

**OKIDATA<sup>®</sup>**

# **OKIPAGE 20 & 20DX User's Guide**



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Written and produced by the OKIDATA Publications Department. Please address any comments on this publication

- by mail to:

**Publications Department**

OKIDATA

532 Fellowship Road

Mount Laurel, New Jersey 08054

- or by email to: [pubs@okidata.com](mailto:pubs@okidata.com)

We welcome you to visit our web site: <http://www.okidata.com>

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## ENERGY STAR



As an ENERGY STAR® Partner, OKIDATA has determined that this product meets the ENERGY STAR guidelines for energy efficiency.

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# Important Safety Instructions

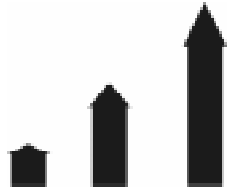
Your OKIDATA printer has been carefully designed to give you years of safe, reliable performance. As with all electrical equipment, however, there are a few basic precautions you should take to avoid hurting yourself or damaging the printer:

- Read the setup and operating instructions in this handbook carefully. Be sure to save it for future reference.
  - Read and follow all warning and instruction labels on the printer itself.
  - Unplug the printer before you clean it. Use only a damp cloth; do not use liquid or aerosol cleaners.
  - Place your printer on a firm, solid surface. If you put it on something unsteady, it may fall and be damaged; if you place it on a soft surface, such as a rug, sofa, or cushioned surface, the vents may be blocked, causing the printer to overheat.
  - To protect your printer from overheating, make sure all openings on the printer are not blocked. Don't put the printer on or near a heat source, such as a radiator or heat register. If you put it in any kind of enclosure, make sure it is well ventilated.
  - Do not use your printer near water, or spill liquid of any kind into it. Be certain that your power source matches the rating listed on the back of the printer. If you're not sure, check with your dealer or with your local power company.
  - Your printer has a grounded, 3-prong plug as a safety feature, and it will only fit into a grounded outlet. If you can't plug it in, chances are you have an older, non-grounded outlet; contact an electrician to have the outlet replaced. Do not use an adapter to defeat the grounding.
  - The printer must be installed near a power outlet which remains easily accessible.
- To avoid damaging the power cord, don't put anything on it or place it where it will be walked on. If the cord becomes damaged or frayed, replace it immediately.
  - If you're using an extension cord or power strip with the printer, make sure that the total of the amperes required by all the equipment on the extension is less than the extension's rating. The total ratings of all equipment plugged into the outlet should not exceed 15 amperes.
  - Do not poke anything into the ventilation slots on the printer; you could get an electrical shock or cause hazardous electrical arcing.
  - Aside from the routine maintenance described in this handbook, don't try to service the printer yourself; opening the cover may expose you to shocks or other hazards. Don't make any adjustments other than those outlined in the handbook—you may cause damage requiring extensive repair work. Appendix A, Support, Service, and Warranty Information, explains how to get your printer serviced by qualified OKIDATA technicians.
  - If anything happens that indicates that your printer is not working properly or has been damaged, unplug it immediately and follow the procedures in Appendix A for having your printer serviced. These are some of the things to look for:
    - The power cord or plug is frayed or damaged.
    - Liquid has been spilled into the printer, or it has been exposed to water.
    - The printer has been dropped, or the cabinet is damaged.
    - The printer doesn't function normally when you're following the operating instructions.

# Warranty Enhancement Programs

• Available in the U.S. and Canada only

## OKI Extend™



This program offers you the opportunity to purchase an extension of the standard warranty for your Okidata printer. You can add 1 or 2 years to the standard warranty.

## OKI On-Site™



If you experience a malfunction of your Okidata printer and the problem can not be resolved over the phone, this program offers you repair of your printer right at your place of business, by our national service provider.

## For more information . . .

For pricing and more detailed information on these programs:

- call 1-800-OKIDATA (1-800-654-3282)
- or
- visit our Web site: <http://www.okidata.com>

# FCC/IC/CE Statements

## Federal Communications Commission Radio Frequency Interference Statement for 120-Volt Models

**WARNING:** This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
  - Increase the separation between the equipment and the receiver.
  - Plug the unit into an outlet on a circuit different from that to which the receiver is connected.
  - Consult the dealer or an experienced radio/television technician for help.
- ✓ *It is the responsibility of the user to obtain the required shielded cable in order to ensure compliance of this equipment with FCC regulations.*

Changes or modifications not expressly approved by OKIDATA may void your authority to operate this device.

## Industry Canada Radio Interference Statement for 120-Volt Models

This OKIDATA apparatus complies with the Class B limits for radio interference as specified in the Industry Canada Radio Interference Regulations.

## Federal Communications Commission Radio Frequency Interference Statement for 230/240-Volt Models

**WARNING:** This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

✓ *It is the responsibility of the user to obtain the required shielded cable in order to ensure compliance of this equipment with FCC regulations.*

Changes or modifications not expressly approved by OKIDATA may void your authority to operate this device.

## Industry Canada Radio Interference Statement for 230/240-Volt Models

This OKIDATA apparatus complies with the Class A limits for radio interference as specified in the Industry Canada Radio Interference Regulations.

## European Union Council of the European Communities Statements of Electromagnetic Conformance for 230/240-Volt Models

This product complies with the requirements of the Council Directive 89/336/EEC on the approximation of the laws of the member states relating to electromagnetic compatibility.

This product is in conformity with Directive 73/23/EEC on the harmonization of the laws of Member States relating to electrical equipment designed for use within certain voltage limits.



# Chapter 1: Setting Up

This chapter explains how to unpack and install your printer.

## Select a Suitable Location

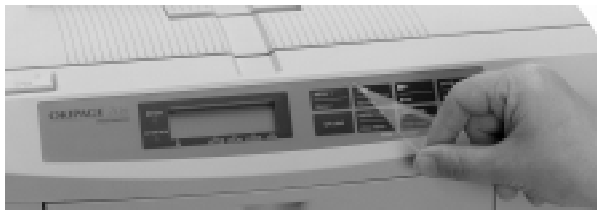
Before unpacking your printer, select a suitable location for it which meets the following criteria:

- A firm, level surface, such as a table or desktop
- Clearance to open the cover, the paper tray, and the rear paper exit extender
- Air circulation around the printer to prevent overheating (recommended minimum of 4" in all directions)
- A nearby power source
- Room temperature of 50° to 90°F (10° to 32°C)
- Relative humidity of 20-80%
- No direct sunlight

## Unpack

### Your printer

1. Unpack the printer and place it on the surface you've selected.
2. Remove the printer from the plastic bag.
3. Lift up the corner of the protective film and peel it off the control panel.



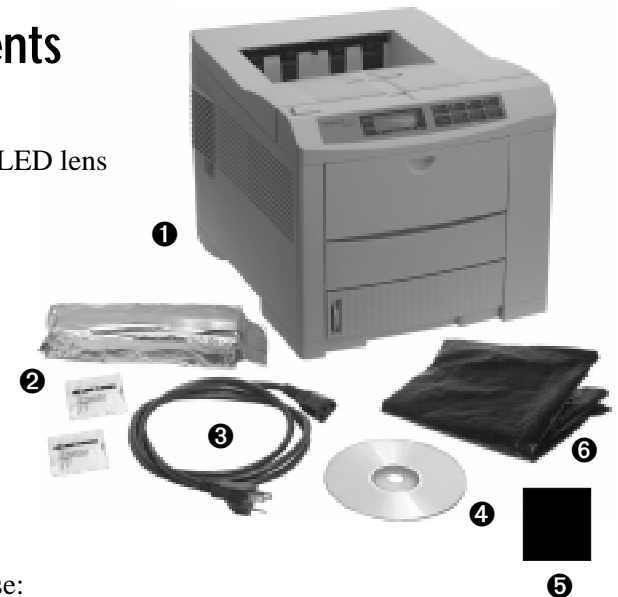
### The accessories

As you unpack the accessories, please save the packing material in the event you need to repack the printer for shipping.

**Important!** Be sure to store the black light-shield bag near the printer to protect the image drum in case you need to take it out of the printer for more than a minute or so. This bag is also used to store the image drum in case you need to ship the printer.

### Check the contents

- ❶ OKIPAGE 20 Printer
- ❷ Toner Cartridge with LED lens cleaners
- ❸ Power Cord
- ❹ Software Support CD
- ❺ Software Support Diskette
- ❻ Light-shield bag

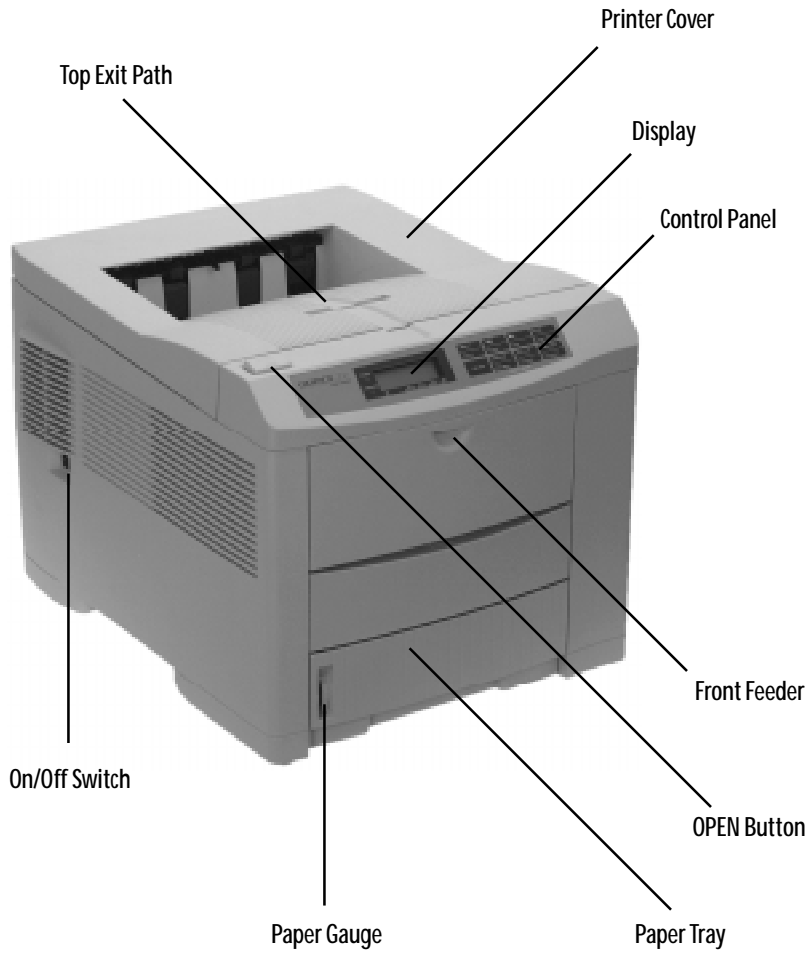


If you are missing anything, contact your dealer.

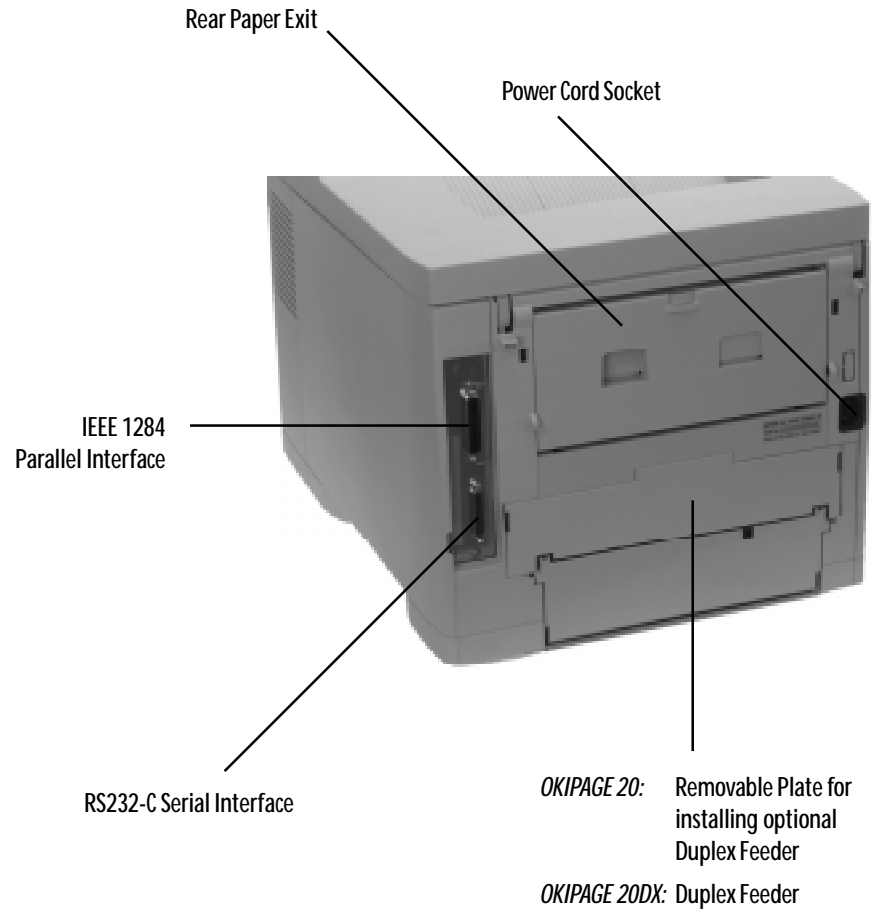
You will need to purchase:

- Paper (see page 5)
- Interface cable: either bi-directional IEEE-1284 parallel cable (see page 9) or RS232-C serial cable (see page 11)

# Getting to Know Your Printer



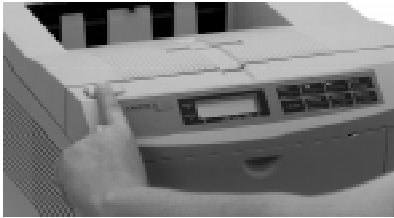
**Front View**



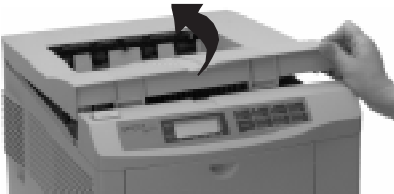
**Rear View**

# Prepare the Image Drum

1. Press the OPEN button.

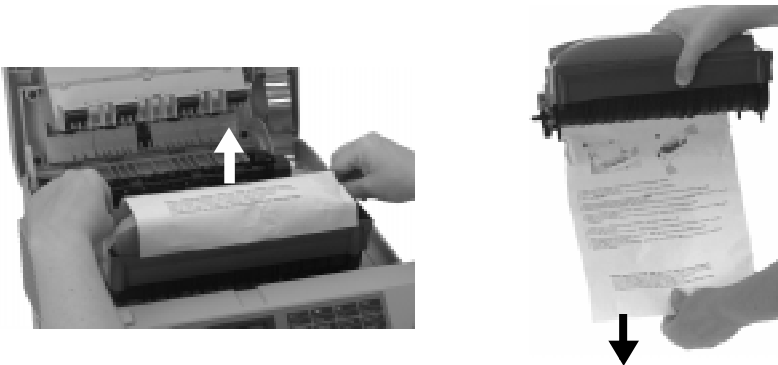


2. Lift the cover (the cover must be lifted completely to remove the image drum cartridge).



**Caution!** Be careful not to touch the image drum's shiny green surface!

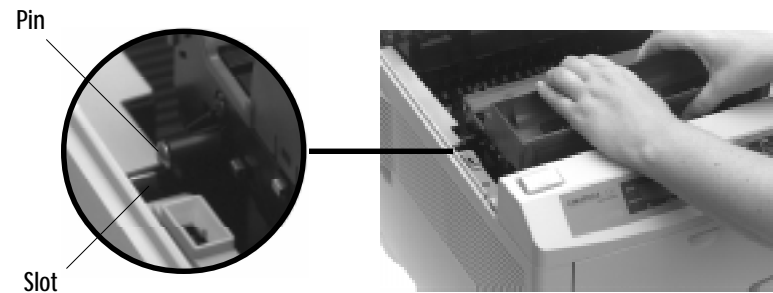
3. Lift out the image drum and remove the protective paper.



4. Remove the tape and shipping insert from the image drum and discard them.

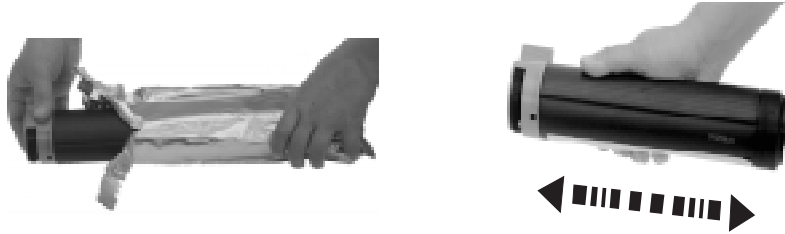


5. Reinstall the image drum in the printer, placing the alignment pins on each side of the drum into the slots in the printer.



# Install the Toner

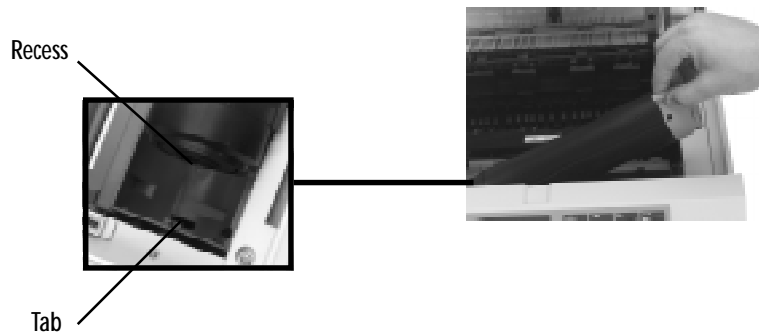
1. Remove the toner cartridge from the foil package and shake it from side to side a few times to distribute the toner evenly.



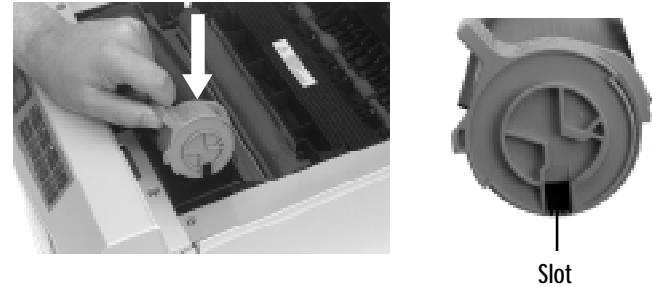
2. Carefully peel off the tape from the bottom of the cartridge.



3. Place the left end of the toner cartridge into the toner well, inserting the recess in the end of the toner cartridge over the tab on the image drum.



4. Lower the right side of the toner cartridge, aligning the slot in the cartridge with the ridge in the image drum.



5. Push the gray lock lever toward the back of the printer until it stops.



6. Close the printer cover.



**Note:** If you get toner on your clothing, brush it off with a dry cloth. Wash clothing in cold water; hot water sets toner.

# Load Paper

## Paper Specifications

When you buy paper, keep in mind that page printers require a smooth finish paper. For most everyday applications, paper rated for copiers and laser printers should work well with your printer. Before buying any large quantity of a particular paper, *always test a sample first.*

### Weight

- Main Tray: 16 - 28 lb.
- Optional Paper Expansion Tray: 16-28 lb.
- Front Feeder: 16 – 36 lb.
- Optional Multipurpose Feeder: 16-24 lb.
- Duplex Feeder (OKIPAGE 20DX): 16-24 lb. (*option for OKIPAGE 20*)

### Usable Types

- Bond
- Smooth, low moisture paper rated for copier and laser printers
- Cover stock; heavy bond (36 lb. max.): *Manual feed only*

### Finish

- Smooth, non-textured
- Copier-type paper or paper with a Sheffield rating of 100 to 250

### Composition

- 100% wood pulp or low cotton content

*Note: Most papers have some cotton or rag content. Avoid papers with a high cotton or rag content.*

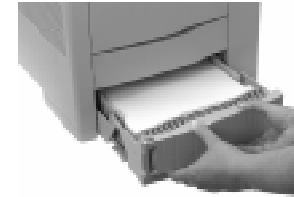
### Letterhead Stationery/Preprinted Forms

- Ink must withstand 392°F (200°C) for 0.1 second.

## Paper Feed Paths

Paper can be supplied to the printer in four ways:

- From the paper tray which holds up to 530 sheets of 20-lb. paper



- From the 100-sheet Front Feeder (see Chapter 4)



- From the *optional* 100-sheet/50 envelope multipurpose feeder (see Chapter 7)



- From the *optional* paper expansion tray which holds up to 530 sheets of 20-lb. paper (see Chapter 7)

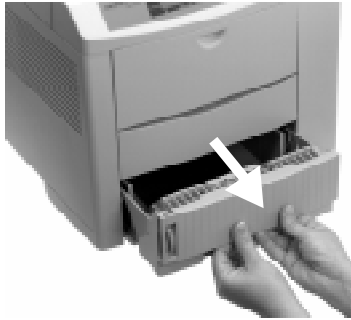


The paper tray will accommodate 16 to 28 lb. paper within the following size ranges:

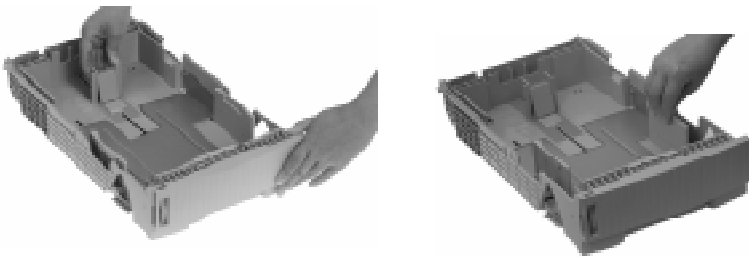
- **Width:** 3.4 to 8.5 inches (86.4 to 216 mm)
- **Length:** 5.5 to 14 inches (140 to 355.6 mm)

## Load the Paper Tray

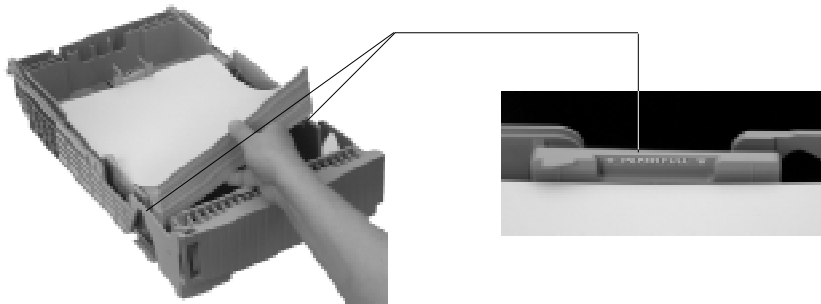
1. Pull out the paper tray.



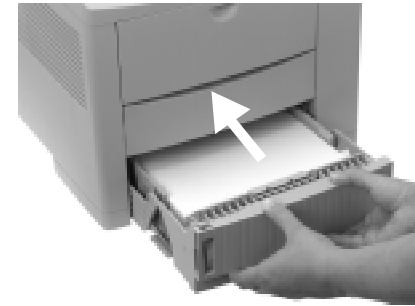
2. Adjust the rear and side paper guides *before* loading paper. This will help to avoid paper jams.



3. Fan a stack of paper (up to 530 sheets of 20 lb. paper) and place it in the tray under the tabs. Do not fill above the PAPER FULL marks.



4. Push the tray into the printer until it locks.



## The Paper Tray Gauge



The paper tray gauge indicates the amount of paper left in the tray. This eliminates having to open the tray to check how much paper remains.

## Storing Paper

If paper is stored improperly, print quality could be affected.

- Store paper in a dark, dry place such as a closet or a cabinet
- Don't open the package until you are ready to use it
- Always store paper lying flat or it may curl
- Store your paper in a static-free environment
- Ideally, store paper at a constant temperature of 70°F (21.1°C) with less than 50% humidity.
- Discard the top sheet from each ream of paper before loading it into the paper tray — it may be contaminated with glue or dust.

## Select a Paper Exit Path

The OKIPAGE 20 has two paper paths:

- **Top Exit:** the normal exit used for routine printing



- **Rear Exit:** used for special types of print media such as envelopes, labels, transparencies, etc.



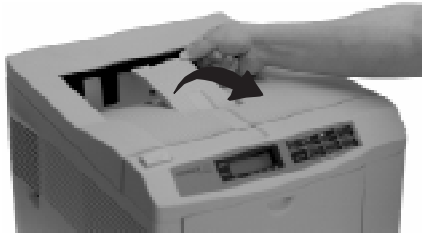
## Top Paper Exit

The top paper exit is the one normally used for routine printing.

- Printed pages feed face down into the bin on top of the printer
- Bin holds 250 sheets of 20 lb. paper
- Pages stack in the correct order
- When the bin is full, **STACKER FULL REMOVE THE PAPER** displays in the control panel window and printing will stop until the paper is removed

To use the top paper exit:

1. Lift out the paper catcher and pull it toward the front of the printer until it stops.



2. Flip up the extender.



## Rear Paper Exit

Use rear exit when printing on heavy paper, envelopes, labels, and transparencies.

- Printed pages feed face up into the rear tray
- Tray holds a maximum of 100 sheets of 20 lb. paper or 10 envelopes
- Pages stack in reverse order
- To avoid paper jams, remove paper when rear exit tray is full.

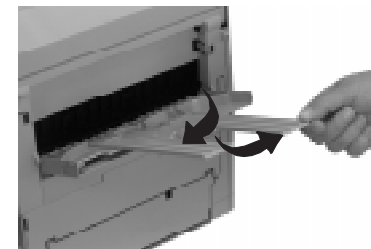
To use rear paper exit:

**Caution! Do not extend the rear exit tray while printing: a paper jam may occur!**

1. Pull the tray down.



2. Pivot out the extenders.





# Connect to Your Computer

## Parallel Connection

### Attach the Parallel Cable

We recommend that you use a bi-directional parallel printer cable. For best results, purchase a cable marked “IEEE 1284-compliant.”

**Important! To comply with FCC regulations, the cable must be shielded and UL and CSA approved.**

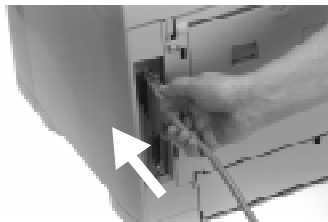
*Note: OKIDATA has tested and approved the following bi-directional cable: Part Number 70000803. See Appendix A for purchasing information.*

To connect the printer to your computer:

1. Turn both your printer and computer OFF.



2. Insert the wide connector on the cable into the parallel port on your printer. Make sure the connector is fully inserted, then snap both wire clips into the notches on the cable connector.



3. Insert the other end of the cable into the parallel port on your computer and tighten the screws.

**Caution! Be sure not to over tighten the screws — this could damage the screw posts on your computer!**

### IEEE 1284 Parallel Interface

Parallel cable requirements:

- Cable must be *shielded* with twisted pair conductors, and must be UL and CSA approved
- Maximum length for bi-directional cable is 6 feet (1.8 meters). For lengths greater than 6 feet, use a cable marked IEEE 1284-compliant.
- Printer connector is an IEEE 1284-B receptacle (36 pins, 0.085” center line)
- Port supports bi-directional IEEE 1284 communications (compatibility, nibble, and ECP modes)

### Bi-Directional Parallel Mode

If you are using the Status Monitor software, which provides on-line feedback of the printer status, BI-DIRECTION must be set to ENABLE (default) in the Level-2 printer main menu (see Chapter 3).

The recommended cable length for bi-directional communications is 6 ft. (1.8 meters). The standard parallel cables available at computer stores should work fine. For extended distances, higher quality IEEE 1284-compliant cables are available.

## Parallel Interface Pin Assignments

Pin No.	Signal Name	Signal Direction	Compatible	Nibble	ECP	Functions
1	Data Strobe	To printer	nStrobe	Host Clk	Host Clk	Parallel data sampling strobe
2-8	Data Bit n	To printer	Data n (LSB)	Data n (LSB)	Data n (LSB)	Parallel input data
9	Data Bit 8	To printer	Data 8 (MSB)	Data 8 (MSB)	Data 8 (MSB)	Parallel input data
10	Acknowledge	From printer	nAck	PtrClk	PeriphClk	Completion of data input or end of functioning
11	Busy	From printer	Busy	PtrBusy	PeriphAck	During print processing or during alarm
12	Paper End	From printer	PError	AckDataReq	nAckReverse	End of paper
13	Select	From printer	Select	Xflag	Xflag	Select state (on-line)
14	Auto Feed	To printer	nAutoFd	HostBusy	HostAck	Request to change mode
15	-	-	-	-	-	(not used)
16	0V	-	Logic Gnd	Logic Gnd	Logic Gnd	Signal ground
17	Chassis Ground	-	Chassis Gnd	Chassis Gnd	Chassis Gnd	Chassis ground
18	+5V	From printer	Peripheral Logic High	Peripheral Logic High	Peripheral Logic High	50 mA max.
19	0V	-	Signal Ground (nStrobe)	Signal Ground (nStrobe)	Signal Ground (nStrobe)	Signal ground
20 to 27	0V	-	Signal Ground (Data 1-8)	(Data 1-8)	(Data 1-8)	Signal ground
28	0V	-	Signal Ground (PError, Select, nAck)	Signal Ground (PError, Select, nAck)	Signal Ground (PError, Select, nAck)	Signal ground
29	0V	-	Signal Ground (Busy, nFault)	Signal Ground (Busy, nFault)	Signal Ground (Busy, nFault)	Signal ground
30	0V	-	Signal Ground (nAutoFd, nSelectIn, nInit)	Signal Ground (nAutoFd, nSelectIn, nInit)	Signal Ground (nAutoFd, nSelectIn, nInit)	Signal ground
31	Input PRIME	To printer	nInit	nInit	nReverseReq	Initializing signal
32	Fault	From printer	nFault	nDataAvail	nPerophReq	Paper out or during alarm
33	0V	-	-	-	-	Signal ground
34	-	-	-	-	-	-
35	-	From printer	-	-	-	Fix at Logic "1"
36	Select In	To printer	nSelectIn	1284 Active	1284 Active	Request to change Mode

## Serial Connection: RS232-C

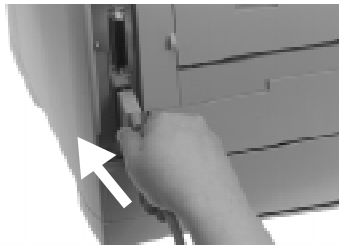
### Attach the Serial Cable

To connect the printer to your computer:

1. Turn both your printer and computer OFF.



2. Insert the male connector on the cable into the serial port on your printer. Make sure the connector is fully inserted, then tighten the screws.



3. Insert the other end of the cable into the serial port on your computer and tighten the screws.

**Caution!** *Be sure not to over tighten the screws — this could damage the screw posts!*

### RS232-C Serial Interface

Serial cable requirements:

- Cable must be *shielded* with twisted pair conductors, and must be UL and CSA approved
- Maximum length for serial cable is 6 feet (1.8 meters).
- Printer connector is Type 17LE-13250-27 (D4CC) receptacle (25 pins)

### Serial Mode

The serial interface settings on your printer and computer must match. To change printer settings, enter the Level 2 menu (press ON-LINE to place the printer off-line, then press MENU 1/Menu 2 for 2 seconds, until PRINT MODE appears) and select the RS232C SERIAL category. Set FLOW CONTROL, BAUD RATE, DATA BITS, PARITY, and MIN. BUSY to match the settings on your computer. Following are the printer default settings for these parameters:

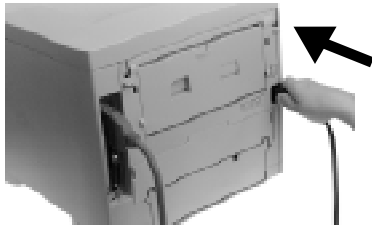
FLOW CONTROL	DTR HI POLARITY
BAUD RATE	9600 BAUD
DATA BITS	8 BITS
PARITY	NONE
MIN. BUSY	200 mSECONDS

### Serial Interface Pin Assignments

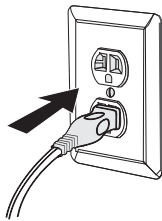
Pin	Signal	Symbol	Direction
1	Frame Ground	FG	-
2	Transmitted Data	TD	To printer
3	Received Data	RD	To printer
4	Request to Send	RTS	From printer
5-6	-	-	-
7	Signal Ground	SG	-
8-17	-	-	-
18	+5V (50 ma max.)	-	From printer
19	-	-	-
20	Data Terminal Ready	DTR	From printer
21-25	-	-	-

## Connect to Power

1. Plug the female end of the power cord supplied with the printer into the power socket on the back of the printer.



2. Plug the other end of the cable into a suitable *grounded* power outlet or power strip.



**Caution!** *If you are using a power strip, be sure the total amperage rating of the strip does not exceed the total amperage of the equipment plugged into it.*

## Check the Menu: *Model 20DX Only*

Check the menu to be sure that the Duplex printing feature is turned on:

1. Turn the printer ON.  
*INITIALIZING displays briefly in the control panel window, then ON-LINE displays.*
2. Press ON-LINE to place the printer off-line.
3. Press MENU1/*Menu 2*.  
*PERSONALITY displays.*

4. Press MENU1/*Menu 2* twice.  
*DUPLEX PRINTING displays.*
5. Make sure the second line of the display reads ON \*. If not, press the ENTER button, then ►/*Reset*, then ENTER.  
*ON \* displays.*
6. Press ON LINE to exit the menu.

## Print the Demo Page

1. Turn the printer ON.  
*INITIALIZING displays briefly in the control panel window, then ON-LINE displays.*
2. Press ON-LINE to place the printer off-line.
3. Press FORM FEED/*Print Demo* for 2 seconds (until the display reads PRINT DEMO PAGE).
4. To print the Demo Page for the HP® PCL6 emulation, press ENTER/*Power Save*. To print the Demo Page for the IBM® or Epson® emulation, press ►/*Reset* until the emulation you want appears on the second line of the display, then press ENTER/*Power Save*.  
*The Demo page prints.*

## Install the Printer Software



You are now ready to install the printer software. See the separate booklet “Software Install Guide” for information on printer drivers and instructions on loading the printer software.

# Chapter 2: The Control Panel

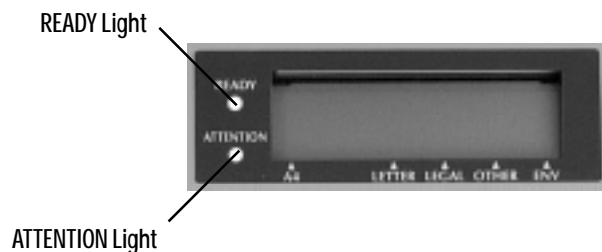
## Select the Display Language

Printer messages can be displayed in the control panel window in a number of languages. English is the default language. To change the display language:

1. Press ON-LINE to change the printer status to off-line.
2. Press MENU 1/Menu 2 and hold for 2 seconds.  
**PRINT MODE** displays.
3. Press MENU 1/Menu 2 until **LANGUAGE** displays.
4. Press ENTER/Power Save.  
**ENGLISH** displays.
5. Press ►/Reset until the desired language displays.
6. Press ENTER/Power Save to select the new language as the default setting.
7. Press ON-LINE to engage the change and place the printer back on-line.

## Control Panel Lights

The lights indicate the printer status:



### READY Light (Amber)

**On:** Printer is on-line, ready to receive data

**Off:** Printer is off-line, unable to receive data; initializing; warming up; error

**Blinking:** Printer is printing a menu, fonts, or demo page

### ATTENTION Light (Red)

**On:** Warning—toner is low, change drum, near end of fuser life

**Off:** Normal state

**Blinking:** Operator assistance required—paper jam, paper out, paper request, service required

## Paper Size Indicator



Paper Size Indicator  
[set for LETTER, the default]

The flashing marker in the printer display window indicates the paper size installed in the paper tray. This feature eliminates having to open the paper tray to see which paper size is loaded.

# Control Panel Button Functions



To access printer functions from the control panel, place the printer off-line (press the ON-LINE button: OFF-LINE appears on the display).

- To access the top function of each button, press the button briefly.
- To access the bottom function, press and hold the button for 2 to 3 seconds.

## Button Function Summary



**Press:** Enters Level-1 menu. Once in the Level-1 menu, press this button to move to the next menu item, or press and hold to cycle backwards through all the Level-1 menu categories.

**Press/hold:** Enters Level-2 menu.



**Press:** In Menu Mode returns to previous item; press and hold to cycle backwards through all the items within a category. Also used with **▶/Reset** to generate a drum cleaning page: see “Generating a Drum Cleaning Page” in Chapter 8.

**Press/hold:** Clears error condition and returns printer on-line.



**Press:** In Menu Mode advances to the next item. Also used with **◀/Recover** to generate a drum cleaning page: see “Generating a Drum Cleaning Page” in Chapter 8.

**Press/hold:** Deletes data in buffer and executes internal reset.



**Press:** In Menu Mode: sets displayed Menu item as the user default.

**Press/hold:** Enters the Power Save quick menu.



**Press:** Changes printer status from receive data mode (on-line) to local function mode (off-line).



**Press:** Enters the Paper Size Quick Menu.

**Press/hold:** Prints a listing of the current and default menu settings (HP PCL 6, IBM Proprinter III XL, or Epson FX).



**Press:** Enters the Tray Select Quick Menu.

**Press/hold:** Prints a sample of installed printer fonts (HP PCL 6, IBM Proprinter III XL, or Epson FX).



**Press:** Ejects the current page. Any data held in the buffer is printed.

**Press/hold:** Prints a Demo Page (HP PCL 6, IBM Proprinter III XL, or Epson FX).

# Chapter 3: The Printer Menu

Most printer features are selected directly from your software application. If you want to use the printer's Menu to select features, see Chapter 3. *Remember, features selected in your software will override features selected in the printer's Menu.*

## Selecting Printer Features Using Your Software

Most printer features like font, paper size, and page orientation can be set in your software program. This is the easiest way to control your printer. Check your software documentation for information.

## Selecting Printer Features Using Your Printer Driver

Printer features can also be set using the Status Monitor software included with your printer. However, these settings will be overridden by any settings made within your software package.

## Selecting Printer Features Using the Printer Main Menu

You can also select printer features in the printer main menu by using the control panel. However, *features set in your software program will override the same features selected in the printer main menu.*

**Important! Use the printer main menu only when your software does not let you select features or when you are setting printer features that your software does not control.**

## Printing the Main Menu

To print a list of the menu items and settings currently engaged:

1. Place the printer off-line (press ON LINE).
2. Press and hold PAPER SIZE/*Print Menu* until the display reads PRINT MENU.
3. To print the menu for the HP PCL6 emulation, press ENTER/*Power Save*. To print the menu for the IBM or Epson emulation, press ►/*Reset* until the emulation you want appears on the second line of the display, then press ENTER/*Power Save*.
4. The menu prints.

The printout shows the factory default settings, the current user settings, and the amount of memory installed in your printer.

## How to Use the Main Menu

Main menu features are

- accessed using control panel buttons
- displayed in the control panel window
- organized by Categories → Items → Selections

There are two levels within the main printer menu: Level-1 and Level-2. To access the menus, place the printer off-line (press ON LINE), then

- to access the Level-1 menu, press MENU 1/*Menu 2* (the display will read PERSONALITY).
- to access the Level-2 menu, press and hold the MENU 1/ *Menu 2* button until the display reads PRINT MODE).

## Quick Access Menus

The PAPER SIZE, TRAY TYPE, and POWER SAVE menu features can be accessed directly without having to step through the main menu.

To do this:

1. Place the printer off-line (press ON LINE).
2. Press and release PAPER SIZE, or  
Press and release TRAY TYPE, or  
Press POWER SAVE *for two full seconds*.
3. Press ► repeatedly until you see the selection you want.
4. Press ENTER/*Power Save* to set the selection as the default.  
*An asterisk (\*) appears to indicate the new default setting.*
5. Press ON LINE to exit the menu and place the printer back on-line.

## Using the Level-1 Menu

1. Press ON-LINE to place the printer off-line.
2. Press MENU 1/*Menu 2* to enter the Level-1 menu.
3. Continue to press MENU 1/*Menu 2* repeatedly to advance through the Level-1 menu categories.
3. Press ENTER/*Power Save* to select a category.  
*The current default setting displays.*  
  
*Note: Some categories include more than one item. In such categories, after you press ENTER, press MENU 1/*Menu 2* to advance to the next item before proceeding to step 4.*
4. Press ► repeatedly to display the selections. Stop when you see the selection you want.
5. Press ENTER/*Power Save* to set a selection as the default.  
*An asterisk (\*) appears to indicate the new default setting.*
6. Repeat steps 3 through 5 until you have made all the menu changes you wish to make, then press ON LINE to exit the Menu Mode and place the printer back on-line.

## Notes:

- If the MENU 1/*Menu 2* button is pressed and held while in Menu Mode, the printer cycles through the categories in reverse order.
- If you enter the Level-1 menu and make a selection while there is data present in the buffer, or while a DLL/Macro is present, the RESET TO SAVE message appears on the display. When you press the ►/*Reset* button, all data in the buffer and any temporary soft fonts or macros will be cleared.

## Example:

If you have one of the optional paper expansion trays installed and you want to set the printer to automatically switch to another tray with the same size paper when the first tray runs out of paper:

1. Press ON LINE.
2. Press MENU 1/*Menu 2* to enter the Menu Mode.
3. Press MENU 1/*Menu 2* again to move to the TRAY SELECT category.
4. Press ENTER.
5. Press MENU 1/*Menu 2* twice to move to the AUTO TRAY SWITCH item.
6. Press ► once to get to the ON selection.
7. Press ENTER to engage the ON selection (an asterisk will appear next to ON).
8. Press ON LINE to exit the Menu Mode.



## Level-1 Menu Settings

### Summary of Level-1 Categories:

- PERSONALITY
- TRAY SELECT
- DUPLEX PRINTING
- EDIT SIZE
- PAPER SIZE
- MEDIA TYPE
- PAPER SIZE CHECK
- COPIES
- FONTS & SYMBOLS
- PAGE LAYOUT1
- PAGE LAYOUT2
- HOST INTERFACE

Level-1 Menu Categories (e.g., PERSONALITY), Items (e.g., EMULATION) and Selections (e.g., HP LaserJet 5, IBM PPR II XL, Epson FX) are summarized below: default Selections are in *italic* (e.g., *AUTO Emulation*).

### PERSONALITY

---

#### EMULATION

*AUTO Emulation*

HP LaserJet 5

IBM PPR III XL

Epson FX

Adobe® PostScript® (appears only if PostScript selection is installed)

**Notes:** Auto Emulation automatically switches between HP LaserJet 5, IBM PPR III XL and Epson FX emulations.

### TRAY SELECT

---

#### MANUAL FEED

*OFF*

ON

**Notes:** Selects Manual Feed mode: paper is fed from the Manual Feeder regardless of the PAPER FEED setting. When the job is ready to print, MANUAL REQUEST will appear on the display; be sure to place paper on Manual Feeder, then press FORM FEED button to start printing.

#### PAPER FEED

*TRAY 1*

TRAY 2\*

TRAY 3\*

FRONT TRAY (Manual Feeder)

MULTI FEEDER\*

**Notes:** \* Selection only appears if appropriate optional accessory is installed.  
Select paper source.

#### AUTO TRAY SWITCH

*OFF*

ON

**Notes:** ON = When paper tray, printer automatically switches to the optional Paper Expansion Tray, if installed, then to the Manual Feeder, then to the optional Multi-Purpose feeder, if installed.

**DUPLEX PRINTING** (appears in OKIPAGE 20 menu only if Duplex Feeder is installed.)

---

#### DUPLEX

ON

*OFF*

**Notes:** Selects duplex printing (for OKIPAGE 20, optional Duplex Feeder must be installed).

### DUPLEX PRINTING (continued)

---

#### BIND

*LONG EDGE*

SHORT EDGE

**Notes:** Select the orientation for duplex printing so that the front and back of printing is properly aligned for the selected orientation of the pages (Duplex Printing must be set to ON). Long Edge sets the orientation for portrait printing. Short Edge sets the orientation for landscape printing.

### EDIT SIZE

---

#### *CASSETTE SIZE*

LETTER

EXECUTIVE

LEGAL 14

LEGAL13

A4 SIZE

A5 SIZE

A6 SIZE

B5 SIZE

COM-9

COM-10

MONARCH

DL ENVELOPE

C5 ENVELOPE

C4 ENVELOPE

**Notes:** *HP PCL6 mode:* Sets the paper size when the software does not. With the default Cassette Size selected, the paper size will be whatever is detected in the paper tray. If manual feed is being used, the paper size will be the one selected in the Level-1 menu (default is letter).

*PostScript mode:* Ignored.

## Level-1 Menu Settings (continued)

### PAPER SIZE

---

#### FRONT/MANUAL

LETTER  
EXECUTIVE  
LEGAL 14  
LEGAL13  
A4 SIZE  
A5 SIZE  
A6 SIZE  
B5 SIZE  
COM-9  
COM-10  
MONARCH  
DL ENVELOPE  
C5 ENVELOPE  
C4 ENVELOPE

**Notes:** Select paper size installed in Manual Feeder. If paper size installed does not match setting, printer will display message requesting the size set in menu.

#### MULTI FEEDER (appears if option is installed)

LETTER  
EXECUTIVE  
LEGAL14  
LEGAL13  
A4 SIZE  
A5 SIZE  
A6 SIZE  
B5 SIZE  
COM-9  
COM-10  
MONARCH  
DL ENVELOPE  
C5 ENVELOPE

**Notes:** Appears only if the optional Multi-Purpose Feeder is installed.

### MEDIA TYPE

---

#### TRAY 1

LIGHT  
MEDIUM LIGHT  
MEDIUM  
MEDIUM HEAVY  
HEAVY

**Notes:** Improves print quality and toner fusing.

Light = 16 lb (60 g/m<sup>2</sup>)

Medium Light = 18 lb (68 g/m<sup>2</sup>)

Medium = 20 lb (75 g/m<sup>2</sup>)

Medium Heavy = 24 lb (90 g/m<sup>2</sup>)

Heavy = 28 lb (105 g/m<sup>2</sup>)

#### TRAY 2 (appears if option is installed))

LIGHT  
MEDIUM LIGHT  
MEDIUM  
MEDIUM HEAVY  
HEAVY

**Notes:** Improves print quality and toner fusing. Only appears in the menu when the optional Paper Expansion Tray is installed.

Light to Heavy weight values are same as specified for Tray 1.

#### TRAY 3 (appears if option is installed))

LIGHT  
MEDIUM LIGHT  
MEDIUM  
MEDIUM HEAVY  
HEAVY

**Notes:** Improves print quality and toner fusing. Only appears in the menu when two optional Paper Expansion Trays are installed.

Light to Heavy weight values are same as specified for Tray 1.

### MEDIA TYPE (continued)

---

#### FRONT/MANUAL

LIGHT  
MEDIUM LIGHT  
MEDIUM\*  
MEDIUM HEAVY  
HEAVY  
TRANSPARENCY

**Notes:** Specify print media weight/type to improve print quality and toner fusing.

Light to Heavy weight values are same as specified for Tray 1.

#### MULTI FEEDER (appears if option is installed))

LIGHT  
MEDIUM LIGHT  
MEDIUM\*  
MEDIUM HEAVY  
HEAVY  
TRANSPARENCY

**Notes:** Specify print media weight/type to improve print quality and toner fusing.

Light to Heavy weight values are same as specified for Tray 1.

### PAPER SIZE CHECK

---

ENABLE  
DISABLE

**Notes:** ENABLE = printer only accepts paper size selected in software which matches size of paper actually loaded in tray.

DISABLE = printer will accept any paper size selected in software.

### COPIES

---

1 to 999

**Notes:** Select number of copies to print for each document.

## FONTS & SYMBOLS

### FONT SOURCE

*RESIDENT*  
SIMM  
DOWNLOAD

**Notes:** Select font source.

SIMM appears only if optional Flash ROM SIMM is installed.

DOWNLOAD appears if a soft font is loaded.

### FONT NO.

*I000* to *I0xx*  
C000  
S001

**Notes:** xx = font ID number (see font print sample).

Prefix indicates font source:

I = internal (resident) — I000 = Courier;

C = Card Font (appears only if optional Flash ROM SIMM is installed)

S = downloaded soft font (appears only if soft font is loaded)

### FONT HEIGHT

*10.00 CPI*  
Range: 0.44 to 99.99 CPI

**Notes:** Appears if scalable, fixed Courier or Letter Gothic font is selected.

CPI = characters per inch, settable in 0.01-cpi (press **▶/Reset**) or 0.1-cpi (press/hold **▶/Reset**) increments.

## FONTS & SYMBOLS (continued)

### FONT HEIGHT

*12.00 POINT*  
4.00 to 999.75 points

**Notes:** Appears if font selected is proportional/scalable (e.g., CG Times, CG Omega, Univers, etc.).

Sets character height in points in 0.25-point (press **▶/Reset**) or 1-point (press/hold **▶/Reset**) increments.

72 points = 1 inch

### SYMBOL SET (HP PCL6 emulation)

*PC-8, ROMAN-8, ISO L1, PC-8 Dan/Nor, PC-850, Legal, ISO-2 IRV, ISO-4 UK, ISO-6 ASC, ISO-10 S/F, ISO-11 SWE, ISO-14, JASC, ISO-15 Ita, ISO-16 Por, ISO-17 Spa, ISO-21 Ger, ISO-25 Fre, ISO-57 Chi, ISO-60 Nor, ISO-61 Nor, ISP-69 Fre, ISO-84 Por, ISO-85 Spa, German, Spanish, ISO Dutch, Roman Ext, ISO Swedish1, ISO Swedish2, ISO Swedish3, IBM-437, IBM-850, IBM-860, IBM-863, IBM-865, PC Set1, PC Ext US, PC Ext D/N, PC Set2 US, PC Set2 D/N, UN Math, UN Int'l, UN US, PS Math, PS Text, Math-8, Pi Font, MS Publish, Win 3.0, DeskTop, Win 3.1 L1, MC Text, PC-852, Win 3.1 L5, Win 3.1 L2, CWI Hung, PC-857 TK, ISO L2, ISO L5, PC-8 TK, Kamenicky, Hebrew NC, Hebrew OC, Plska Mazvia, ISO L6, Win 3.1 Cyr, PC-866, Win 3.1 Grk, PC-869, PC-855, Greek-437, Greek-437 Cy, Greek-928, Win 3.1 Heb, Serbo Croat2, Ukrainian, Bulgarian PC-1004, WIN BALTIC, PC-775, Serbo Croat1, HP ZIP, USPSZIP, USPSFIM, USPSSSTP, Wingdings, Symbol, OCR-A, OCR-B*

## PAGE LAYOUT1

### A4 PRINT WIDTH

*78 COLUMN*  
*80 COLUMN*

**Notes:** HP Mode only. When using A4 size paper, select 78 columns or condense to 80 columns so characters will fit on a line.

### WHITE PAGE SKIP

*OFF*  
*ON*

**Notes:** HP Mode only. ON = printer will ignore FF code when buffer is empty. (Cancels printing a blank page at the end of a print job.)

### CR FUNCTION

*CR*  
*CR + LF*

**Notes:** HP Mode only. CR + LF = add LF command to each CR command.

### LF FUNCTION

*LF*  
*LF + CR*

**Notes:** HP Mode only. LF+CR= add CR command to each LF command.

## PAGE LAYOUT2

### ORIENTATION

*PORTRAIT*  
*LANDSCAPE*

**Notes:** Sets printing oriented with the width of the page (Portrait) or with the length of the page (landscape).

### LINES PER PAGE

*60 LINES*  
*5 TO 128 LINES*

**Notes:** Select lines per page in 1 line increments.

## Level-1 Menu Settings (continued)

### HOST INTERFACE

#### PARALLEL

*ENABLE*  
DISABLE

**Notes:** Enables parallel interface.

#### RS232C

*ENABLE*  
DISABLE

**Notes:** Enables serial interface.

#### OKI HSP

*ENABLE*  
DISABLE

**Notes:** Enables network interface.

## Level-1 Menu Selections for IBM PPR III XL & EPSON FX Emulations

Default settings below are in *italic*.

### FONTS & SYMBOLS

#### CHARACTER PITCH

*10 CPI*  
12 CPI  
17 CPI  
20 CPI  
PROPORTIONAL

**Notes:** Specifies character pitch.

#### FONT CONDENSE

12 CPI to 20 CPI  
*12 CPI to 12 CPI*

**Notes:** IBM emulation only.

### FONTS & SYMBOLS (continued)

#### CHARACTER SET

*SET 2*  
SET 1

**Notes:** Choose Character Set: Standard IBM Set 1 or Line Graphics IBM Set II

#### SYMBOL SET

*IBM 437, IBM 850, IBM 860, IBM 863, IBM 865, PC Set1, PC Ext US, PC Ext D/N, PC Set2 US, PC Set2 D/N, Roman-8, ISO L1, PC-8, PC-Dan/Nor, PC-850, Legal, ISO-2 IRV, ISO-4 UK, ISO-6 ASC, ISO-10 S/F, ISO-11 Swe, ISO-14 JASC, ISO-15 Ita, ISO-16 Por, ISO-17 Spa, ISO-21 Ger, ISO-25 Fre, ISO-57 Chi, ISO-60 Nor, ISO-61 Nor, ISO-69 Fre, ISO-84 Por, ISO-86 Spa, German, Spanish, ISO Dutch, Roman Ext, ISO Swedish1, ISO Swedish2, ISO Swedish3, UN Math, UN Int'l, UN US, PS Math, PS Text, Math-8, Pi Font, MS Publish, Win 3.0, DeskTop, Win 3.1 L1, MC Text, PC-852, Win 3.1 L5, Win 3.1 L2, CWI Hung, PC-857 TK, ISO L2, ISO L5, PC-8 TK, Kamenicky, Hebrew NC, Hebrew OC, Plska Mazvia, ISO L6, Win 3.1 Heb, Win 3.1 Cyr, PC-866, Win 3.1 Grk, PC-869, PC-855, Greek-437, Greek-437 Cy, Greek-928, Serbo Croat2, Ukranian, Bulgarian, PC-1004, Win Baltic, PC-775, Serbo Croat1*

**Notes:** Selects special character set to be used.

#### LETTER O STYLE

*DISABLE*  
ENABLE

**Notes:** Specifies the style of the letter O.

#### ZERO CHARACTER

*NORMAL*  
SLASHED

**Notes:** Sets whether or not the number 0 will have a slash through it to differentiate it from the capital letter O.

### PAGE LAYOUT1

#### LINE PITCH

*6 LPI*  
8 LPI

**Notes:** Sets the number of lines per inch.

#### WHITE PAGE SKIP

*OFF*  
ON

**Notes:** Sets whether blank pages are "printed."

#### CR FUNCTION

*CR*  
CR+LF

**Notes:** Sets what happens when CR command is received. CR + LF produces a line feed after the carriage return.

#### LF FUNCTION

*LF*  
LF+CR

**Notes:** IBM emulation only.

Sets what happens when a LF command is received. LF+CR produces a carriage return in addition to the line feed.

#### LINE LENGTH

*80 COLUMN*  
136 COLUMN

**Notes:** Specifies the number of characters in one line.

#### FORM LENGTH

11 INCH (LETTER)  
11.7 INCH (A4)

**Notes:** Specifies length of paper.

## PAGE LAYOUT1 (continued)

### TOF POSITION

*0.0 INCH*

Range 0.0 to 1.0 INCH

**Notes:** Sets Top of Form in 0.1-inch increments. This determines the print start position relative to the top of the paper.

### LEFT MARGIN

*0.0 INCH*

Range 0.0 to 1.0 INCH

**Notes:** Shifts the left margin further to the right.

## Using the Level-2 Menu

The Level-2 menu includes selections that are rarely changed once they are set. To access the Level-2 menu:

1. Press ON-LINE to place the printer off-line.
2. Press and hold MENU 1/Menu 2 until you see PRINT MODE on the display. Once you are in the menu, press MENU 1/Menu 2 repeatedly to advance through the Menu categories.
3. Press ENTER to select a category.  
*The current default setting displays.*
4. Press ►/Reset repeatedly until you see the selection you want.
5. Press ENTER to set a selection as the default.  
*An asterisk (\*) will appear to indicate the new default setting.*

**Note:** *Some categories include a number of items. In such categories, after you press ENTER in step 3, press MENU 1/Menu 2 to advance to the next selection before proceeding to step 4.*

### Summary of Level-2 Categories:

- PRINT MODE
- MEMORY USAGE
- AUTO OPERATION
- DARKNESS CONTROL
- POWER SAVING
- LOW TONER
- TONER SAVING
- CLEARABLE WARNINGS
- ERROR REPORT
- PARALLEL I/F
- RS232C SERIAL
- LANGUAGE

## Level-2 Menu Settings

Level-1 Menu Categories (e.g., **PRINT MODE**), Items (e.g., RESOLUTION) and Selections (e.g., 600x1200 DPI, 300 DPI) are summarized below: default selections are in *italic* (e.g., *600 DPI*).

### PRINT MODE

#### RESOLUTION

*600 DPI*

600x1200 DPI

300 DPI

**Notes:** Select print density in dots per inch. When a print job is sent at a resolution which is different from this menu setting, it will automatically be converted and printed at the value selected in the print job.

### MEMORY USAGE

#### FONT PROTECTION

*AUTO*

OFF

400 KB

**Notes:** *HP PCL 6 mode:* Sets the font cache size. If you change settings, the printer memory will be reconfigured and all downloaded fonts and PCL macros will be lost.

*PostScript mode:* Fixed at automatic; other settings not implemented at this time.

#### MEMORY FREE AREA

*####KB/ReadOnly*

**Notes:** Displays memory area available for downloading fonts (cannot be changed through the menu).

## Level-2 Menu Settings (continued)

### AUTO OPERATION

#### AUTO CONTINUE

OFF  
ON

**Notes:** *HP PCL 6 mode:* controls what happens when a memory overflow/print overrun situation occurs. OFF = printer will remain off-line until you press the /Recover button. ON = printer will return to the on-line state automatically 15 seconds after it goes off-line.

*PostScript mode:* this setting is ignored. When a memory overflow/print overrun situation occurs, the ATTENTION light will come on until the print process is completed. It will then automatically go out and the printer will return to the on-line state.

#### WAIT TIMEOUT

OFF  
Range 5 to 300 SEC

**Notes:** Sets the length of time the printer waits for additional data to be received.

*HP PCL 6 mode:* If the amount of time selected passes before the printer receives additional data, the printer will print any data it has in the buffer and reset.

*PostScript mode:* If the amount of time selected passes before the printer receives additional data, the printer will cancel the print job immediately and reset without any further printing.

### AUTO OPERATION (continued)

#### MANUAL TIMEOUT

60 SECONDS  
30 SECONDS  
OFF

**Notes:** PostScript mode only. Sets the amount of time the printer will wait for paper to be loaded in the Manual Feeder before cancelling the print job.

### DARKNESS CONTROL

#### DARKNESS

0  
+1  
+2  
-2  
-1

**Notes:** Set print density (darkness). Negative values lighten print; positive values darken print.

### POWER SAVING

0 SEC  
8 MIN  
DISABLE

**Notes:** 0 SEC = Reduces power consumption. Immediately after printer stops receiving data, fuser heating element shuts off; 30 seconds later fan shuts off. When printer receives data, fuser warms up before printing begins.

8 MIN. = Reduces power consumption. 8 minutes after printer stops receiving data, fuser heating element shuts off; 30 seconds later fan shuts off. When printer receives data, fuser warms up before printing begins.

DISABLE = Fuser and fan are always on, printer is ready to print at all times.

### LOW TONER

ON  
OFF

**Notes:** ON = When low toner is detected, TONER LOW displays, indicating that toner cartridge should be replaced soon: at this point 100 more sheets will print before the TONER EMPTY message displays.

OFF = When low toner is detected, TONER EMPTY displays, indicating that the toner cartridge needs replacement. You must replace the toner cartridge immediately, or open and close the cover to remove the message, which will then reappear after every 20 pages are printed.

### TONER SAVING

DISABLE  
MEDIUM  
LIGHT

**Notes:** Select medium or light to reduce the amount of toner used. This will result in lighter printing to conserve toner and is recommended only for proofs and draft print jobs.

## CLEARABLE WRNINGS

ON  
JOB

**Notes:** Sets the disposition of error messages which can be cleared by pressing the ►/Reset button.

*HP PCL 6 mode:* ON = Message displays until you press ►/Reset to clear the display. OFF = Message will automatically clear when next print job is received, whether or not you have pressed the ►/Reset button.

*PostScript mode:* Invalid. Error message will automatically be cleared from display as soon as the print job ends.

## ERROR REPORT

OFF  
ON

**Notes:** *HP PCL 6 mode:* Invalid.

*PostScript mode:* Change to ON if you wish to set the printer to print the error contents and the operand stack condition during a PostScript error.

## PARALLEL I/F

PARALLEL SPEED

HIGH  
MEDIUM

**Notes:** HIGH = Data transfer speed maximized. MEDIUM = Select if data transmission problems occur, or with earlier computers.

BI-DIRECTION

ENABLE  
DISABLE

**Notes:** ENABLE = Select Bi-directional parallel communication (Compatible, Nibble, ECP).

DISABLE = Bi-directional communications are NOT supported.

I-PRIME

OFF  
ON

**Notes:** Applicable only for IBM and Epson emulations. Sets whether or not the I-Prime signal is ignored (OFF = ignored).

## RS232C SERIAL

FLOW CONTROL

DTR HI POLARITY  
DTR LO POLARITY  
XON/XOFF  
ROBUST XON

**Note:** Sets the type of serial communication protocol used.

## RS232C SERIAL (continued)

BAUD RATE

300 BAUD  
600 BAUD  
1200 BAUD  
2400 BAUD  
4800 BAUD  
9600 BAUD  
19200 BAUD

**Note:** Sets the communication speed in bits per second.

DATA BITS

8 BITS  
7 BITS

**Note:** Sets the number of data bits used in serial interface communication.

PARITY

NONE  
EVEN  
ODD

**Note:** Sets the serial interface parity.

MIN. BUSY

200 mSECONDS  
2 SECOND

**Note:** Sets the length of the busy signal.

## LANGUAGE

LANGUAGE

ENGLISH  
DEUTSCH  
FRANCAIS  
ITALIANO  
CASTELLANO  
SVENSKA  
NORSK  
DANSK  
NEDERLANDS  
TÜRKÇE  
PORTUGUES  
POLSKI

**Note:** Sets the display language

# The User Maintenance Menu

The User Maintenance Menu includes printer maintenance and operating functions. Functions are described below.

To enter the Maintenance Menu:

1. Turn off the printer.
2. Press and hold MENU 1/*Menu 2* while turning the printer on, until USER MNT displays.
3. Press MENU 1/*Menu 2* repeatedly to advance to the category you want.
4. Press ENTER to engage a category function, or press ► to see other selections, then press ENTER to engage the selection you want.
5. Press ON-LINE (except for HEX DUMP) to invoke the function.

## Summary of Maintenance Menu Categories:

- MENU RESET
- HEX DUMP
- DRUM CNT RESET
- REC BUF
- OP MENU
- X ADJUST
- Y ADJUST
- DUP ADJUST
- 2ND TRAY
- 3RD TRAY
- FRONT
- PLACE PG
- SETTING
- CLN CYCL

## Maintenance Menu Settings

### MENU RESET

**Note:** Resets the Level-1 menu to factory defaults.

### HEX DUMP

**Notes:** Prints a hex dump of received data for diagnostics. If less than a page of data is received, you must press the FORM FEED/*Print Demo* button to print the page.

To exit hex dump mode, turn off the printer.

### DRUM CNT RESET

**Note:** Use this to reset the drum counter after replacing, *and only after* replacing, the image drum cartridge.

### RECEIVE BUFFER

AUTO  
8KB  
20KB  
50KB  
100KB  
1MB

**Notes:** Sets the size of the receive buffer. If you set a large value, the printing speed will be faster, but memory overflows will occur more frequently.

When this value is changed, all downloaded fonts, macros, and I/O data are lost.

### OP MENU

ENABLE  
DISABLE

**Notes:** DISABLE = Disables all control panel buttons except ON-LINE. Use this feature to prevent changing menu items you have personally selected.

ENABLE = All control panel buttons are active.

### X ADJUST

*0mm* (Range +2.00 to -2.00 mm, in 0.25 mm intervals)

**Notes:** Adjust horizontal print position in 0.25 mm increments. Plus (+) indicates right movement, minus (-) indicates left movement.

### Y ADJUST

*0mm* (Range +2.00 to -2.00 mm, in 0.25 mm intervals)

**Notes:** Adjust vertical print position in 0.25 mm increments. Plus (+) indicates downward movement, minus (-) indicates upward movement.

In PostScript mode, any negative values selected will be ignored.



## DUP ADJ

0mm (Range +2.00 to -2.00 mm, in 0.25 mm intervals)

**Notes:** For the OKIPAGE 20, this setting only applies when the optional Duplex Feeder is installed.

Adjust vertical print position in 0.25 mm increments. Plus (+) indicates downward movement, minus (-) indicates upward movement.

In PostScript mode, any negative values selected will be ignored.

## 2ND TRAY

5 (Range 1 to 16)

**Notes:** Applies only when the optional Paper Expansion Tray is installed. Sets the priority of the optional tray in the HP PCL 6 emulation.

## 3RD TRAY

9 (Range 1 to 16)

**Notes:** Applies only when two optional Paper Expansion Trays are installed. Sets the priority of the second optional tray in the HP PCL 6 emulation.

## FRONT

4 (Range 1 to 16)

**Notes:** Sets the priority of the Manual Feeder in the in the HP PCL 6 emulation.

## PLACE PG

CENTER  
LEFT

**Notes:** Sets placement of printed image on the page.

## SETTING

0 (Range -1 to +1 in increments of 1)

**Notes:** Adjust to improve print quality:

-2 Rough/thick papers and/or low temperature/humidity

-1

0 Normal media/environmental conditions

+1

+2 Rough papers and/or high temperature/humidity

## CLN CYCL

NORMAL  
MIDDLE  
HIGH

**Notes:** Sets the frequency of the page cleaning sequence:

NORMAL = every 20 pages

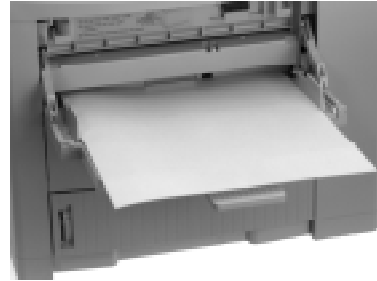
MIDDLE = every 10 pages

HIGH = every 3 pages.



# Chapter 4: The Front Feeder

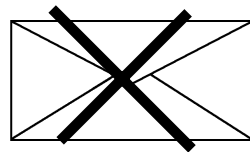
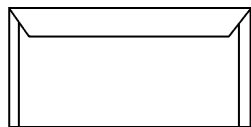
Use the Front Feeder to print on special media without having to change the paper you have loaded in the tray(s). You can print up to 100 pieces of media or you can use the Front Feeder as a manual feed unit to print individual pieces of media “on-the-fly.”



For media other than standard paper, you must use the rear paper exit. This eliminates curling, and for labels, it eliminates peeling.

You can use the Front Feeder to print on the following media:

- **Standard weight paper** that is different from the paper loaded in the paper tray: e.g., letterhead, different size
  - Up to 100 sheets
  - 16 to 28-lb.
  - Letter, 13" & 14" Legal, Executive, A4, A5, B5, C5 (minimum 3.4" x 2.8"; maximum 8.5" x 14")
  - Use either top or rear paper exit path
- **Envelopes**
  - Up to 10 envelopes
  - 16 to 28-lb.
  - Com 10, Com 9, Monarch, DL, C4, C5
  - Use envelopes that have seams that run down the sides and squared-off flaps: envelopes with v-type flap are *not* recommended.

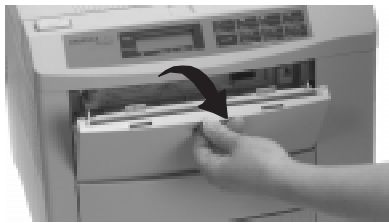


- Use envelopes with a smooth, even surface that are designed for laser printers: *no metal clasps, snaps, windows, or self-adhesive flaps*
- Use rear paper exit only
- **Labels**
  - Important! Carrier sheet and label adhesive must withstand the fusing process heat of 392° F (200°C) for 1 second. Label adhesive must not be exposed; if it is, it will cause jamming in the printer.**
  - Up to 100 sheets
  - Letter or A4
  - Use label sheets designed for laser printers
  - *Labels must cover the entire carrier sheet.*
  - Use rear paper exit only
- **Transparencies** (up to 100 sheets)
  - Important! Transparencies must withstand the fusing process heat of 392° F (200°C) for 1 second without wrinkling or gumming up.**
  - Letter or A4
  - Use transparencies designed for laser printers
  - Use rear paper exit only
- **Heavy weight paper** such as index or card stock
  - Up to 100 sheets
  - Up to 36-lb.
  - Letter, 13" & 14" Legal, Executive, A4, A5, B5, C5 (minimum 3.4" x 2.8"; maximum 14")
  - Use rear paper exit only

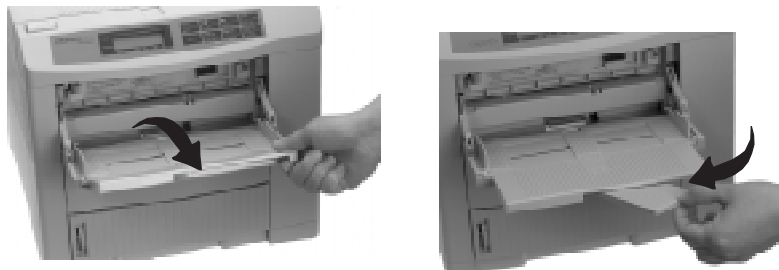
# Using the Front Feeder to Print Multiple Pieces of Media

To set up the printer for multiple-piece print jobs using the Front Feeder:

1. In your software program:
  - a. Enter the printer setup menu.
  - b. Select Front Feeder.
  - c. Select the media type, size and orientation.
2. Lower the printer's Front Feeder.



3. Flip out the tray, then pivot out the extender.

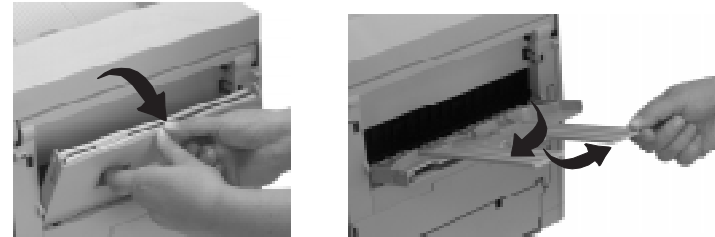


4. Enter the Level-1 menu and make changes:
  - a. Press the ON LINE button (printer goes off line).
  - b. Press MENU 1/Menu 2 until TRAY SELECT displays.
  - c. Press ENTER.
  - d. Make sure that MANUAL FEED is set to OFF (the factory default), then press ENTER.

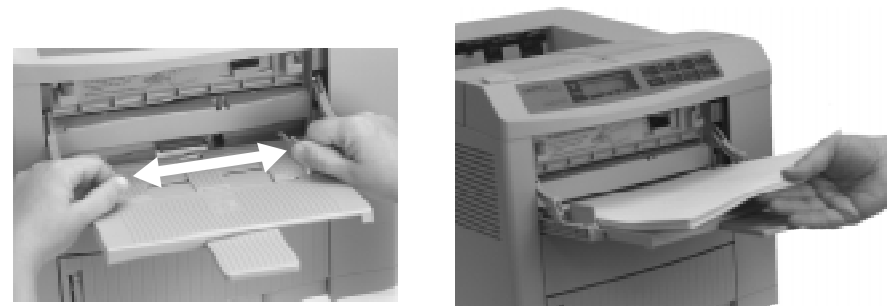
- e. Press MENU 1/Menu 2 (display reads PAPER FEED).
- f. Press **▶/Reset** until the display reads FRONT TRAY, then press ENTER to engage the setting (an Asterisk will appear next to FRONT TRAY).
- g. Press ON LINE to return the printer to on-line status.

*Note: When you are done printing using the Front Feeder, reenter the Level-1 menu and change the PAPER FEED setting back to its former setting (normally TRAY 1).*

5. Open the rear paper exit path (not required for standard weight paper).



6. Adjust the Front Feeder paper width guides for the media you will be using and load the print media.



*Note: Insert letterhead paper face-up, with the top edge of the paper nosed into the printer.*

7. Send the print job.

*Note: The software application will override the printer menu settings.*

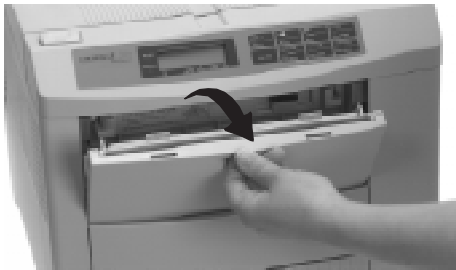
# The Front Feeder: Printing Individual Pieces (Manual Feed)

You can open up the Front Feeder and use it as a manual feeder to print an individual piece of standard paper, an envelope, or specialty print media, without having to change any of the menu settings.

## Manual Feed: Standard Paper

### Setting up Manual Feed for Standard Weight Paper

1. In your software program:
  - a. Enter the printer setup menu.
  - b. Select Manual Feed.
  - c. Select the paper size and orientation.
2. Lower the printer's Manual Feeder.



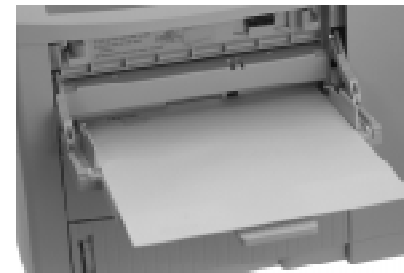
3. Flip out the tray, then pivot out the extender.



4. Adjust the paper width guides.



5. Load a sheet of paper.



*Note: Insert letterhead paper face-up, top edge of paper in first.*

6. Send the print command from your software.
7. When prompted to, press the FORM FEED button on the printer control panel.

*The page prints.*

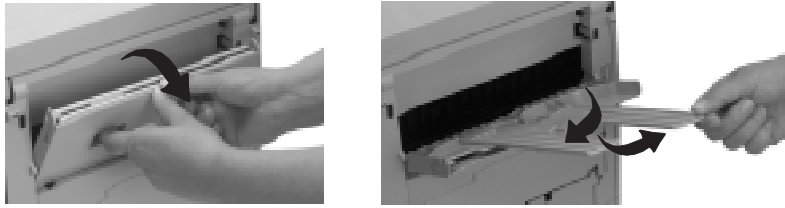
## Manual Feed: Envelopes

### Important!

- Use rear paper exit to avoid curling
- Do *not* use v-flap type envelopes (see page 27)

### Setting up to Print an Envelope

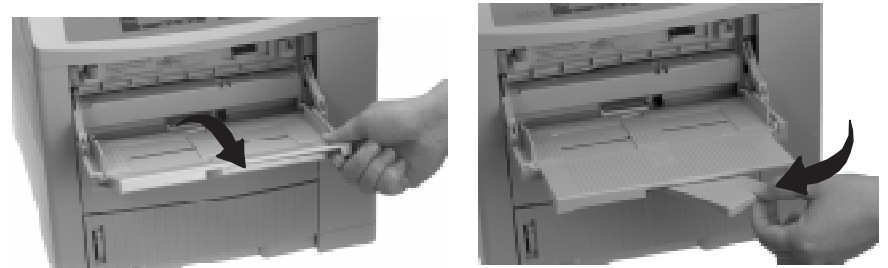
1. In your software program:
  - a. Enter the printer setup menu.
  - b. Select Manual Feed.
  - c. Select the envelope size.
  - d. Select landscape orientation.
2. Lower the rear paper exit tray and pull out the rear exit extender.



3. Lower the Front Feeder.



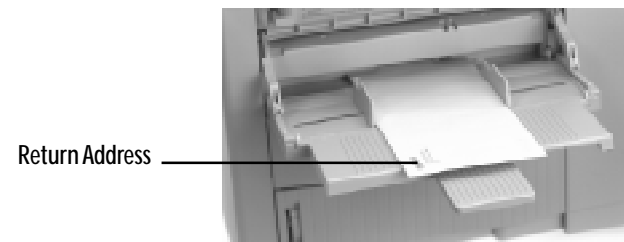
4. Flip out the manual feed tray, then pivot out the extender.



5. Adjust the paper width guides.



6. Insert the envelope with return address on lower left side and flap underneath.



7. Send the print command from your software.
8. When prompted to, press the FORM FEED button on the printer control panel.  
*The printed envelope will exit at the rear.*

## Manual Feed: Labels

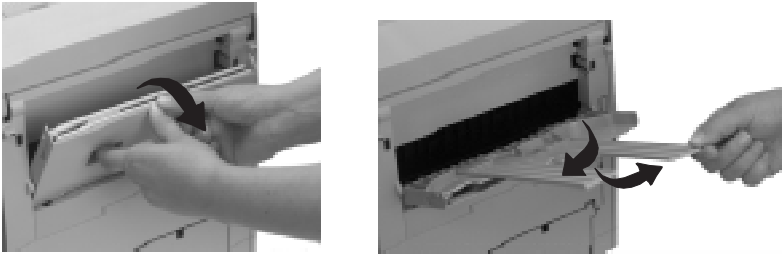
**Important! Sheet and label adhesive must withstand the fusing process heat of 392°F (200°C) for 1 second.**

**Label adhesive must not be exposed; if it is, it will cause jamming in the printer.**

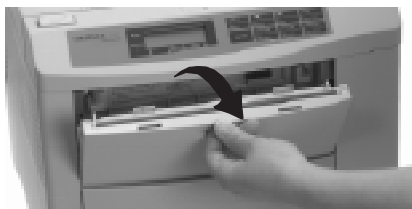
- Labels must cover the entire carrier sheet.
- Use rear paper exit to avoid peeling.

### Setting up to Print Labels

1. In your software program:
  - a. Enter the printer setup menu.
  - b. Select Manual Feed.
  - c. Select the label sheet size.
2. Lower the rear paper exit tray and pull out the rear exit extender.



3. Lower the Front Feeder.



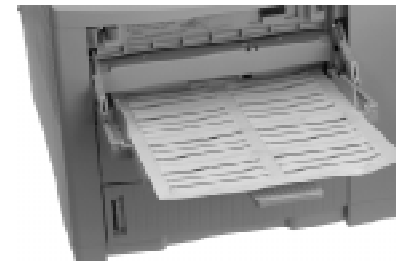
4. Flip out the tray, then pivot out the extender.



5. Adjust the paper width guides.



6. Insert the label sheet face up.



7. Send the print command from your software.
8. When prompted to, press the FORM FEED button on the printer control panel.

*The printed label sheet will exit at the rear.*

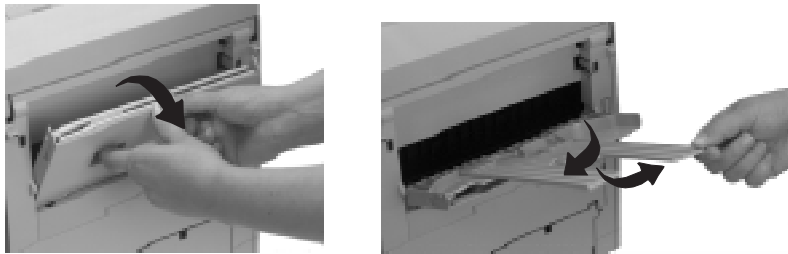
## Manual Feed: Transparencies

**Important! Transparency must withstand the fusing process heat of 392°F (200°C) for 1 second without wrinkling or gumming up.**

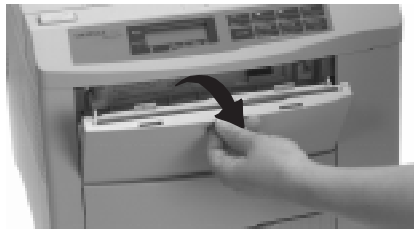
- Use transparencies designed for laser printers.
- Use rear paper exit to avoid curling.

### Setting up to Print a Transparency

1. In your software program:
  - a. Enter the printer setup menu.
  - b. Select Manual Feed.
  - c. Select the transparency size.
2. Lower the rear paper exit tray and pull out the rear exit extender.



3. Lower the Front Feeder.



4. Flip out the tray, then pivot out the extender.



5. Adjust the paper width guides.



6. Insert the transparency with the side to be printed facing up.



7. Send the print command from your software.
8. When prompted to, press the FORM FEED button on the printer control panel.  
*The printed transparency will exit at the rear.*



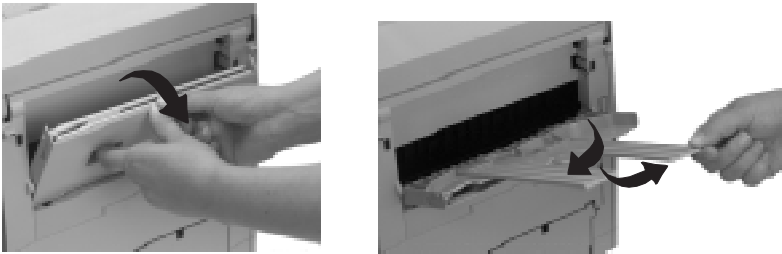
## Manual Feed: Heavy (Card) Stock

### Heavy (Card) Stock Specifications

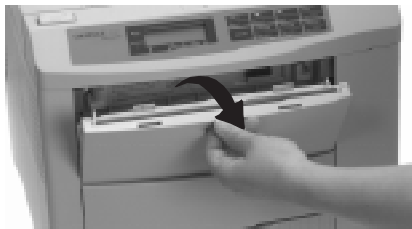
- Weight range : 28 - 36 lb.
- Use rear paper exit to avoid curling

### Setting up to Print Heavy Stock

1. In your software program:
  - a. Enter the printer setup menu.
  - b. Select Manual Feed.
  - c. Select the media size.
2. Lower the rear paper exit tray and pull out the rear exit extender.



3. Lower the Front Feeder.



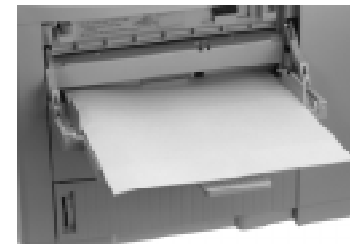
4. Flip out the tray, then pivot out the extender.



5. Adjust the paper width guides.



6. Insert the sheet of heavy stock.



7. Send the print command from your software.
8. When prompted to, press the FORM FEED button on the printer control panel.

*The printed sheet will exit at the rear.*

## Using the Automatic Tray Switch Feature

To increase the paper feed capacity, you can set the printer to automatically feed paper from the front feeder when the paper tray empties (or from any of the optional accessories).

To do this:

1. Press ON LINE.  
*The printer goes off-line.*
2. Press MENU 1/Menu 2 to enter the Menu Mode.
3. Press MENU 1/Menu 2 again to move to the TRAY SELECT category.
4. Press ENTER.
5. Press MENU 1/Menu 2 twice to move to the AUTO TRAY SWITCH item.
6. Press ►/Reset once to get to the ON selection.
7. Press ENTER to engage the ON selection.  
*An asterisk appears next to ON.*
8. Press ON LINE to exit the Menu Mode.

**Important: Paper tray size settings in your application software and in the OKIPAGE 20 Software Operator Panel will override the printer's front operator panel settings.**

If all paper sources have the same paper size selected, the printer will normally feed paper in the following sequence:

- (1) the first tray
- (2) the paper expansion tray (if installed)
- (3) the second paper expansion tray (if installed)
- (4) the front feeder
- (5) the multipurpose feeder (if installed).

If any paper tray has a different size paper selected, it will be skipped.

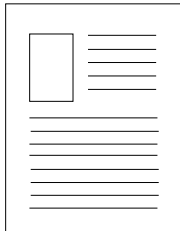
If you wish to change the sequence, use the Maintenance Menu (see “The User Maintenance Menu” in Chapter 3).

# Chapter 5: Duplex Printing

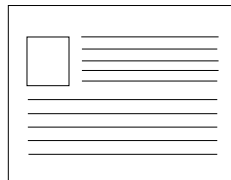
*Note: This chapter applies only to the Model 20DX, or Model 20 with the optional Duplex Feeder installed.*

## Portrait Versus Landscape

**Portrait:**



**Landscape:**



## Duplex Printing: Windows NT 3.51

The duplex print options are in the **Document Properties** dialog box.

### Example:

In Windows® NT 3.5, to select duplex printing in Microsoft® Word:

1. Select **Print** from the **File** menu.
2. Click **Printer**.
3. Click **Options**.
4. Select the duplex print method:  
**Long Side** (portrait printing)  
**Short Side** (landscape printing)
5. Click **OK**.
6. Click **Close** and send the print job.

## Duplex Printing: Windows® 3.1x

The duplex print options are in the **Document Properties** dialog box.

### Example:

In Windows 3.1x, to select duplex printing in Microsoft Word:

1. Select **Print** from the **File** menu.
2. Click **Printer**.
3. Click **Options**.
4. Select the **Paper Input** tab.
6. Click **Duplex**.
7. Select the duplex print method:  
**Join top to bottom** (landscape printing)  
**Join left to right** (portrait printing)
8. Click **OK**.
9. Click **OK**.
10. Click **Close** and send the print job.

## Duplex Printing: Windows 95

The duplex print options are in the **Document Properties** dialog box.

### Example:

In Windows 95, to select duplex printing in Microsoft Word:

1. Select **Print** from the **File** menu.
2. Click **Properties**.
3. Select the **Paper** tab.
4. Click **Duplex**.
5. Select the duplex print method:  
**Join top to bottom** (landscape printing)  
**Join left to right** (portrait printing)
6. Click **OK**.
7. Click **OK** and send the print job.

### Setting Duplex Printing as the Default in Windows 95

1. Click **Start, Settings, Printers**.
2. Click the *right* mouse button on the driver icon.
3. Click **Properties**.
4. Click **Duplex**.
5. Select the duplex method you wish to use as the default.
6. Click **OK**.
7. Click **OK**.

## Duplex Printing: Windows NT 4.0

The duplex print options are in the **Document Properties** dialog box.

### Example:

In Windows NT 4.0, to select duplex printing in Microsoft Word:

1. Select **Print** from the **File** menu.
2. Click **Properties**.
3. Select the **Advanced** tab.
4. Click **Paper/Output** in the box.
5. Click **Print on Both Sides (Duplex Printing)**.
6. Select the duplex print method:  
**Short Side** (landscape printing)  
**Long Side** (portrait printing)
7. Click **OK**.
8. Click **OK** and send the print job.

### Setting Duplex Printing as the Default in Windows NT 4.0

1. Click **Start, Settings, Printers**.
2. Click the *right* mouse button on the driver icon.
3. Click **Document Defaults**.
4. Select the duplex method you wish to use as the default.
5. Click **OK**.
6. Click **OK**.

# Chapter 6: Fonts

## Available Fonts

Your printer provides a variety of HP LaserJet 5 compatible fonts including:

- 45 PCL Scalable Fonts
- 4 Bitmap Fonts

In addition, there are four fonts with fixed spacing available in the IBM and Epson emulations.

## Printing a Sample of Resident Fonts

To see a sample of these fonts, print the Typeface List:

1. Place the printer off-line (press ON-LINE).
2. Press TRAY TYPE/*Print Fonts* for 2 seconds (until the display reads PRINT FONTS).
3. To print the Typeface List for the HP PCL6 emulation, press ENTER/*Power Save*. To print the Typeface List for the IBM or Epson emulation, press ►/*Reset* until the emulation you want appears on the second line of the display, then press ENTER/*Power Save*.  
*The Typeface List prints.*

## Summary of Available Fonts

### Fixed Scalable Fonts

Fixed spaced scalable fonts Courier and Letter Gothic are available in sizes from 0.44 to 99.99 cpi (characters per inch).

#### **Courier: 66 Symbol Sets**

- Courier, Font # 0
- Courier Bold, Font # 1
- Courier Italic, Font # 2
- Courier Bold Italic, Font # 3

#### **Letter Gothic: 61 Symbol Sets**

- Letter Gothic, Font # 32
- Letter Gothic Bold, Font # 33
- Letter Gothic Italic, Font # 34

### Proportional Scalable Fonts

Proportionally spaced scalable typefaces can be printed in any height from 4.00 up to 999.75 points (0.06-inch to 13.9 inches), adjustable in 0.25-point or 1-point increments.

*Note: There are 72 points in one inch.*

#### **CG Times: 77 Symbol Sets**

- CG Times, Font # 4
- CG Times Bold, Font # 5
- CG Times Italic, Font # 6
- CG Times Bold Italic, Font # 7

**CG Omega: 61 Symbol Sets**

CG Omega, Font # 8  
CG Omega Bold, Font # 9  
CG Omega Italic, Font # 10  
CG Omega Bold Italic, Font # 11

**Coronet: 61 Symbol Sets, Font # 12****Clarendon Condensed: 61 Symbol Sets, Font # 13****Univers: 77 Symbol Sets**

Univers, Font # 14  
Univers Bold, Font # 15  
Univers Italic, Font # 16  
Univers Bold Italic, Font # 17

**Univers Condensed: 61 Symbol Sets**

Univers Condensed, Font # 18  
Univers Condensed Bold, Font # 19  
Univers Condensed Italic, Font # 20  
Univers Condensed Bold Italic, Font # 21

**Antique Olive: 61 Symbol Sets**

Antique Olive, Font # 22  
Antique Olive Bold, Font # 23  
Antique Olive Italic, Font # 24

**Garamond: 61 Symbol Sets**

Garamond Antiqua, Font # 25  
Garamond Halbfett, Font # 26  
Garamond Kursive, Font # 27  
Garamond Kursiv Halbfett, Font # 28

**Marigold: 61 Symbol Sets, Font # 29****Albertus: 61 Symbol Sets**

Albertus, Font #30  
Albertus Extra Bold, Font # 31

**Arial: 27 Symbol Sets**

Arial, Font # 35  
Arial Bold, Font # 36  
Arial Italic, Font # 37  
Arial Bold Italic, Font #38

**Times New: 27 Symbol Sets**

Times New, Font # 39  
Times New Bold, Font # 40  
Times New Italic, Font # 41  
Times New Bold Italic, Font # 42

**Symbol:** 1 Symbol Set, Font # 43

**Wingdings:** 1 Symbol Set, Font # 44

**Bitmap Fonts****Line Printer: 63 Symbol Sets**

- Pitch = 16.67 cpi
- Size = 8 points
- Portrait only

**OCR-A & OCR-B: 1 Symbol Set**

- Pitch = 10 cpi
- Size = 12.0 points
- Portrait only

**USPSZIP Bar Code: 4 Symbol Sets**

- Pitch = Proportional
- Size = 64 points
- Portrait only

**IBM/Epson Emulation Fonts****Courier: 63 Symbol Sets, Fixed Spacing**

Courier  
Courier Bold  
Courier Italic

**Line Printer: 63 Symbol Sets, Fixed Spacing**

## Selecting Fonts

The printer's default font is 10 cpi Courier.

The easiest way to select fonts is through your software program. Refer to your software documentation for information on selecting fonts.

Fonts can also be selected using the printer's control panel and main menu, however, *if a different font is selected in your software, it will override the font selected in the printer menu*: see Chapter 3 for menu information.

## Using Bar Code Fonts

The OKIPAGE 20 printer drivers support USPS PostNet bar code fonts resident on your printer. Bar Code fonts can be printed easily from WORD for Windows and other Windows applications.

## Symbol Sets

Your printer provides 90 special sets of characters for technical, legal and foreign language uses, as well as sets of drawing characters and standard alphanumeric characters. Each font uses symbols from one or more of these sets.

PC-8 is the printer's default symbol set. Check your software documentation for information on how to select a symbol set and how to insert a symbol or special character into your document. Symbol sets can also be selected under the FONTS & SYMBOLS category in the printer Level-1 menu.

## Adobe PostScript Fonts Option

The optional Adobe PostScript Level 2 SIMM Kit (P/N 70032701) provides an additional 37 Adobe Type 1 fonts (see Chapter 7).

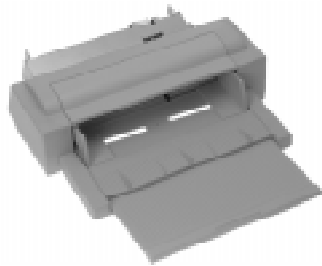




# Chapter 7: Accessories

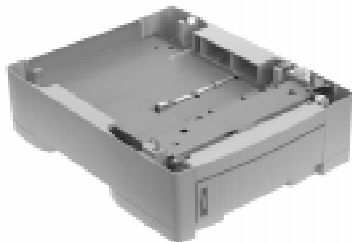
## Optional Paper Handling Accessories

### Multipurpose Feeder (P/N 40352801)



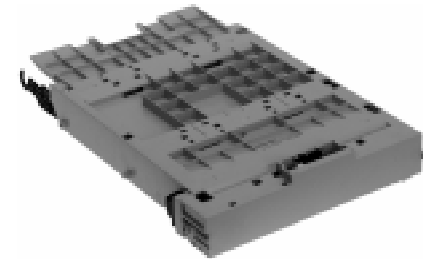
Automatically feeds up to 50 envelopes or 100 sheets of paper.

### Paper Expansion Tray (P/N 40346401)



Doubles the paper capacity to 1,060 sheets by adding an additional 530-sheet paper tray. If desired, a second Paper Expansion Tray can be added to triple the paper capacity to 1,590 sheets.

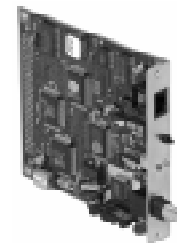
### Duplex Feeder (P/N 70033301)



Converts the OKIPAGE 20 printer into an OKIPAGE 20DX. This feeder allows you to print on both sides of standard paper.

## Additional Options

### Network Card (P/N 70032801)



Install this card in your OKIPAGE 20/20DX printer to convert it for operation on a network.

## Adobe PostScript Level 2 SIMM Kit (P/N 70032701)



## Flash ROM Memory SIMMs



4 MB (P/N 70032601)

8 MB (P/N 70033201)

## Expanded Memory SIMMs



User-installable RAM SIMMs are available to upgrade the printer's memory in the following sizes:

- 4 MB SIMM (Okidata Part # 70028801)
- 8, 16 and 32 MB SIMMs commercially available (72-pin, 60 ns, FPM, Non-parity)

## SIMM Configurations

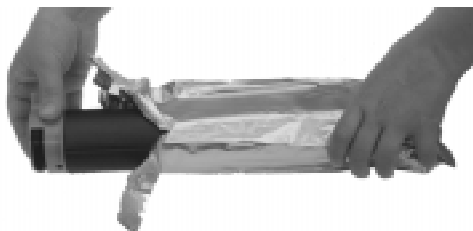
There are three sockets in your OKIPAGE 20/20DX printer to take SIMM boards. See Appendix C for information on the possible SIMM configurations for these sockets.

# Chapter 8: Maintenance

This chapter explains how to replace the toner and image drum cartridges, and clean the LED array.

## General Consumables Information

### The Toner Cartridge: Type 7 (P/N 40468801)



#### Toner Cartridge Life

Toner cartridge life depends on the page density, the percentage of each page that is printed black. An average business letter is printed at between 3% and 5% density, graphics density is usually higher. The higher the print density, the more toner is used.

On the average, a toner cartridge will produce approximately 5000 sheets at 5% print density.

**Important:** The first toner cartridge you place in your printer will only produce between 2500 and 3500 sheets. This is normal, as the new image drum reservoir and developing roller system must saturate with toner.

### The Image Drum: Type 7 (P/N 40468701)



#### Image Drum Life

The life of the image drum depends on a number of factors, including the operating temperature, humidity, the type of paper you use, and the number of pages per job. Each time you print or turn the printer on, the drum has to rotate to start up and to wind down. As a result, frequent one-page print jobs will wear down your drum more quickly than multiple-page print jobs.

The image drum cartridge should last up to 30,000 pages at 3 pages per *job* (continuous printing) or 19,000 pages at 3 pages per *minute*.

## Replacing the Toner Cartridge (P/N 40468801)

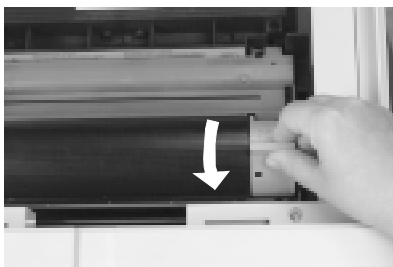
Replace the toner cartridge after TONER LOW displays in the control panel window. At this point, the printer will print about 100 more sheets, then display TONER EMPTY and stop printing. Printing will resume when a new toner cartridge is installed.

To replace the toner cartridge:

1. Press the OPEN button and lift the cover.



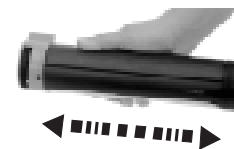
2. Pull the grey lock lever toward the front of the printer until it stops.



3. Lift out and discard the used toner cartridge in accordance with local regulations.



4. Remove the toner cartridge from the foil package and shake it from side to side a few times to distribute the toner evenly.

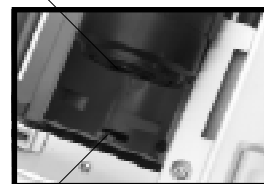


5. Carefully peel off the tape from the bottom of the cartridge.



6. Place left end of the toner cartridge into the toner well at an angle, aligning the recess in the end of the toner cartridge with the tab on the image drum.

Recess



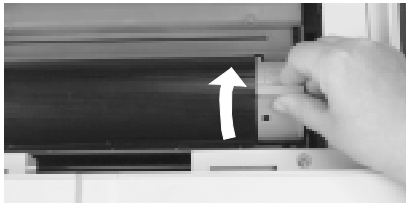
Tab



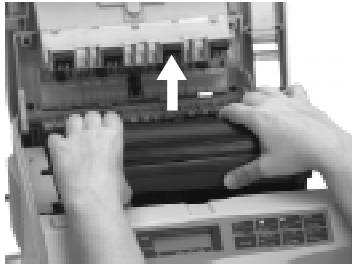
7. Lower the right side of the cartridge, aligning the slot with the ridge in the image drum.



8. Push the grey lock lever toward the back of the printer until it stops.



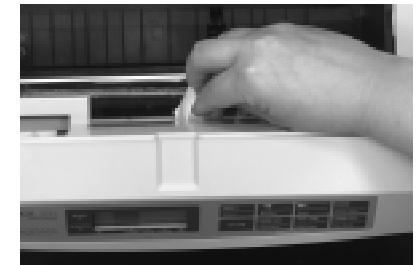
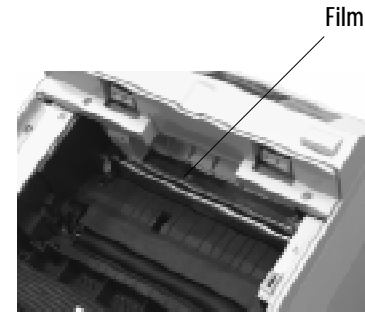
9. Lift out the image drum and put it on a smooth, flat surface. *Be sure to protect the drum from exposure to light either by placing it in the light shield bag supplied with the printer, or by placing a sheet of paper over it.*



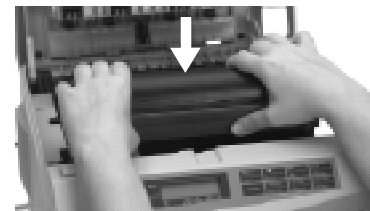
10. Use the lens cleaner supplied in the new toner kit to clean the LED array.



11. Locate the clear plastic film inside the front of the printer, then fold the lens cleaner over and use it to wipe any paper dust off the plastic film.



12. Replace the image drum and close the cover.



# Replacing the Image Drum Cartridge (P/N 40468701)

When the image drum reaches 90% of its life, the CHANGE DRUM message will display in the control panel window. You should have a new image drum cartridge and a new toner cartridge on hand at this point. Change the image drum cartridge when the print becomes faint or begins to deteriorate.

*Note: To replace the image drum, you will need both a new image drum cartridge and a new toner cartridge.*

## Precautions!

The image drum is fragile. To avoid damage to the new drum, take these precautions while handling the new image drum cartridge:

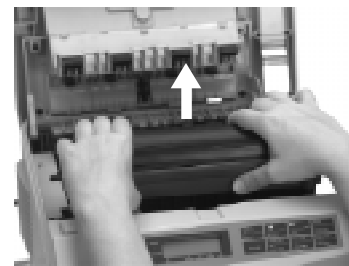
- Avoid touching the green drum surface.
- Be careful not to set the cartridge down on anything that might scratch the surface of the drum.
- Keep the drum from exposure to direct sunlight and don't let it sit in room light for more than 5 minutes. Leave it in the package until you are ready to install it in the printer.

To replace the image drum cartridge:

1. Press the OPEN button and lift the printer cover all the way back.



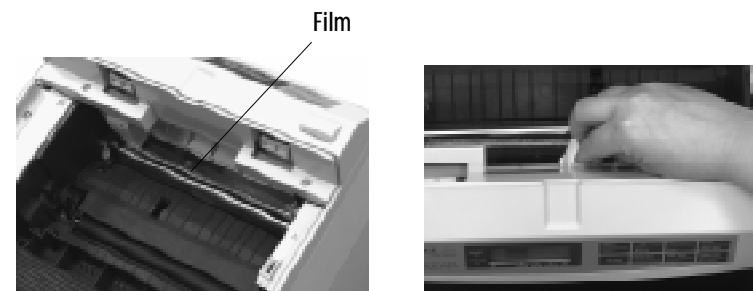
2. Lift out the used image drum cartridge with the toner installed and discard both in accordance with local regulations.



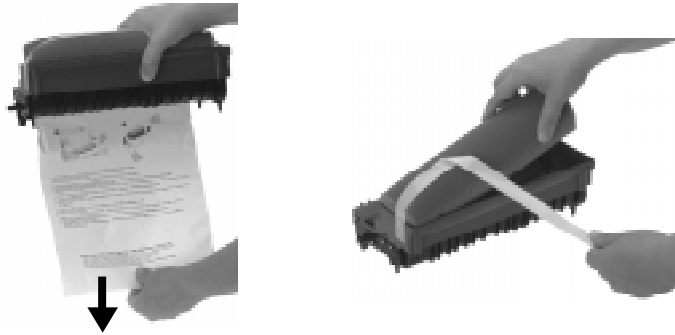
3. Open the LED lens cleaner (included with the replacement toner cartridge) and wipe the LED lens assembly clean.



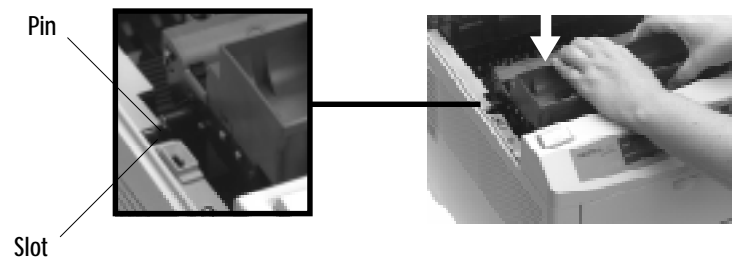
4. Fold over the lens cleaner and use it to wipe any paper dust off the clear plastic film inside the front of the printer.



5. Open the new image drum package and remove the protective paper, then remove the tape and shipping insert from the toner well and discard them.



6. Install the new image drum in the printer, inserting the alignment pins on each end into the slots in the printer.



7. Remove the new toner cartridge from its package and shake it from side to side a few times to distribute the toner evenly, then carefully peel off the tape from the bottom of the cartridge.



8. Place the left end of toner cartridge into the toner well, aligning the recess in the end of the toner cartridge with the tab on the image drum, then lower the right side of the toner cartridge, aligning the slot in the end of the toner cartridge with the ridge in the image drum.



9. Push the grey lock lever toward back of the printer until it stops.



10. Close the printer cover.

11. Reset the Drum Counter:

**Important! If the drum counter is not reset when you replace the drum, the CHANGE DRUM message will appear at the next “toner low” condition, long before it is actually necessary to change the drum.**

- Turn the printer on while holding the MENU 1/Menu 2, button. INITIALIZING, then USERMNT displays in the control panel window.
- Press MENU 1/Menu 2, 3 times. DRUM CNT RESET displays.
- Press ENTER. The counter resets.
- Press ON LINE.

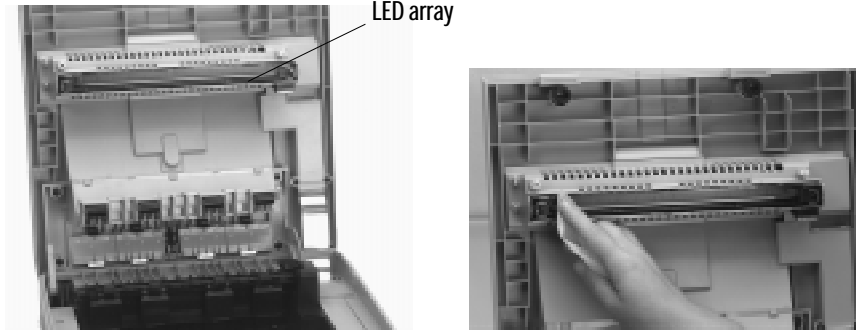
## Cleaning the LED Array

Clean the LED array every time you install a new toner cartridge. A dirty LED array could cause faded vertical areas or light printing down a page.

1. Press the OPEN button and lift the printer cover all the way up.



2. Locate the LED array on the underside of the cover. Remove the LED Lens Cleaner Pad (included with the Toner Kit) from the package and carefully run it along the LED array.



*Note: If you do not have a lens cleaner pad, you can use a lint-free cloth with a little rubbing alcohol on it to clean the LED array.*

3. Close the printer cover.



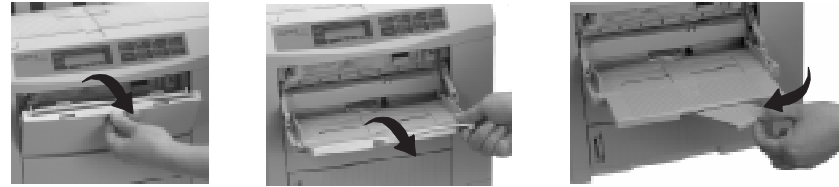
*Note: An extra LED cleaning pad is provided with each toner cartridge. Clean the LED array between toner changes if faded vertical stripes appear.*

## Generating a Drum Cleaning Page

If you experience print quality problems, for example repeating marks, blotching or shading, use the drum cleaning feature. The cleaning process will remove residual impurities from printing surfaces.

To generate a Drum Cleaning page:

1. Press ON-LINE to set the printer off-line.
2. Lower and open the Front Feeder.



Press ◀/Recover and ▶/Reset simultaneously and hold for 2 seconds.

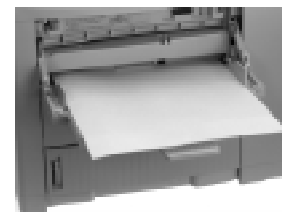
DRUM CLEANING  
MANUAL LETTER REQUEST

*or*

DRUM CLEANING  
MANUAL A4 REQUEST

*displays.*

3. Insert a clean sheet of letter or A4 paper in the Front Feeder.



4. Press FORM FEED.  
*The Cleaning Page will print.*
5. Press ON-LINE to return the printer to ready.



# Chapter 9: Problem Solving

Most of the printing difficulties you might encounter have a simple solution. This chapter can help you troubleshoot problems concerning:

- Paper jams
- Printer messages
- Print quality
- Software
- Hardware

If you are unable to solve your printer problem, see Appendix A for Service and Support information.

## Paper Jams

If a paper jam occurs, a message will display which indicates the location of the jam. Once the jam is cleared, the cover is closed and Warming Up is complete, the printer prints all the pages affected by the jam.

## Paper Jam Messages

### **PAPER INPUT JAM**

Paper jammed as it was being fed in from the paper tray or other source.

### **PAPER FEED JAM**

Paper jammed somewhere between the input and the paper exit.

### **PAPER EXIT JAM**

Paper jammed as it was exiting the printer.

### **DUPLEX INPUT JAM**

Paper jammed as it was being fed in from the paper tray.

### **DUPLEX OPEN JAM**

Paper tray was opened as the paper was being fed through the Duplex Feeder.

### **DUPLEX FEED JAM 1**

Paper jammed as it was being fed to the reverse roller in the Duplex Feeder.

### **DUPLEX FEED JAM 2**

Paper jammed as it was being reversed in the Duplex Feeder.

### **DUPLEX FEED JAM 3**

Paper jammed as it was being fed through the Duplex Feeder.

## Why Paper Jams Occur

**Reason:** The paper tray is overloaded.

**Corrective Action:** Do not fill the tray above the PAPER FULL mark.

**Reason:** Paper is too heavy, too light, or contains excess cotton content.

**Corrective Action:** Switch papers and use the recommended stock.

**Reason:** Paper is too moist or too dry, causing missfeeds and imaging problems.

**Corrective Action:** Store paper in average humidity, reseal opened reams. In areas of extreme dryness or humidity, do not leave paper in the tray overnight.

**Reason:** Rear paper exit tray may not be fully extended.

**Corrective Action:** Check to be sure that the rear exit tray is fully extended.

**Reason:** Rear exit tray was lowered while a job was printing.

**Corrective Action:** Resend the print job after lowering the rear exit tray.

**Reason:** Paper tray was opened while paper was feeding through the duplex feeder (optional on OKIPAGE 20).

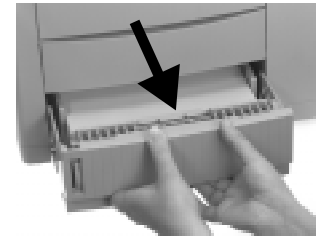
**Corrective Action:** Remove the jammed sheet from the duplex feeder, then reinstall the paper tray and resend the print job.

## Clearing Paper Jams

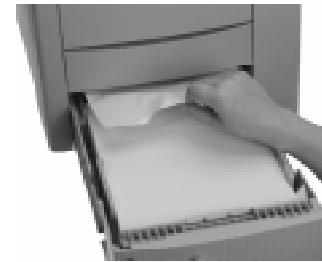
### Clearing a Paper Input Jam

PAPER INPUT JAM  
CHECK TRAY1

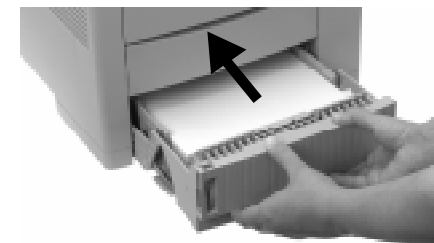
1. Slide out the paper tray.



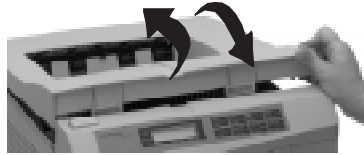
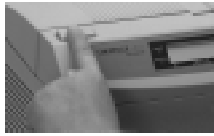
2. Remove the sheet that did not feed, then inspect the remaining sheets to see that they are not wrinkled or stuck together.



3. Close the paper tray.



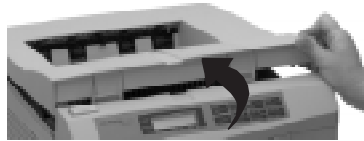
4. Press the OPEN button, then open and close the top cover to clear the paper jam message.



## Clearing a Paper Feed Jam

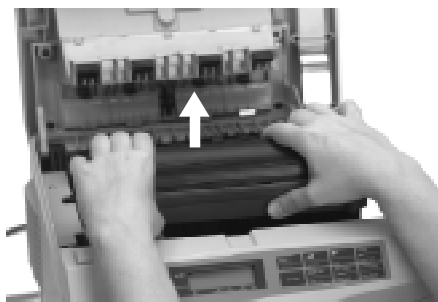
PAPER FEED JAM  
CHECK TRAY1

1. Press OPEN and lift the cover.



2. Lift out the image drum cartridge (*Careful! Avoid touching the shiny green drum area!*) and place it on a smooth, flat surface.

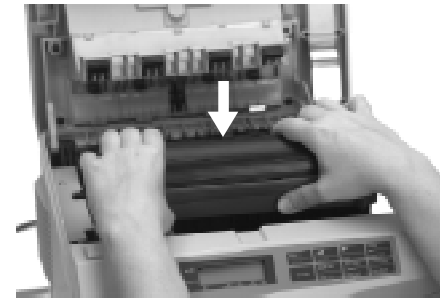
**Caution!** *The fusing unit may be HOT!*



3. Carefully remove the jammed paper.



4. Put the image drum cartridge back into the printer.



5. Close the cover.



## Clearing a Paper Exit Jam

PAPER EXIT JAM  
REMOVE THE PAPER

1. Press OPEN and lift the top cover to release roller pressure.



2. Pull the jammed paper out from the rear exit.



**Caution!** The fusing unit may be **HOT!**

3. If the paper will not release, try carefully pulling it out from inside the printer.



4. Close the printer cover.



## Clearing Duplex Feeder Paper Jams

### Clearing Duplex Feeder Input Jams

DUPLEX INPUT JAM  
REMOVE THE PAPER

To clear a Duplex Feeder Input paper jam, follow steps 1 through 4 under “Clearing a Paper Input Jam” earlier in this chapter.

### Clearing a Duplex Feeder Open Jam

DUPLEX OPEN JAM  
REMOVE THE PAPER

1. Press the OPEN button and open the top cover.



2. Carefully pull the sheet from inside the printer.

**Caution!** *The fusing unit may be hot!*



3. Close the printer cover.

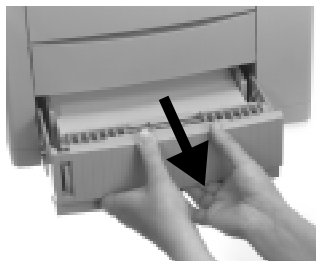


## Clearing Duplex Feeder Jams 1 & 2

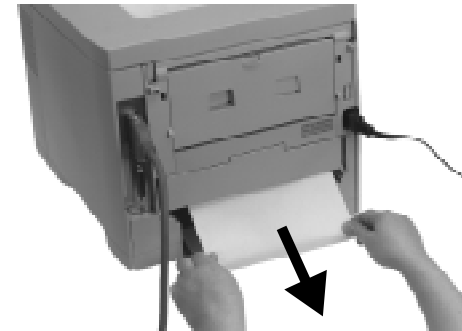
DUPLEX FEED JAM1  
REMOVE THE PAPER

DUPLEX FEED JAM2  
REMOVE THE PAPER

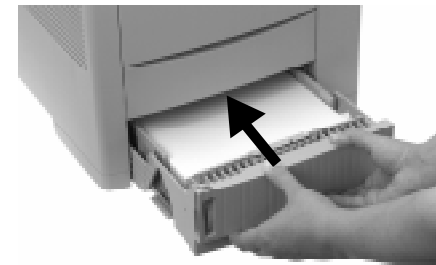
1. Remove the paper tray.



2. Remove the jammed sheet from the back of the printer



3. Replace the paper tray.



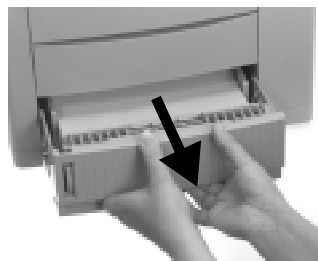
4. Press the OPEN button, then open and close the top cover to clear the paper jam message.



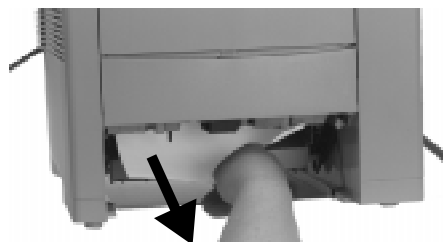
## Clearing Duplex Feeder Jam 3

DUPLEX FEED JAM3  
REMOVE THE PAPER

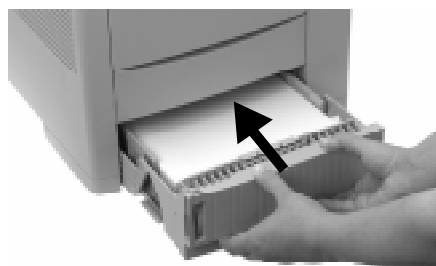
1. Remove the paper tray.



2. Reach in the front of the printer and pull the jammed sheet out of the Duplex Feeder.



3. Replace the paper tray.



4. Press the OPEN button, then open and close the top cover to clear the paper jam message.



## Printer Display Messages

The control panel window displays messages about your printer's operating conditions.

Message: **CHANGE DRUM**

Meaning: Appears on second line of display to indicate that the drum is near 90% of life. Change drum and reset drum counter. Note: If the drum counter is not reset when you replace the drum, the CHANGE DRUM message will appear at the next "toner low" condition. See "Replacing the Image Drum Cartridge" in Chapter 8.

Message: **COPY nnn/mmm**

Meaning: Indicates number of copies being printed.  
nnn = page being printed.  
mmm = total copies requested.

Message: **COVER OPEN**

Meaning: Close cover.

Message: **DATA PRESENT .xxx**

Meaning: Print data is in buffer. xxx = emulation

Message: **DRUM CLEANING**

Meaning: Drum Cleaning page is printing.

Message: **DUPLEX INPUT JAM  
REMOVE THE PAPER**  
Meaning: Paper has jammed when entering Duplex Feeder. Remove jammed paper, then open and close cover.

Message: **DUPLEX INPUT JAM1  
REMOVE THE PAPER**  
Meaning: Paper has jammed when being fed to reverse roller in Duplex Feeder. Remove jammed paper, then open and close cover.

Message: **DUPLEX INPUT JAM2  
REMOVE THE PAPER**  
Meaning: Paper has jammed within the Duplex Feeder. Remove jammed paper, then open and close cover.

MESSAGE: **DUPLEX INPUT JAM3  
REMOVE THE PAPER**  
Meaning: Paper has jammed in the Duplex Feeder. Remove jammed paper, then open and close cover.

Message: **DUPLEX OPEN JAM  
REMOVE THE PAPER**  
Meaning: Paper jammed as it entered Duplex Feeder. Remove jammed paper, then open and close cover.

Message: **EEPROM RESETTING**  
Meaning: EEPROM resetting to factory defaults. Returns to ON-LINE.

Message: **ERROR  
nn**  
Meaning: Printer error. Try turning the printer off, then on again. If this doesn't clear the error, write down the error number nn and contact your service provider.

Message: **ERROR CONTROLLER  
nn -aaaaaaa**  
Meaning: Controller error. nn = exception code. aaaaaaa = error address. Call Technical Support or a Service Center. Power off printer to clear error. If error continues contact service.

Message: **ERROR HOST I/F  
RS232C**  
Meaning: Serial interface error. Press RECOVER to continue. Check the protocol of both the PC and the printer. Resend job.

Message: **ERROR MEMORY  
OVERFLOW**  
Meaning: Page data exceeds available memory. Press RECOVER to continue. Adjust RASTER BUFFER, RECEIVE BUFFER, and/or FONT PROTECT in Menu and resend job.

Message: **ERROR PAPER SIZE  
CHECK ttttttt**  
Meaning: Incorrect paper size detected for tray ttttttt. Provide correct paper size in tray. Open and close cover to continue.

Message: **ERROR PRINT  
OVERRUN**  
Meaning: Data too complex for current RASTER BUFFER Setting. Increase RASTER BUFFER value and resend job, or add memory. Press RECOVER to continue.

Message: **ERROR RECEIVE  
BUFFER OVERFLOW**  
Meaning: Receive buffer overflow. Data was lost. Press RECOVER to continue. Resend job.

Message: **FLUSHING JOB**  
Meaning: Data is being discarded as a result of command received.

## Printer Display Messages (continued)

Message: **FRONT TRAY ERROR  
PRESS RECOVERKEY**

Meaning: Error in manual feeder. Press RECOVER to correct.

Message: **FUSER LIFE**

Meaning: Appears on second line of display to indicate that the fuser is near end of life. Contact your service dealer (see Appendix A).

Message: **INITIALIZING**

Meaning: Controller is being initialized at power on.

Message: **Mmmmm MANUAL  
yyyyyyy REQUEST**

Meaning: Insert requested paper. Printing is stopped until paper is provided or RECOVER is pressed.

Mmmmm = requested size

yyyyyyy = requested paper media (paper, envelope, etc.)

Message: **Mmmmm tttttt  
PAPER REQUEST**

Meaning: Paper size mmmmm requested at tray tttttt. Printing is stopped until paper is provided or RECOVER is pressed.

Message: **OFF-LINE .xxx  
Mmmmm ttttt**

Meaning: Not ready to receive data. xxx = emulation. Mmmmm = SIMPLEX or DUPLEX (on OKIPAGE 20, appears only if optional duplex feeder is installed). ttttt = paper tray selected

Message: **ON-LINE .xxx  
Mmmmm ttttt**

Meaning: Ready to receive data. xxx = emulation. Mmmmm = SIMPLEX or DUPLEX (on OKIPAGE 20, appears only if optional duplex feeder is installed). ttttt = paper tray selected

Message: **PAPER EXIT JAM  
REMOVE THE PAPER**

Meaning: Paper jammed during exit. Clear jam and open/close top cover.

Message: **PAPER FEED JAM  
CHECK ttttttt**

Meaning: Paper jammed during feeding from tray ttttttt. Clear jam and open/close top cover.

Message: **PAPER INPUT JAM  
CHECK ttttttt**

Meaning: Paper jammed while being supplied from tray ttttttt. Clear jam and open/close top cover.

Message: **PAPER NEAREND Tn**

Meaning: Indicates only about 20 sheets left in tray Tn.

Message: **PAPER OUT  
mmmmm ttttttt**

Meaning: Paper size mmmmm is out at tray ttttttt. Printing is stopped until paper is loaded.

Message: **POWER SAVING**

Meaning: Flashes on second line of display to indicate that printer is in power saving mode.

Message: **PRESS FORM FEED  
TO EJECT**

Meaning: Memory overflow has occurred. Press FORM FEED to eject paper.



Message: **PRINT DEMO PAGE**

Meaning: Demo page is printing.

Message: **PRINT FONTS**

Meaning: Typeface List page is printing.

Message: **PRINT MENU**

Meaning: Menu page is printing.

Message: **PRINTING**

Meaning: Data is being received and printed.

Message: **PROCESSING .xxx**

Meaning: Data being received or processed. xxx = emulation

Message: **RESET**

Meaning: Manual reset was initiated. All temporary fonts and macros are deleted.

Message: **RESET TO FLUSH**

Meaning: Printer was switched to off-line with data in buffer. Press RESET to delete data.

Message: **RESET TO SAVE**

Meaning: Press **▶/Reset** to save menu changes. Menu changes cannot be reset automatically because data is present in buffer.

Message: **STACKER FULL  
REMOVE THE PAPER**

Meaning: Rear paper exit bin is full. Printing is stopped until paper is removed.

Message: **TONER EMPTY  
REPLACE TNR CART.**

Meaning: Toner cartridge is virtually empty and must be changed to avoid print deterioration.

Message: **TONER LOW**

Meaning: Appears on second line of display to indicate that toner is running out. About 100 more pages can be printed after this message first appears.

Message: **TONER SENSOR**

Meaning: Appears in second line of display to indicate that a malfunction of toner sensor has been detected.

Message: **ttttt INSTALL**

Meaning: Tray ttttt is pulled out: reinsert tray.

## Print Quality Problems

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

---

### Blank sheets printed.

*Reason:* Image drum cartridge may have been exposed to light, or LED array or image drum contacts may have failed.

*Solution:* Leave image drum cartridge in total darkness for several hours. If this fails to restore it, install a new image drum cartridge.

*Reason:* Empty or missing toner cartridge.

*Solution:* Install new toner cartridge.

---

### Entire page prints faintly.

*Reason:* Empty toner cartridge. Pages get fainter after toner is used up.

*Solution:* Install new toner cartridge.

*Reason:* LED array is dirty.

*Solution:* Clean the LED array.

---

**Page has gray background.**

*Reason:* Static electricity causes toner to stick to background

*Solutions:*

- (1) Change papers to an acceptable laser bond and use a humidifier.
- (2) Generate a Drum Cleaning page.

*Reason:* Image drum has been exposed to light.

*Solution:* Leave image drum cartridge in total darkness for several hours. If this fails to restore it, install a new image drum cartridge.

---

**Page prints all black.**

*Reason:* Hardware problem

*Solution:* Contact your service representative.

---

**Page has repeating marks.**

*Reason:* Excess toner in paper path.

*Solution:* Generate a Drum Cleaning page.

*Reason:* Damaged image drum cartridge causes repetitive marks due to surface nicks and scratches.

*Solution:* Install new Image drum cartridge.

---

**An oblong area of faint print appears on each page.**

*Reason:* “Dropout” caused by using cotton bond paper in high humidity. Moisture has affected paper.

*Solution:* Change to a different type of paper or use a dehumidifier; check toner.

---

---

**Vertical white streaking or faint areas on page.**

*Reason:* Toner is low and does not distribute properly or the drum is worn out.

- Solutions:*(1) Replace toner cartridge.  
(2) Check drum and replace if necessary.

*Reason:* LED array is dirty.

- Solutions:*(1) Clean LED array.  
(2) Contact your service representative.
- 

**Faded vertical stripes**

*Reason:* LED array is dirty.

*Solution:* Clean the LED array.

---

**Vertical black lines**

*Reason:* Toner is low.

*Solution:* Replace toner cartridge.

*Reason:* Scratched image drum.

*Solution:* Replace the image drum cartridge.

*Reason:* Hardware problem.

*Solution:* Contact service representative.

---

**Fuzzy print**

*Reason:* LED array is dirty.

*Solution:* Clean the LED array.

---

**Distorted print**

*Reason:* Paper path lamp assembly or fusing unit problem.

- Solutions:*(1) Generate Drum Cleaning page.  
(2) Contact service representative.
-

---

**White blotches or faded gray areas and temperature or humidity is high or low.**

*Reason:* Difficult environment.

*Solution:* Check toner. If okay, adjust settings in Maintenance Menu (See Chapter 3).

---

**Faded print after installation.**

*Reason:* Toner cartridge is not correctly installed.

*Solution:* Install toner cartridge correctly.

---

**Print is smeared or blotched.**

*Reason:* Dirty or defective fuser assembly or other hardware problem.

*Solutions:*(1) Generate Drum Cleaning page.

(2) Contact your service representative.

---

**Printed page is light or blurred.**

*Reason:* Toner is low.

*Solution:* Replace toner cartridge.

*Reason:* Paper used is not designed for laser printers.

*Solution:* Switch to a recommended paper.

*Reason:* LED array is dirty.

*Solution:* Clean LED array.

---

**Bold characters and dark lines are smeared.**

*Reason:* Toner is low.

*Solution:* Replace toner cartridge.

---

**Print is darker than usual.**

*Reason:* Darkness setting is too high.

*Solution:* Change Darkness setting in Menu.

---

---

**Pages curl excessively**

*Reason:* Printing on wrong side of paper.

*Solutions:*(1) Turn paper over in tray.

(2) When installing paper, make a note of the print side arrow on the paper package, then install the paper “print side down” in the paper tray.

*Reason:* Moisture in paper. Improper storage.

*Solution:* Avoid storing paper in areas of excessive temperature changes and humidity.

*Reason:* High humidity.

*Solution:* Recommended operating humidity is 20-80%.

---

## Adjusting Print Quality

The following items in the printer menus can be set to adjust print quality. See Chapter 3 for more information.

### Level-1 Menu

#### MEDIA TYPE

TRAY1

TRAY2 (appears only if paper expansion tray option is installed)

TRAY3 (appears only if second paper expansion tray option is installed)

FRONT/MANUAL

MULTIFEEDER (appears only if optional multipurpose feeder is installed)

Specify a paper weight of Light, Medium Light, Medium, Medium Heavy, or Heavy for the appropriate paper feed source to improve print quality and toner fusing.

### Level-2 Menu

#### PRINT MODE

RESOLUTION

Set resolution in dots per inch.

#### DARKNESS CONTROL

DARKNESS

Set darkness of characters.

#### TONER SAVING

Lower print quality to reduce toner consumption: engage only for proofs and rough drafts.

### Maintenance Menu

#### SETTING

Make adjustments for difficult environment or rough/thick paper.

## Software Problems

Most printer features are controlled by your software application. For more information, see your software documentation or contact your software vendor.

Here are solutions to common problems related to software:

### Blank pages appear between printed pages.

*Reason:* Number of lines per page in software is not equal to number of lines per page of printer.

*Solution:* Many software packages assume 66 lines per page; your printer default is 60. Adjust software accordingly or set LINES/Pg in Menu 1 to equal lines per page in software.

### Cannot get justified right margin with a proportionally spaced font.

*Reason:* Right justification with proportional fonts is a software feature.

*Solution:* Check your software manual to see if this feature is supported.

### Control codes not operating correctly

*Reason:* Incorrectly entered control codes.

*Solution:* Check for confusion of the lower case letter l with the number 1, the upper case letter O with the number 0; make sure you are using upper/lower case correctly; make sure font is specified correctly and is available.

---

**Data sent to printer does not print but DATA message appears.**

*Reason:* A form feed has not been sent.

*Solution:* Press the ON-LINE button to take the printer off-line, then press FORM FEED to eject the final page, or send a FF command (decimal character 12). If desired, set AUTO EJECT in MENU 2.

---

**Last page of document is not printed.**

*Reason:* No form feed provided at end of document.

*Solution:* Press ON-LINE to take the printer off-line then press FORM FEED to eject the final page or send the form feed code (decimal character 12). If desired set AUTO EJECT in MENU 2.

---

**First line on page won't print.**

*Reason:* Tops of letters extend into unprintable area so they don't print.

*Solution:* Set your margins in software to print within the printable area. (1/2" from physical edge of paper.)

---

**Graphics won't position properly.**

*Reason:* Wrong reference point being used.

*Solution:* Take measurements from the printable area not from the physical edges of the page.

---

**Parts of documents are missing at the edges of the printed page.**

*Reason:* Software is attempting to print beyond the printer's maximum image area.

*Solution:* Adjust software page margins to printer's maximum margins (8.25", x 10 .75" for standard sheets).

---

**Parts of control codes are printed at the beginning of documents.**

*Reason:* Command sent is not a true printer command generally because the ESC character was not sent.

*Solution:* Before sending control codes through an application make sure the ESC character can be entered and is entered properly.

---

---

**Print job started with italics changed to bold but italics still output.**

*Reason:* Font selection is by priority bold and italic is "higher" than bold.

*Solution:* Turn italics off before turning bold on.

---

**Printer ignores control codes sent prior to printing a document.**

*Reason:* The application software automatically sends a reset command before printing.

*Solution:* Embed the control codes in the text to be printed.

---

**"Garbage" prints**

*Reason:* Incorrect driver is installed.

*Solution:* Install the appropriate driver (See the "Software Installation Guide")

---

**Printer's output is below rated speed.**

*Reason:* Delays are caused by software formatting routines graphics downloads, and other application-specific factors.

*Solution:* For maximum speed output plain text.

---

**Size of top margin increases with each page printed.**

*Reason:* "Creeping text." Number of lines per page in software is not equal to number of lines per page of printer.

*Solution:* Many software packages assume 66 lines per page but printer's default is 60. Adjust software accordingly or set LINES/PG in Menu 1 to equal lines per page in software.

---

**Strange symbols appear during normal printing.**

*Reason:* Wrong symbol set.

*Solution:* Make sure the symbol set selected corresponds to symbol set resident, or soft font.

---

## Hardware Problems

Certain error messages (See Printer Messages at the beginning of this chapter) indicate a hardware problem. Other possible hardware problems are listed below:

---

### Graphic image prints partly on one page partly on the next.

*Reason:* Insufficient printer memory for image at set resolution.

*Solution:* Change the resolution, reduce the image size, or install more memory.

---

### Nothing happens but printer indicates it is ready to receive data.

*Reason:* Configuration error.

*Solution:* Check cable connection. If more than one printer is available make sure your printer is selected. Make sure printer is on-line.

---

### "Garbage" prints.

*Reason:* Incorrect cable configuration. (Also see Software Problems.)

*Solution:* Check cable signal continuity and length.

---

### Printer freezes or displays error message when computer is rebooted.

*Reason:* Booting the computer while the printer is on can cause a communications error.

*Solution:* Take printer off-line before rebooting computer.

---

### Odors

*Reason:* Gases are given off by forms or adhesives passing through the printer's fusing unit.

*Solution:* Make sure the forms you use can withstand heating; provide adequate ventilation.

---

Change Drum message appears after only 4000 to 5000 pages are printed.

*Reason:* Drum counter was not reset when the drum was replaced.

*Solution:* Reset the drum counter (see "Replacing the Image Drum Cartridge" in Chapter 8). Always reset the drum counter when replacing the image drum.

# Appendix A: Service & Support

## How to Get Service

If you are unable to solve your printer problem after consulting the troubleshooting information, contact the following sources for service or support.

*Note: This information applies to the US and Canada only.*

### Your Dealer

Consult the store where you purchased your printer, or call 1-800-OKIDATA for the location of the nearest authorized OKIDATA service dealer. Have your zip code ready.

Your printer has a 1-year on-site warranty. (US and Canada only) Proof of purchase is required for warranty work. Be sure to retain your purchase documents.

Prices and minimum charges for work done beyond the warranty period may vary.

### Customer Support Center

For customer assistance call 1-800-OKIDATA. The Okidata Information System Automated Attendant is available 24 hours a day, 7 days a week. The system can provide immediate assistance with:

- Basic operating procedures
- Sales and service referrals
- Parts and consumable referrals
- Product Information

## Customer Service Representatives

For Technical Assistance call 1-800-OKIDATA. Agents are available 24 hours a day, seven days a week. Please be sure that you are calling from a telephone close to your printer, so you can describe your problem accurately. Agents can assist you with:

- Installation of your Okidata printer
- Determination of printer issues that require service
- Availability and installation of printer drivers (*CSRs are not trained to provide assistance with the use of commercial software packages. Please consult your software user's manual for times and availability of their support*).
- Consumer relations
- Interface Information

### Faxable Facts

You can have product and support information faxed automatically to you through Okidata's Faxable Facts, an on-line document retrieval system. A touch-tone telephone and facsimile machine with a designated telephone number are required.

Call toll-free at 1-800-654-6651, press option 2 to hear a description of how Faxable Facts works. If you are calling for the first time, order a catalog of available documents. This system is accessible 24 hours a day, 7 days a week. The following information can be faxed to you in minutes:

- Product data brochures
- Product part numbers and pricing (USA and Canadian)
- User Tips
- Accessories, Options, and Consumables part numbers and pricing (USA and Canada)

## Internet

See Okidata's Internet Home Page at <http://www.okidata.com>

E-mail: [comments@okidata.com](mailto:comments@okidata.com)

## Okidata Service Centers

Your printer has a 1-year on-site warranty. (US and Canada). If you need to ship your printer to a service center, repack it in the original packing materials. If the original packaging is not available, contact your dealer or 1-800-OKIDATA for shipping instructions.

- Allow 30 days for round trip shipping and repair via a depot.
- Carry-in repairs must first be called in to schedule service.
- Before shipping your printer, call for a return authorization number (RA).

### Okidata US and Canada Service Center Locations:

#### United States

##### East

Okidata  
57 Carnegie Plaza  
Cherry Hill, NJ 08003  
Tel: 1-800-809-4948  
Fax: 1-609-222-5347

##### Central

Okidata  
851 Feehanville Drive  
Mt. Prospect, IL 60056  
Tel: 1-800-809-4948

#### Canada

Okidata  
2735 Matheson Blvd., East  
Unit 1  
Mississauga, Ontario L4W4M8  
Tel: 905-238-4265  
Fax: 905-238-4427

## Purchasing Supplies

Before you order, know your printer model number (see the front of the printer) and have the correct part number and description of the item.

### Ways to Purchase

- Consult the dealer where you purchased your printer.
- Consult an Okidata Authorized Sales or Service Dealer.
- Call 1-800-OKIDATA for the nearest Authorized Sales and Service location. Have your ZIP code ready for our Customer Support Representatives.
- Order toll-free by phone at 1-800-OKIDATA (1-800-654-3282), using VISA, Mastercard or American Express.
  - \$10.00 minimum purchase required.
- Check office supply catalogs or your local stationery store. Most carry Okidata brand supplies.

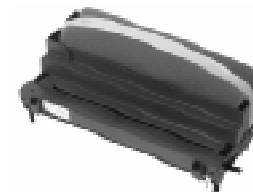
In Canada, call 905-602-6400 to order parts: VISA and American Express are accepted.

### Supply Order Numbers

Toner Cartridge, "Type 7" (Okidata P/N 40468801)



Image Drum, "Type 7" (Okidata P/N 40468701)





# Appendix B: Specifications

## General Specifications

<b>Print Method:</b>	LED array
<b>Print Speed:</b>	20 pages per minute, one-sided printing (SIMPLEX mode, standard) 10 pages per minute, two-sided printing (DUPLEX mode; on OKIPAGE 20, applies only if optional Duplex Feeder is installed)
<b>Resolution:</b>	300 x 300 dpi, 600 x 600 dpi, 600 x 1200 dpi
<b>RAM:</b>	4 MB standard, expandable to 68 MB (optional SIMMs installed)
<b>ROM:</b>	6 MB standard (optional PostScript board installed)
<b>Interface:</b>	
<i>Parallel:</i>	IEEE 1284 compliant, bi-directional port
<i>Serial:</i>	RS232C
<b>Emulations:</b>	HP® LaserJet® 5 PCL5e® HP LaserJet 5 PCLXL IBM® Proprinter II Epson® FX Auto Emulation Switching

## Typefaces

<b>Bitmap:</b>	Line Printer, OCR-A, OCR-B
<b>Scalable</b>	
<i>Fixed:</i>	Courier, Letter Gothic
<i>Proportional:</i>	Albertus, Antique Olive, Arial, CG Times, CG Omega, Clarendon, Coronet, Garamond, Marigold, Symbol, Times New, Univers, Univers Condensed, Wingdings
<b>Bar Code:</b>	USPS PostNet
<b>SIDM Mode:</b>	Courier, Line Printer

## Paper Handling Specifications

<b>Paper Tray:</b>	530 sheets, 16-28 lb. paper
<b>Manual Feeder:</b>	100 sheets, 16-36 lb. paper 10 Envelopes
<b>Duplex Feeder (OKIPAGE 20DX):</b>	16-28 lb. paper

## Environmental Specifications

### Temperature

<i>Operating:</i>	50 to 90°F (10 to 32°C)
<i>Storage:</i>	14 to 110°F (-10 to +43°C)

### Humidity

<i>Operating:</i>	20 to 80% RH
<i>Storage:</i>	10 to 90% RH

## Electrical Specifications

**Voltage:** 120V ac, +10%, -14%

**Frequency:** 50/60 Hz +/-2%

### Power

*Idle:* 95 watts

*Operating:* 350 watts

*Peak:* 820 watts

*Power Save Mode:* 25 watts

## Physical Specifications

**Width:** 14.4 inches (366 mm)

**Depth:** 18.2 inches (462 mm)

**Height:** 13 inches (331 mm)

**Weight:** OKIPAGE 20 = 42 lbs. (19 kg)

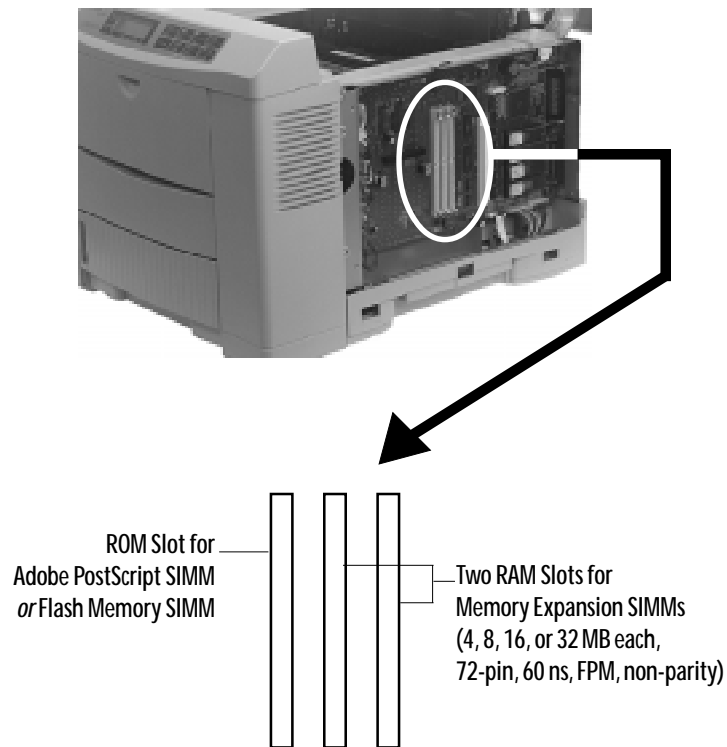
OKIPAGE 20DX = 47 lbs. (21.3 kg)

**Specifications are subject to change without notice.**

# Appendix C: Installing SIMMs

## SIMM Configurations

The OKIPAGE 20 has three slots for installation of optional SIMMs:



You can use these slots to add up to 64 MB of memory (two 32 MB SIMMs) to the standard 4 MB OKIPAGE 20/20DX printer memory, and/or to install *either* the Adobe PostScript SIMM Kit *or* the Flash ROM SIMM.

See Chapter 7 for ordering information on these accessories.

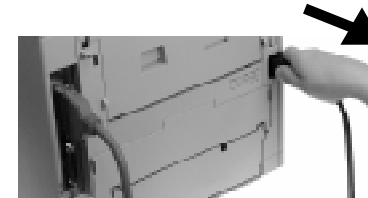
## Installing SIMMs

To install SIMMs in the printer:

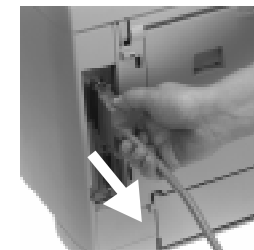
1. Turn the printer off.



2. Unplug the power cord.



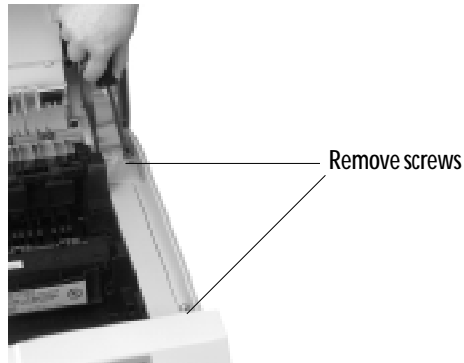
3. Detach the interface cable from the back of the printer.



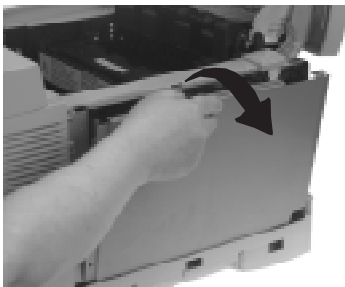
4. Push the OPEN button, then open the top cover.



5. Remove and save the two large screws on the right side, which hold the side panel in place.



6. Pull the side panel out and remove it from the printer.

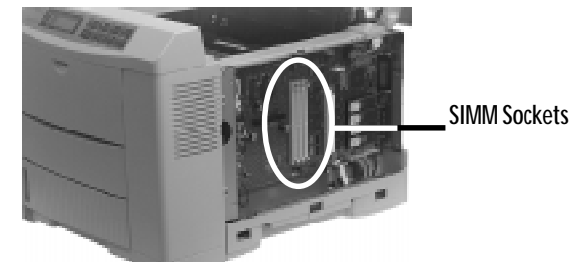


7. Remove and save the two screws on the left of the metal plate covering the internal board, then pull the plate out about an inch and lift it out.

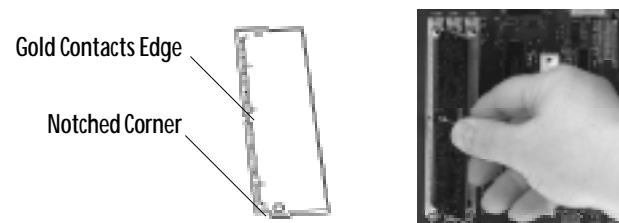


8 Install the SIMMs:

a. Locate the three SIMM sockets on the board. Always install SIMMs in the sockets from left to right.



b. Insert the gold metallic contact edge of the SIMM into the socket at about a 45 ° angle, with the notched corner of the SIMM at the bottom. Push in until the gold contacts are fully inserted into the socket.

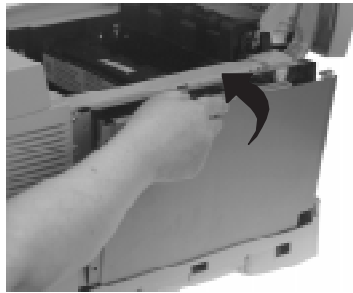
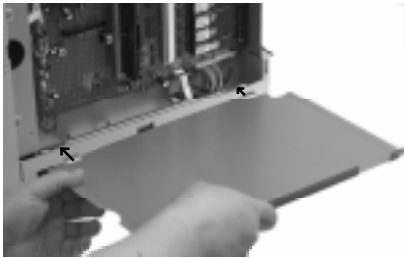


c. Pivot the SIMM to the left until it snaps into place.

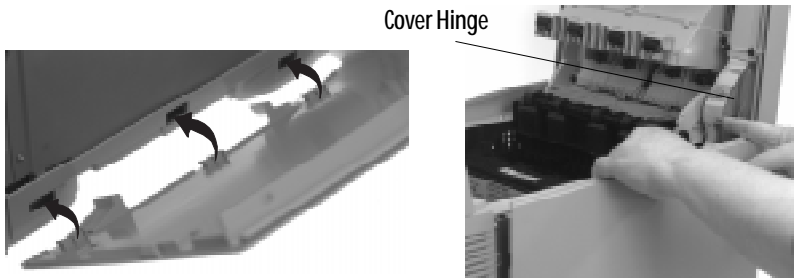


*Note: Repeat steps a through c if you are installing additional SIMMs, working from left to right.*

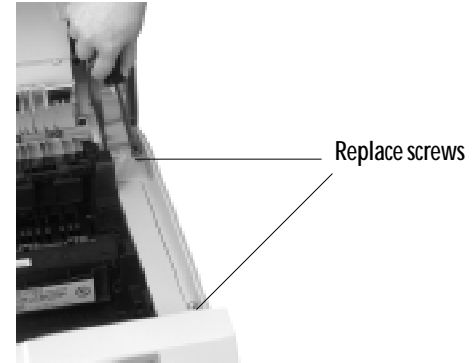
9. Insert the tabs on the metal plate into the slots on the printer housing, then swing it up into place and replace the two mounting screws.



10. Replace the side panel (tabs go in slots): you'll need to move the cover hinge out of the way before you put the side panel back in place.



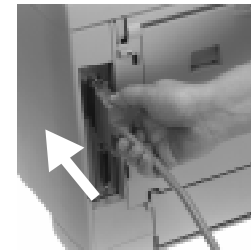
11. Secure the panel in place with the two screws.



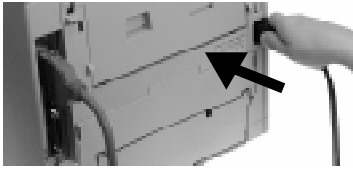
12. Close the printer cover.



13. Reattach the PC interface cable.



14. Plug the power cord into the power outlet.



15. Turn the printer on.



16. Check the menu printout to be sure that the SIMMs are properly installed:

- a. Press ON-LINE to place printer off-line.
- b. Press the PAPER SIZE/Print Menu button for 2 seconds.  
*PRINT MENU displays then the menu prints.*
- c. Check the top of the menu printout to verify that the SIMMs you installed appear (“Page Memory Installed” will appear if you installed memory expansion SIMMs).

*Note: If no verification appears at the top of the menu printout, open the printer back up and make sure that the SIMMs are firmly in place, then print the menu out again.*

# Limited Warranty

OKIDATA, division of Oki America, Inc. (OKIDATA) warrants this printer to be free from defect in material and workmanship and will remedy any such defect according to the terms of this Limited Warranty. This Limited Warranty extends to the original purchaser only. This Limited Warranty does not extend to network setup, application conflicts, or consumable items including but not limited to image drum cartridges, toner cartridges, fuses, etc.

OKIDATA will repair (or at its option, replace) at no charge, any defective component(s) of the Printer for one (1) year from the date of purchase except for the printhead (LED imaging array), which is warranted for a period of five (5) years from date of purchase. This Limited Warranty extends to the original purchaser only.

## On-Site Repair

*✓ On-Site repair is available in the United States and Canada only*

OKIDATA will, for a period of 1 year from the date of purchase, repair (or replace at its option) on-site at the original purchaser's facility within a 50 mile radius of an Authorized Service Center and without charge, any defective component(s) of the OKIPAGE 20, provided that this warranty service is performed by an authorized OKIDATA service center or authorized third-party service organization. The printhead (LED imaging array) has a 5 year parts warranty from date of purchase. On-site replacement of the printhead is limited to one year from date of purchase. For the remaining printhead warranty period, replacement will be at an authorized service center or authorized third party service organization.

To make request or claim for service under this Limited Warranty, contact your OKIDATA Authorized Dealer, authorized third-party service provider, or OKIDATA.

A written receipt for the product, showing the date of purchase, dealer's name, and serial number of the OKIPAGE 20 printer, must accompany any request or claim for work to be performed under this Limited Warranty.

This Limited Warranty shall not apply if the product has been damaged due to abuse, misuse, misapplication, accident, or as a result of service or modification by any other than an authorized OKIDATA service center.

THERE ARE NO EXPRESS WARRANTIES OTHER THAN THOSE ON THE FACE HEREOF AND DESCRIBED ABOVE. NO WARRANTIES WHETHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY PARTICULAR PURPOSE, SHALL EXTEND BEYOND THE RESPECTIVE WARRANTY PERIOD DESCRIBED ABOVE. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

OKIDATA SHALL NOT BE RESPONSIBLE OR LIABLE FOR ANY SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES OR LOSS ARISING FROM THE USE OF THIS PRODUCT. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above exclusion may not apply to you.

Additional information on obtaining service under this Limited Warranty is available by contacting the OKIDATA dealer from whom the product was purchased, by contacting OKIDATA directly at 1-800-OKIDATA (U.S. and Canada, English only), or by contacting one of the service locations listed below.

This Limited Warranty applies to this OKIDATA printer. However, the procedure for obtaining service may vary outside the continental United States. Contact your OKIDATA dealer for such warranty service information. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

## Okidata Service Centers

### United States

#### Okidata

Tel: 1-800-809-4948

Fax: 1-609-222-5247

### Canada

Okidata

Tel: 905-238-4265

Fax: 905-238-4427

### Argentina

#### Free Distribuidores Mayoristas

Tel:

Buenos Aires: (012) 300-0052

Cordoba: (051) 61-4060

Rosario: (041) 49-4440

Fax: 54-41 259250

### Chile

#### Teknos Comunicaciones

Tel: 56 (2) 555-5530

Fax: 56 (2) 440-2390

### Colombia

#### Texins, S.A.

Tel: 571-218-5300

Fax: 571-236-2914

### Venezuela

#### MAI de Venezuela S.A.

Tel: 782.78.11

Fax: (02) 781.9390

### Brazil

#### Oki Data do Brasil, Ltda

Tel: (5511) 5589-1518

(5511)-5584-0267

#### NYTEK

Rua Pe. Francisco Libermann, Sao Paulo

Tel: (011) 819-0211

Fax: (011) 819-3496

#### NYTEK

Rua Parapanema

Sao Paulo

Tel: (011) 7924-0796, 7, 8

Fax: (011) 493-3234

### Mexico

#### Oki Data de Mexico, S.A. de C.V.

Tel: (525) 661-6860

Fax: (525) 661-5861

#### C-SERCOMP

Tel: 915-581-2166

Fax: 915-559 32-67

#### COMPU SUPPORT

Tel: 915-559 30-22

Fax: 915-559 32-67

#### ROM Mayoreo Mexico S.A. de C.V.

Tel/Fax: 525-682-3407



# Material Safety Data Sheet

## OKIPAGE 20 Toner, P/N 40468801 MSDS # 58328701

For more information, contact Okidata at:

532 Fellowship Road  
Mount Laurel, NJ 08054

*Emergency Information:* 1-800-OKIDATA

### Emergency First Aid Procedures

**Emergency: Toner swallowed (ingested)**

**Procedure:** Dilute by giving two glasses of water and induce vomiting by administering Syrup of Ipecac (follow manufacturer's instructions). Seek medical attention.  
*NEVER give anything by mouth or attempt to induce vomiting in a person who is unconscious.*

**Emergency: Toner inhaled**

**Procedure:** Remove person to fresh air. Seek medical attention.

**Emergency: Toner gets in the eyes**

**Procedure:** Flush eyes with large quantities of cool water for 15 minutes, keeping the eyelids open with fingers. Seek medical attention.

*Note: Small amounts of toner on skin or clothing can easily be removed with soap and cold water. Hot water makes toner harder to remove.*

### Hazardous Ingredients

**Styrene-Butyl Acrylate Copolymer  
(91% by weight)**

CAS# 25767-47-9

OSHA TWA 15 mg/m<sup>3</sup> for total dust

ACGIH TLV 10 mg/m<sup>3</sup> for total dust

**Carbon Black (5-7% by weight)**

CAS# 1333-86-4

OSHA TWA 3.5 mg/m<sup>3</sup>

ACGIH TLV 3.5 mg/m<sup>3</sup>

**Paraffin Wax (less than 3% by weight)**

CAS# 8002-74-2

OSHA TWA 2 mg/m<sup>3</sup> for total dust

ACGIH TLV 2 mg/m<sup>3</sup> for total dust

**Amorphous Fumed Silica**

**(less than 1% by weight)**

CAS# 67762-90-7

OSHA PEL 15.0 mg/m<sup>3</sup> for total dust

ACGIH TLV 10.0 mg/m<sup>3</sup> for total dust

*Note: This product is not regulated under Section 313 of SARA, Title III.*

### Physical Data

**Melting Point:** 110°C (230°F)

**Boiling Point:** Not applicable

**Vapor Pressure:** Not applicable

**Vapor Density (Air=1):** Not applicable

**Evaporation Rate (Butyl Acetate=1):** Not applicable

**Specific Gravity (H<sub>2</sub>O=1):** 1.15

**Solubility in water:** Negligible

**Appearance and odor:** Black granules, no odor

### Fire and Explosion Hazard Data

**Flash Point (Method Used):** Not applicable

#### Flammable Limits

**Lower Explosive Limit:** Not applicable

**Upper Explosive Limit:** Not applicable

**Extinguishing Media:** Water, CO<sub>2</sub>, Dry Chemical, or Foam

**Special Fire Fighting Procedures:** Do not use methods that may create a dust cloud, such as high pressure water and/or steam

#### Unusual Fire and Explosion Hazards:

- Organic components decompose at 392-851°F (200-455°C).
- Material may explosively combust when finely suspended in air.
- Thermal decomposition of organic components may result in release of oxides of carbon and nitrogen.

## Health Hazard Data

**Routes of Entry:** Inhalation, Ingestion, Eyes, Skin.

### Health Hazards:

#### 1. Styrene-Butyl Acrylate Copolymer

Subcutaneous implantation of polymeric styrene powder in rats has induced tumors at the site of implantation.

#### 2. Carbon black

(Group 2B “Possible Carcinogen”; IARC)

Overexposure to carbon black is associated with causing irritation, conjunctivitis, and corneal hypoplasia of the eyes; minor irritation and eczema of the skin; and irritation and bronchitis. Long-term inhalation exposure may be associated with causing lung cancer.

#### 3. Paraffin Wax

(Group 3 “Not Classifiable”; IARC)

May cause eye, skin, respiratory, and digestive tract irritation. Paraffin is an equivocal tumorigenic agent by RTECS criteria.

#### 4. Amorphous Fumed Silica

(Group 3 “Not Classifiable”; IARC)

Overexposure to amorphous silica has been associated with causing irritation of the lungs and pneumoconiosis. Long term inhalation exposure may be associated with producing tumors in laboratory animals.

## Reactivity Data

**Stability:** Stable

**Polymerization:** Will not occur.

**Hazardous Decomposition Products:** Thermal decomposition may result in release of oxides of carbon and nitrogen.

**Temperature:** Do not expose to temperatures above 200°C (392°F).

**Incompatibility:** Avoid exposure to strong oxidizers.

## Spill Cleanup and Disposal

### Spill Cleanup

#### *Small Spills*

- Remove sources of ignition.
- Clean up spill with wet cloth.

#### *Large Spills*

- Remove sources of ignition.
- Wear protective gear: respirator, rubber gloves, goggles (see below)
- Clean up spill with scoop, being careful not to generate a lot of dust.

**Waste Disposal:** Follow appropriate federal, state and local regulations.

## Safe Handling and Use

**Respiratory Protection:** Not normally required. For large spills, use NIOSH approved full face-piece respirator with HEPA cartridge during cleanup.

**Protective Gloves and/or Eye Protection:** Not normally required. For large spills, use rubber gloves and chemical worker’s goggles during cleanup.

**Ventilation:** Outside of normal ventilation, not normally required.

**Other Protective Equipment and/or Hygienic Practices:** None

## Special Precautions

**Precautions for Handling or Storage:** Protect from high heat. Avoid making dust.

**Other Precautions:** None

The information contained in this MSDS is based on data considered accurate; however, no warranty is expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof. Vendor assumes no responsibility for injury to vendee or third person party proximately caused by the product if reasonable safety procedures are not adhered to as stipulated in the MSDS. Furthermore, vendor assumes no responsibility for injury to vendee or third person party proximately caused by abnormal use of the product even if reasonable safety procedures are followed. Additionally, vendee assumes the risk of his use of the product.

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# Notes

# Notes

