “cool” the colours look.

NOTE

Several of the Printer Driver’s Colour Matching options make reference to your monitor’s Colour Temperature. Many modern monitors allow the colour temperature to be adjusted using the monitor’s control panel.

There are several settings found on a typical monitor:

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

(k = degrees Kelvin, a measurement of temperature)

4. How your software application displays colour

Some graphics applications such as Corel Draw or Adobe Photoshop may display colour differently from “office” applications such as Microsoft Word. Please see your application’s on-line help or user manual for more information.

5. Paper type

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

CHOOSING A COLOUR MATCHING METHOD

There is no correct way to achieve a good match between the document displayed on your monitor, and its printed equivalent. There are many factors involved in achieving accurate and reproducible colour.

However, the following guidelines may help in achieving good colour output from your printer. There are several suggested methods, depending on the type of document you are printing.

NOTE

These suggestions are for guidance only. Your results may vary depending on the application from which you are printing. Some applications will override any colour matching settings in the printer driver without warning.

RGB OR CMYK?

The guidelines for choosing a colour matching method makes distinctions between Red, Green, Blue (RGB) and Cyan, Magenta, Yellow, Black (CMYK).

Generally, most documents you print will be in RGB format. This is the most common, and, if you do not know your document's colour mode, assume that it is RGB.

Typically CMYK documents are only supported in professional Desktop Publishing and Graphics applications.

MATCHING PHOTOGRAPHIC IMAGES

RGB only

Oki Colour Matching is a generally a good choice. Select a matching method appropriate to your monitor.

RGB or CMYK

If you are printing photographic images from a graphics application such as Adobe Photoshop, you may be able to use Soft-Proofing to simulate the printed image on your monitor. To do this, you can use the ICC-Profiles provided by Oki, and then print using the ICC profiles as the Print Space (or Output space).

MATCHING SPECIFIC COLOURS

(For instance, a Company logo.)

RGB only

- › Oki Colour Matching, and the sRGB setting.
- › PostScript Colour Matching using the Relative Colorimetric option.
- › Use the Colour Swatch Utility to print out a chart of RGB swatches and enter your desired RGB values in your application's colour picker.

RGB or CMYK

- › If you are printing from a graphics application such as Adobe Photoshop, you may be able to use Soft-Proofing to simulate the printed image on your monitor. To do this, you can use the ICC-Profiles provided by Oki, and then print using the ICC profiles as the Print Space (or Output space).
- › Alternatively, use PostScript Colour Matching with the Relative Colorimetric setting.

PRINTING VIVID COLOURS

RGB only

- › Use Oki Colour Matching, with either the Monitor 6500k Vivid, sRGB or Digital Camera settings.

RGB or CMYK

- › Use PostScript Colour Matching with the Saturation option.

OKI DRIVER OPTIONS

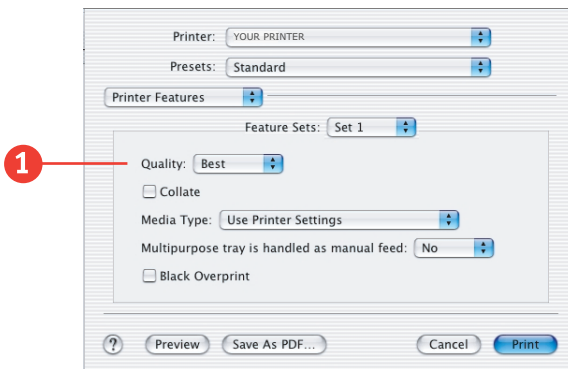
This section references only the Oki-specific driver selections.

OKI PRINTER FEATURES

1. From within your application, select **File**→**Print**.
2. Then open the drop-down menu at left and select **Printer Features**.

Feature Set 1

The tab's features are explained below.



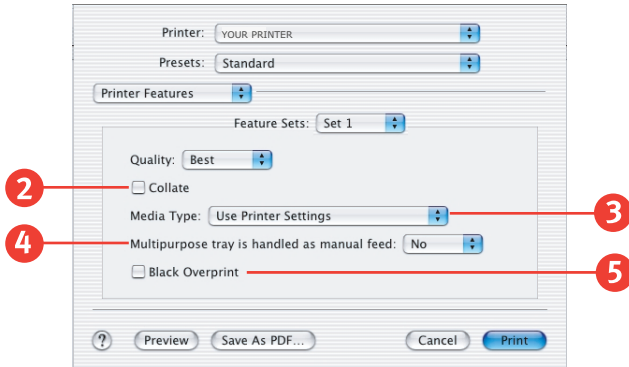
1. Quality

A straightforward selection of the print quality desired.

Normal: normal resolution, fast speed: Choose this for quick proofing of drafts.

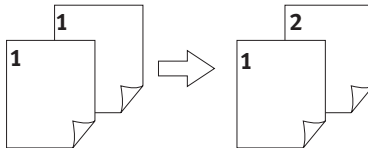
Best: high resolution, slower speed: Provides optimum results when printing graphics.

Select your desired print quality.



2. Collate

Collating can be carried out with or without a hard disk drive installed. However, printers with a hard disk drive will provide greater performance. This option is useful when printing multiple copies of large documents and you want to print them in sequence. Click to enable collation of your documents.



3. Media Type

Many options are available for selecting the thickness of the paper type. Normally the Printer Setting is sufficient.

Select your desired Media Type. Any option, other than “Use Printer Settings”, will override the setting at the printer.

4. Multipurpose tray is handled as manual feed

When this is checked, the printer waits until the **Online** button is pressed before feeding paper from the Multipurpose Tray. This is useful for printing on stationery such as envelopes.

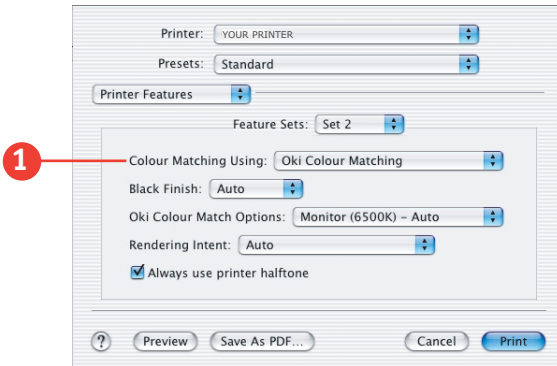
If the manual feed timeout is exceeded, the print job is discarded, and the printer goes back **Online**.

5. Black Overprint

This option prevents registration errors and only works for 100% black text. Click on the checkbox to enable the option.

Feature Set 2

The tab's features are explained below.



1. Colour Matching

No Colour Matching

No colour correction occurs when selected. This option is beneficial when other matching regimens are used, specifically if you select an Ink Simulation option. Also use this option if using an application program's Colour Matching.

OKI Colour Matching

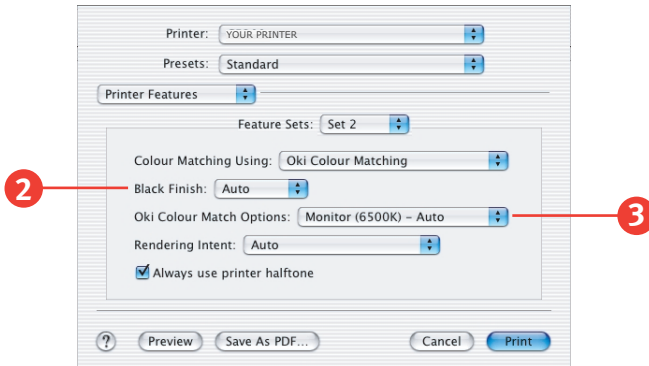
This is Oki's proprietary colour matching system and affects RGB data only. This is the default setting and provides the best colour matching for your printer.

Postscript Colour Matching

This uses PostScript Colour Rendering Dictionaries built into the printer, and affects both RGB and CMYK data.

Print In Grayscale

No colour will print. The printer will interpret all colours as a variation of grays.



2. **Black Finish**

This setting determines Black Toner usage only.

Auto

This option is best for an office environment, with the printer determining which style is better.

Matte

This option produces a True Black (K only).

Gloss

This option uses CMY to produce a Composite Black.

3. **Oki Colour Match Options**

These options are available when **Oki Colour Matching** is selected in “Colour Match Using...”. You can match to a device such as a Monitor or Digital Camera. Select the option desired based upon the information below.

Digital Camera

Optimised for printing photographs taken with a digital camera. This tends to produce prints with lighter and brighter colours. For some photographs, other settings may be better depending on the subjects and the conditions under which they were taken. Vivid or Digital Camera settings produce brightest colours.

Monitor (6500k) Auto

The default setting that selects the best options for your printer. This selection works best for office graphics.

Monitor (6500k) Perceptual

Optimised for printing photographs when using a monitor with a colour temperature of 6500K. This is best for printing photographic images.

Monitor (6500k) Vivid

Optimised for printing bright colours when using a monitor with a colour temperature of 6500K. Ideal for office graphics and text. Vivid or Digital Camera settings produce the brightest colours.

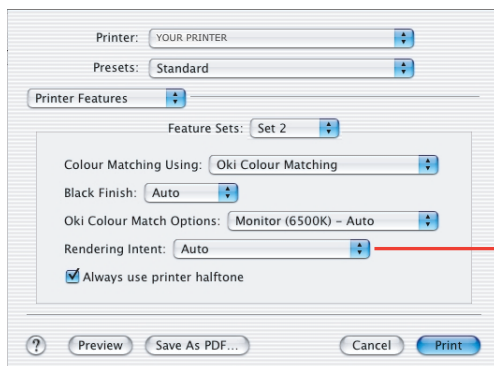
Monitor (9300k)

Optimised for printing photographs when using a monitor with a colour temperature of 9300K.

sRGB

Optimised for matching specific colours, such as a company logo colour. This option attempts to simulate RGB colour. The colours within the printer's colour gamut are printed without any modification, and only colours that fall outside the printable colours are modified.

4. Rendering Intent



Rendering Intents are only used when “Postscript Colour Matching” is selected.

When a document is printed, a conversion takes place from the document’s colour space to the printer’s colour space. The rendering intents are essentially a set of rules that determine how this colour conversion takes place.

Select the option desired.

Absolute Colorimetric

Matches colours common to both devices exactly, and clips the “out of gamut” colours to their nearest printed equivalent. Tries to print white as it appears on screen. The white of a monitor is often very different from paper white, so this may result in colour casts, especially in the lighter areas of an image.

Auto

The best default option as this selects the optimal settings for a general office environment.

Perceptual

Best choice for printing photographs. Compresses the source gamut into the printer's gamut whilst maintaining the overall appearance of an image. This may change the overall appearance of an image as all the colours are shifted together.

Relative Colorimetric

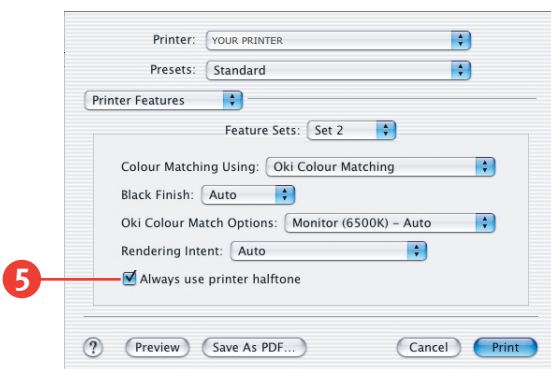
Good for proofing CMYK colour images on a desktop printer.
Best for solid colours and tints.

Much like Absolute Colorimetric, except that it scales the source white to the (usually) paper white; i.e. unlike Absolute Colorimetric, this attempts to take the paper white into account.

Saturation

Best choice for printing bright and saturated colours if you don't necessarily care how accurate the colours are. This makes it the recommended choice for graphs, charts, diagrams etc. Maps fully saturated colours in the source gamut to fully saturated colours in the printer's gamut.

5. Always use Printer Halftone

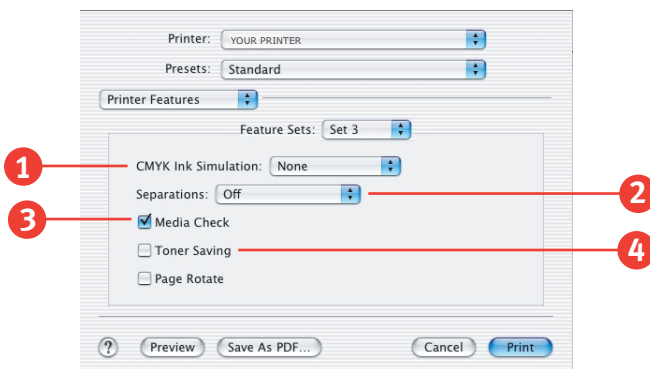


This option prevents the halftone of a high-end graphic application from printing by using the printer's halftone pattern instead of the application's one.

Click on the checkbox to enable the option.

Feature Set 3

The tab's features are explained below.



1. Ink Simulation

Affects CMYK output only and is usually used in offset printer environments only.

This option simulates what the output will look on a printing press using the ink types SWOP, Euroscale or Japan. If using CMYK Ink Simulation, it is recommended that you switch off all other Printer Colour Matching by selecting the No Colour Matching option under the “Colour Match Using” option in the printer driver.

Select the option desired.

2. Separations

This option affects output only, allowing you to print all colours or separate plates.

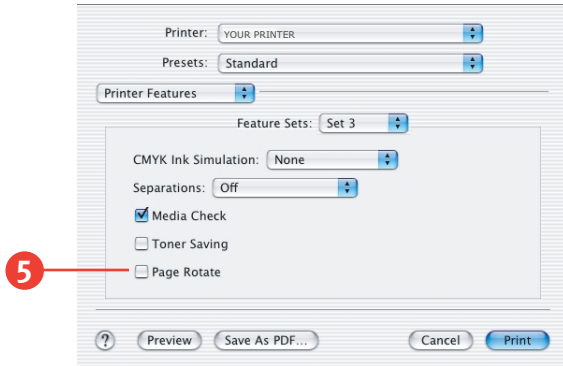
Select the option desired.

3. Media Check

Sets whether the printer checks the matching of paper size to that of the tray. Only standard sizes are checked.

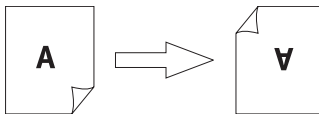
4. Toner Saving

Checking this will enable toner saving, but reduce print quality and provide a much lighter print.



5. Page Rotate

Checking this will rotate the printed material on the page 180 degrees.



OPERATIONS

This section deals with printing options. It does not attempt to cover all the options that might occur, but rather, the typical printing operations that can benefit from detailed descriptions. The settings selected here are document specific only; meaning, the setting selected will apply *only to the current print job*.

COLLATING

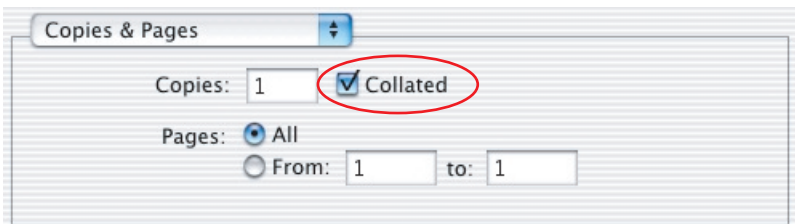
Collating can be carried out with or without a hard disk drive installed. However, installing an HDD will achieve greater performance.

If the software application being used has a collate print option, it is recommended to use only one collate option to prevent any conflicts in printing, i.e. collate from the software application or collate from the printer driver.

The following instructions explain how to select collating using a printer driver.

To access, first select your desired printer from an application using **File→Print..**

1. The **Copies & Pages** dialogue box should already be displayed. If not, then select **Copies & Pages** from the menu.
2. From the **General** screen, click the button next to **Collate** to enable the function.

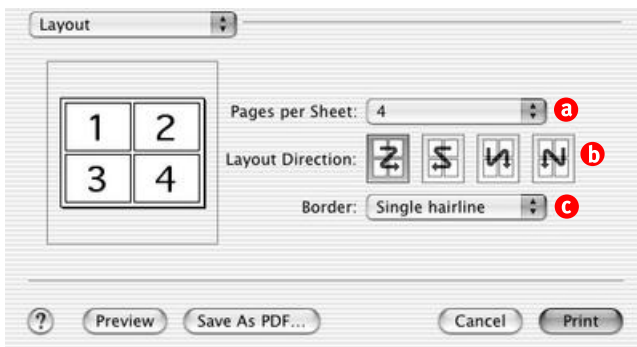


MULTIPLE PAGES ON ONE SHEET

To access, first select your desired printer from an application using **File→Print..**

1. Open the drop-down menu and select **Layout**.

2. From the Layout screen, select the options desired.



- (a) For Multiple Pages, access **Pages per sheet**.
- (b) Select the desired **Layout Direction**.
- (c) Select a **Border** between the sheets, if desired.

DUPLEX

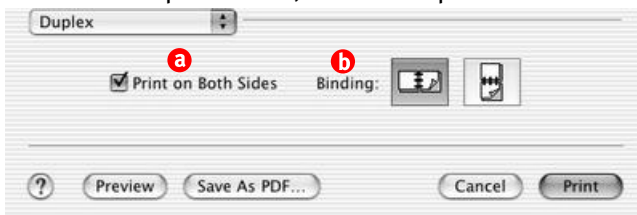
NOTE

- › Duplex printing can only be carried out on standard paper sizes and paper weights between 20 and 28 lb. (75 and 105 g/m²).
- › The optional duplex unit must be installed in the printer and enabled before duplex printing can be carried out.
- › Paper must be loaded into the paper tray with the print side facing upwards. The multi purpose tray cannot be used for duplex printing.

To access, first select your desired printer from an application using **File→Print..**

1. Open the drop-down menu at left and select **Duplex**.

2. From the Duplex screen, select the options desired.



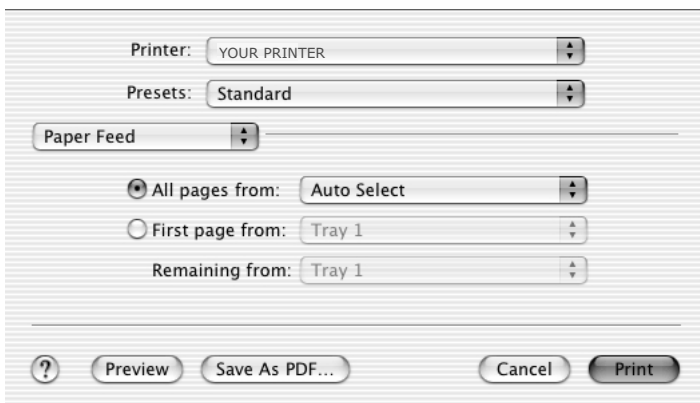
- (a) For Duplexing (printing on both sides of the sheet), select **Print on Both Sides**.
- (b) Select which **Binding** you prefer. Normally, the first option is the default.

PAPER FEED/TYPE SELECT

The Paper Feed option allows the selection of different types of paper or trays. The options selected affect only the current document being printed.

To access, first select your desired printer from an application using **File**→**Print**.

1. Open the drop-down menu at left and select **Paper Feed**.
2. From the screen, click the arrows button to select the desired option.



3. From the various options presented, make your desired selection.

Auto Select

If you have identical paper stock loaded in the Multi-Purpose Tray or the optional Second Paper Tray, you can have the printer automatically switch to the other tray when the current tray runs out of paper.

Paper Options

When you select a paper-type option, the printer automatically accesses the proper tray. For example, when Labels is selected, the printer will pull from the Multipurpose tray where the labels should be inserted.

Tray Options

Select the drawer desired for the current print job.

COLOUR PRINTING

The printer drivers supplied with your printer provide several controls for changing the colour 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 colour 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 colour management functions.

FACTORS THAT AFFECT THE APPEARANCE OF PRINTS

If you wish to manually adjust the colour settings in your printer driver, please be aware that colour 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 colours a monitor or printer can reproduce

- › Neither a printer nor a monitor is capable of reproducing the full range of colours visible to the human eye. Each device is restricted to a certain range of colours. In addition to this, a printer cannot reproduce all of the colours displayed on a monitor, and vice versa.
- › Both devices use very different technologies to represent colour. 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 colours such as intense reds and blues and these cannot be easily produced on any printer using toner or ink. Similarly, there are certain colours, (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 colours do not match the colours displayed on screen.

Viewing conditions

A print can look very different under different lighting conditions. For example, the colours 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 colour settings

The driver settings for Manual colour can change the appearance of a print. There are several options available to help match the printed colours 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 colour temperature influences how "warm" or "cool" the colours look.

Several of the Colour Matching options make reference to your monitor's Colour Temperature. Many modern monitors allow the colour temperature to be adjusted using the monitor's control panel.

There are several settings found on a typical monitor:

- › 5000k Warmest; yellowish lighting, typically used in graphics arts 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 colour

Some graphics applications such as Corel Draw or Adobe Photoshop may display colour 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 colour. For example, a printout on recycled paper can look duller than one on specially formulated glossy paper.

CHOOSING A COLOUR MATCHING METHOD

There is no correct way to achieve a good match between the document displayed on your monitor, and its printed equivalent. There are many factors involved in achieving accurate and reproducible colour.

The following guidelines may help in achieving good colour output from your printer. There are several suggested methods, depending on the type of document you are printing.

These suggestions are for guidance only. Your results may vary depending on the application from which you are printing. Some applications will override any colour matching settings in the printer driver without warning.

RGB OR CMYK?

The guidelines for choosing a colour matching method makes distinctions between Red, Green, Blue (RGB) and Cyan, Magenta, Yellow, Black (CMYK).

Generally, most documents you print will be in RGB format. This is the most common, and if you do not know your document's colour mode, assume that it is RGB.

Typically CMYK documents are only supported in professional Desktop Publishing and Graphics applications.

MATCHING PHOTOGRAPHIC IMAGES

RGB only

Okí Colour Matching is a generally a good choice. Select a matching method appropriate to your monitor.

RGB or CMYK

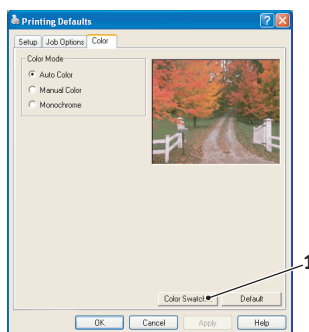
If you are printing photographic images from a graphics application such as Adobe Photoshop, you may be able to use Soft-Proofing to simulate the printed image on your monitor. To do this, you can use the ICC-Profiles provided by Oki, and then print using the ICC profiles as the Print Space (or Output space).

MATCHING SPECIFIC COLOURS

(For instance, a Company logo.)

RGB only

- › Oki Colour Matching, and the sRGB setting (PCL or PS driver).
- › PostScript Colour Matching using the Relative Colorimetric option.
- › Use the Colour Swatch Utility (1) to print out a chart of RGB swatches and enter your desired RGB values in your application's colour picker.



PRINTING VIVID COLOURS

RGB only

- › Use Oki Colour Matching, with either the Monitor 6500k Vivid, sRGB or Digital Camera settings (PCL or PostScript emulations).

PCL DRIVER

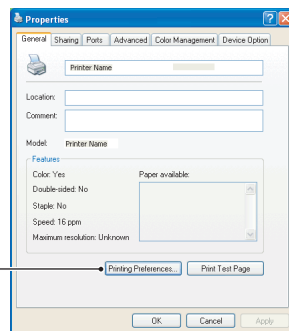
ACCESSING THE COLOUR MATCHING OPTIONS

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

The PCL driver's colour options are only designed to work with RGB data. If you are printing CMYK data, we recommend you use the PostScript driver.

To open colour 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).

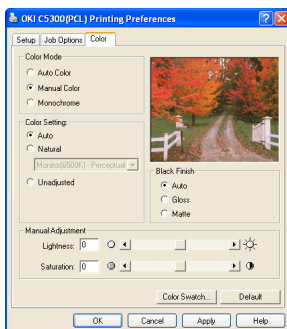


To open colour matching options from within a Windows application:

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

SETTING THE COLOUR MATCHING OPTIONS

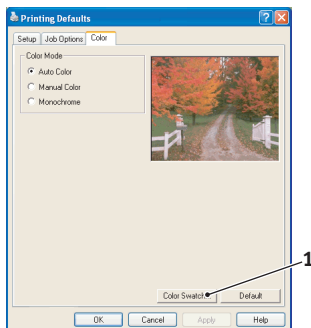
1. On the **Colour** tab select **Manual** for Colour Matching.



2. Choose from the available options:
 - (a) **Monitor (6500k) Perceptual**
Optimised for printing daylight photographs.
 - (b) **Monitor (6500k) Vivid**
Optimised for printing bright colours. Good for office graphics.
 - (c) **Monitor (9300k)**
Optimised for printing photographs when using a professional graphics monitor.
 - (d) **Digital Camera**
Optimised for printing photographs taken with a digital camera. This tends to produce prints with lighter and brighter colours. For some photographs, other settings may be better depending on the subjects and the conditions under which they were taken.
 - (e) **sRGB**
Optimised for matching specific colours, such as a company logo colour. The colours within the printer's colour gamut are printed without any modification, and only colours that fall outside the printable colours are modified.

USING THE COLOUR SWATCH FEATURE

The Colour Swatch function prints charts which contain a range of sample colours. Note that this is not the full range of colours that the printer can produce. Listed on each sample colour are the corresponding RGB (Red, Green, Blue) values. This can be used to pick specific colours 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 Colour Swatch function:

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

1. Print a colour 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 colour picker, enter these same RGB values, and change the logo to that colour.

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

POSTSCRIPT DRIVER

COLOUR MATCHING OPTIONS

The PostScript driver offers several different methods of controlling the colour output of the printer.

Some of the colour matching options only work on certain types of data. The table below summarises the various options available, and what types of data they affect.

Colour Matching Option	RGB data	CMYK data
Oki Colour Matching	Yes	No
PostScript Colour Matching	Yes	Yes
CMYK Ink Simulation	No	Yes
Windows ICM Matching ¹	Yes	No
Using ICC Profiles ²	Yes	No

1. Not Windows NT 4.
2. Not Windows 95/98/Me

Oki Colour Matching

This is Oki's proprietary colour matching system, and affects RGB data only.

- › **Perceptual** settings are best for printing photographic images.
- › **Vivid** or **Digital Camera** settings produce brightest colours.
- › **sRGB** is the best choice for matching specific colours (such as printing logos).

Monitor (6500k) Perceptual

Optimised for printing photographs when using a monitor with a colour temperature of 6500K.

Monitor (6500k) Vivid

Optimised for printing bright colours when using a monitor with a colour temperature of 6500K. Good for office graphics and text.

Monitor (9300k)

Optimised for printing photographs when using a monitor with a colour temperature of 9300K.

Digital Camera

Optimised for printing photographs taken with a digital camera. This tends to produce prints with lighter and brighter colours. For some photographs, other settings may be better depending on the subjects and the conditions under which they were taken.

sRGB

Optimised for matching specific colours, such as a company logo colour.

The colours within the printer's colour gamut are printed without any modification, and only colours that fall outside the gamut (set of printable colours) are modified.

POSTSCRIPT COLOUR MATCHING

This uses PostScript Colour Rendering Dictionaries built into the printer, and affects both RGB and CMYK data.

Rendering Intents

When a document is printed, a conversion takes place from the document's colour space to the printer colour space. The rendering intents are essentially a set of rules that determine how this colour conversion takes place.

The rendering intents that the printer driver provides are listed below:

› Perceptual

Best choice for printing photographs. Compresses the source gamut into the printer's gamut whilst maintaining the overall appearance of an image. This may change the overall appearance of an image as all the colours are shifted together.

› Saturation

Best choice for printing bright and saturated colours, but less accurately matched. This makes it the recommended choice for graphs, charts, diagrams etc. Maps fully saturated colours in the source gamut to fully saturated colours in the printer's gamut.

› Absolute Colorimetric

Best for printing solid colours and tints, such as Company logos etc. Matches colours common to both devices exactly, and clips the out of gamut colours to their nearest printed equivalent. Tries to print white as it appears on screen. The white of a monitor is often very different from paper white, so this may result in colour casts, especially in the lighter areas of an image.

› Relative Colorimetric

Good for proofing CMYK colour images on a desktop printer. Much like Absolute Colorimetric, except that it scales the source white to the (usually) paper white. Unlike Absolute Colorimetric, this attempts to take the paper white into account.

CMYK INK SIMULATION

Affects CMYK data only.

This option simulates what the output will look like on a printing press using the ink types SWOP, Euroscale or Toyo. If using CMYK Ink Simulation, it is recommended that you switch off all other Printer Colour Matching. Select the No Colour Matching option under the Colour Match option in the printer driver.

WINDOWS ICM COLOUR MATCHING

Windows 98, Me, 2000 and XP only. Affects RGB data only.

ICM is the colour management system built into Windows.

Windows ICM uses ICC profiles for your monitor and printer; these profiles describe the colours that your device is capable of

reproducing. ICC profiles can be associated with your printer via the Colour Management tab of the printer driver.

Depending on how you have installed the printer driver, the colour profiles may already be associated with the driver.

To associate ICC Colour Profiles with the printer driver:

1. Access the printer settings via the **Start** menu.
2. Right-click the printer name and choose **Properties**.
3. Click the **Colour Management** tab.
4. Under “Colour Profiles currently associated with this printer”, you should see the names of profiles that match your printer model. If you do not see any profiles associated with the driver, click “Add...” and locate the ICC profiles for your printer.

Windows ICM uses the information in these profiles to convert colours in your documents to colours that the printer can reproduce. The way in which this conversion is performed can be controlled via the ICM Intent control in the printer driver.

USING ICC PROFILES

Windows 2000 and Windows XP. Affects RGB data only.

This provides a method of matching RGB colours similar to Windows ICM matching. The main advantage it has over Windows ICM colour matching is that it provides a method of printing using both input and output profiles. Windows ICM matching only allows output profiles to be chosen.

Input profiles provide information about the colour in the original device that was used to capture or display the image data. For example, an input device could be a scanner, digital camera or monitor.

Output profiles provide information about the device to which you are printing.

The “Using ICC Profiles” function allows both an input profile (e.g. digital camera), and an output profile (e.g. your printer) to be selected. It uses both these profiles to generate a CRD (Colour

Rendering Dictionary), and this is used to match the colours as closely as possible.

This feature may not work for all application programs. However, many professional graphics applications offer a similar feature in their print settings, with the ability to choose a source (input) colour space, and a print (output) colour space.

MENU FUNCTIONS

This sections lists the menus accessed via the controls on the printer's operator panel and displayed in the LCD window.

It should be noted that many of these settings can be, and often are, overridden by settings in the Windows printer drivers. However, several of the driver settings can be left at "Printer Setting," which will then default to the settings entered in these printer menus.

Factory default settings are shown in **bold type** in the following tables.

In the normal operating condition, known as "standby," the printer's LCD window will show "ONLINE." In this condition, to enter the menu system, press the +/- keys on the operator panel to move up and down through the list of menus until the menu you wish to view is displayed. Then proceed as follows:

1. Press **ENTER** to enter the menu.
2. Use the +/- keys to move up and down through the items in the menu. When the item you want to change is displayed, press **ENTER** to edit that item. An asterisk (*) appears next to the setting currently in effect.
3. Use the +/- keys to move up and down through the available settings for this item, and press **ENTER** when the setting you want is displayed. An asterisk (*) will appear next to the setting, indicating that this setting is now in effect.
4. Press **BACK** to move back to the list of menu items.
5. Do one of the following:
 - › Press **BACK** again to move up to the list of menus;
 - or...*
 - › Press **ON LINE** to exit from the menu system and return to standby.

PRINT JOBS MENU

This menu only appears when the hard disk drive is installed. It is used for printing of documents stored on the internal hard disk. These will be stored using either the secure printing feature or the proof and print feature. Please refer to these features elsewhere in this manual for instructions on how to use.

You will be prompted for your password or personal identification number (PIN). The **+/-** keys are used to enter each digit and the **ENTER** key to advance from one digit to the next.

INFORMATION MENU

This menu provides a quick method of listing various items stored within the printer.

INFORMATION MENU		
Item	Action	Explanation
PRINT MENU MAP	EXECUTE	Prints complete menu listing with current settings shown.
PRINT FILE LIST	EXECUTE	Prints a list of overlays, macros, fonts and other files stored on the printer's hard disk drive (if installed).
PRINT PCL FONT	EXECUTE	Prints complete list of all internal PCL fonts plus those stored in ROM (slot 0), flash memory and in hard disk (if installed).
PRINT PSE FONT	EXECUTE	Prints complete list of all internal PostScript emulation fonts.
PRINT PPR FONT	EXECUTE	Prints complete list of all internal IBM ProPrinter III XL emulation fonts, including any downloaded to flash memory or hard disk.
PRINT FX FONT	EXECUTE	Prints complete list of all internal Epson FX emulation fonts, including any downloaded to flash memory or hard disk.
DEMO1	EXECUTE	Prints demonstration page containing graphics and text in colour and monochrome.
PRINT ERROR LOG	EXECUTE	Prints a list of errors encountered by the printer.

SHUTDOWN MENU

This menu only appears if the hard disk drive is installed. **This item should always be selected before switching the printer off, to ensure that no hard disk data is lost.**

SHUTDOWN MENU

Item	Settings	Explanation
SHUTDOWN START	EXECUTE	Performs controlled shutdown of the printer, ensuring that all files on the internal hard disk are closed before power is turned off. Only power the printer off when the display indicates that shutdown is complete.

PRINT MENU

This menu provides adjustment of various print job related functions.

PRINT MENU		
Item	Settings	Explanation
COPIES	1-999	Enter the number of copies of a document to be printed from 1 to 999.
DUPLEX	ON/OFF	Turns the duplex (2-sided) printing function on or off if this feature is installed.
PAPER FEED	TRAY1 TRAY2 MP TRAY	Selects the default tray for paper feed, Tray 1 (upper), Tray 2 (lower, if installed) or MP Tray (multipurpose tray).
AUTO TRAY SWITCH	ON OFF	If two trays contain identical paper, the printer can switch to an alternative source when the current tray runs out in the middle of a print job.
TRAY SEQUENCE	DOWN UP PAPER FEED TRAY	Determines tray sequence order when automatically switching.
MP TRAY USAGE	DO NOT USE WHEN MISMATCH	If a document to be printed demands a paper size not installed in the selected tray, the printer can automatically feed from the multipurpose tray instead. If this function is not enabled, the printer will stop and request the correct size of paper to be loaded.
MEDIA CHECK	ENABLE DISABLE	Determines whether the printer check the size of paper loaded matches that required for the document sent to print.
RESOLUTION	600x1200DPI 600DPI	Sets the default resolution for printing (dots per inch). 600x1200DPI uses more memory and requires more time to process, but prints at a higher quality.
TONER SAVE MODE	OFF ON	Reduces the amount of toner used for imaging. Toner saving gives lighter prints but is more economical.
MONO-PRINT SPEED	AUTO COLOR SPEED NORMAL SPEED	Selects the printer's print engine speed for the type of print media in use.
ORIENTATION	PORTRAIT LANDSCAPE	Selects default page orientation between portrait (tall) and landscape (wide).

PRINT MENU		
Item	Settings	Explanation
LINES PER PAGE	5-64-128	Sets the number of lines of text per page when raw text is received from systems other than Windows. The default for A4 portrait is 65, and for Letter is 60.
EDIT SIZE	CASSETTE SIZE LETTER EXECUTIVE LEGAL14 LEGAL13.5 LEGAL13 A4 / A5 / A6 / B5 CUSTOM COM-9 ENVELOPE COM-10 ENVELOPE MONARCH ENV DL ENVELOPE C5 ENVELOPE	Sets the size of the printable page area to match the size of paper in use. This is not the same as the physical paper size, which is always slightly larger. For dimensions of physical page sizes, see “Paper Recommendations” section in this guide.

MEDIA MENU

This menu provides adjustment to suit a wide range of print media.

MEDIA MENU		
Item	Settings	Explanation
TRAY1 PAPERSIZE	A4 / A5 / A6 / B5 LEGAL14 LEGAL13.5 LEGAL13 LETTER EXECUTIVE CUSTOM	Selects the size of paper loaded in Tray 1 (upper tray if both trays installed). For CUSTOM setting see X-DIMENSION and Y-DIMENSION later in this table.
TRAY1 MEDIATYPE	PLAIN LETTERHEAD BOND RECYCLED ROUGH	Selects the type of media loaded in this tray. This will help the printer to adjust its internal operating parameters, such as engine speed and fusing temperature, to better accommodate the media to be fed. For example, letterhead may benefit from a slightly lower fusing temperature to ensure that its ink does not offset.
TRAY1 MEDIAWEIGHT	LIGHT (64~74g/m ²) MEDIUM (75~90g/m²) HEAVY (91~105g/m ²)	Adjusts the printer for the weight of paper stock loaded in this tray.
TRAY2 PAPERSIZE	A4 / A5 / B5 / LEGAL14 LEGAL13.5 LEGAL13 LETTER EXECUTIVE CUSTOM	Selects the size of paper loaded in Tray 2 (lower) if installed. For CUSTOM setting see X-DIMENSION and Y-DIMENSION later in this table.
TRAY2 MEDIATYPE	PLAIN LETTERHEAD BOND RECYCLED ROUGH	Selects the type of media loaded in this tray.
TRAY2 MEDIAWEIGHT	LIGHT (64-74g/m ²) MEDIUM (75-90g/m²) HEAVY (91-176g/m ²)	Adjusts the printer for the weight of paper stock loaded in this tray.

MEDIA MENU		
Item	Settings	Explanation
MPT PAPERSIZE	LETTER EXECUTIVE LEGAL14 LEGAL13.5 LEGAL13 A4 / A5 / A6 / B5 CUSTOM COM-9 ENVELOPE COM-10 ENVELOPE MONARCH ENV DL ENVELOPE C5 ENVELOPE	Selects the size of paper to be fed from the multipurpose tray. For CUSTOM setting see X-DIMENSION and Y-DIMENSION later in this table.
MPT PAPERTYPE	PLAIN LETTERHEAD TRANSPARENCY LABELS BOND RECYCLED CARD STOCK ROUGH GLOSSY	Selects the type of media to be fed from the multipurpose tray so that the printer can adjust its internal parameters to better accommodate the selected type of media.
MPT MEDIAWEIGHT	MEDIUM (75-90g/m²) HEAVY (91-121g/m ²) ULTRA HEAVY (122-203g/m ²)	Selects the media weight to be fed from the multipurpose tray.
UNIT OF MEASURE	MILLIMETER INCH	Selects the unit of measure for the next two items.
X-DIMENSION	100- 210 -216 MILLIMETER	Selects the width of paper defined by the “CUSTOM” settings referred to in the foregoing PAPER SIZE settings.
Y-DIMENSION	148- 297 -1200 MILLIMETER	Selects the length of paper defined by the “Custom” settings referred to in the foregoing PAPER SIZE settings. Note that media of up to 1200mm in length can be fed from the multipurpose tray for banner printing.

COLOR MENU

The printer automatically adjusts colour balance and density at appropriate intervals, optimising the printed output for bright white paper viewed in natural daylight conditions. The items on this menu provide a means of changing the default settings for special or particularly difficult print jobs. Settings revert to their default values when the next print job is complete.

COLOR MENU		
Item	Settings	Explanation
DENSITY CONTROL	AUTO MANUAL	If set to AUTO, image density will be automatically adjusted at power on, when a new image drum or toner cartridge is installed, and at intervals of 100, 300 and 500 drum counts. If a 500 drum count interval occurs during a print job it will occur at the end of that job, and will take up to 55 seconds. If set to manual, this adjustment will only be performed when initiated by the next menu item.
AUTO DENSITY	EXECUTE	Selecting this will perform the auto density set up immediately.
COLOR TUNING	PRINT PATTERN	Selecting this item prints the colour tuning pattern to help you adjust the colour balance.
C HIGHLIGHT	-3~0~+3	Adjusts image density for each colour component (cyan, magenta, yellow and black. Normal setting is 0.
C MID-TONE	-3~0~+3	
C DARK	-3~0~+3	
M HIGHLIGHT	-3~0~+3	
M MID-TONE	-3~0~+3	
M DARK	-3~0~+3	
Y HIGHLIGHT	-3~0~+3	
Y MID-TONE	-3~0~+3	
Y DARK	-3~0~+3	
K HIGHLIGHT	-3~0~+3	
K MID-TONE	-3~0~+3	Adjusts darkness of each colour component (cyan, magenta, yellow and black. Normal setting is 0.
K DARK	-3~0~+3	
C DARKNESS	-3~0~+3	
M DARKNESS	-3~0~+3	
Y DARKNESS	-3~0~+3	
K DARKNESS	-3~0~+3	

COLOR MENU		
Item	Settings	Explanation
AUTO REGISTRATION	EXECUTE	Performs automatic colour registration adjustment. Normally this is done on power on and when the top cover is opened and then closed. This process accurately aligns the cyan, magenta and yellow images to the black image.
C REG FINE ADJUST	-3~0~+3	Performs fine adjustment of image timing in relation to the black image component.
M REG FINE ADJUST	-3~0~+3	
Y REG FINE ADJUST	-3~0~+3	
INK SIMULATION	OFF SWOP EUROSCALE JAPAN	Selects from a range of industry standard colour swatches.
UCR	LOW MEDIUM HIGH	
CMY 100% DENSITY	DISABLE ENABLE	When enabled, black areas are produced using 100% C, M, and Y instead of black. This results in a glossier finish.

SYSTEM CONFIGURATION MENU

This menu adjusts general printer settings to suit the way you prefer to work.

SYSTEM CONFIGURATION MENU		
Items	Settings	Explanation
POW SAVE TIME	5	Adjusts the idling time before the printer automatically switches into power saving mode. In this mode power consumption is reduced to a low level required to just keep the printer operating and ready to receive data. When a job is sent the printer will require a warm-up time of up to 1 minute before printing can begin.
	15	
	30	
	60	
	240	
PERSONALITY	AUTO PCL IBM PPR III XL EPSON FX PS3 EMULATION	This item selects which industry standard emulation your printer should use. When set to AUTO, incoming data is examined and the correct emulation is automatically selected each time a print job is received.
USB PS PROTOCOL	RAW ASCII	Selects PostScript data format for USB port.
NET PS PROTOCOL	RAW ASCII	Selects PostScript data format for network port.
CLEARABLE WARNING	ON JOB	When ON, non-critical warnings, such as requests for a different paper size, can be cleared by pressing the ON LINE button. When set to JOB, they are cleared when the print job resumes.
AUTO CONTINUE	ON OFF	Determines whether or not the printer will automatically recover from a memory overflow condition.
MANUAL TIMEOUT	OFF 30 60	Specifies how many seconds the printer will wait for paper to be fed before cancelling the job.
WAIT TIMEOUT	5~ 40 ~300	Specifies how many seconds the printer will wait when received data pauses before forcing a page eject. In PostScript Emulation mode the job will be cancelled if timeout occurs.
LOW TONER	CONTINUE STOP	Specifies whether the printer should continue printing even after a low toner condition is detected.

SYSTEM CONFIGURATION MENU

Items	Settings	Explanation
JAM RECOVERY	ON OFF	Specifies whether the printer should perform jam recovery after a paper jam has occurred. If ON, the printer will attempt to print again any pages lost due to a paper jam once the jam has been cleared.
ERROR REPORT	ON OFF	If ON, the printer will print error details when a PostScript Emulation error occurs.
LANGUAGE	English German French Italian Spanish Swedish Norwegian Danish Dutch Turkish Portuguese Polish	Sets the language used for the display window and printed reports.

PCL EMULATION

This menu controls settings effective when the printer is operating in PCL emulation mode.

PCL EMULATION		
Item	Settings	Explanation
Font Source	RESIDENT / DIMM0 / DIMM1 / DOWNLOADED	Specifies the location of the PCL default font. Normally this will be INTERNAL unless additional fonts are installed in the expansion ROM slot or additional fonts have been downloaded to RAM as permanent fonts.
FONT No.	1000 / C001 / S001	Sets the current default font number from the currently selected source, which could be internal (I), ROM slot (C) or downloaded (S).
FONT PITCH	0.44~ 10.00 ~99.99	Sets the character width of the default font in characters per inch (CPI). This is only available when the selected font is fixed width and scalable.
FONT HEIGHT	4.00~12.00~999.75	Point size of selected default font.

PCL EMULATION

Item	Settings	Explanation
SYMBOL SET	PC-8 / PC-8 Dan/Nor / PC-8 TK / PC-775 / PC-850 / PC-852 / PC-855 / PC-857 TK / PC-858 / PC-866 / PC-869 / PC-1004 / Pi Font / Plska Mazvia / PS Math / PS Text / Roman-8 / Roman-9 / Roman Ext / Serbo Croat1 / Serbo Croat2 / Spanish / Ukrainian / VN Int'l / VN Math / VN US / Win 3.0 / Win 3.1 Blt / Win 3.1 Cyr / Win 3.1 Grk / Win 3.1 Heb / Win 3.1 L1 / Win 3.1 L2 / Win 3.1 L5 / Wingdings / Dingbats MS / Symbol / OCR-A / OCR-B / HP ZIP / USPSFIM / USPSSTP / ISO Swedish1 / ISO Swedish2 / ISO Swedish3 / ISO-2 IRV / ISO-4 UK / ISO- 6 ASC / ISO-10 S/F / ISO-11 Swe / ISO-14 JASC / ISO-15 Ita / ISO-16 Por / ISO-17 Spa / ISO-21 Ger / ISO-25 Fre / ISO-57 Chi / ISO-60 Nor / ISO-61 Nor / ISO-69 Fre / ISO-84 Por / ISO-85 Spa Kamenicky / Legal	PCL symbol set. If the font source and number are changed to one which does not support the selected symbol set, this must be changed to an available symbol set for that font.

PCL EMULATION		
Item	Settings	Explanation
SYMBOL SET (continued)	Math-8 / MC Text / MS Publish / PC Ext D/N / PC Ext US / PC Set1 / PC Set2 D/N / PC Set2 US / USPSZIP / Bulgarian / CWI Hung / DeskTop / German / Greek-437 / Greek- 437 Cy / Greek-928 / Hebrew NC / Hebrew OC / IBM-437 / IBM- 850 / IBM-860 / IBM-863 / IBM-865 / ISO Dutch / ISO L1 / ISO L2 / ISO L5 / ISO L6 / ISO L9	
A4 PRINT WIDTH	78 COLUMN 80 COLUMN	Sets the number of columns subject to Auto LF with A4 paper in PCL. This is the value when Auto CR/LF Mode is set to OFF with the 10CPI character.
WHITE PAGE SKIP	OFF / ON	Selects whether blank pages are printed or not.
CR FUNCTION	CR / CR+LF	Selects whether a received carriage return character (0Dh) also causes a line feed.
LF FUNCTION	LF / LF+CR	Selects whether a received line feed character (0Ah) also causes a carriage return.
PRINT MARGIN	NORMAL 1/5 INCH 1/6 INCH	Sets the non-printable page area. NORMAL is PCL compatible.
TRUE BLACK	OFF / ON	Selects whether black image data is printed using black toner (ON) or 100% CMY (OFF). (Valid in PCL emulation mode only.)

PARALLEL MENU

This menu controls the operation of the printer's Centronics compatible (IEEE-1284) data interface.

PARALLEL MENU		
Item	Settings	Explanation
PARALLEL	ENABLE / DISABLE	Enables or disables operation of this port.
BI-DIRECTION	ENABLE / DISABLE	Enables or disables bidirectional functionality of this port.
ECP	ENABLE / DISABLE	Enables or disables ECP mode.
ACK WIDTH	NARROW MEDIUM WIDE	Sets width of ACK signal in compatible receiving to 0.5µS, 1.0µS or 3.0µS.
ACK/BUSY TIMING	ACK IN BUSY ACK WHILE BUSY	Sets the order in which the BUSY signal is output. For ACK IN BUSY, BUSY goes low at end of ACK pulse. For ACK WHILE BUSY, BUSY goes low at centre of ACK pulse.
I-PRIME	3 MICRO SEC 50 MICRO SEC DISABLE	Sets time to enable/disable the I-PRIME signal. Can be enabled with 3µS or 50µS nInit signal, or disabled completely.

USB MENU

This menu controls the operation of the printer's USB data interface.

USB MENU		
Item	Settings	Explanation
USB	ENABLE / DISABLE	Enables or disables operation of this port.
VERSION	1.1 / 2.0	Selects USB version for compatibility.
SOFT RESET	ENABLE / DISABLE	Enables or disables the SOFT RESET command.

NETWORK MENU

This menu controls the operation of the printer's 10Base-T/100Base-TX network interface.

NETWORK MENU		
Item	Settings	Explanation
TCP/IP	ENABLE / DISABLE	Enables or disables this network protocol.
NETBEUI	ENABLE / DISABLE	Enables or disables this network protocol.
NETWARE	ENABLE / DISABLE	Enables or disables this network protocol.
ETHERTALK	ENABLE / DISABLE	Enables or disables this network protocol.
FRAME TYPE	AUTO / 802.2 / 802.3 / ETHERNET II / SNAP	Selects the Ethernet MAC layer frame type.
IP ADDRESS SET	AUTO / MANUAL	Specifies whether IP address allocation is automatic (DHCP) or manually assigned.
IP ADDRESS	xxx.xxx.xxx.xxx	Current assigned IP address. To change, press ENTER and use +/- keys to increment 1st octet, then press ENTER again to move on to next octet. When 4th octet has been set, press ENTER again to register new address.
SUBNET MASK	xxx.xxx.xxx.xxx	Current assigned subnet mask. To change, proceed as above.
GATEWAY ADDRESS	xxx.xxx.xxx.xxx	Current assigned gateway address. To change, proceed as above.
INITIALIZE NIC?	EXECUTE	Initialises the network hardware.
WEB/IPP	ENABLE / DISABLE	Enables or disables Web config. facility and Internet Printing Protocol.
TELNET	ENABLE / DISABLE	Enables or disables Telnet config. facility.
FTP	ENABLE / DISABLE	Enables or disables communication via FTP.
SNMP	ENABLE / DISABLE	Enables or disables SNMP protocol.
LAN	NORMAL / SMALL	Selects network size.
HUB LINK SETTING	AUTO NEGOTIATE 100BASE-TX FULL 100BASE-TX HALF 10BASE-T FULL 10BASE-T HALF	Sets full or half duplex for communication via a network hub.

MAINTENANCE MENU

This menu provides access to various printer maintenance functions.

MAINTENANCE MENU		
Item	Settings	Explanation
MENU RESET	EXECUTE	Resets menus to default settings.
SAVE MENU	EXECUTE	Saves current menu settings as default values. At confirmation prompt, press ENTER to confirm save, or CANCEL to cancel.
POWER SAVE	ENABLE / DISABLE	Enables or disables automatic power save mode. Delay before entering this mode is set in the system configuration menu.
PAPER BLACK SETTING	-2~0~+2	Used for small adjustment when you experience faded print or light specks / streaking in monochrome printing on white paper. Select a higher value to reduce fading, or a lower value to reduce specks or streaking in high density print areas.
PAPER COLOR SETTING	-2~0~+2	As above, but for colour printing.
TRANSPR BLACK SETTING	-2~0~+2	As above but for mono printing on transparencies.
TRANSPR COLOR SETTING	-2~0~+2	As above but for colour printing on transparencies.

USAGE MENU

This menu is for information only, and provides an indication of total usage of the printer and the expected life left in its consumable items. This is particularly useful if you do not have a full set of replacement consumables to hand and you need to know how soon you will need them.

USAGE MENU	
Item	Explanation
TOTAL PAGE COUNT	The total number of prints output by the printer.
TRAYn PAGE COUNT	The total number of pages fed from tray n.
MPT PAGE COUNT	The total number of pages fed from the multipurpose tray.
COLOR PAGE COUNT	The total number of pages printed in colour.
MONO PAGE COUNT	The total number of pages printed in monochrome.
K DRUM LIFE REMAINING C DRUM LIFE REMAINING M DRUM LIFE REMAINING Y DRUM LIFE REMAINING	Percentage of life remaining in these consumable items.
BELT LIFE REMAINING	Percentage of belt life remaining.
FUSER LIFE REMAINING	Percentage of fuser life remaining.
K TONER C TONER M TONER Y TONER	Cartridge size and current toner level.

OVERLAYS AND MACROS

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.

NOTE

PostScript overlays are not available for Windows 95/98/Me.

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

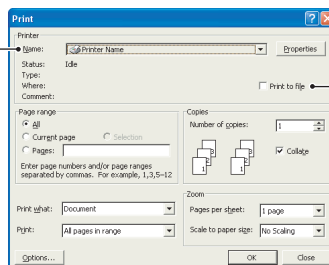
Three steps are required to create an overlay:

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 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.

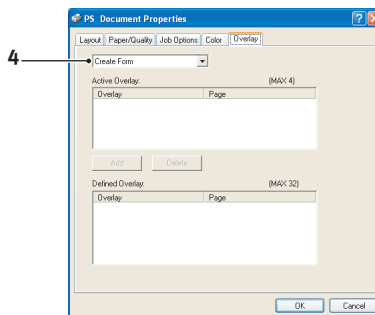
When printing overlay files to disk, do not select any special features, such as two-sided printing or multiple copies. These are not appropriate to overlays, they apply only to your final documents.

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...** dialog box.
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 Overlay tab, choose **Create Form** from the drop-down list (4).
7. Click **OK** to close the Document Properties window.
8. Click **OK** again to close the Print dialogue.



9. When prompted for a print file name, enter a meaningful name with the extension **.PRN**.
10. 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 **Printers**→**New Project**.
3. Choose **Printers**→**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 hard disk in the printer, SDM will automatically download files to it. If not, SDM will download files to flash memory. If you have a hard disk 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.

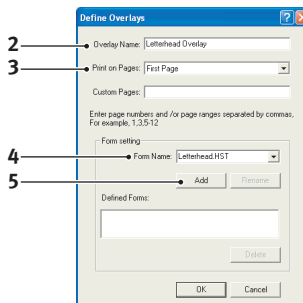
DEFINING OVERLAYS

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. On the **Overlay** tab, click the **New** button.

4. In the **Define Overlays** window, enter a suitable name (2) for this overlay and choose which page(s) (3) of your documents will use this overlay.

5. Enter the name of the overlay file (4) *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** (5) 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.

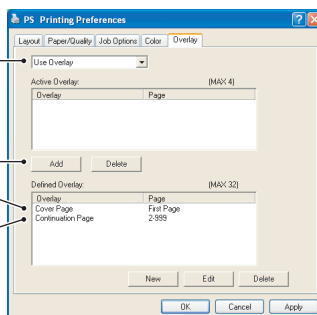
9. When done, click **OK** to close the printer properties window.

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 Overlays tab, choose **Use Overlay** from the drop-down list (1).
5. 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).
6. 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.
7. When you have selected all the overlays you want to use for this document, click **OK**.
8. Finally, in your application's print dialogue, click **OK** to begin printing.



CREATING PCL OVERLAYS

Three steps are required to create an overlay:

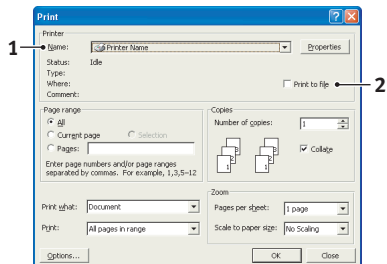
1. Create the form data using your own application software and print it to a printer (.PRN) file.
2. Use the Storage Device Manager utility software supplied on CD with your printer to create a “project file,” import the .PRN file, and download the generated filter (.BIN) files to the printer.
3. Use 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 **Printers**→**New Project** to start a new project.
3. Choose **Printers**→**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 colour 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 disk drive PCL partition;
1 = printer’s disk drive Common partition;
%disk0% = printer’s disk drive 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.

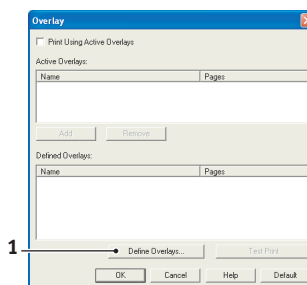
TEST PRINTING THE MACRO

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.

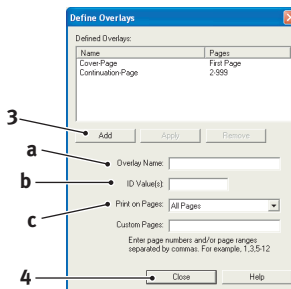
DEFINING OVERLAYS

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** (2) of the required overlay, and define which **page(s)** (c) of your documents will use this overlay. Then click the **Add button** (3) to add this overlay to the list of defined overlays. Repeat for any other related overlays. When done, click the **Close button** (4) 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.

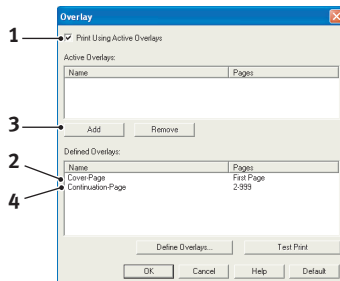
The new overlays will now appear in the Defined Overlays list in the printer properties window.

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 Overlay tab, check the **Use active overlays** checkbox (1).
5. 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.)
6. 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.
7. When the list of active overlays contains all the items you want to use, click **OK**.
8. Finally, click the **Print** button in your application's Print dialogue to begin printing your document.



REPLACING CONSUMABLE ITEMS

This section explains how to replace consumable items when due. As a guide, the life expectancy of these items is:

- › Toner — 5,000 A4 pages at 5% coverage, which means that 5% of the addressable print area is printed with this colour. Toner life is directly affected by coverage, e.g. at 10% coverage there is sufficient toner for 2,500 pages, conversely at 2.5% there is sufficient toner for 10,000 pages in the cartridge.

The printer is shipped with sufficient toner for 3,000 A4 pages in the print cartridges of which 1,500 A4 pages of toner are used to charge the image drum.

- › Image drum — 17,000 pages (calculated on typical office usage where 20% of printing is 1 page only, 30% is 3 page documents and 50% is print runs of 15 pages or more).
- › Transfer belt — Approximately 50,000 A4 pages.
- › Fuser — Approximately 45,000 A4 pages.

CONSUMABLE ORDER DETAILS

Item	Life	Order No.
Toner, high capacity, black	5,000 A4 @ 5%	42127408
Toner, high capacity, cyan	5,000 A4 @ 5%	42127407
Toner, high capacity, magenta	5,000 A4 @ 5%	42127406
Toner, high capacity, yellow	5,000 A4 @ 5%	42127405
Toner, rainbow pack (1 ea. CMYK)	5,000 A4 @ 5%	42403002
Image drum, black	17,000 A4 pages*	42126608
Image drum, cyan	17,000 A4 pages*	42126607
Image drum, magenta	17,000 A4 pages*	42126606
Image drum, yellow	17,000 A4 pages*	42126605
Fuser	45,000 A4 pages	42158603
Transport belt	50,000 A4 @ 3/job	42158702

* *Average life*

Please always use genuine Oki consumables. Use of “compatibles” and counterfeit items may impair performance and could cause product damage, which is not covered under the warranty.

TONER CARTRIDGE REPLACEMENT

The toner used in this printer is a very fine dry powder. It is contained in four cartridges: one each for cyan, magenta, yellow and black.

Have a sheet of paper handy so that you have somewhere to place the used cartridge while you install the new one.

Dispose of the old cartridge responsibly, inside the pack that the new one came in. Follow any regulations, recommendations, etc., which may be in force concerning waste recycling.

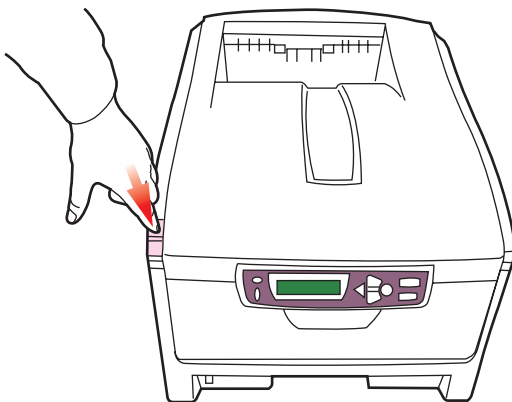
If you do spill any toner powder, lightly brush it off. If this is not enough, use a cool, damp cloth to remove any residue. *Do not use hot water, and never use solvents of any kind. They will make stains permanent.*

WARNING!

If you inhale any toner or get it in your eyes, drink a little water or bathe your eyes liberally in cold water. Seek medical attention immediately.

Switch off the printer and allow the fuser to cool for about 10 minutes before opening the cover.

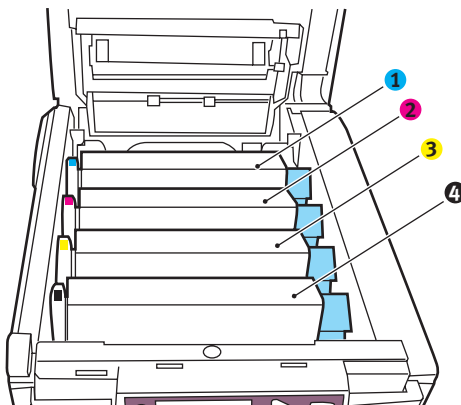
1. Press the cover release and open the printer's top cover fully.



WARNING!

If the printer has been powered on, the fuser may be hot. This area is clearly labeled. Do not touch.

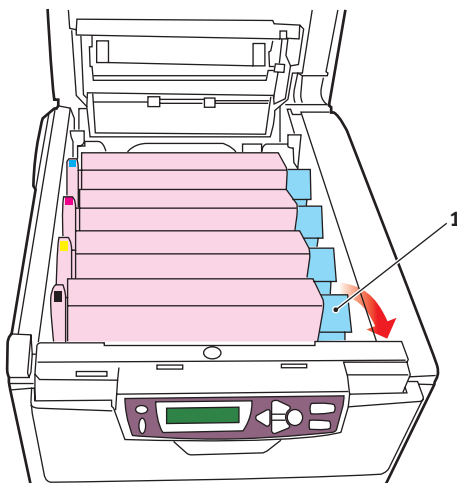
2. Note the positions of the four cartridges.



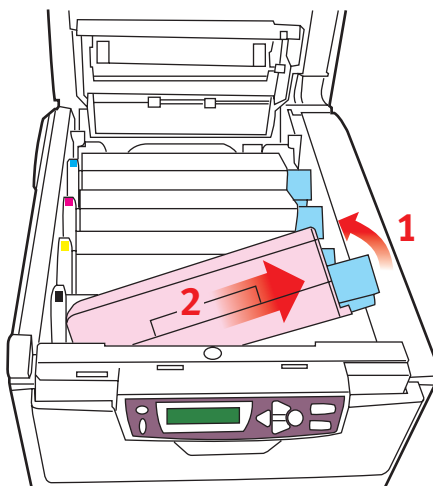
1. Cyan cartridge
3. Yellow cartridge

2. Magenta cartridge
4. Black cartridge

3. Pull the coloured toner release lever (1) on the cartridge to be replaced towards the front of the printer.



4. Lift the right-hand end of the cartridge and then draw the cartridge to the right to release the left-hand end as shown, and withdraw the toner cartridge out of the printer.

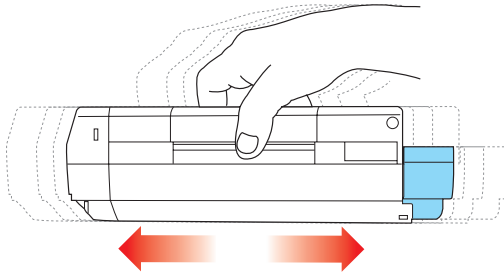


- Put the cartridge down gently onto a piece of paper to prevent toner from marking your furniture and to avoid damaging the green drum surface.

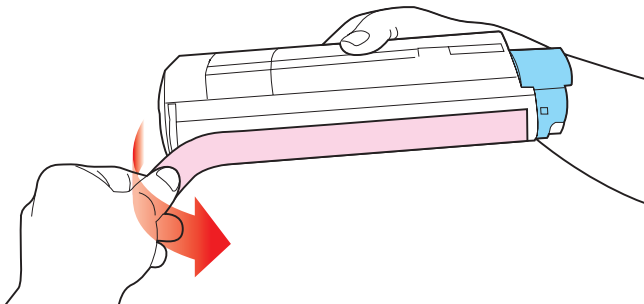
CAUTION!

The green image drum surface at the base of the cartridge is very delicate and light sensitive. Do not touch it and do not expose it to normal room light for more than 5 minutes. If the drum unit needs to be out of the printer for longer than this, please wrap the cartridge inside a black plastic bag to keep it away from light. Never expose the drum to direct sunlight or very bright room lighting.

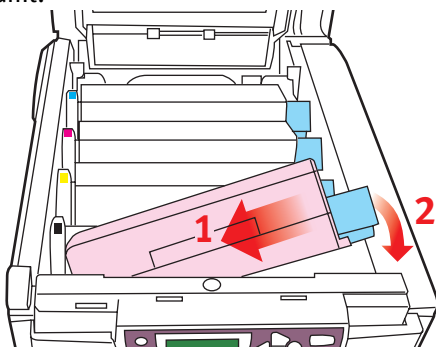
- Remove the new cartridge from its box but leave its wrapping material in place for the moment.
- Gently shake the new cartridge from end to end several times to loosen and distribute the toner evenly inside the cartridge.



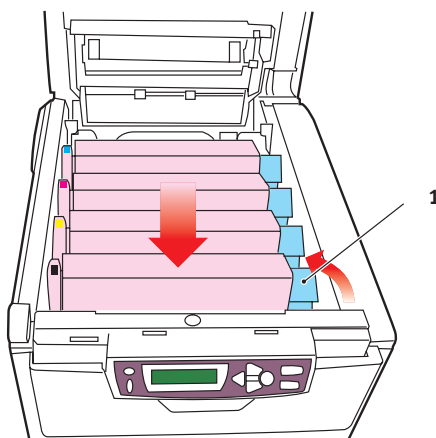
- Remove the wrapping material and peel off the adhesive tape from the underside of the cartridge.



9. Holding the cartridge by its top centre with the coloured lever to the right, lower it into the printer over the image drum unit from which the old cartridge was removed.
10. Insert the left end of the cartridge into the top of the image drum unit first, pushing it against the spring on the drum unit, then lower the right end of the cartridge down onto the image drum unit.



11. Pressing gently down on the cartridge to ensure that it is firmly seated, push the coloured lever (1) towards the rear of the printer. This will lock the cartridge into place and release toner into the image drum unit.



12. Finally, close the top cover and press down firmly at both sides so that the cover latches closed.

IMAGE DRUM REPLACEMENT

Switch off the printer and allow the fuser to cool for about 10 minutes before opening the cover.

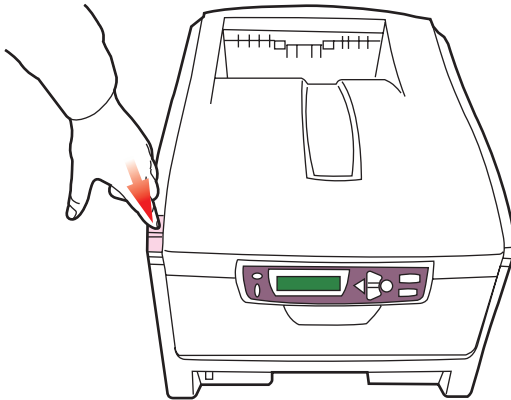
CAUTION!



Static sensitive devices, handle with care.

The printer contains four image drums: cyan, magenta, yellow and black.

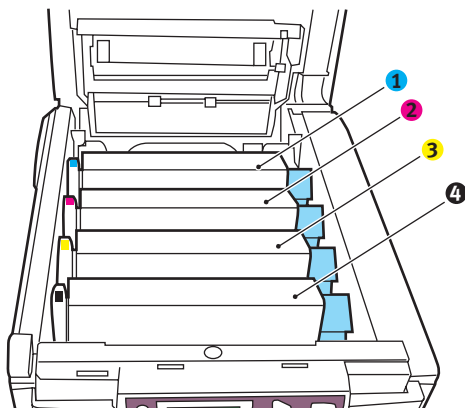
1. Press the cover release and open the printer's top cover fully.



WARNING!

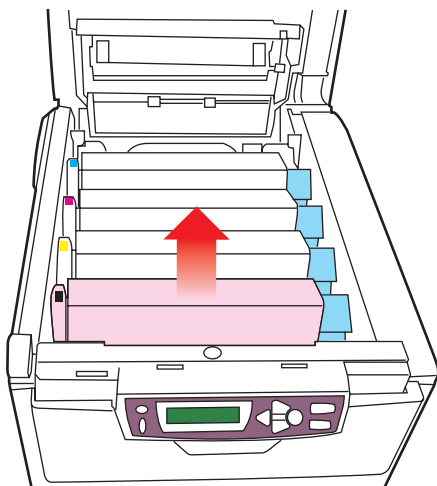
If the printer has been powered on, the fuser will be hot. This area is clearly labeled. Do not touch.

2. Note the positions of the four cartridges.



- | | |
|---------------------|----------------------|
| 1. Cyan cartridge | 2. Magenta cartridge |
| 3. Yellow cartridge | 4. Black cartridge |

3. Holding it by its top centre, lift the image drum, complete with its toner cartridge, up and out of the printer.

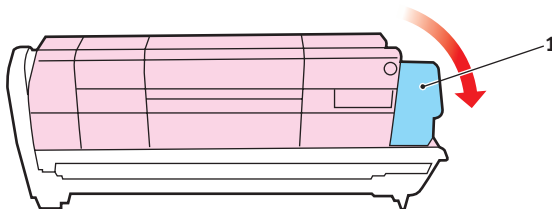


- Put the cartridge down gently onto a piece of paper to prevent toner from marking your furniture and to avoid damaging the green drum surface.

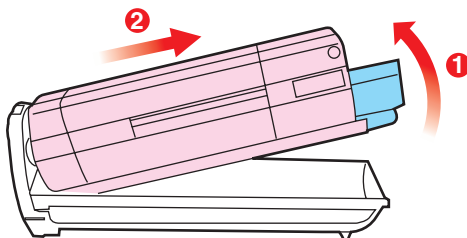
CAUTION!

The green image drum surface at the base of the cartridge is very delicate and light sensitive. Do not touch it and do not expose it to normal room light for more than 5 minutes. If the drum unit needs to be out of the printer for longer than this, please wrap the cartridge inside a black plastic bag to keep it away from light. Never expose the drum to direct sunlight or very bright room lighting.

- With the coloured toner release lever (1) to the right, pull the lever towards you. This will release the bond between the toner cartridge and the image drum cartridge.



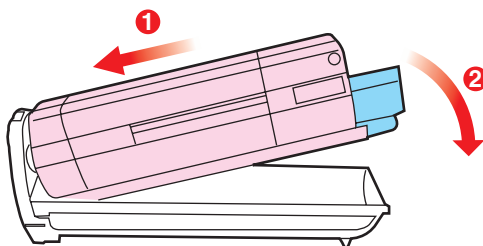
- Lift the right-hand end of the cartridge and then draw the cartridge to the right to release the left-hand end as shown, and withdraw the toner cartridge out of the image drum cartridge. Place the cartridge on a piece of paper to avoid marking your furniture.



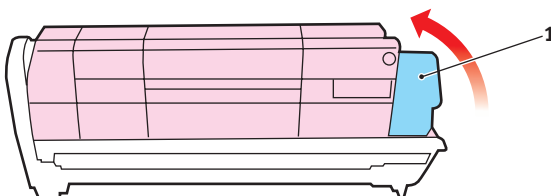
- Take the new image drum cartridge out of its packaging and place it on the piece of paper where the old cartridge was

placed. Keep it the same way round as the old unit. Pack the old cartridge inside the packaging material for disposal.

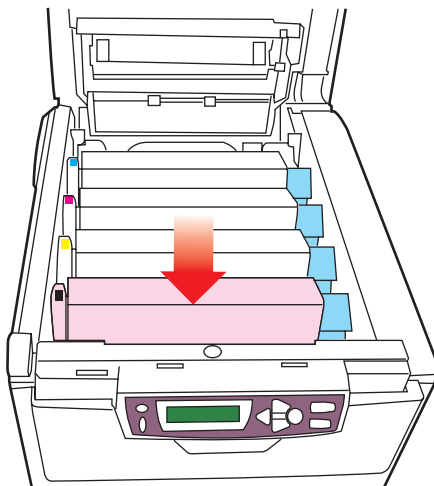
8. Place the toner cartridge onto the new image drum cartridge as shown. Push the left end in first, and then lower the right end in. (It is not necessary to fit a new toner cartridge at this time unless the remaining toner level is very low.)



9. Push the coloured release lever (1) away from you to lock the toner cartridge onto the new image drum unit and release toner into it.



- 10.** Holding the complete assembly by its top centre, lower it into place in the printer, locating the pegs at each end into their slots in the sides of the printer cavity.



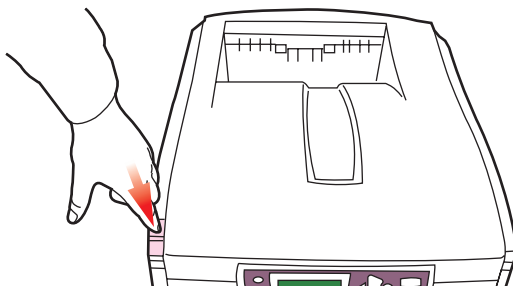
- 11.** Finally, close the top cover and press down firmly at both sides so that the cover latches closed.

REPLACING THE BELT UNIT

The belt unit is located under the four image drums. This unit requires replacement approximately every 50,000 pages.

Switch off the printer and allow the fuser to cool for about 10 minutes before opening the cover.

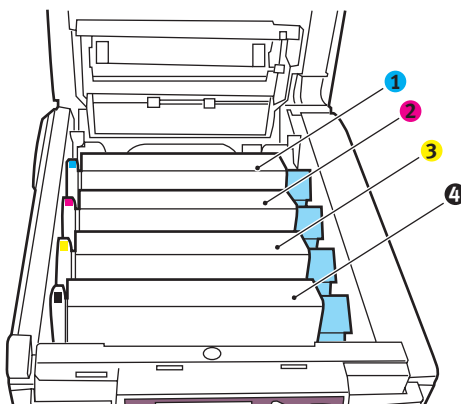
1. Press the cover release and open the printer's top cover fully.



WARNING!

If the printer has been powered on, the fuser will be hot. This area is clearly labeled. Do not touch.

2. Note the positions of the four cartridges. It is essential that they go back in the same order



1. Cyan cartridge

2. Magenta cartridge

3. Yellow cartridge

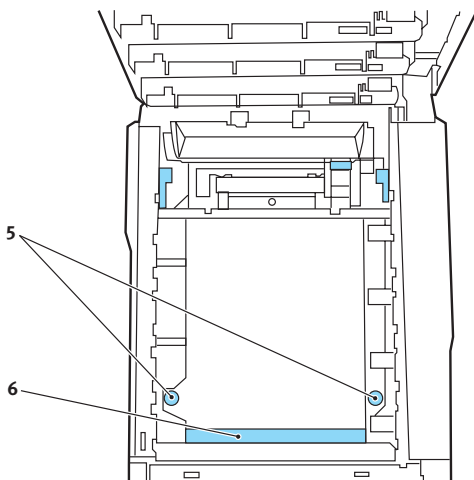
4. Black cartridge

- Lift each of the image drum units out of the printer and place them in a safe place away from direct sources of heat and light.

CAUTION!

The green image drum surface at the base of each cartridge is very delicate and light sensitive. Do not touch it and do not expose it to normal room light for more than 5 minutes. If the drum unit needs to be out of the printer for longer than this, please wrap the cartridge inside a black plastic bag to keep it away from light. Never expose the drum to direct sunlight or very bright room lighting.

- Locate the two fasteners (5) at each side of the belt and the lifting bar (6) at the front end.



- Turn the two fasteners 90° to the left. This will release the belt from the printer chassis.
- Pull the lifting bar (6) upwards so that belt tilts up towards the front, and withdraw the belt unit from the printer.
- Lower the new belt unit into place, with the lifting bar at the front and the drive gear towards the rear of the printer. Locate the drive gear into the gear inside the printer by the rear left

corner of the unit, and lower the belt unit flat inside the printer.

8. Turn the two fasteners (5) 90° to the right until they lock. This will secure the belt unit in place.
9. Replace the four image drums, complete with their toner cartridges, into the printer in the same sequence as they came out: cyan (nearest the rear), magenta, yellow and black (nearest the front).
10. Finally, close the top cover and press down firmly at both sides so that the cover latches closed.

FUSER REPLACEMENT

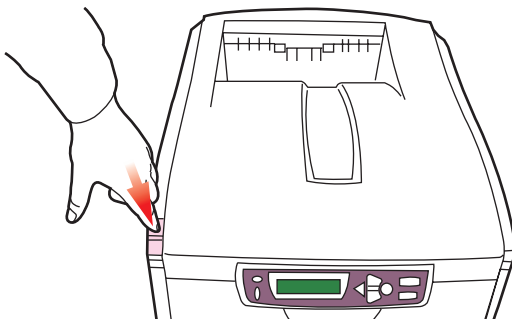
The fuser is located inside the printer just behind the four image drum units.

WARNING!

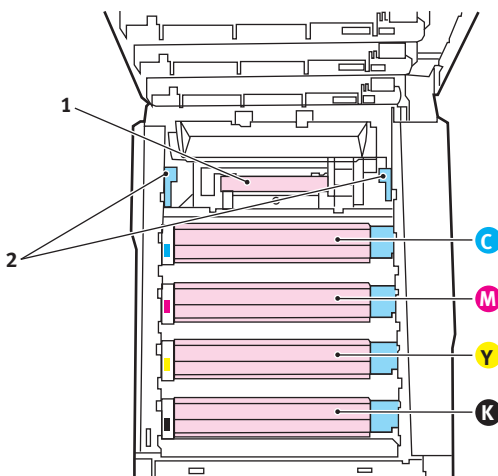
If the printer has recently been powered on, some fuser components will be very hot. Handle the fuser with extreme care, holding it only by its handle, which will only be mildly warm to the touch. A warning label clearly indicates the area. If in doubt, switch the printer off and wait at least 10 minutes for the fuser to cool before opening the printer cover.

Switch off the printer and allow the fuser to cool for about 10 minutes before opening the cover.

1. Press the cover release and open the printer's top cover fully.

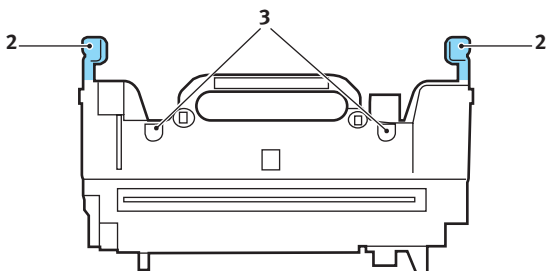


2. Identify the fuser handle (1) on the top of the fuser unit.

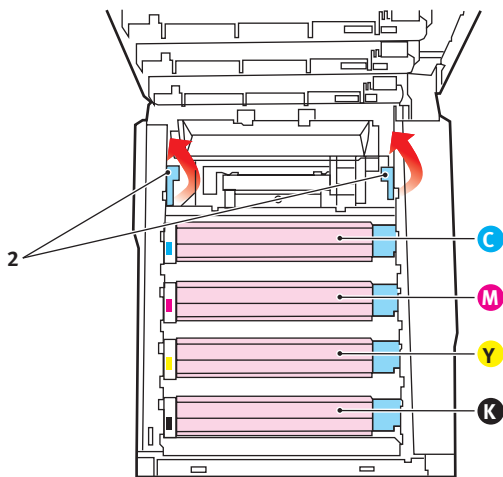


3. Pull the two fuser retaining levers (2) towards the front of the printer so that they are fully upright.
4. Holding the fuser by its handle (1), lift the fuser straight up and out of the printer. If the fuser is still warm, place it on a flat surface which will not be damaged by heat.
5. Remove the new fuser from its packaging and remove the transit material.

6. Holding the new fuser by its handle, make sure that it is the correct way round. The retaining levers (2) should be fully upright, and the two locating lugs (3) should be towards you.



7. Lower the fuser into the printer, locating the two lugs (3) into their slots in the metal partition which separates the fuser area from the image drums.
8. Push the two retaining levers (2) towards the rear of the printer to lock the fuser in place.



9. Finally, close the top cover and press down firmly at both sides so that the cover latches closed.

INSTALLING UPGRADES

This section explains how to install optional equipment into your printer. This includes:

- › duplex (two sided printing) unit;
- › additional RAM memory;
- › 10GB hard disk drive.

DUPLEX UNIT

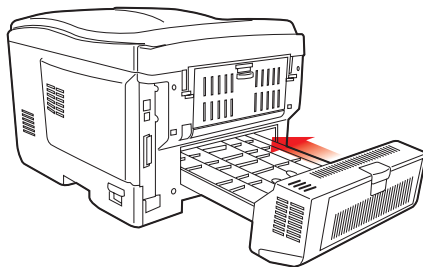
The duplex unit adds the function of two sided printing, using less paper and making large documents easier to handle. It also enables booklet printing, which uses even less paper and makes large documents even easier to handle.

NOTE

The duplex unit requires an additional 64MB memory upgrade.

The duplex unit slides straight into the rear of the printer and requires no tools to install.

1. Unpack the new unit and remove any transit material from it.
2. Switch the printer off. It is not necessary to disconnect the AC power cable.
3. Ensure that the unit is the right way up, as shown, and push it into the slot behind the rear panel. The panel will swing inwards as you push the unit into it. Push the unit all the way in until it stops and latches home.



4. Switch the printer on and wait for it to warm up (about 1 minute).
5. Print a menu map as follows:
 - (a) Press the **+** button to access the Information Menu.
 - (b) Press **ENTER** once for the menu map.
 - (c) Press **ENTER** again to print the menu map.
 - (d) When the menu map is printed, press **ON LINE** to exit the menu system.
6. Examine the first page of the menu map.

Near the top of the page, between the two horizontal lines, you will see the current printer configuration. This list should indicate that the duplex unit is now installed.

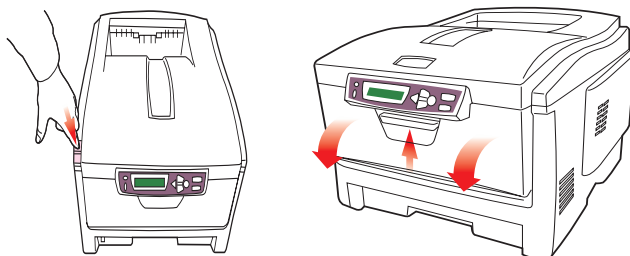
All that remains is to adjust the Windows printer driver to make full use of the new features.

MEMORY UPGRADE

The basic printer model comes equipped with 64MB of main memory. This can be upgraded with an additional memory board containing 64MB, 128MB or 256MB, giving a maximum total memory capacity of 320MB.

Installation takes a few minutes, and requires a medium size cross-head (philips type) screwdriver.

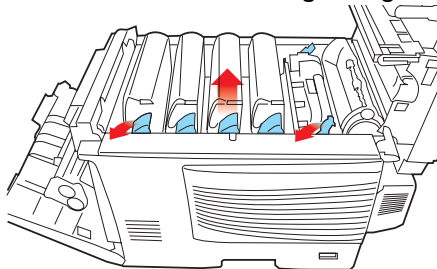
1. Switch the printer off and disconnect the AC power cable.
2. Press the cover release and open the printer's top cover fully.



WARNING!

If the printer has been powered on recently, the fuser will be hot. This area is clearly labeled. Do not touch.

3. Lift the front cover latch and pull open the front cover.
4. Remove the screw securing the right-hand side cover.

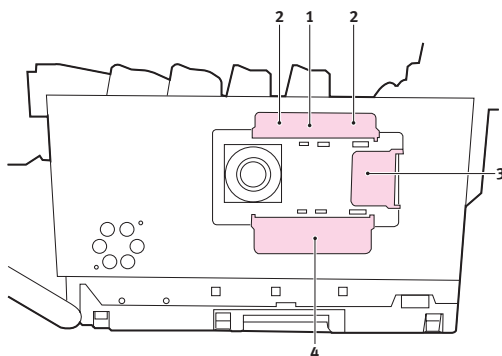


5. Lift the edge of the side cover slightly at the two points shown, and pull the cover away from the printer at the top. Lift the cover slightly to detach it from the printer. Place it safely to one side.

6. Carefully remove the new memory board from its wrapping. Try to handle the board only by its short edges, avoiding contact with any metal parts as far as possible. In particular, avoid touching the edge connector.
7. Notice that the memory board has a small cutout in the edge connector, which is closer to one end than the other.



8. Identify the RAM expansion slot (1) in the printer.



9. If the RAM expansion slot already contains a memory upgrade board, that board will have to be removed before you can install the new one. To remove it proceed as follows, otherwise skip to step 10.
 - (a) Identify the locking clips (2) at each end of the RAM expansion slot (1).
 - (b) Push the clips outward and back into the printer. The board will pop out slightly.
 - (c) Grip the board firmly by its short edges and pull it out of the slot.
 - (d) Place the removed memory board in the antistatic bag which originally contained the new memory board.

10. Hold the new memory board by its short edges, so that the edge connector faces in towards the RAM expansion slot, and the small cutout is closer to the rear of the printer.
11. Gently push the board into the RAM expansion slot until it latches in and will not go any further.
12. Locate the three retaining clips at the bottom of the side cover into their rectangular holes near the bottom of the printer.
13. Close the top of the side cover up to the printer and refit the securing screw removed in step 4.
14. Close the front cover and close the top cover, pressing down firmly at each side to latch it closed.
15. Reconnect the AC power cable and switch the printer on.
16. When the printer is ready, print a menu map as follows:
 - (a) Press the **+** button to access the Information Menu.
 - (b) Press **ENTER** once for the menu map.
 - (c) Press **ENTER** again to print the menu map.
 - (d) When the menu map is printed, press **ON LINE** to exit the menu system.
17. Examine the first page of the menu map.

Near the top of the page, between the two horizontal lines, you will see the current printer configuration. This list contains the figure for total memory size.

This should indicate the total memory now installed, which should be the size of memory board you have installed plus 64MB.

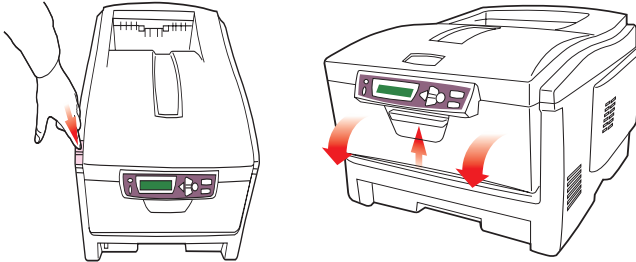
If you are using the Windows PostScript driver, follow the instructions later in this section to adjust the driver.

HARD DISK DRIVE

The optional 10GB internal hard disk drive (HDD) enables collating of printed pages and can be used to store overlays and macros, fonts, and secure or proof documents waiting to be printed.

Installation takes a few minutes, and requires a medium size cross-head (philips type) screwdriver.

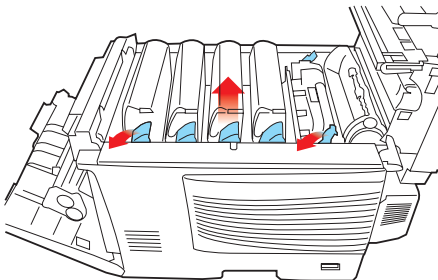
1. Switch the printer off and disconnect the AC power cable.
2. Press the cover release and open the printer's top cover fully.



WARNING!

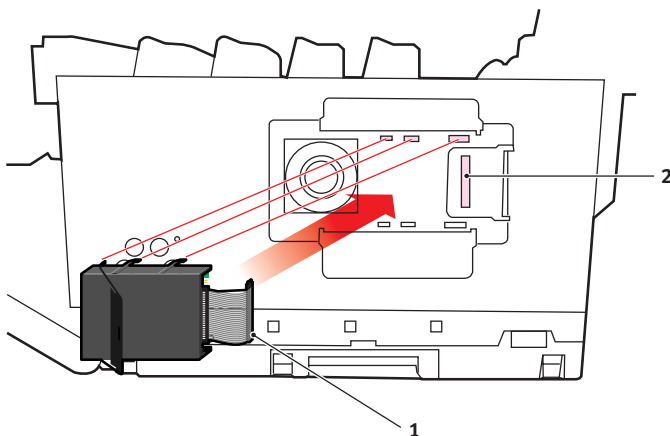
If the printer has been powered on recently, the fuser will be hot. This area is clearly labeled. Do not touch.

3. Lift the front cover latch and pull open the front cover.
4. Remove the screw securing the right-hand side cover.



5. Lift the edge of the side cover slightly at the two points shown, and pull the cover away from the printer at the top. Lift the cover slightly to detach it from the printer. Place it safely to one side.

6. Identify the six locating holes indicated in the illustration, which will be used to locate the disk unit onto the side of the printer.



7. With the component side of the disk unit facing the printer, and the connector cable towards the rear, lift the disk unit handle away from the disk body.
8. Plug the end of the connecting cable (1) into the disk unit connector (2) in the printer.
9. Locate the six legs of the disk unit into the mounting holes on the printer.
10. Push the handle flat against the disk unit, which will lever the unit slightly towards the rear of the printer, locking it into place.
11. Locate the three retaining clips at the bottom of the side cover into their rectangular holes near the bottom of the printer.
12. Close the top of the side cover up to the printer and refit the securing screw removed in step 4.
13. Close the front cover and close the top cover, pressing down firmly at each side to latch it closed.
14. Reconnect the AC power cable and switch the printer on.

15. When the printer is ready, print a menu map as follows:
 - (a) Press the **+** button to access the Information Menu.
 - (b) Press **ENTER** once for the menu map.
 - (c) Press **ENTER** again to print the menu map.
 - (d) When the menu map is printed, press **ON LINE** to exit the menu system.

16. Examine the first page of the menu map.

Near the top of the page, between the two horizontal lines, you will see the current printer configuration. This should now indicate that the hard disk unit is installed.

All that remains is to configure the Windows printer driver so that it knows the hard disk unit has been fitted, and the additional features can be made available immediately.

ADJUSTING WINDOWS PRINTER DRIVERS

Once your new upgrade has been installed, you may need to update the Windows printer driver so that the additional features are available to your Windows applications.

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

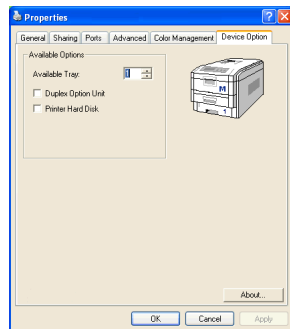
The illustrations shown here are for Windows XP. Other Windows versions may appear slightly different, but the principles are the same.

PCL DRIVER

If you have installed a memory upgrade it is not necessary to change the PCL printer driver, and you can ignore this section.

If you have installed a duplex unit or hard disk, proceed as follows:

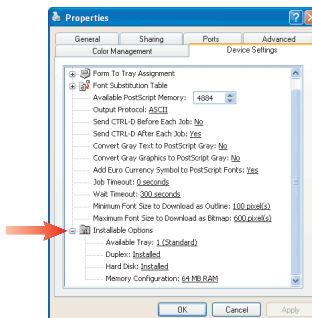
1. Open the Printers window (called "Printers and Faxes" in Windows XP) via the **Start** Menu or from the Windows Control Panel.
2. Right-click the printer icon for this printer, and choose **Properties** from the pop-up menu.
3. On the **Device Options** tab, check the box for the upgrade you have just installed.
4. Click **OK** to close the properties window, and then close the Printers window.



POSTSCRIPT DRIVER

This driver must be adjusted for any upgrade just installed.

1. Open the Printers window (called “Printers and Faxes” in Windows XP) via the **Start Menu** or from the Windows Control Panel.
2. Right-click the printer icon for this printer, and choose **Properties** from the pop-up menu.
3. On the **Device Settings** tab, locate the list of installable options. Change those settings to indicate the new features you have just installed.
4. Click **OK** to close the properties window, and then close the Printers window.

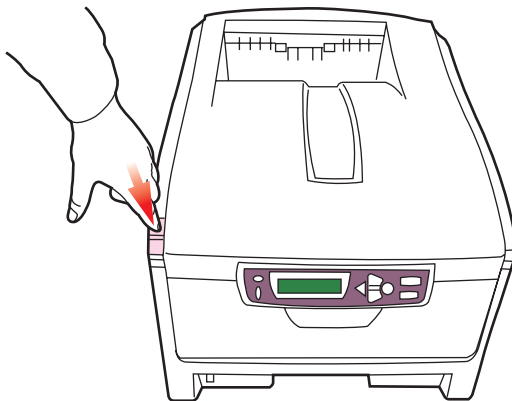


CLEARING PAPER JAMS

Provided that you follow the recommendations in this guide on use of print media, and you keep the media in good condition prior to use, your printer should give years of reliable service. However, paper jams occasionally do occur, and this section explains how to clear them quickly and simply.

Jams can occur due to paper misfeeding from a paper tray or at any point on the paper path through the printer. When a jam occurs, the printer immediately stops, and the LCD window on the operator panel informs you of the event. If printing multiple pages (or copies), do not assume that having cleared an obvious sheet that others will not also be stopped somewhere along the path. These must also be removed in order to clear the jam fully and restore normal operation.

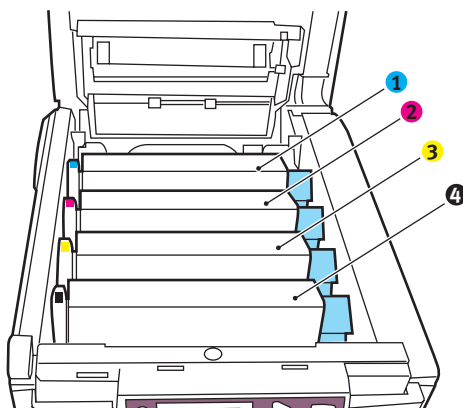
1. If a sheet is well advanced out of the top of the printer, simply grip it and pull gently to draw it fully out. If it does not remove easily, do not use excessive force. It can be removed from the rear later.
2. Press the cover release and open the printer's top cover fully.



WARNING!

If the printer has been powered on, the fuser will be hot. This area is clearly labeled. Do not touch.

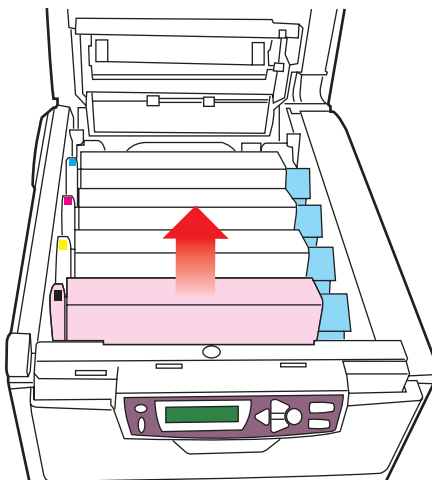
3. Note the positions of the four cartridges.



- | | |
|---------------------|----------------------|
| 1. Cyan cartridge | 2. Magenta cartridge |
| 3. Yellow cartridge | 4. Black cartridge |

It will be necessary to remove the four image drums to gain access to the paper path.

4. Holding it by its top centre, lift the image drum, complete with its toner cartridge, up and out of the printer.

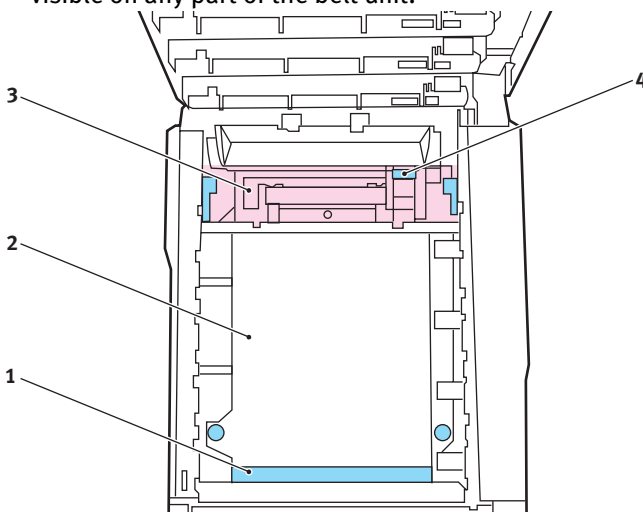


- Put the cartridge down gently onto a piece of paper to prevent toner from marking your furniture and to avoid damaging the green drum surface.

CAUTION!

The green image drum surface at the base of the cartridge is very delicate and light sensitive. Do not touch it and do not expose it to normal room light for more than 5 minutes.

- Repeat this removal procedure for each of the four image drum units.
- Look into the printer to check whether any sheets of paper are visible on any part of the belt unit.

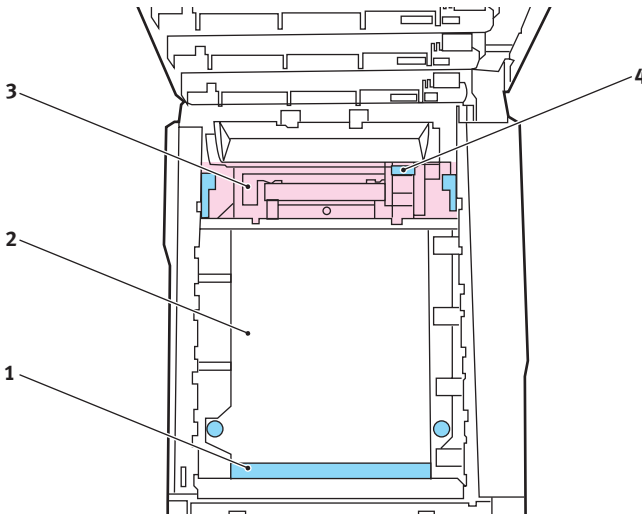


- › To remove a sheet with its leading edge at the front of the belt (1), carefully lift the sheet from the belt and pull it forwards into the internal drum cavity and withdraw the sheet.

CAUTION!

Do not use any sharp or abrasive objects to separate sheets from the belt. This may damage the belt surface.

- › To remove a sheet from the central area of the belt (2), carefully separate the sheet from the belt surface and withdraw the sheet.

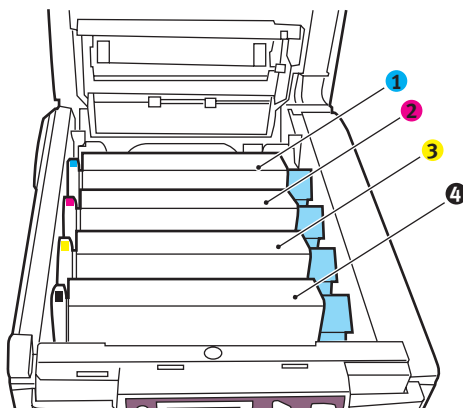


- › To remove a sheet just entering the fuser (3), separate the trailing edge of the sheet from the belt, push the fuser pressure release lever (4) towards the front and down to release the fuser's grip on the sheet, and withdraw the sheet through the drum cavity area. Then allow the pressure release lever to rise again.

NOTE

If the sheet is well advanced into the fuser (only a short length is still visible), do not attempt to pull it back. Follow the next step to remove it from the rear of the printer.

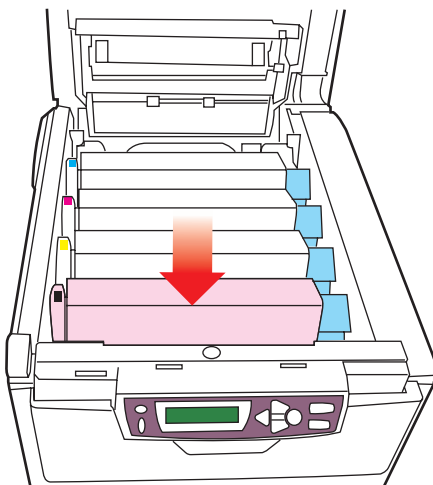
8. Starting with the cyan image drum unit nearest the fuser, replace the four image drums back into the drum cavity, making sure to locate them in the correct order.



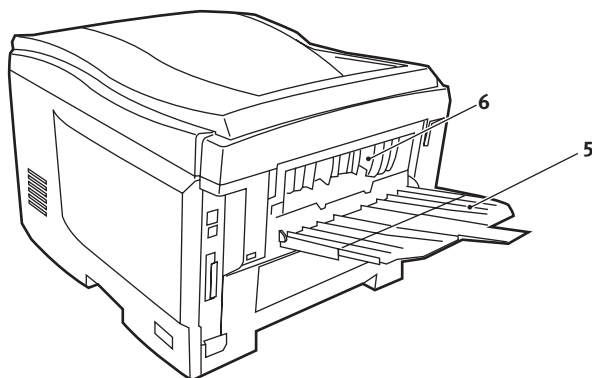
1. Cyan cartridge
3. Yellow cartridge

2. Magenta cartridge
4. Black cartridge

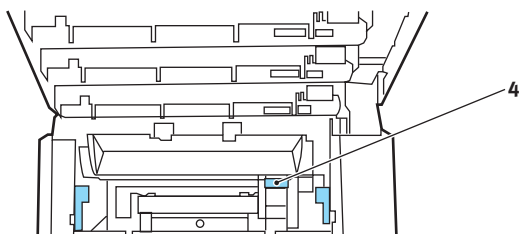
- › Holding the complete assembly by its top centre, lower it into place in the printer, locating the pegs at each end into their slots in the sides of the printer cavity.



9. Lower the top cover down but do not press down to latch it closed yet. This will protect the drums from excessive exposure to room lighting while you check the remaining areas for jammed sheets.
10. Open the rear exit tray (5) and check for a sheet of paper in the rear path area (6)

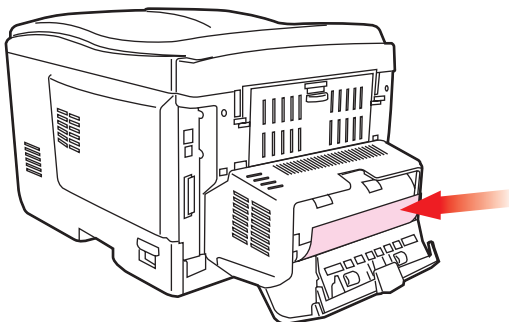


- › Pull out any sheets found in this area.
- › If the sheet is low down in this area and difficult to remove, it is probably still gripped by the fuser. In this case raise the top cover, reach around and press down on the fuser pressure release lever (4).

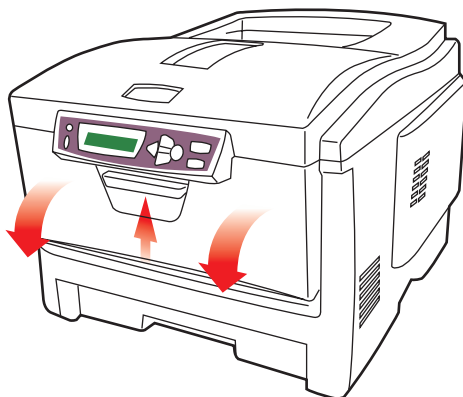


11. If not using the rear exit tray, close it once paper has been removed from this area.

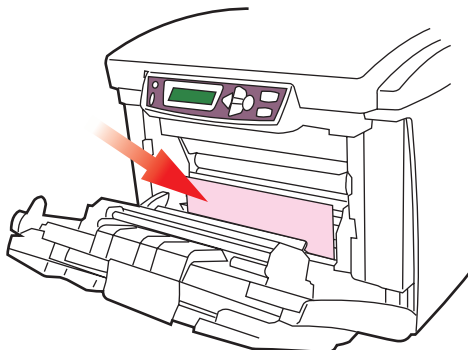
12. If your printer has a duplex unit installed, press the cover release at the centre of the unit, open the cover and remove any sheets in this area, then close the cover



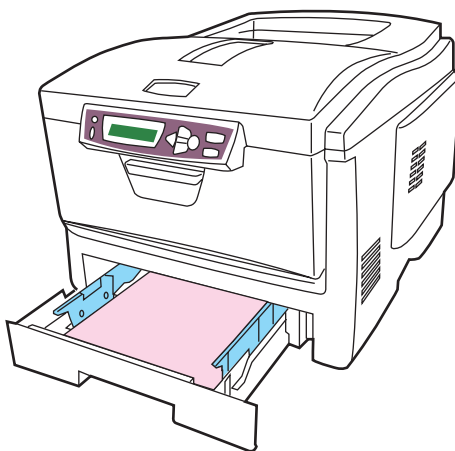
13. Lift the front cover release and pull open the front cover.



14. Check inside the cover for sheets in this area and remove any that you find, then close the cover.



15. Pull out the paper tray in use when the jam occurred and ensure that all paper is stacked properly, is undamaged, and that the paper guides are properly positioned against the edges of the paper stack. When satisfied, replace the tray.



16. Finally, close the top cover and press down firmly at both sides so that the cover latches closed.

When the jam has been cleared, if Jam Recovery is set to ON in the System Configuration Menu, the printer will attempt to reprint any pages lost due to paper jams.

SPECIFICATIONS

Item	Specification
Dimensions	400 x 528 x 330mm (W x D x H)
Weight	25Kg
Print speeds	12 pages per minute colour / 20 pages per minute monochrome
Resolution	600dpi or 600 x 1200dpi
Emulations	PostScript 3 PCL 5c, HP-GL, PCL XL Epson FX IBM Pro Printer III XL
Auto Features	Auto registration Auto density adjustment Auto consumable counter reset
Memory	64MB standard, upgradable to 128MB, 192MB or 320MB
Paper capacity at 80g/m ²	300 sheets in main tray 530 sheets in optional 2nd tray 100 sheets in multipurpose tray (or 50 transparencies or 10 envelopes)
Paper weight	60 ~ 120g/m ² in main tray 60 ~ 176g/m ² in 2nd tray 60 ~ 203g/m ² in multipurpose tray
Paper output	250 sheets in face down (top) stacker @ 80g/m ² 100 sheets in face up (rear) stacker @ 80g/m ²
Printer life	420,000 pages or 5 years
Duty cycle	20,000 pages per month max., 4,000 pages per month average
Toner life	5,000 pages at 5% coverage
Image drum life	17,000 pages at 3 pages per job
Belt life	50,000 A4 pages at 3 pages per job
Fuser life	45,000 A4 pages

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