B4400/B4600 Series

OKI
PRINTING SOLUTIONS

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 Printing Solutions website:

www.okiprintingsolutions.com

$\mathsf{C}\mathsf{E}$ 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.

NOTE
The PostScript Emulation feature described in this guide is only available in some countries.

EMERGENCY FIRST AID

Take care with toner powder:

If swallowed, induce vomiting and seek medical attention. Never attempt to induce vomiting if person is unconscious.

If inhaled, move the person to an open area for fresh air. Seek medical attention.

If it gets into the eyes, flush with large amounts of water for at least 15 minutes keeping eyelids open. Seek medical attention.

Spillages should be treated with cold water and soap to help reduce risk of staining skin or clothing.

IMPORTER TO THE EU

Oki Europe Limited (trading as OKI Printing Solutions)
Central House
Balfour Road
Hounslow
TW3 1HY
United Kingdom

For all sales, support and general enquiries contact your local distributor.

ENVIRONMENTAL INFORMATION

CONTENTS

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 purchasing this 26 pages per minute monochrome page printer.

Your new printer is designed with a range of advanced features to give you crisp black and white pages at high speed on a wide range of print media.

For your information, a summary of the main features of your printer is given below.

PRINTER FEATURES

> Six different models to choose from: B4400, B4400n, B4600, B4600n (n denotes Network Interface Card included), B4600PS (PostScript PS Level 3 emulation DIMM included) and B4600nPS (nPS denotes Network Interface Card and PostScript PS Level 3 emulation DIMM included)

> Memory: 32MB

> High speed printing: 26 pages per minute

> Resolution: 1200 x 600 dpi

> Paper handling: 250 sheets (80g/m²).

> Emulation: Printer Control Language PCL5e, Epson FX, IBM ProPrinter

> Barcodes: embedded for SIDM emulations

> 8MB Flash DIMM: to allow the storage of additional fonts or bar codes

> USB 2.0 and Parallel interfaces

> "Ask Oki" – a user-friendly function that gives a direct link from your printer driver screen (but not illustrated in this guide) to a dedicated web site specific to the exact model you are using. This is where you'll find all the advice, assistance and support you could need to help you get the best possible results from your Oki printer.

Additionally, the following optional features are also available:

> **>** 10/100 BASE-TX Network Interface Card: to make the B4400 and B4600 network compatible

> **>** 16, 32, 64, 128, 256MB RAM DIMM: to extend the main memory of your printer and speed up the processing of large files

> **>** RS232C Card: to provide serial interface capability for the B4400 and B4600

> **>** Second paper tray: to increase your printer's paper handling capacity by 500 sheets (80g/m²)

> **>** Multi-purpose tray: to extend the range of media your printer can accommodate (capacity 100 sheets (80g/m²) or 50 envelopes)

> **>** One of the following can be added:

>> **>** 8MB Flash DIMM: to allow the storage of additional fonts or bar codes for the B4400, B4400n, B4600, B4600n

>> **>** 16MB Flash DIMM: to allow the storage of additional fonts or bar codes for the B4400, B4400n, B4600, B4600n

>> **>** PostScript PS level 3 DIMM: to add PostScript emulation to the B4600 or B4600n. Cannot be added in conjunction with extra flash memory. (See the section entitled "Installing Options" for full details.)

USING YOUR PRINTER

To help you get the most from your printer, the manufacturer has provided a variety of supporting materials. A summary of these materials and their purposes is given in the following chapter.

ABOUT THIS MANUAL

This manual is the user's guide (check the Oki Printing Solutions website, www.okiprintingsolutions.com, for the most up-to-date version) for your printer and forms part of the overall user support listed below:

> **Quick Set-up Guide:** to describe how to unpack, connect and power up your printer.

> This **User's Guide:** to help you to operate your printer and make the best use of its many features. Also included are guidelines for troubleshooting and maintenance to ensure that it performs at its best. Additionally, information is provided for adding optional accessories as your printing needs evolve.

> **Installation Guides:** accompany consumable items and optional accessories to describe how to install them.

> **Online Help:** online information associated with the printer driver and Status Monitor software.

This manual has been written using more than one printer as a model and the illustrations/screenshots reflect this. What you see will be appropriate to the model you are using.

ONLINE USAGE

This manual is intended to be read on screen using an Adobe Acrobat Reader. Use the navigation and viewing tools provided in Acrobat.

You can access specific information in two ways:

> In the list of bookmarks down the left hand side of your screen, click on the topic of interest to jump to the required topic. (If the bookmarks are not available, use the Table of Contents.)

> In the list of bookmarks click on Index to jump to the Index. (If the bookmarks are not available, use the Table of Contents.) Find the term of interest in the alphabetically arranged index and click on the associated page number to jump to the page containing the subject.

PRINTING PAGES

The whole manual, Individual pages, or sections may be printed. The procedure is:

1. From the toolbar, select File > Print (or press the Ctrl + P keys).

2. Choose which pages you wish to print:

   (a) [All pages], for the entire manual.

   (b) [Current page] for the page at which you are looking.
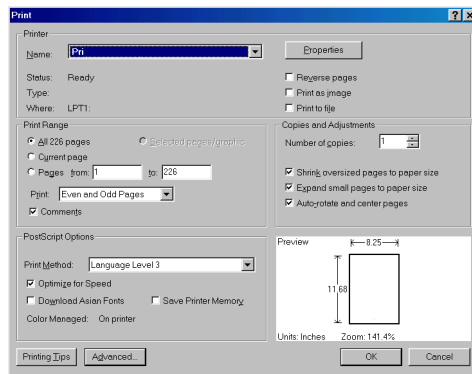
   (c) [Pages from] and [to] for the range of pages you specify by entering their page numbers.

3. Click on **OK**.

ABBREVIATIONS USED

The following abbreviations are used in this manual:

ABBREVIATION	MEANING
Ctrl	Control
dpi	dots per inch
DIMM	Dual In-line Memory Module
n	network card installed
LED	Light Emitting Diode
NIC	Network Interface Card
PCL	Printer Control Language
PS	PostScript (emulation)
PSE	PostScript Emulation
RAM	Random Access Memory
SIDM	Serial Impact Dot Matrix

PRINTER COMPONENTS

Apart from the Operator panels, which are described in the next chapter, the B4400, B4400n, B4600, B4600n, B4600PS and B4600nPS printers look similar from the outside. The important components are identified in the representations below.

1. Operator panel (B4400 shown)

2. Output Stacker (150 sheets, face down)

3. Top cover release button

4. Output Stacker extension

5. Output Stacker extension paper guide

6. Paper Tray content indicator

7. ON/OFF switch

8. Rear Output Stacker (50 sheets, face up)

9. Rear Output Stacker paper guide
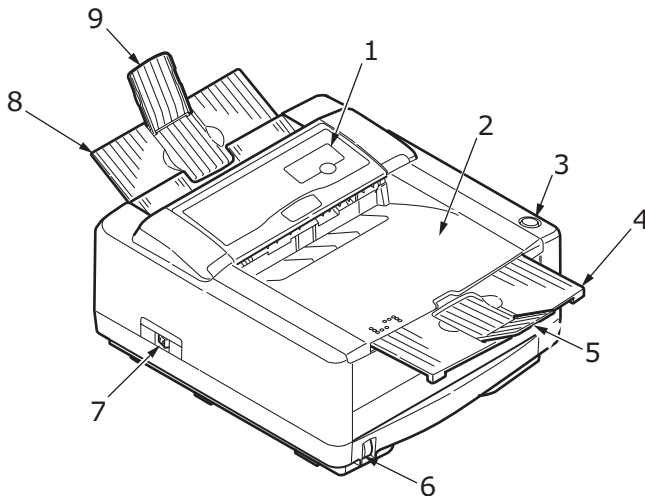
10. LED array

11. Image drum

12. Manual Feed Tray (single sheet) (shown in closed position)

13. Paper Tray (250 sheets)

14. Toner cartridge

15. Fuser unit

16. Top cover
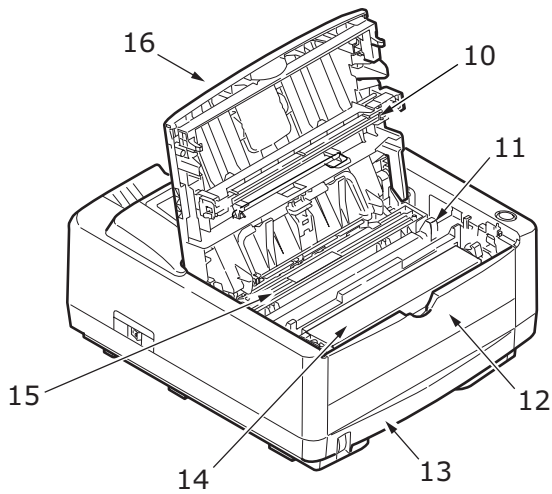
17. Power cable connection

18. Cooling fan

19. USB interface connection

20. Parallel interface connection

21. Second paper tray (optional) connection

22. Network card (standard on B4400n, B4600n, B4600nPS and optional on B4400, B4600, and B4600PS)

23. RS232 serial interface card (optional on B4400, B4600 and B4600PS)

24. Optional Multi Purpose Tray connection
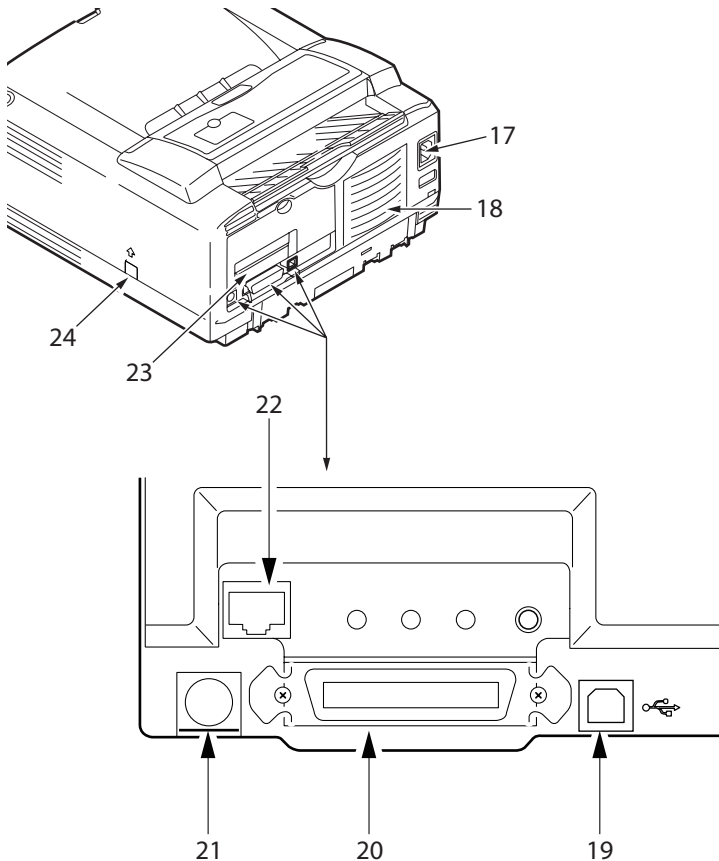
OPERATOR PANELS

This chapter describes the function of the operator panel on your printer. It is useful to describe the Status Monitor software at this point as it provides the B4400, B4400n status information and the equivalent of the menu control panel on the B4600, B4600n, B4600PS, B4600nPS. (See "Printer Drivers" for installation of the Status Monitor.)

B4400, B4400N

OPERATOR PANEL

The B4400, B4400n operator panel consists of 4 indicating LEDs and an **Online** button. From left to right, the LEDs indicate Power On, Ready, Manual feed and Error.

LED INDICATORS

The LED indicators show the status of the printer and have five operating conditions as follows:

> Indicator off

> Indicator on

> Flash 1 - slow blink - 1 long flash every 4 seconds

> Flash 2 - blink - 1 flash per second

> Flash 3 - rapid blink - 4 flashes per second.

All four LED indicators come on momentarily when power is switched on using the main power switch.

Power on LED (green)

This indicator comes on and stays on when the printer is switched on using the main power switch.

Ready LED (green)

> Indicator on - the printer is on-line and ready to receive data.

> Indicator off - the printer is off-line and cannot receive data.

The meaning of the indicator LEDs when they flash (x) is summarised as follows:

FLASH TYPE	READY LED (GREEN)	MANUAL FEED LED (AMBER)	ERROR LED (AMBER)	MEANING
Flash 1 – slow blink	x			The printer is data processing when printing has been suspended.
			x	The image drum requires changing, toner is low or paper tray is empty but no job is processing.

FLASH TYPE	READY LED (GREEN)	MANUAL FEED LED (AMBER)	ERROR LED (AMBER)	MEANING
Flash 2 — blink	x			The printer is receiving and processing data during printing or the printer is resetting.
		x		The printer is requesting that a Manual Feed Tray is used for paper feed.
			x	There is a printing error, for example, a problem with paper, the cover is open or the paper tray is empty while a job is processing.
	x	x	x	There is a minor error with the printer, for example, toner is low and the image drum needs to be changed.
Flash 3 — rapid blink	x	x	x	There is a major error with the printer, requiring a service call, for example, a hardware problem.

ONLINE BUTTON

The primary functions of the **Online** button are activated by pressing the switch momentarily and releasing. The primary functions are as follows:

> Turning the printer off-line.

> Turning the printer on-line (ready).

> Resuming printing after a print overrun, page overflow, or receiving buffer overflow.

> Interrupting data processing when the printer is receiving and processing data.

>   Resuming data processing.

The secondary functions of the **Online** button are activated after turning the printer off line, then pressing and holding the switch for four seconds before releasing. The secondary functions are as follows:

>   Printing the demo and menu pages.

> *NOTE*
> *Demo and menu pages can also be printed using the printer Status Monitor.*

>   Printing any data held in the buffer after printing has been cancelled.

The other functions of the **Online** button are activated after turning the printer off line then pressing and holding the switch for seven seconds before releasing. The other functions are as follows:

>   Printing a cleaning page.

> *NOTE*
> *A cleaning page can also be printed using the printer Status Monitor.*

>   Resetting the printer and clearing the buffer after printing has been cancelled.

> *NOTE*
> *To reset the printer to the default settings of the manufacturer, the **Online** button is pressed and held down while the printer is switched on with the main power switch. The LED indicators blink when the printer has reset to the default settings.*

STATUS MONITOR

After installing the printer driver software onto your computer, the Status Monitor is then installed to indicate what is happening to the printer when it is being used. (See the chapter entitled "Printer Drivers".) This Status Monitor is also used to control and change the various printer settings.

Using the Printer Status Monitor

Viewing the status of the printer, and viewing or changing the printer settings are carried out as follows:

Click on Start > All Programs > Okidata > Status Monitor and select the Status Monitor. The current printer status is shown.
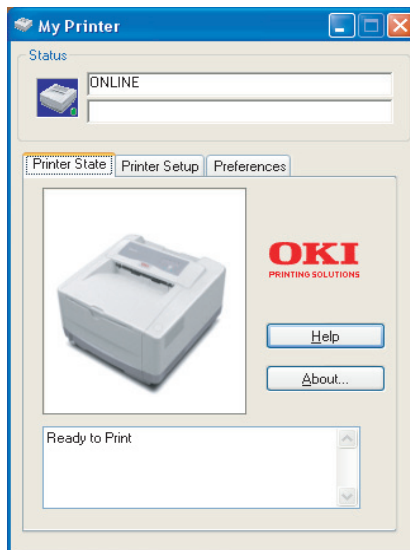
Printer Setup Tab

Selecting the Printer Setup tab provides access to the Printer Menu button, which, when selected, enables you to:

>   Select which printer to connect to via the **Select Printer** button.

>   Configure the printer settings via the **Open Configuration** button.

At all stages, detailed on-line help is provided via the **Help** button.
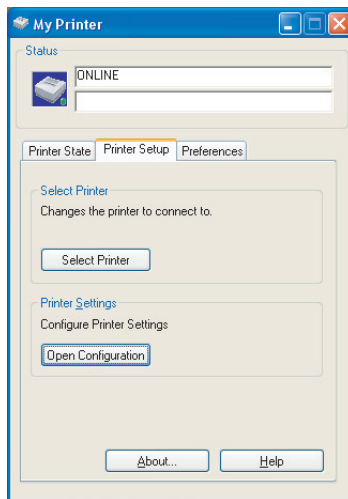
Preferences Tab

Selecting this tab provides the means to choose the information displayed by the Status Monitor and how/when the Status Monitor appears.

The default Alert view setting ensures that the Status Monitor pops up to inform you of a condition that requires your attention e.g. toner low.
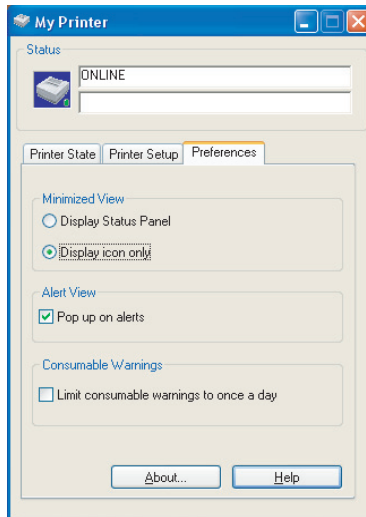
MENU FUNCTIONS

The Printer Menu allows you to view and change the printer's internal settings. You can think of this as the software equivalent of an LCD operator panel display that appears on the front of some printers.

The settings are grouped into categories or "menus" such as Information Menu or Print Menu.

Some of these settings are similar to those found in your printer driver or application software. The settings that you can change using this software act as the printer's defaults. These can be overridden by the settings in your printer driver or application.

For example, if you have set the number of copies in the Printer Menu settings to one, this will be overridden if you select three copies of your document in the printer driver.

Information Menu

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

INFORMATION MENU

ITEM	ACTION	
PRINT MENU MAP	Apply	
PRINT FILE LIST	Apply	
PRINT PCL FONT	Apply	
PRINT PSE FONT	Apply	When PSE is installed
PRINT IBM PPR FONT	Apply	
PRINT EPSON FX FONT	Apply	
PRINT DEMO 1	Apply	

Print menu

This menu provides adjustment of various print job related functions.

PRINT MENU

ITEM	DEFAULT	REMARKS
COPIES	1	
MANUAL FEED MODE	OFF	
PAPER SOURCE	TRAY1	
AUTO TRAY CHANGE	OFF	No optional tray installed
	ON	When Tray2 or MPF is installed
AUTO TRAY SEQUENCE	DOWN	
PAPER SIZE CHECK	ENABLE	
RESOLUTION	600	
TONER SAVE	DISABLE	
ORIENTATION	PORTRT	
LINES PER PAGE	64LNS	
EDIT SIZE	CASSETT	

Media Menu

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

MEDIA MENU

ITEM	DEFAULT	REMARKS
TRAY1 MEDIA SIZE	A4 SIZE	
TRAY1 MEDIATYPE	PLAIN	
TRAY1 MEDIAWEIGHT	MEDIUM	
TRAY2 PAPERSIZE	A4 SIZE	When tray 2 is installed
TRAY2 MEDIATYPE	PLAIN	When tray 2 is installed
TRAY2 MEDIAWEIGHT	MEDIUM	When tray 2 is installed
MPF MEDIA SIZE	DL ENV	When MPF is installed
MPF MEDIATYPE	PLAIN	When MPF is installed
MPF MEDIAWEIGHT	MEDIUM	When MPF is installed
MANUAL TRAY MEDIA SIZE	A4 SIZE	
MANUAL TRAY MEDIA TYPE	PLAIN	
MANUAL TRAY MEDIA WEIGHT	MEDIUM	
CUSTOM PAPER SIZE UNIT	mm	
CUSTOM PAPER WIDTH	210 mm	
CUSTOM PAPER LENGTH	297 mm	

System configuration menu

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

SYSTEM CONFIGURATION MENU

ITEM	DEFAULT	REMARKS
POWER SAVE	10 MIN	
EMULATION	AUTO	
PARA PORT	ASCII	
USB PORT	RAW	
NW PORT	RAW	When NIC is installed
RS PORT	ASCII	When RS232 is installed
CLEAR ALARMS	ON	
CLEAR ERRORS	ON	
MANUAL FEED TIMEOUT	60 SEC	
WAIT TIMEOUT	40 SEC	
PRINT CONFIGURATION AT TONER LOW	CONT	
JAM RECOVERY	ON	
ERROR REPORT	OFF	

SYSTEM CONFIGURATION MENU

ITEM	DEFAULT	REMARKS
STATUS DISPLAY LANGUAGE	ENGLISH	

PCL emulation

This menu controls the printer's PCL emulation.

PCL MENU

ITEM	DEFAULT	REMARKS
FONT SOURCE	RESDENT	
FONT No.	I000	
FONT PITCH	10.00	
FONT SIZE	12.00	Not displayed in default setup
SYMBOL SET	PC-8	
A4 WIDTH	78 COL	
WHITE PAGE SKIP	OFF	
CR FUNCTION	CR	
LF FUNCTION	LF	
UNPRINTABLE AREA	NORMAL	
PEN ADJUST	ON	

PPR Emulation

This menu controls the printer's PPR emulation.

PPR MENU

ITEM	DEFAULT	REMARKS
FONT PITCH	10 CPI	
FONT PITCH IN CONDENSE MODE	12 to 20	
CHARACTER SET	SET-2	
SYMBOL SET	IBM-437	
LETTER O STYLE	DISABLE	
ZERO CHARACTER	NORMAL	
LINE PITCH	6 LPI	
WHITE PAGE SKIP	OFF	
CR FUNCTION	CR	
LF FUNCTION	LF	
LINE LENGTH	80 COL	
FORM LENGTH	A4	
TOF POSITION	0.0 INCH	

PPR MENU

ITEM	DEFAULT	REMARKS
LEFT MARGIN	0.0 INCH	
FIT TO LETTER	DISABLE	
TEXT HEIGHT	SAME	

FX Emulation

This menu controls the printer's FX emulation.

FX MENU

ITEM	DEFAULT	REMARKS
FONT PITCH	10 CPI	
CHARACTER SET	SET-2	
SYMBOL SET	IBM-437	
LETTER O STYLE	DISABLE	
ZERO CHARACTER	NORMAL	
LINE PITCH	6 LPI	
WHITE PAGE SKIP	OFF	
CR FUNCTION	CR	
LINE LENGTH	80 COL	
FORM LENGTH	A4	
TOF POSITION	0.0 INCH	
LEFT MARGIN	0.0 INCH	
FIT TO LETTER	DISABLE	
TEXT HEIGHT	SAME	

Parallel menu

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

PARALLEL PORT MENU

ITEM	DEFAULT	REMARKS
PARALLEL PORT	ENABLE	
BI-DIRECTIONAL	ENABLE	
ECP MODE	ENABLE	
ACK WIDTH	NARROW	
BUSY/ACK OUTPUT SEQUENCE	IN	
I-PRIME	DISABLE	
OFF REC	DISABLE	Only when PSE is installed

RS232C menu

This menu controls the operation of the printer's RS232C data interface.

RS232C MENU

ITEM	DEFAULT	REMARKS
RS232C	ENABLE	Only when RS232C is installed
FLOW CONTROL	DTR HI	Only when RS232C is installed
BAUD RATE	9600	Only when RS232C is installed
DATA BITS	8 BITS	Only when RS232C is installed
PARITY	NONE	Only when RS232C is installed
MIN. BUSY TIME	200mSEC	Only when RS232C is installed
OFF REC	DISABLE	Only when both RS232C and PSE are installed

USB menu

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

USB MENU

ITEM	DEFAULT	REMARKS
USB	ENABLE	
SOFTWARE RESET	DISABLE	
OFF REC	DISABLE	Only when PSE is installed
SERIAL NUMBER	ENABLE	

Network menu

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

NETWORK MENU

ITEM	DEFAULT	REMARKS
TCP/IP	ENABLE	Only when NIC is installed
NETBEUI	ENABLE	Only when NIC is installed
NETWARE	ENABLE	Only when NIC is installed

NETWORK MENU

ITEM	DEFAULT	REMARKS
ETHERTALK	ENABLE	Only when NIC is installed
FRAME TYPE	AUTO	Only when NIC is installed
IP ADDRESS SET	AUTO	Only when NIC is installed
IP ADDRESS		Only when NIC is installed
SUBNET MASK		Only when NIC is installed
GATEWAY ADDRESS		Only when NIC is installed
INITIALIZE NIC?		Only when NIC is installed
WEB/IPP	ENABLE	Only when NIC is installed
TELNET	ENABLE	Only when NIC is installed
FTP	ENABLE	Only when NIC is installed
SNMP	ENABLE	Only when NIC is installed
LAN	NORMAL	Only when NIC is installed
HUB LINK SETTING	AUTO NEGOTIATE	Only when NIC is installed

Memory menu

This menu determines how printer memory is used.

MEMORY MENU

ITEM	DEFAULT	REMARKS
RECEIVE BUFFER SIZE	AUTO	
RSRC SAV	OFF	

System adjustment menu

This menu provides fine adjustment of image position on the printed page in steps of 0.25mm.

SYSTEM ADJUSTMENT MENU

ITEM	DEFAULT	REMARKS
X ADJUST	0.00 mm	
Y ADJUST	0.00 mm	
TRAY ID		
PLACE PAGE	CENTER	

Maintenance menu

This menu provides access to various printer maintenance functions.

MAINTENANCE MENU

ITEM	DEFAULT	REMARKS
RESET MENU		
RESET DRUM COUNT		
POWER SAVE MODE	ENABLE	
TRANSFER SETTING	0	
DARKNESS	0	
PRINT CLEANING PAGE		

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	DEFAULT	REMARKS
TOTAL SHEETS	REMAINING	The total number of sheets the printer has printed.
DRUM LIFE	REMAINING%	An indication of how soon you will need to replace the drum.
TONER LIFE	6K=% 2.5K=%	An indication of how much toner is left in the cartridge.

PRINTING MENU SETTINGS

The menu settings can be printed as a menu map as follows.

Using the Online button

1. Press the **Online** button to take the printer off-line.

2. Press and hold down the **Online** button for at least four seconds, but less than seven seconds.

3. The printer prints a list of the menu settings and a demo print page.

Using the Status Monitor

1. Select Start > All Programs > Okidata > Status Monitor.

2. Select the Printer Setup Tab.

3. Click on the **Open Configuration** button. The Printer Menu is displayed.

4. Expand the Information Menu.

5. To print a demo page or Menu Map, select either "Print Demo1" or "Print Menu Map" and click on the **Apply** button.

B4600, B4600N, B4600PS, B4600NPS

OPERATOR PANEL

The B4600, B4600n, B4600PS, B4600nPS operator panel consists of a menu driven control panel, an LCD display and a LED indicator.
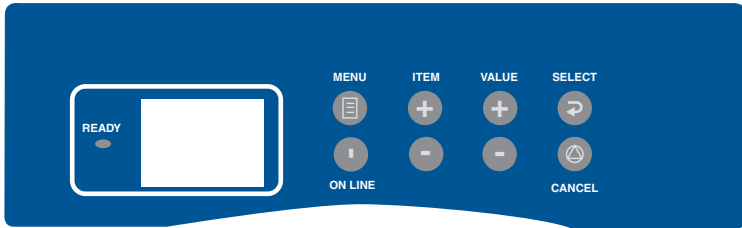
PANEL ELEMENTS

Ready indicator (green). ON - ready to receive data. FLASHING indicates processing data or error.

1. **Liquid crystal display.** (LCD) panel. Two rows of up to 8 alphanumeric digits displaying print status, menu items in menu mode and error messages.

2. **Menu Button.** Press briefly to enter the MENU mode. Press briefly again to select the next menu. Press for more than 2 seconds to scroll through the different menus.

3. **Item (+) button.** Press briefly to scroll forward to the next menu item.

4. **Value (+) button.** Press briefly to scroll forward to the next value setting for each menu item.

5. **Select button.** Press briefly to select the menu, item or value indicated on the LCD panel.

6. **Cancel button.** Press to cancel a print job.

7. **Value (−) button.** Press briefly to scroll backward to the previous value setting for each menu item.

8.   **Item (−) button.** Press briefly to scroll backward to the previous menu item.

9.   **Online button.** Press to switch between online and offline status.

NOTE
*When pressed in Menu mode, the **Online** button returns the printer to ONLINE status. When pressed with DATA PRESENT displayed, it forces the printer to print out the remaining data in the printer. Also when there is an error indicating wrong paper size, pressing the **Online** button forces the printer to print.*

MENU FUNCTIONS

The Printer Menu allows you to view and change the printer's internal settings.

The settings are grouped into categories or "menus" such as Information Menu or Print Menu.

Some of these settings are similar to those found in your printer driver or application software. The settings that you can change using this software act as the printer's defaults. These can be overridden by the settings in your printer driver or application.

For example, if you have set the number of copies in the Printer Menu settings to one, this will be overridden if you select three copies of your document in the printer driver.

Factory default settings are shown in the following tables.

Information Menu

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

INFORMATION MENU

ITEM	ACTION	
MENU MAP	Apply	
PCL FONT	Apply	
PSE FONT	Apply	When PSE is installed
IBM PPR FONT	Apply	
EPSON FX FONT	Apply	

INFORMATION MENU

ITEM	ACTION
DEMO 1	Apply

Print menu

This menu provides adjustment of various print job related functions.

PRINT MENU

ITEM	DEFAULT	REMARKS
COPIES	1	
MANUAL FEED	OFF	
PAPER FEED	TRAY1	
AUTO TRAY SWITCH	OFF	No optional tray installed
	ON	When Tray2 or MPF is installed
TRAY SEQUENCE	DOWN	
PAPER SIZE CHECK	ENABLE	
RESOLUTION	600 DPI	
TONER SAVE MODE	DISABLE	
ORIENTATION	PORTRAIT	
LINES-PER PAGE	64 LINES	
EDIT SIZE	CASSETTE SIZE	

Media Menu

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

MEDIA MENU

ITEM	DEFAULT	REMARKS
TRAY1 PAPERSIZE	A4	
TRAY1 MEDIATYPE	PLAIN	
TRAY1 MEDIAWEIGHT	MEDIUM	
TRAY2 PAPERSIZE	A4	When tray 2 is installed
TRAY2 MEDIATYPE	PLAIN	When tray 2 is installed
TRAY2 MEDIAWEIGHT	MEDIUM	When tray 2 is installed
MPF PAPERSIZE	DL ENV	When MPF is installed
MPF MEDIATYPE	PLAIN	When MPF is installed
MPF MEDIAWEIGHT	MEDIUM	When MPF is installed
MANUAL PAPERSIZE	A4	

MEDIA MENU

ITEM	DEFAULT	REMARKS
MANUAL MEDIATYPE	PLAIN	
MANUAL MEDIAWEIGHT	MEDIUM	
UNIT OF MEASURE	mm	
X DIMENSION	210 mm	
Y DIMENSION	297 mm	

System configuration menu

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

SYSTEM CONFIGURATION MENU

ITEM	DEFAULT	REMARKS
POWER SAVE DELAY TIME	10 MIN	
EMULATION	AUTO EMULATION	
PARA PORT	ASCII	
USB PORT	RAW	
NW PORT	RAW	When NIC is installed
RS PORT	ASCII	When RS232 is installed
CLEARABLE WARNING	ON	
AUTO CONTINUE	ON	
MANUAL TIMEOUT	60 SEC	
WAIT TIMEOUT	40 SEC	
TONER LOW	CONTINUE	
JAM RECOVERY	ON	
ERROR REPORT	OFF	
LANGUAGE	ENGLISH	

PCL emulation

This menu controls the printer's PCL emulation.

PCL MENU

ITEM	DEFAULT	REMARKS
FONT SOURCE	RESDENT	
FONT No.	I000	
FONT PITCH	10.00 CPI	
FONT HGT	12.00	Not displayed in default setup
SYMBOL SET	PC-8	

PCL MENU

ITEM	DEFAULT	REMARKS
A4 PRINT WIDTH	78 COLUMN	
WHITE PAGE SKIP	OFF	
CR FUNCTION	CR	
LF FUNCTION	LF	
PRINT MARGIN	NORMAL	
PEN WIDTH ADJUST	ON	

PPR Emulation

This menu controls the printer's PPR emulation.

PPR MENU

ITEM	DEFAULT	REMARKS
CHARACTER PITCH	10 CPI	
FONT CONDENSE	12 CPI to 20 CPI	
CHARACTER SET	SET-2	
SYMBOL SET	IBM-437	
LETTER O STYLE	DISABLE	
ZERO CHARACTER	NORMAL	
LINE PITCH	6 LPI	
WHITE PAGE SKIP	OFF	
CR FUNCTION	CR	
LF FUNCTION	LF	
LINE LENGTH	80 COLUMN	
FORM LENGTH	11.7 INCH (A4)	
TOF POSITION	0.0 INCH	
LEFT MARGIN	0.0 INCH	
FIT TO LETTER	DISABLE	
TEXT HEIGHT	SAME	

FX Emulation

This menu controls the printer's FX emulation.

FX MENU

ITEM	DEFAULT	REMARKS
CHARACTER PITCH	10 CPI	
CHARACTER SET	SET-2	
SYMBOL SET	IBM-437	

FX MENU

ITEM	DEFAULT	REMARKS
LETTER O STYLE	DISABLE	
ZERO CHARACTER	NORMAL	
LINE PITCH	6 LPI	
WHITE PAGE SKIP	OFF	
CR FUNCTION	CR	
LINE LENGTH	80 COLUMN	
FORM LENGTH	11.7 INCH (A4)	
TOF POSITION	0.0 INCH	
LEFT MARGIN	0.0 INCH	
FIT TO LETTER	DISABLE	
TEXT HEIGHT	SAME	

Parallel menu

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

PARALLEL MENU

ITEM	DEFAULT	REMARKS
PARALLEL	ENABLE	
BI-DIRECTION	ENABLE	
ECP	ENABLE	
ACK WIDTH	NARROW	
ACK/BUSY TIMING	ACK IN BUSY	
I-PRIME	3 MICRO SEC	
OFF REC	DISABLE	Only when PSE is installed

RS232C menu

This menu controls the operation of the printer's RS232C data interface.

RS232C MENU

ITEM	DEFAULT	REMARKS
RS232C	ENABLE	Only when RS232C is installed
FLOW CTL	DTR HI	Only when RS232C is installed
BAUD RATE	9600	Only when RS232C is installed

RS232C MENU

ITEM	DEFAULT	REMARKS
DATA BITS	8 BITS	Only when RS232C is installed
PARITY	NONE	Only when RS232C is installed
MIN. BUSY	200mSEC	Only when RS232C is installed
OFF REC	DISABLE	Only when both RS232C and PSE are installed

USB menu

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

USB MENU

ITEM	DEFAULT	REMARKS
USB	ENABLE	
SOFT RESET	DISABLE	
OFF REC	DISABLE	Only when PSE is installed
SERIAL NUMBER	ENABLE	

Network menu

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

NETWORK MENU

ITEM	DEFAULT	REMARKS
TCP/IP	ENABLE	Only when NIC is installed
NETBEUI	ENABLE	Only when NIC is installed
NETWARE	ENABLE	Only when NIC is installed
ETHERTALK	ENABLE	Only when NIC is installed
FRAME TYPE	AUTO	Only when NIC is installed
IP ADDRESS SET	AUTO	Only when NIC is installed
IP ADDRESS		Only when NIC is installed
SUBNET MASK		Only when NIC is installed
GATEWAY ADDRESS		Only when NIC is installed
INITIALIZE NIC?		Only when NIC is installed
WEB/IPP	ENABLE	Only when NIC is installed
TELNET	ENABLE	Only when NIC is installed
FTP	ENABLE	Only when NIC is installed

NETWORK MENU

ITEM	DEFAULT	REMARKS
SNMP	ENABLE	Only when NIC is installed
LAN	NORMAL	Only when NIC is installed
HUB LINK SETTING	AUTO NEGOTIATE	Only when NIC is installed

Memory menu

This menu determines how printer memory is used.

MEMORY MENU

ITEM	DEFAULT	REMARKS
RECEIVE BUFF SIZE	AUTO	
RSRC SAV	OFF	

System adjustment menu

This menu provides fine adjustment of image position on the printed page in steps of 0.25mm.

SYSTEM ADJUSTMENT MENU

ITEM	DEFAULT	REMARKS
X ADJUST	0.00 mm	
Y ADJUST	0.00 mm	
PCL MANUAL ID	2	
PCL TRAY1 ID	1	
PCL TRAY2 ID	5	
PCL MP ID	6	
PLACE PAGE	CENTER	

Maintenance menu

This menu provides access to various printer maintenance functions.

MAINTENANCE MENU

ITEM	DEFAULT	REMARKS
EEPROM RESET		
DRUM COUNT RESET		
POWER SAVE	ENABLE	
SETTINGS	0	
DARKNESS	0	

MAINTENANCE MENU

ITEM	DEFAULT	REMARKS
CLEANING PAGE		

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	DEFAULT	REMARKS
DRUM LIFE	REMAINING%	An indication of how soon you will need to replace the drum.
TONER	6K=% 2.5K=%	An indication of how much toner is left in the cartridge.

PRINTING MENU SETTINGS

Current menu settings can be confirmed by printing a Menu Map.

1. Press the **Menu** button until the Information Menu is available.

2. Press the **Item** button until the display prompts you to print the menu map.

3. Press the **Select** button to print the menu map.

PAPER RECOMMENDATIONS

For guidance on the media you can use with your printer, which input tray and which ejection method to use, see the section entitled "Paper and tray information" in the "Specifications" chapter.

PAPER AND ENVELOPE TYPES

The manufacturer of this printer recommends the following guidelines when selecting paper and envelopes for use in your printer:

> Paper and envelopes should be stored flat and away from moisture, direct sunlight and heat sources.

> Use a smooth finished paper such as copier or laser type paper with a Sheffield (smoothness) rating of 250 or less. If in doubt, please ask your paper supplier.

> Use envelopes designed for use in laser type printers.

> The use of heavily laid or textured paper will seriously impact on the life of the image drum.

> Do not use very smooth, shiny/glossy paper.

> Do not use heavily embossed headed paper.

> Avoid printing on both sides and putting paper through the printer twice.

> Avoid using paper with perforations, cut-outs and ragged edges.

> Do not use envelopes with windows or metal clasps.

> Do not use envelopes with self sealing flaps.

> Avoid using damaged or curled envelopes.

TRANSPARENCIES AND ADHESIVE LABELS

The manufacturer of this printer recommends the following guidelines when selecting transparencies and adhesive labels for use in your printer:

> **>** Always manually feed single sheets using a Manual Feed Tray.

> **>** Always use rear output.

> **>** Media must be designed for use in laser printers or photocopiers and must be able to withstand 200°C for 0.1 sec.

> **>** Do not use media designed for use in colour laser printers and photocopiers.

> **>** Labels should cover entire carrier sheet.

> **>** Carrier sheet or adhesive must not be exposed to any part of the printer.

INSTALLING PAPER

1. Remove the paper tray from the bottom of the printer and place plain paper in the tray, keeping the level of the paper in the tray below the guide arrowheads shown on the paper guides (1).
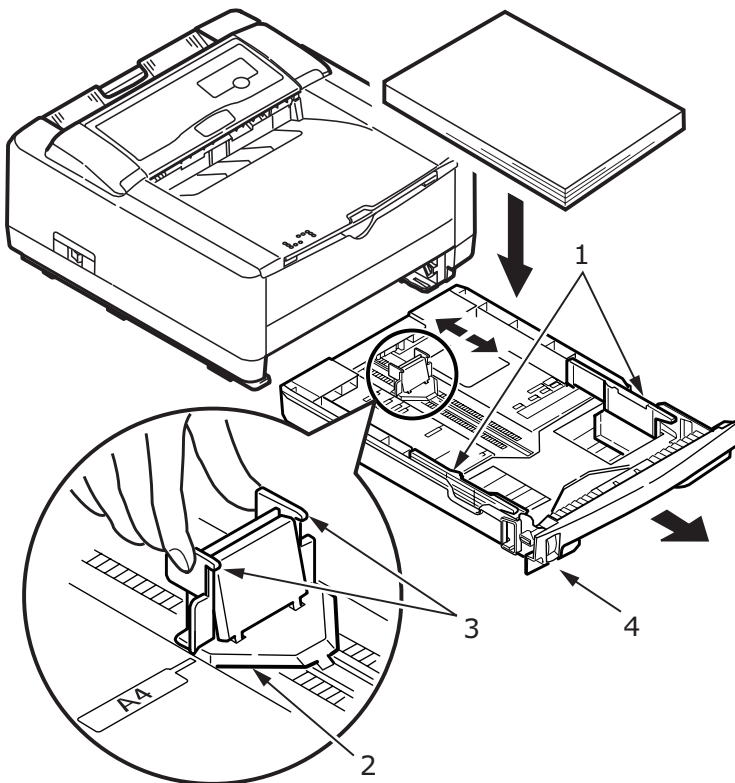
2. Adjust the rear paper support (2) to the size of paper you are using by gripping the lugs (3), tilting and sliding the support forwards or backwards as necessary.

3. Adjust the paper guides (1). It is important to adjust the paper guides correctly to ensure that the paper is not skewed in the print process. Paper jams may occur if this operation is not carried out correctly.

4. Replace the tray in the printer. The paper level indicator (4) provides a visual indication of how much paper is left in the tray.

FACE UP AND FACE DOWN PRINTING

For face down printing, make sure the Rear Output Stacker is closed (the paper exits from the top of the printer). The Output Stacker on the top of the printer stacks printed pages face down, capacity 150 sheets of weight 80 g/m². Pages printed in reading order (page 1 first) will be sorted in reading order (last page on top, facing down).

For face up printing, make sure the face up Rear Output Stacker is open and the paper guide is extended if required. In this condition, paper will exit via this path, regardless of driver settings. Paper is stacked in reverse order, capacity 50 sheets of weight 80 g/m².

Always use this tray in conjunction with the Manual Feed Tray for heavyweight stocks to reduce the possibility of paper jams.

AUTOMATIC FEED SEQUENCE

With no optional feed trays installed, the Autotray function in the Print Menu is set by default to OFF and the Tray sequence function is set to DOWN. Ensure that the Autotray function is set to ON (default) when you have either or both optional feed trays installed. In this way, if a tray runs out of paper, automatic feed will take place in the order Tray 1, Tray 2 (if fitted), optional Multi Purpose Tray (if fitted), provided that these trays are set up for identical media.

PRINTING ENVELOPES

1. Pull out the Rear Output Stacker (1) until it locks and lift out the paper guide (2).
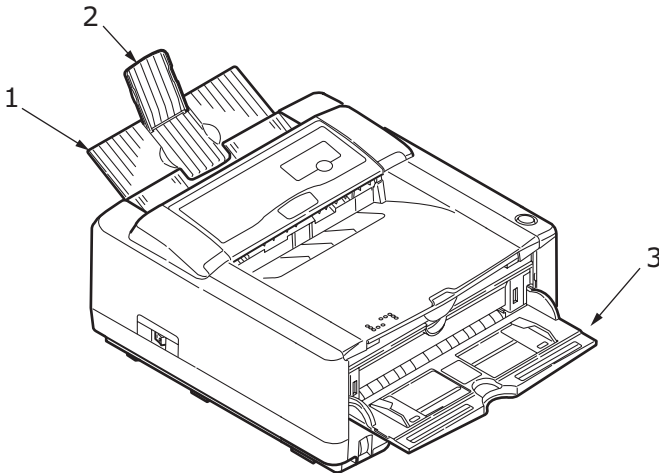
2. Pull down the Manual Feed Tray (3) and adjust the paper guides to the width of the envelope.

3. Insert the envelope, flap down and to the left, until the printer grips it.

4. Set envelope size and landscape orientation in your software, then issue the print command.

HEAVYWEIGHT PAPER OR CARDSTOCK

The normal paper path from a main paper tray to the top output stack involves two complete U-turns. This may sometimes cause very heavyweight paper or cardstock to jam or misfeed.

Use the Manual Feed Tray to feed this type of paper and the Rear Output Stacker to collect printed output. This gives a nearly straight paper path through the machine and may prove more reliable in this type of application.

PAPER FEED, SIZE AND MEDIA SETTING

The process used to fuse (fix) the printed image to the paper involves a mixture of pressure and heat. Too much heat will cause lightweight paper to crease or curl and corrugations in transparencies. Too little heat will cause the image not to fuse fully into heavyweight paper.

NOTE
Although media properties can be set in the printer driver for particular jobs, when filling a tray with media it is recommended that you manually set the printer to match the media as described here.

B4400, B4400N

The print quality for different types of paper is adjusted by changing the media type as follows:

1. Start the Status Monitor.

2. Select the Printer Setup tab and click on the **Printer Menu** button.

3. Select the Paper tab. Click on the button for the paper tray being used. Adjust the media type to the required setting and, if necessary, the paper size to the size of the paper being used.

4. Click on the **Apply** button, **Close** button then **OK** button to set the printer to the new media type and printing quality.

Printing transparencies

When printing transparencies, the Manual Feed Tray must be used and the media type changed to transparencies as follows:

> **CAUTION!**
>
> **Damage to the printer may occur if the incorrect setting is used when printing transparencies.**

1. Open the Manual Feed Tray on the printer and place the transparency face up between the paper guides.

2. Adjust the paper guides to the width of the transparency.

3. Start the Status Monitor.

4. Select the Printer Setup tab and click on the **Printer Menu** button.

5. Select the Paper tab and click on the **Manual Feed** button. Adjust the media type to Transparency and the paper size to the size of the transparency being used.

6. Click on the **Apply** button, **Close** button then **OK** button to set the printer for transparencies.

NOTE
Remember to reset the printer for normal paper after printing transparencies.

B4600, B4600ɴ, B4600PS, B4600ɴPS

Using the control panel on your printer, you can choose:

>   which paper to use

>   the size of the paper you wish to use

>   the weight of the paper (thickness)

>   the type of paper

Paper feed selection

The paper feed, paper size, paper weight and media type can be set manually on the printer using the control panel as follows.

1.   Press the **Online** button to return the printer to offline status.

2.   Press the **Menu** button repeatedly until PRINT MENU is displayed, then press the **Select** button.

3.   Press the **Item** button until the required paper feed is displayed.

4.   Press the **Select** button. A plus (+) appears next to the selected paper feed.

NOTE
When the AUTO TRAY SWITCH is set to ON and more than one paper tray is fitted, paper feed automatically switches to the next available paper tray, providing non-stop printing.

Paper size

Set the paper size as follows.

NOTE
> *When using paper trays, standard paper sizes are recognised automatically with CASSETTE SIZE (default setting) selected. Paper size need only be set for custom paper sizes.*

> *When using the Manual Feed Tray, the paper size has to be selected.*

---

1. Press the **On Line** button to return the printer to offline status.

2. Press the **Menu** button until PRINT MENU is displayed, then preset Select button.

3. Press either **Item (+)** or **(-)** button repeatedly until EDIT SIZE is displayed.

4. Press either **Value (+)** or **(-)** button until the required paper size is displayed, then press the **Select** button. A plus (+) appears next to the selected paper size.

5. Press the **Online** button to return the printer to ONLINE status.

6. Select the correct paper settings in the printer driver before printing the file.

Media type and weight

Set media type and weight as follows:

CAUTION!

If media type or media weight are not correctly set, print quality deteriorates and the fuser roller may be damaged.

1. Press the **Online** button to return the printer to offline status.

2. Press the **Menu** button until MEDIA MENU is displayed, then press the **Select** button.

3. Press the **Item (+)** or **(-)** button until MEDIA TYPE or MEDIA WEIGHT for the required tray is displayed.

4. Press the **Value (+)** or **(-)** button until the required paper type or weight is displayed, then press the **Select** button. A plus (+) appears next to the selected paper type or weight.

5. Press the **Online** button to return the printer back to online status.

Select the correct paper settings in the printer driver before printing the file.

INTERFACES

Your printer is equipped with a selection of data interfaces:

1. **Parallel** – For direct connection to a PC. This port requires a bi-directional (IEEE 1284 compliant) parallel cable.

2. **USB** – For connection to a PC running Windows 98 or above (not Windows 95 upgraded to Windows 98) or Macintosh. This port requires a cable conforming to USB version 2.0 or above.

   The operation of a printer is not assured if a USB compatible device is connected concurrently with other USB-compatible machines.

   When connecting multiple printers of the same type, they appear as *****, ***** (2), ***** (3), etc. These numbers depend on the order of connecting or turning on each printer.

3. **Serial** – for direct connection to a device that uses serial printing (available as an option).

4. **Ethernet** – For network cable connection. This port is standard on the B4400n, B4600n and B4600nPS and optional on the B4400, B4600, B4600PS.

NOTE
> *It is not recommended that you connect serial/USB and parallel cables to the printer simultaneously.*

> *Interface cables are not supplied with your printer.*

If you are connecting your printer directly to a stand alone computer proceed to the chapter entitled "Printer Drivers".

If your printer is to be installed as a network printer, please refer to the relevant section in the User's Guide for the network interface card for further details on how to configure the network connection before installing the printer drivers.

NOTE
Administrator's authority is required when installing a network connection.

PRINTER DRIVERS

This chapter describes how to install a printer driver on two types of operating system – Windows and Macintosh.

The printer drivers are all contained on the printer driver CD-ROM (CD1). Please refer to the readme file on this CD for the latest information on printer driver installation.

WINDOWS OPERATING SYSTEMS

1. With Windows running, insert the printer driver CD-ROM (CD1) into your CD-ROM drive.

2. If the CD does not run automatically, use Start > Run... and enter E:\setup (where E is your CD-ROM drive) in the Open field.

3. Click on **OK**.

4. Select your printer model.

5. Click on Driver Installation > Install Printer Driver and follow the on-screen prompts to complete your printer driver installation.

6. For the B4400, B4400n only, once the driver has been installed, the Status Monitor is then automatically installed.

NOTE
Take time to note the facilities available on the CD. For example, the Help facility briefly describes each of the Software Utilities.

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7. For the B4600, B4600n, B4600PS, B4600nPS, once the driver has been installed, the operator panel language switching utility will run automatically. Choose your preferred operating language.

INSTALLED OPTIONS

Certain options may have been installed in your printer. For those that are installed, check that they appear enabled on the Menu Map (See "Confirming current settings" in "Operator panels".)

Ensure that your options are set up in the printer driver(s) by making the appropriate settings on the Device Options tab (PCL emulation) and/or Device Settings tab (PS emulation) described in the chapter entitled "Operation".

MACINTOSH OPERATING SYSTEMS

Please refer to the readme file on CD1 for details on installing the appropriate Macintosh drivers.

INSTALLED OPTIONS

Ensure that any installed options are enabled in the printer driver.

CHOOSING A MAC DRIVER

The B4400, B4400n, B4600, B4600n models allow you to use a PCL Mac driver.

The B4600PS, B4600nPS models must always use a PS driver on Macintosh operating systems.

OPERATION

This chapter provides a broad outline of how to operate your printer from either a Windows or a Macintosh environment. In the former, while PCL emulation is available on all printer models, PS emulation is standard only on the B4600nPS model and is optional on the B4600 and B4600n models.

PRINTER SETTINGS IN WINDOWS

> *NOTE*
> *The illustrations in this guide relate to Windows 2000 PCL and PS emulations – other operating system windows may appear slightly different but the principles are the same.*

The operator panel controlled menus and Status Monitor controlled menus (described in the chapter entitled "Operator panels") 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 and Status Monitor menus, and you print documents from Windows, the settings in the Windows printer driver will override those settings in the operator panel and Status Monitor menus.

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 settings available from within your application are only those which you may want to change for specific applications or documents. Settings you change here will usually only last for as long as the particular application program is running.

PCL EMULATION

The tabs available are the **Setup Tab**, the **Job Options Tab** and the **Image Tab**.

Setup Tab.
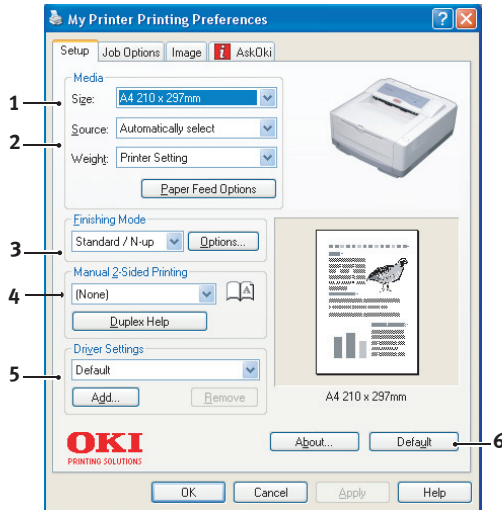
1. Paper size should be the same as the page size of your document (unless you wish to scale the printout to fit another size), and should also be the same as the size of paper you will feed into the printer.

2. You can choose the source of the paper to feed, which may be Tray 1 (the standard paper tray), Manual Feed Tray, Tray 2 (if you have the optional second paper tray installed) or the optional Multi Purpose feeder. You can also click on the appropriate part of the screen graphic to select your preferred tray.

   If you select manual, the Weight selection box becomes visible. You can leave the setting at Printer Setting or select as required.

3. A variety of document finishing options can be selected, such as normal one page per sheet, or N-up (where N can be 2 or 4) for printing scaled down pages at more than one page per sheet.

4. Under Manual 2-sided Printing, you can choose to print on one side of a sheet only or to use 2-sided printing (duplex printing). Your printer allows you to carry out manual duplex printing, meaning you must pass the paper through the printer twice. For more information, see "2-sided printing (Windows only)" on page 69. The Duplex Help button also offers guidelines on how to carry out manual duplex printing.

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.

Job Options tab
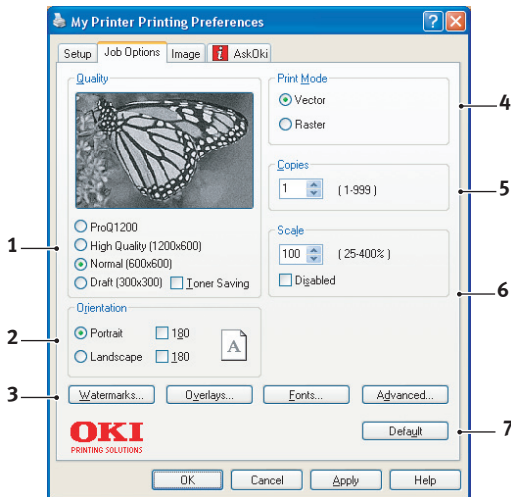
1. The output resolution of the printed page can be set as follows.

> The ProQ1200 setting prints at 2400 x 600dpi. This setting requires the most printer memory and takes the longest to print. Your printed pages can be scaled to fit larger or smaller stationery. It is the best option for printing photographs.

> The Fine/Detail setting prints at 1200 x 600dpi is the best option for printing vector objects such as graphics and text.

> The Normal setting prints at 600 x 600dpi and is suitable for most printing jobs.

> The Draft setting prints at 300 x 300dpi and is suitable for printing draft documents that contain mainly text. You can select Toner Saving to save toner for some print jobs.

2. Page orientation can be set to either portrait (tall) or landscape (wide). Both views can be rotated by 180 degrees.

3. You can print watermark text behind the main page image. This is useful for marking documents as draft, confidential, etc.

   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 Overlays. For more information on "Overlays and Macros (Windows only)" on page 71. The Overlays button also offers guidelines on how to carry out manual duplex printing.

4. In Raster (bitmap) mode, processing of the page image is done in the computer leaving little processing for the printer to do, although the file size may be large. In Vector mode, file sizes may be smaller and so transmission over a network, for example, may be faster. These effects are more pronounced for graphics printing than for text printing.

5. You can select up to 999 copies to print consecutively, although you will need to top up the paper tray during such a long print run.

6. Your printed pages can be scaled to fit larger or smaller stationery, within a range of 25% to 400% of the original size.

7. A single on-screen button restores the default settings.

Image tab
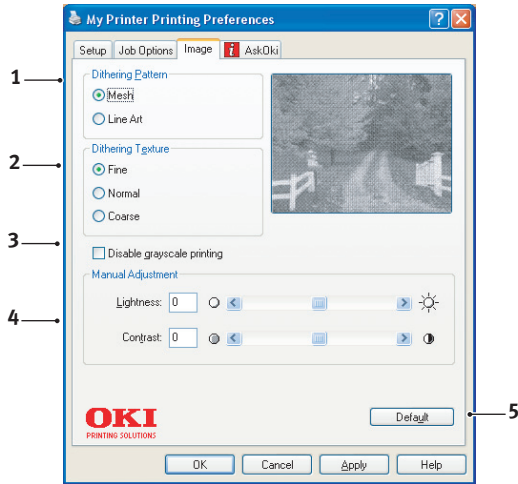
**1.** Dithering produces an intermediate greyscale by adjusting the combination of dots used in printing. Selecting a setting determines the degree of detail with which a graphics image will be printed. Mesh determines that a screen of dots is used for dithering while Line Art determines that an array of lines is used for dithering.

2. Select dithering texture by setting the size of dots used in the halftone screen.

3. Set this control to print greyscale effects in black without dithering. Select the check-box to disable greyscale printing or de-select the check-box to enable greyscale printing.

4. You can manually adjust lightness (the higher the setting the lighter the print) and contrast (the higher the setting the greater the contrast).

PS emulation

The tabs available are the **Layout Tab**, the **Paper/Quality Tab** and the **Job Options Tab**.
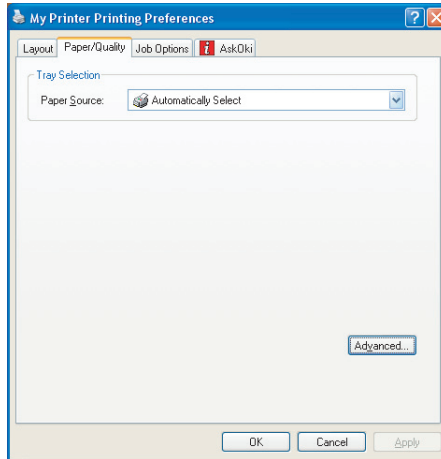
Layout tab
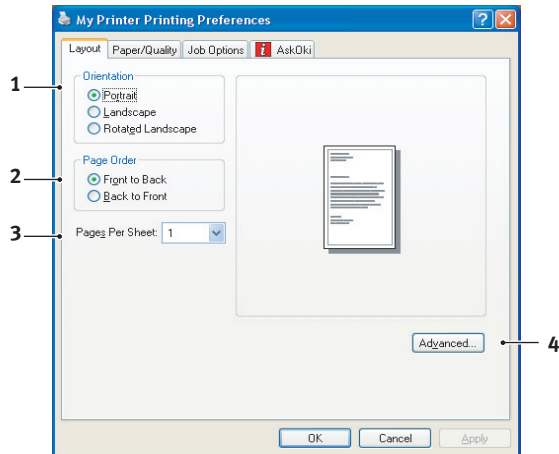
1. Page orientation can be set to portrait (tall), landscape (wide) or landscape rotated by 180 degrees.

2. Printed page order can be set as front to back or back to front of the document.

3. Set the number of pages to be printed on a single sheet.

**4.** Click the **Advanced** button to be able to set further document options as follows:
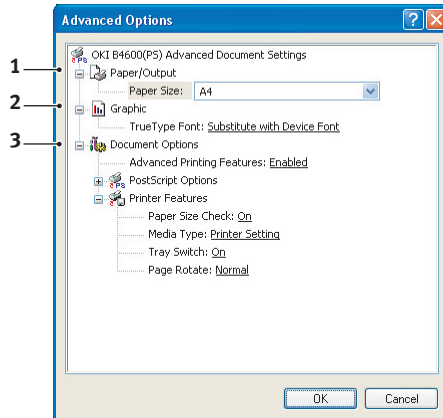
1. Select the required printed paper size.

2. You can substitute another font for TrueType Font.

3. You can set other document options as required, including PostScript options and printer features.

Paper/Quality tab

You can set the paper source or leave it as automatic selection
and by using the **Advanced** button you have access to the same
set of options as described above for the Layout Tab.

Job Options tab
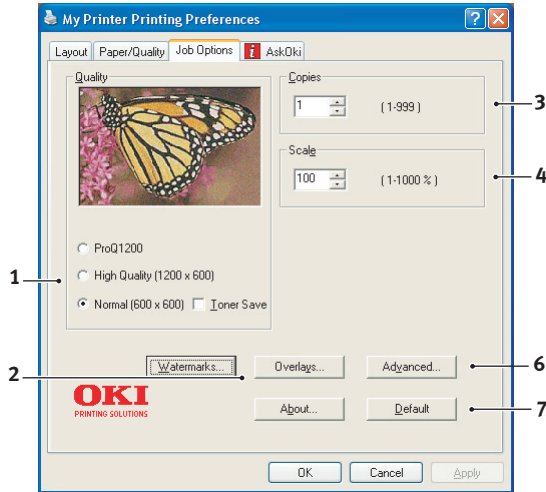
1. The output resolution of the printed page can be set as follows.

> **>** The ProQ1200 setting prints at 2400 x 600dpi. This setting requires the most printer memory and takes the longest to print. It is the best option for printing photographs.

> **>** The High Quality setting prints at 1200 x 600dpi and is the best option for printing vector objects such as graphics and text.

> **>** The Normal setting prints at 600 x 600dpi and is suitable for most printing jobs. You can select Toner Saving to save toner for some print jobs

2. You can print watermark text behind the main page image. This is useful for marking documents as draft, confidential, etc.

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 Overlays. For more information on "Overlays and Macros (Windows

only)" on page 71. The Overlays button also offers guidelines on how to carry out manual duplex printing.

3. You can select up to 999 copies to print consecutively, although you will need to top up the paper tray during such a long print run.

4. Your printed pages can be scaled to fit larger or smaller stationery.

5. Using the **Advanced** button gives you access to the facility to set mirror image printing or negative image printing.

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

SETTING FROM WINDOWS CONTROL PANEL

When you open the driver properties window directly from Windows, rather than from within an application program, a somewhat more extensive range of settings is provided. Changes made here will generally affect all documents you print from Windows applications, and will be remembered from one Windows session to the next.

PCL emulation

The main tabs are the **General Tab**, **Advanced Tab** and **Device Options Tab**.

General tab
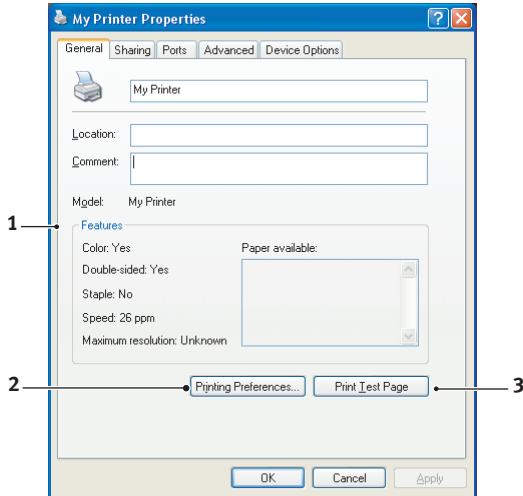
1. This area lists some of the main features of your printer, including optional items.

2. This button opens the same windows as described earlier for items which can be set from within application programs. Changes you make here, however, will become the new default settings for all Windows applications.

3. This button prints a test page to ensure that your printer is working.

NOTE
The above features are provided by the Windows 2000 operating system and will vary with other operating systems.

Advanced tab
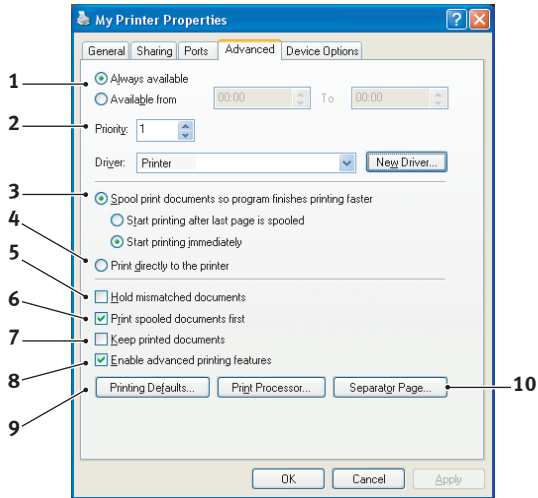
1. You can specify which times of day your printer will be available.

2. Indicates current priority, from 1 (lowest) to 99 (highest). Highest priority documents will print first.

3. Specifies that documents should be spooled (stored in a special print file) before being printed. The document is then printed in the background, allowing your application program to become available more quickly. Options follow:

This specifies that printing should not start until the last page has been spooled. If your application program needs a lot of time for further computation in the middle of printing, causing the print job to pause for more than a short period, the printer could prematurely assume that the document has finished. Selecting this option would prevent that situation, but printing will be completed a little later, as the start is delayed.

This is the opposite choice to the one above. Printing starts as soon as possible after the document begins spooling.

4. This specifies that the document should not be spooled, but printed directly. Your application will not normally be ready for further use until the print job is complete. This requires less disk space on your computer, since there is no spool file.

5. Directs the spooler to check the document setup and match it to the printer setup before sending the document to print. If a mismatch is detected, the document is held in the print queue and does not print until the printer setup is changed and the document restarted from the print queue. Mismatched documents in the queue will not prevent correctly matched documents from printing.

6. Specifies that the spooler should favour documents which have completed spooling when deciding which document to print next, even if completed documents are lower priority than documents which are still spooling. If no documents have completed spooling, the spooler will favour larger spooling documents over shorter ones. Use this option if you want to maximise printer efficiency. When this option is disabled the spooler chooses documents based only on their priority settings.

7. Specifies that the spooler should not delete documents after they are completed. This allows documents to be re submitted to the printer from the spooler instead of printing again from the application program. If you use this option frequently it will require large amounts of disk space on your computer.

8. Specifies whether advanced features, such as pages per sheet, are available, depending on your printer. For normal printing keep this option enabled. If compatibility problems occur you can disable the feature. However, these advanced options may then not be available, even though the hardware might support them.

9. This button provides access to the same setup windows as when printing from applications. Changes made via the Windows Control Panel become the Windows default settings.

10. You can design and specify a separator page that prints between documents. This is particularly useful on a

shared printer to help each user find their own documents in the output stack.

NOTE
The above features are provided by the Windows 2000
operating system and will vary with other operating systems.
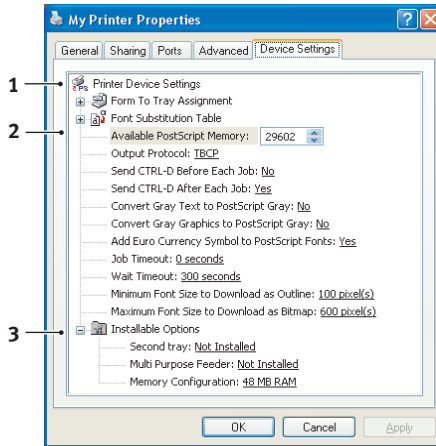

Device Options tab
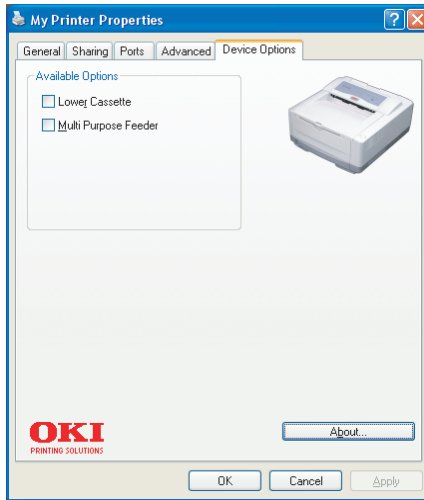
In this window you can select which optional upgrades are installed on your printer. See the chapter entitled "Installing options".

PS emulation

The main tabs are the **General Tab**, **Advanced Tab** and **Device Settings Tab**. The General and Advanced tabs are the same as for PCL emulation described earlier.

Device Settings tab

1.   You can set the desired paper sizes in each of the
available paper feed trays.

2.   You can make a variety of font settings depending on your
application.

3.   You can set which optional upgrades are installed on your
printer. See the chapter entitled "Installing options".

PRINTER SETTINGS IN MACINTOSH

Refer to the readme file on the drivers CD, CD1, and the online
help provided in the driver software.

2-SIDED PRINTING (WINDOWS ONLY)

To carry out 2-sided, or Manual Duplex Printing you must pass paper through the printer twice. You can carry out 2-sided printing using the Paper Tray or the Manual Feed Tray.

2-sided Printing is supported on Windows operating systems only.

MANUAL DUPLEX PRINTING USING THE PAPER TRAY

1. Ensure that there is enough paper in the Paper Tray to carry out the print job.

2. Select File -> Print and click the **Preferences** button. In the 2-sided printing drop down menu, select either "Long Edge" or "Short Edge" according to your printing preferences. If you require further information, click the **Duplex Help** button. Then, Click the **Print** button.
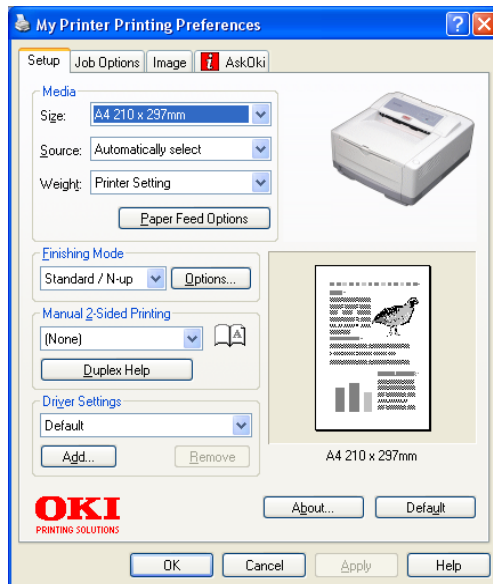
3. Every second page of your document is printed first. When this is complete, a message appears on screen prompting you to take the paper, flip it and replace it in the Paper Tray.

4. Open the Paper Tray.

5. Take the printed paper from the Output Stacker and place it in the Paper Tray, ensuring that the printed side is facing up and the bottom of the page facing into the printer.

6. Close the Paper Tray and press the **Online** button. The message window should disappear from your screen and the document finishes printing the remaining pages of your document.

MANUAL DUPLEX PRINTING USING THE MANUAL FEED TRAY

> *NOTE:*
> *When using the Manual Feed Tray, feed pages one sheet at a time. You can use either the standard Manual Feed Tray or the optional Multi Purpose Tray, providing that this is installed.*

1. Position the paper guides on the Manual Feed Tray according to the paper size.

2. Place paper one sheet at a time in the Manual Feed Tray. The paper is automatically gripped in position.

3. Select File -> Print to display the Print dialog box.

4. Click the **Preferences** button. On the 2-sided printing drop down menu, select either "Long Edge" or "Short Edge" according to your printing preferences. If you require further information, click the **Duplex Help** button

5. When every second page has printed, take the paper from the output stacker.

6. Set the paper one page at a time in the Manual Feed Tray with the printed side facing down and the top of the page facing into the printer. Ensure that the paper is gripped in place.

7. Press the **Online** button. The remaining pages of your document print on the blank side of the paper, one sheet at a time as you feed it into the Manual Feed Tray.

OVERLAYS AND MACROS (WINDOWS ONLY)

WHAT ARE OVERLAYS AND MACROS?

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

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

> *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...** dialogue.

3. Make sure that the selected printer name (1) is that of your PostScript printer driver.

4. Select the **Print To File** (2) option.

5. Click the **Properties** button (3) to open the Document Properties window.

6. On the 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.
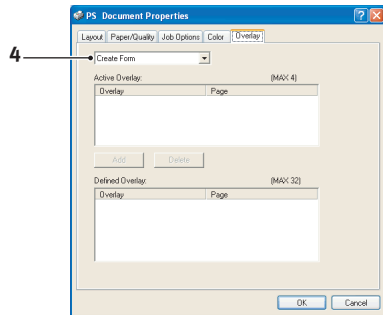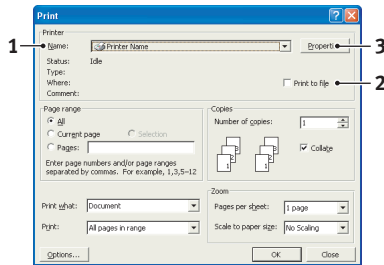
CREATE AND DOWNLOAD THE PROJECT

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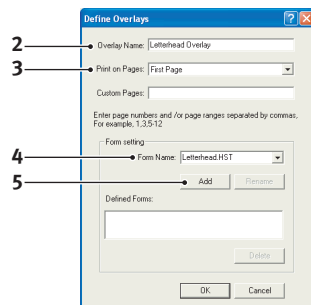
If you forgot to note the overlay names when you created them, you can find them using Storage Device Manager to view the project file, or the printer's Information Menu to print a file list and identify them from there.

**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).
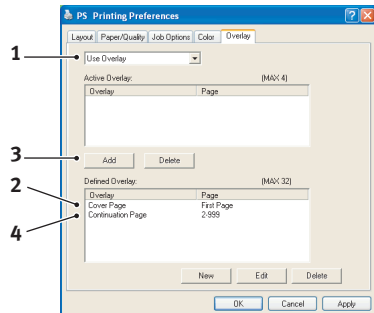
6. If you want to use another overlay, in this case it is the Continuation page, click the second overlay (4) and then click the **Add** button (3) again.

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.
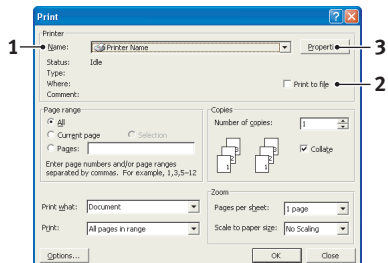
5. When prompted for a print file name, enter a meaningful name with the extension .PRN .

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.

Note that the names are case sensitive.

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).
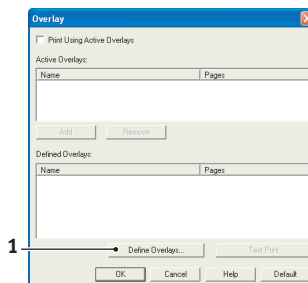
5. In the Define Overlays window, enter the **name** (a) and **I**D (b) of the required overlay, and define which **page(s)** (c) of your documents will use this overlay. Then click the **Add button** (3) to add this overlay to the list of defined overlays. Repeat for any other related overlays. When done, click the **Close button** (4) to close the window.
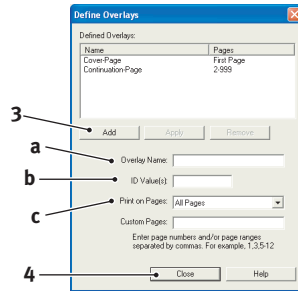
The example illustrated shows two overlays defined, one for a cover page and one for continuation pages.

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.
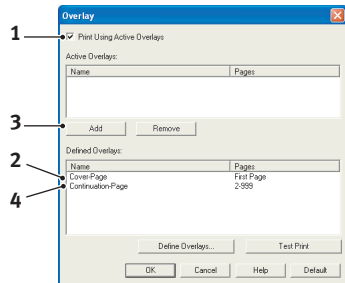
CONSUMABLES AND MAINTENANCE

This section deals with the replacement of the toner cartridge and image drum and general maintenance.

CONSUMABLE ORDER DETAILS

ITEM	LIFE	ORDER NO.
Toner, standard, B4400, B4400n, B4600, B4600n, B4600nPS, B4600PS.	3,000 A4 @ 5%	43502302 (EU only) 43502306 (non-EU)
Toner, high capacity, B4600, B4600n, B4600nPS, B4600PS	7,000 A4 @ 5%	43502002 (EU only) 43502004 (non-EU)
Image drum	25,000 A4 pages*	43501902

*typical for continuous printing

Please always use genuine consumables.

TONER CARTRIDGE LIFE

How long your toner cartridge lasts depends on the print density; the percentage of the page that prints black. A typical letter has 3% to 5% print density; graphics usually have higher density. Higher print density means toner is used up faster. At 5% print density, a standard toner cartridge will print an average of 3,000 pages. Remember, this is only an average: actual results may vary.

The first toner cartridge installed in a new printer has to fill the image drum reservoir and saturate the developing roller with toner. The first standard toner cartridge normally produces about 1,000 pages after installation.

WHEN TO REPLACE THE TONER CARTRIDGE

B4400, B4400N

Replace the toner cartridge after Toner Low displays in the printer Status Monitor. Also, the Error LED indicator slowly blinks when toner is low. After Toner Low displays, the printer will print about 100 more pages then display Toner Empty and stop printing. Printing will resume after a new toner cartridge has been installed.

B4600, B4600N, B4600PS, B4600NPS

When the toner is running low, TONER LOW is displayed in the operator panel LCD. If printing continues without replacing the toner cartridge, CHANGE TONER is displayed and printing is cancelled. Printing will resume after a new toner cartridge has been installed.

REPLACING THE TONER CARTRIDGE

It is recommended that you clean the LED array at the same time as you change the toner cartridge.

The toner used in this printer is a very fine dry powder contained in the toner cartridge.

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 top cover.

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

<div style="border: 2px solid red; background: white;">

WARNING!

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

</div>

2.   Pull the coloured lever on the right side of the toner cartridge towards the front of the printer to close the cartridge then remove the used toner cartridge.

3.   Follow the installation instructions on or inside the box containing the new toner cartridge to install the new cartridge.

4.   Gently wipe the LED array surface with the LED lens cleaner that came with the new toner cartridge or soft tissue.

5.   Close the top cover and press it down to latch it closed.

IMAGE DRUM LIFE

The life of an image drum depends on a number of factors, including temperature and humidity, the type of paper used, and the number of pages per job.

The image drum should last approximately 25,000 pages continuous printing. This number is approximate because different numbers of pages are printed each time and the environmental conditions and the paper type used may vary.

WHEN TO REPLACE THE IMAGE DRUM

B4400, B4400N

When the drum reaches 90% of its life, a CHANGE DRUM message is displayed in the printer Status Monitor. Also, the Error LED indicator blinks fast when the image drum requires changing. Change the image drum when the print becomes faint or begins to deteriorate.

B4600, B4600N, B4600PS, B4600NPS

When the drum reaches 90% of its life, a CHANGE DRUM message is displayed in the operator panel LCD. Change the image drum when the print becomes faint or begins to deteriorate.

REPLACING THE IMAGE DRUM

It is recommended that you change the toner cartridge and clean the LED array at the same time as you change the image drum.

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. Always hold the image drum unit by the ends or from the top.

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 labelled. Do not touch.

2. Remove the used image drum and toner cartridge.

3. Follow the installation instructions on or inside the box containing the new image drum to install the new image drum.

4. Follow the installation instructions on or inside the box containing the new toner cartridge to install the new toner cartridge.

5. Gently wipe the LED array surface with the LED lens cleaner that came with the new toner cartridge or soft tissue.

6. Close the top cover and press it down to latch it closed.

RESETTING THE DRUM COUNTER

After replacing the image drum, reset the drum counter to keep a correct count of the number of pages printed on the image drum.

B4400, B4400N

1. Start the **Status Monitor** for the printer.

2. Select the Printer Setup tab, click on the **Printer Menu** button and then select the Maintenance Menu.

3. Select "Reset Drum Count" and click on the **Apply** button to reset the drum counter.

B4600, B4600N, B4600PS, B4600NPS

1. Press the **Online** button to return the printer to offline status.

2. Press the **Menu** button repeatedly until MAINTENANCE MENU is displayed, then press the Select button.

3. Press the **Item** button until DRUM COUNT RESET is displayed.

4. Press the **Select** button and the Drum Counter is reset.

5. Return the printer on line by pressing the **Online** button.

GENERATING A CLEANING PAGE

If the printed page shows signs of fading, streaking or erratic marks, the problem may be cleared by generating a drum cleaning page as follows.

B4400, B4400N

Using the printer Status Monitor

1. Start the **Status Monitor** for the printer.

2. Select the Printer Setup tab and click on the **Printer Menu** button.

3. Select the Test Print tab and click on the **Cleaning** button.

4. Open the Manual Feed Tray and insert a sheet of A4 plain paper between the paper guides, then click the **OK** button.

5. The printer grips the paper and prints a cleaning page.

6. If subsequent printing appears faded or uneven, try replacing the toner cartridge.

Using the Online button

1. Press the **Online** button to take the printer off line.

2. Open the Manual Feed Tray and insert a sheet of A4 plain paper between the paper guides.

3. Press and hold down the **Online** button for at least five seconds.

4. The printer grips the paper and prints a cleaning page.

5. Return the printer on line by pressing the **Online** button.

6. If subsequent printing appears faded or uneven, try replacing the toner cartridge.

B4600, B4600N, B4600PS, B4600NPS

1. Open the Manual Feed Tray and insert a sheet of A4 plain paper between the paper guides. To print from the Paper Tray, press the Online button when the LCD display prompts you to insert a sheet of paper in the Manual Feed Tray.

2. Press the **Menu** button repeatedly until MAINTENANCE MENU is displayed, then press the **Select** button.

3. Press the **Item** button until CLEANING PAGE is displayed.

4. Press the **Select** button.

5. The printer grips the paper and prints a cleaning page.

6. Press Cancel to exit the menu. The printer should now be on line.

7. If subsequent printing appears faded or uneven, try replacing the toner cartridge.

CLEANING THE LED ARRAY

Clean the LED array whenever a new toner cartridge is installed or if there are faded vertical areas or light printing down a page.

Wipe the LED array gently with an anti-static cleaning pad that is generally available for computer cleaning.

TROUBLESHOOTING

STATUS AND ERROR MESSAGES

Your printer has been designed to give you helpful status feedback not only during normal operation but also if a printing problem occurs so that you can take appropriate corrective action.

B4400, B4400N

Both status and error messages are displayed in your chosen language in the Status Monitor, error messages being accompanied by the appropriate flashing of the **Error** indicator. You can set the Status Monitor to pop up on your computer screen when an alert condition occurs from the Preferences tab in the Status Monitor.

B4600, B4600N, B4600PS, B4600NPS

The LCD on the printer operator panel provides the self-explanatory status and error messages in your chosen language. Error messages are accompanied by the Ready indicator being extinguished.

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 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.

The printer may experience a paper jam in one of three areas.

> INPUT JAM - paper has failed to leave the selected feed tray and enter the internal paper path of the printer. A typical message indicates a paper jam and identifies the tray to check.

> FEED JAM - paper has entered the printer but failed to reach the exit. A typical message indicates a paper jam and advises you to open the top cover for access.

> EXIT JAM - paper has reached the exit but has failed to exit completely from the printer. A typical message indicates an exit jam and advises you to open the top cover for access.

INPUT JAM

1. Remove the paper tray from the printer.

2. Remove any crumpled or folded paper.

3. Remove any paper from the underside of the printer.

4. Replace the paper tray.

After successful removal of any damaged or misfed paper, the printer should continue printing.

FEED JAM OR EXIT JAM

1. Remove the tray and clear any misfed sheets as given above.

2. Open the top cover.

WARNING!

The fuser area will be hot. This area is clearly marked. Do not touch it.

CAUTION!

Never expose the image drum unit to light for more than 5 minutes. Never expose the image drum unit to direct sunlight. Always hold the image drum unit by the ends or from the top. Never touch the surface of the green drum inside the image drum unit.

3. Carefully lift out the image drum, complete with the toner cartridge. Be careful not to touch or scratch the green drum surface.

4. Remove any jammed sheets from the paper path.

5. Re-install the image drum complete with toner cartridge, ensuring that it correctly locates into the slots on each side of the printer.

6. Close the top cover and press down to latch it closed.

7. The printer will warm up and commence printing when ready. The page lost through the jam will normally be reprinted.

NOTE
If the edge of the jammed paper protrudes (or can be seen) from the exit, reinstall the image drum, close the top cover and switch the printer on. Remove the jammed paper from the exit when the exit roller begins rotating after a few seconds after switching on. However, if the jammed paper cannot be removed, contact a service representative.

PRINT QUALITY PROBLEMS

Before consulting a service representative regarding a print quality problem, check the table below to see if there is a solution, or something you might have overlooked.

SYMPTOM	PROBLEM	SOLUTION
Blank sheets printed.	Image drum cartridge not properly installed.	Reinstall image drum cartridge.
	Empty or missing toner cartridge.	Install new toner cartridge.
Entire page prints faintly.	Empty toner cartridge. Pages get fainter when toner is used up.	Install new toner cartridge.
	LED array is dirty.	Clean LED array.
Page has grey background.	Static electricity, generally from dry environments, causes toner to stick to background.	Change paper to a smoother laser bond or use a humidifier.
Page prints all black.	Hardware problem.	Contact service.
Page has repetitive marks.	Damaged image drum cartridge causes repetitive marks every 1.6 inches (4.06 cm) due to surface nicks and scratches.	Generate a cleaning page, repetitive marks may be temporary.
Oblong area of faint print appears on each page.	Drop out caused by using paper exposed to high humidity.	Change paper stocks, check paper storage environment or use a dehumidifier; check toner level.
Vertical white streaking or faint areas on page.	Toner is low and does not distribute properly, or the drum is worn out.	Replace toner cartridge. Check drum and replace the drum, if necessary. Contact service.
	LED array is dirty.	Clean LED array.
Vertical black lines.	Hardware problem.	Contact service.

SYMPTOM	PROBLEM	SOLUTION
Fuzzy print.	LED array is dirty.	Clean LED array.
Distorted print.	Paper path, lamp assembly, or fusing unit problem.	Generate cleaning page. Contact service.
Faded print.	Toner cartridge is not correctly installed. Toner low.	Install toner cartridge correctly. Replace toner cartridge.
Smeared or blotched print.	Dirty rollers; toner dropped inside printer or image drum problem.	Replace image drum and toner. Contact service.
Printed page is light/blurred.	Is toner low?	Replace toner cartridge.
	Is paper meant for laser printers?	Use recommended paper.
	LED array is dirty.	Clean LED array.
Bold characters and dark lines are smeared.	Toner is low.	Install new toner cartridge.
Print is darker than usual.	Darkness setting is too high.	Change darkness setting.
Pages curl excessively.	Printing on wrong side of paper.	Turn paper over in tray. (Note arrow on paper package). Install paper print side down in tray.
	Moisture in paper. Improper storage.	Avoid storing paper in areas of excessive temperature and humidity. Store paper in protective wrapping.
	High humidity.	Recommended operating humidity: 20-80%

SOFTWARE PROBLEMS

Your software (operating environment, applications and printer drivers) controls the printing process. Make sure you have selected the right driver for use with your printer. See your software documentation for more information.

SYMPTOM	PROBLEM	SOLUTION
Printing is garbled.	Incorrect driver is installed.	Install an appropriate driver.
Printer's output is below rated speed.	Much of the printing delays will be caused by your application. Sometimes purely text documents will print slowly depending on the selected fonts and how they are transferred to the printer.	For maximum speed, use text in your document and use a printer resident font.
Size of top margin increases with each page printed.	Creeping text. Number of lines per page in software is not equal to number of lines per page of printer.	Many software packages assume 66 lines per page, but your printer's default is 64. Adjust software accordingly, or set LINES Per PAGE in the soft control panel to equal lines per page in your software.

HARDWARE PROBLEMS

SYMPTOM	PROBLEM	SOLUTION
Graphic image prints partly on one page, partly on the next.	Insufficient printer memory for this image at this resolution.	Change the resolution, reduce the image size, or install more memory in your printer.
When you try to print nothing happens, but printer indicates it is ready to receive data.	Configuration error.	Check cable connection. If more than one printer is available, make sure your printer has been selected.
Garbage prints.	Incorrect cable configuration. Also, see Software Problems.	Check cable configuration, continuity, and length.

SYMPTOM	PROBLEM	SOLUTION
Printer freezes or displays error message when computer is rebooted.	Booting the computer while the printer is on can cause a communications error.	Turn printer off before rebooting computer.
Odours.	Gases are given off by forms or adhesives passing through the hot fusing unit.	Make sure the forms you use can withstand heating, and provide adequate ventilation.
Printer is on but must warm up before a job is printed.	Power Save mode is set on to conserve energy. The fuser must heat up before you can begin printing the next job.	To eliminate warm up delay, change Power Save setting

INSTALLING OPTIONS

The following options are available to extend the performance of your printer:

> 10/100 BASE-TX Network Interface Card: to make the B4400 and B4600 network compatible

> 16, 32, 64, 128, 256MB RAM DIMM: to extend the main memory of your printer and speed up the processing of large files

> RS232C Card: to provide serial interface capability for the B4400 and B4600

> Second paper tray: to increase your printer's paper handling capacity by 500 sheets (80g/m²)

> Multi Purpose Tray: to extend the range of media your printer can accommodate (capacity 100 sheets (80g/m²) or 50 envelopes)

> One of the following can be added:

   (a)   8MB Flash DIMM: to allow the storage of additional fonts or bar codes for the B4400, B4400n, B4600, B4600n

   (b)   16MB Flash DIMM: to allow the storage of additional fonts or bar codes for the B4400, B4400n, B4600, B4600n

   (c)   PostScript PS level 3 DIMM: to add PostScript emulation to the B4600 or B4600n. Cannot be added in conjunction with extra flash memory.

   (d)   The B4600 PS option is supplied as 2 DIMMs: a PS DIMM and a 16MB RAM DIMM. When fitted into a basic B4600 or B4600n (i.e. one with no memory upgrade already fitted) the PS DIMM will expand into the 16MB RAM DIMM in order to work, and the amount of memory available for general operation of the printer will therefore not change. It will remain at 16MB, which is the printer's base memory.

   (e)   If you require to install a PS upgrade into a B4600 or B4600n which already has a memory upgrade installed, discard the 16MB RAM DIMM which ships

with the PS option and install only the PS DIMM. The result will be that the amount of overall memory available to the printer will decrease by 16MB as the PS code expands into 16MB of RAM currently installed. For example, a user who already has 128MB installed (total memory is therefore 128+16=144MB) will fit only the PS DIMM and will then have 128MB of RAM left for printing.

INSTALLATION PROCEDURE

To install any of the above options, follow the detailed installation sheet that accompanies the option.

SPECIFICATIONS

GENERAL

A summary of the basic characteristics of your printer appears in the table below:

ITEM	SPECIFICATION
Dimensions	B4400 (N22105B): 355mm x 395mm x 200mm (W x D x H) B4600 (N22106B): 355mm x 395mm x 215mm (W x D x H)
Weight	9 kg approximately
Printing method	Electro-photographic printing using LEDs as light source
Print colour	Monochrome
Print speed	26 pages per minute maximum
Resolution	1200 x 600 dots per inch
Emulations	PCL6, PCL5e, PCLXL, Epson FX, IBM ProPrinter, Mac OS9, Mac OS X for B4400, B4400n, B4600, B4600n PCL6, PCL5e, Epson FX, IBM ProPrinter, Mac OS9, Mac OS X, PS for B4600PS, B4600nPS
Interfaces	Parallel port in compliance with IEEE 1284-1994 standard USB 2.0 full speed 100BASE-TX/10Base-T for B4400n, B4600n, B4600nPS Optional RS232C Serial interface
Processor	200 MHz PowerPC
Memory	16 MB expandible to 272MB
Paper sizes	A4, A5, A6, B5, Letter, Legal 13, Legal 14, Executive, Custom, Envelopes (5 types)
Paper feed	Automatic feeding via paper trays (including optional tray and optional Multi Purpose Tray) Manual feeding of single sheets
Paper feed capacity at 80g/m²	Tray 1: 250 sheets Optional Tray 2: 500 sheets Optional Multi-purpose feeder: 100 sheets
Paper output	Face up, face down depending on paper size, type and thickness

ITEM	SPECIFICATION
Power consumption	Typical: 400W Idle: 70W Power save mode: 7-10W
Paper output capacity at 80g/m²	Face up: 50 sheets Face down: 150 sheets
Monthly duty cycle	30,000 pages
Consumables	Toner cartridge, Image drum
Power cable	Approximately 1.8 m max. length (not provided)
Noise level	Operation: 53 dB(A) Standby mode: 30dB(A) Power saving mode: Background level
Environmental conditions	Operation: 10 - 32°C, 20% - 80% RH, Storage: 14 - 110°C, 10% - 90% RH When the printer is stored, it should be in its original packaging, with no moisture formation.

PAPER AND TRAY INFORMATION

Feed and ejection methods vary depending on the type, size and thickness of medium used. Use the chart below and the notes/symbols/terms on the following page for initial guidance. (Minor variations to settings may be necessary depending on user setup and environmental conditions.)

PAPER TYPE	SIZE	WEIGHT	FEED CASSETTE T1	T2	MPF	MF	EJECTION METHOD FU	FD
Plain paper	A4	L, ML, M	o	o	o	o	o	o
	A5	MH, H	x	x	o	o	o	x
	B5							
	Letter							
	Executive							
	Legal (13)	L, ML, M	o	o	x	o	o	o
		MH, H	x	x	x	o	o	x
	Legal (14)							
	A6	L, ML, M	o	x	o	o	o	x
		MH, H	x	x	o	o	o	x
	Custom	L, ML, M	o	o	o	o	o	o
	W: 90 – 216	MH, H	x	x	o	o	o	x
	L: 148 – 356							
Envelopes	Com-9	–	x	x	o	o	o	x
	Com-10							
	DL							
	C5							
	Monarch							
	Custom							
	W: 90 – 216							
	L: 148 – 356							
Labels	A4	–	x	x	o	o	o	x
	Letter							
Transparencies	A4	–	x	x	o	o	o	x
	Letter							

NOTES/SYMBOLS/TERMS

Notes:

1. When an optional second paper tray is used, the original tray is referred to as Tray 1 and the optional tray as Tray 2.

2. It is not possible to use custom paper sizes with the PS emulation driver.

3. Tray 2 can accommodate paper with width of 148 to 216mm and length of 210 to 316mm.

4. Paper smaller than A5 (i.e. less than 210mm long) should be ejected face up.

SYMBOL/ TERM	MEANING
T1	Paper Tray 1
T2	Paper Tray 2 (optional)
MPF	Multi Purpose Tray (optional)
MF	Manual Feed Tray
FU	Face Up printing from the rear of the printer
FD	Face Down printing from the top of the printer
W, L	Width, Length in mm
L	Light paper weight: 59 - 66g/m²
ML	Medium Light paper weight: 67 - 73g/m²
M	Medium paper weight: 74 - 88g/m²
MH	Medium Heavy paper weight: 89 - 104g/m²
H	Heavy paper weight: 105 - 122g/m²
o	Can be used
x	Cannot be used

INDEX

Numerics

OKI CONTACT DETAILS

Oki Systems (UK) Limited
550 Dundee Road
Slough Trading Estate
Slough, SL1 4LE

Tel:44 (0) 1753 819819
Fax:44 (0) 1753 819899
http://www.oki.co.uk

Oki Systems Ireland Limited
The Square Industrial Complex
Tallaght, Dublin 24, Ireland

Tel:+353 1 4049590
Fax:+353 1 4049591
http://www.oki.ie

OKI Systems (Ireland) Ltd.
40 Sydenham Park
Belfast, BT4 1PW

Tel:+44 44 (0)28 90 20 1110
http://www.oki.ie

Technical Support for all of Ireland:
Tel: +353 1 4049570
Fax: +353 1 4049555
E-mail: tech.support@oki.ie

Oki Data Corporation
4-11-22 Shibaura, Minato-ku, Tokyo
108-8551, Japan

Tel: (81) 3 5445 6158
Fax: (81) 3 5445 6189
http://www.okidata.co.jp

Oki Data (Singapore) Pte. Ltd.
78 Shenton Way, #09-01,
Singapore 079120

Tel: (65) 221 3722
Fax: (65)421 1688
http://www.okidata.com.sg

Oki Systems (Thailand) Ltd.
956 Udomvidhya Building 6th Floor,
Rama IV Rd., Bangkok 10500, Thailand

Tel: (662) 636 2535
Fax: (662) 636 2536
http://www.okisysthai.com

Oki Hong Kong Limited
Suite 1909, Tower3,
China Hong Kong City,
33 Canton Rd., Tsimshatsui,
Kowloon, Hong Kong

Tel: (852) 2736 0130
Fax: (852) 2376 3725

The IPL Group
63-85 Victoria Street
Beaconsfield NSW 2015, Australia

Tel: (61) 2 9690 8200
Fax: (61) 2 9690 8300
http://www.oki.com.au

Comworth Systems Ltd.
10 Constellation Drive Mairangi Bay,
Auckland,
New Zealand

Tel: (64) 9 477 0500
Fax: (64) 9 477 0549
http://www.comworth.co.nz

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