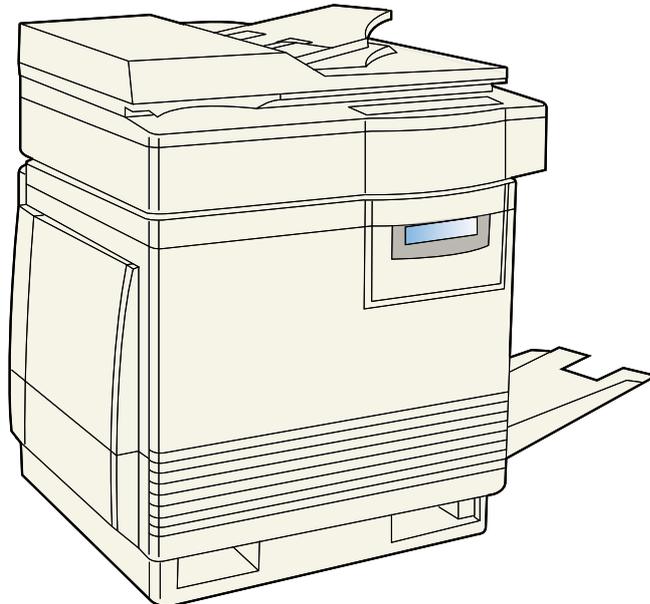


**Panasonic**

# *Operating Instructions*

Digital Color Imaging System Enhanced

Model No. **KX-PS8000**



Please carefully read the Operating Instructions and the Utilities and Drivers Reference Guide before using the Digital Color Imaging System. Keep this CD-ROM in the protective case. Do not expose the CD-ROM to direct sunlight or extreme heat and do not scratch or smudge the surface of the CD-ROM.

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Thank you for purchasing the Panasonic KX-PS8000 Digital Color Imaging System (DCIS).

The Panasonic KX-PS8000 Digital Color Imaging System consists of the KX-PS8001 Color Laser Printer and the KX-PS8002 Color Scanner.

The serial numbers are located on the labels on the rear of the units. For your convenience, record these numbers below and keep this book along with your proof of purchase, in the event of a theft or for future reference.

MODEL NO. Printer: **KX-PS8001** Scanner: **KX-PS8002**

SERIAL NO. Printer: \_\_\_\_\_ Scanner: \_\_\_\_\_

NAME OF RESELLER \_\_\_\_\_

DATE OF PURCHASE \_\_\_\_\_

### Important

- Do not duplicate bills, coins, securities and the like (with this system).
- Do not duplicate copyrighted material or the work of others except for the purpose of private use.
- Do not duplicate any kind of certificates, licenses, passports, official or private documents, and the like.



As an Energy Star Partner, Panasonic has determined that this product meets the Energy Star guidelines for energy efficiency. (The international Energy Star<sup>SM</sup> Logo is valid in U.S.A., Europe and Japan only.)

These operating instructions are subject to change without notice.

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## FOR USERS IN UNITED STATES

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 receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

The user may find the booklet "Something About Interference" available from FCC local regional offices helpful.

**FCC Warning:** To assure continued FCC emission limit compliance, the user must use the recommended shielded interfacing cable when connecting to a host computer. Also, any unauthorized changes or modifications to this equipment would void the user's authority to operate this device.

---

### Technical Support Calls

If you have read this manual and tried the troubleshooting procedures and you are still having difficulty, please contact the reseller from which the unit was purchased. You may also call the end user technical support telephone number which is operational during East Coast business hours (9:00 AM to 7:00 PM). The end user technical support number is 1-888-744-2424. This number is available within the U.S. only.

---

### Helpful Phone Numbers

To locate your nearest sales dealer	CALL 1-800-742-8086 ask for COLOR
To order consumables	CALL 1-800-222-0584
To order operating instructions/CD's	CALL 1-800-833-9626
To locate your nearest authorized service center	CALL 1-888-744-2424
For technical support	CALL 1-888-744-2424
Automated 24-hour support via Fax back	CALL 1-800-222-0584
Electronic bulletin board	CALL 1-201-863-7845
World Wide Web Technical & Driver Support	<a href="http://www.panasonic.com/alive">http://www.panasonic.com/alive</a>

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# For Your Safety

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## General

### Warning

- To prevent fire or shock hazard, do not expose this product to rain or any type of moisture.

### Caution

- Do not open covers and do not attempt to repair the unit yourself. Refer servicing to qualified personnel.
- Avoid contact with the rotating rollers when the ADF top cover is open.

## Power Source

### Warning

- The power source voltage of this unit is listed on the nameplate. Only plug the unit into an outlet with the proper voltage.
- When you operate this equipment, the outlet should be near the equipment and accessible.
- To ensure safe operation the AC cord supplied must be inserted into standard three-prong AC outlet which is effectively grounded (earthed) through the normal wiring.
- The fact that the equipment operates satisfactorily does not imply that the power point is grounded (earthed) and that the installation is completely safe. For your safety, if in any doubt about the effective grounding (earthing) of the power point, consult a qualified electrician.
- If the plug cannot be inserted into the AC outlet, contact a licensed electrician to replace the outlet with a properly grounded (earthed) one. Do not defeat the purpose of the grounding (earthing) plug (ex. do not use a conversion plug).

## Laser Safety

### Caution

- The printer utilizes a laser.  
Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

## Ozone Release

### Warning

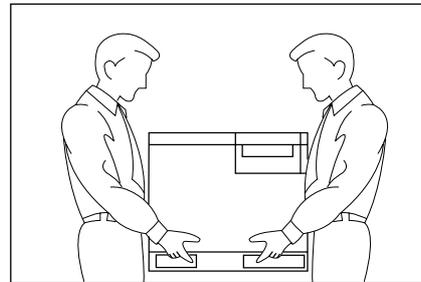
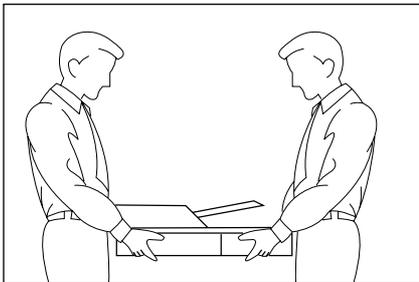
- Make sure that the printer is installed in a well ventilated room so as not to increase density of ozone in the air. Since ozone is heavier than air, it is recommended that air at floor level be ventilated.

## Light Source

Do not look directly at the light source lamps of the scanner as this may be harmful to your eyes.

## Moving the Units

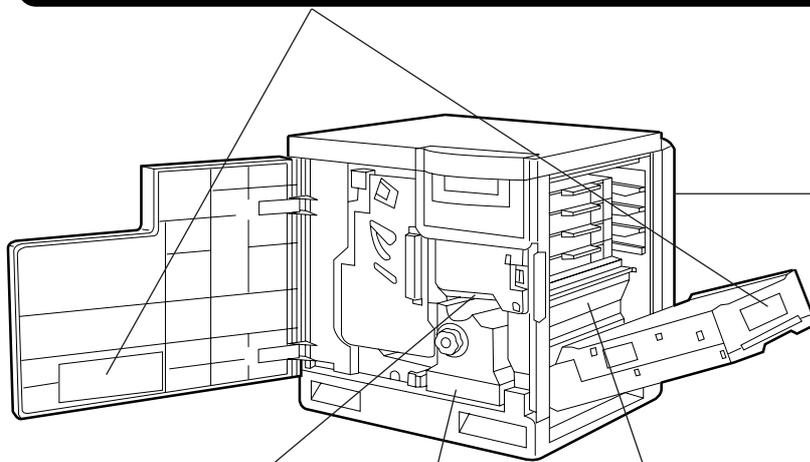
The scanner weighs approximately 17.3 kg {38.1 lbs.} and the printer weighs approximately 47.9 kg {105.5 lbs.}. They must be handled by two people. Turn the power off and remove the power cords when handling the units.



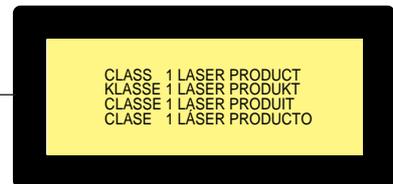
# For Your Safety

## Caution Labels

<p><b>DANGER:</b> Invisible laser radiation when open and interlock defeated. <b>AVOID DIRECT EXPOSURE TO BEAM.</b></p>	<p><b>CAUTION:</b> Invisible laser radiation when open and interlocks defeated. <b>AVOID EXPOSURE TO BEAM.</b></p>	<p><b>VORSICHT:</b> Unsichtbare Laserstrahlung, wenn Abdeckung geöffnet und Sicherheitsverriegelung überbrückt. <b>NICHT DEM STRAHL AUSSETZEN.</b></p>	<p><b>ATTENTION:</b> Rayonnement laser invisible dangereux en cas d'ouverture et lorsque la sécurité est neutralisée. <b>EXPOSITION DANGEREUSE AU FAISCEAU.</b></p>		
<p><b>PELIGRO:</b> Cuando se abre y se invalida el bloqueo, se producen radiaciones invisibles de láser. <b>EVÍTESE LA EXPOSICIÓN A TALES RAYOS.</b></p>	<p><b>VARNING:</b> Osynlig laserstrålning när denna del är öppnad och spärrar är urkopplade. <b>STRÅLEN ÄR FARLIG.</b></p>	<p><b>VARO!</b> Näkymätöntä avalttaessa ja suojalukitus ohitettaessa olet alltiina lasersäteilylle. <b>ÄLÄ KATSO SÄTEESEEN.</b></p>	<p><b>VARNING:</b> Osynlig laserstrålning när denna del är öppnad och spärrar är urkopplade. <b>BETRAKTA EJ STRÅLEN.</b></p>		<p><b>ADVARSEL:</b> Usynlig laserstrålning ved åbning når sikkerhedsafbrydere er ude af funktion. <b>UNNGÅ UDSÆTTELSE FOR STRÅLING.</b></p>

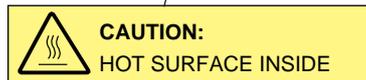


(220-240 VAC equipment)



### Laser diode properties

Laser output : 5 mW max  
Wavelength : 780 nm  
Emission duration : Continuous



## FOR USERS IN U.K.

**IMPORTANT:**  
**FOR YOUR SAFETY PLEASE READ THE FOLLOWING TEXT CAREFULLY**

Both the printer and scanner are supplied with a moulded three pin mains plug each for your safety and convenience. A 13 amp fuse is fitted in this plug. Should the fuse need to be replaced please ensure that the replacement fuse has a rating of 13 amps and that it is approved by ASTA or BSI to BS 1362.

Check for the ASTA mark  or the BSI mark  on the body of the fuse.

If the plug contains a removable fuse cover you must ensure that it is refitted when the fuse is replaced. If you lose the fuse cover the plug must not be used until a replacement cover is obtained. A replacement fuse cover can be purchased from your local Panasonic Dealer.

**IF THE FITTED MOULDED PLUG IS UNSUITABLE FOR THE SOCKET OUTLET IN YOUR HOME THEN THE FUSE SHOULD BE REMOVED AND THE PLUG CUT OFF AND DISPOSED OF SAFELY. THERE IS A DANGER OF SEVERE ELECTRICAL SHOCK IF THE CUT OFF PLUG IS INSERTED INTO ANY 13 AMP SOCKET.**

If a new plug is to be fitted please observe the wiring code as shown below. If in any doubt please consult a qualified electrician.

**WARNING:** THIS APPLIANCE MUST BE EARTHED.

**IMPORTANT:** The wires in this mains lead are coloured in accordance with the following code.

Green-and-Yellow: Earth      Blue: Neutral      Brown: Live

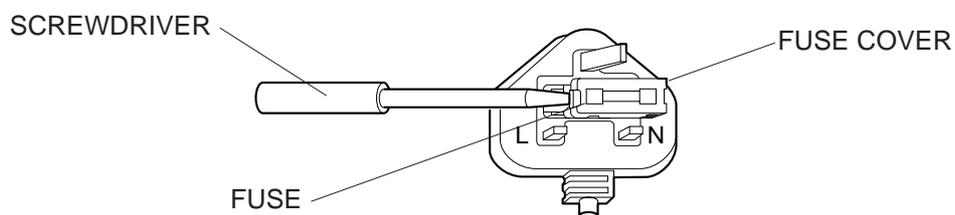
As the colours of the wire in the mains lead of this appliance may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows.

The wire which is coloured GREEN-AND-YELLOW must be connected to the terminal in the plug which is marked with the letter E or by the Earth symbol , or coloured GREEN or GREEN-AND-YELLOW.

The wire which is coloured BLUE must be connected to the terminal in the plug which is marked with the letter N or coloured BLACK.

The wire which is coloured BROWN must be connected to the terminal in the plug which is marked with the letter L or coloured RED.

**How to replace the fuse:** Open the fuse compartment with a screwdriver and replace the fuse.



N52

## FOR USERS IN AUSTRALIA

This mark shows that the product complies with AS/NZS 3548.

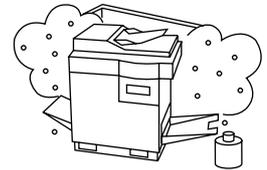
# Before You Start

## Cautions

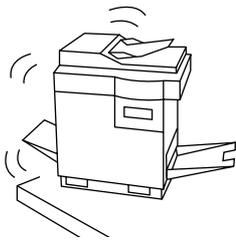
To avoid machine malfunction, do not use the equipment under the following conditions:



- Direct exposure to sunlight
- Extremely high or low temperature [temperature range: 10°C to 32.5°C (50°F to 90.5°F)]
- Extremely high or low humidity (humidity range: 20% to 80% RH)
- Condensation due to rapid change of temperature



- Areas of poor ventilation
- Areas of high dust or chemical fume concentration (solvent etc.)



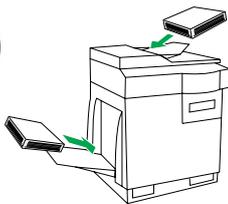
- Unstable or unlevel surfaces



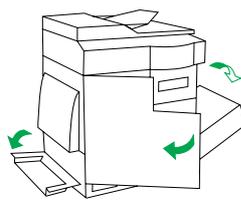
- Directly in front of air conditioning vents



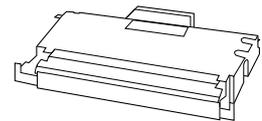
- Liquids near the equipment



- Too much media/document which exceeds the limit mark on the guide of the tray.



- Front/right/left doors opened while the printer is operating; it may cause a media jam.

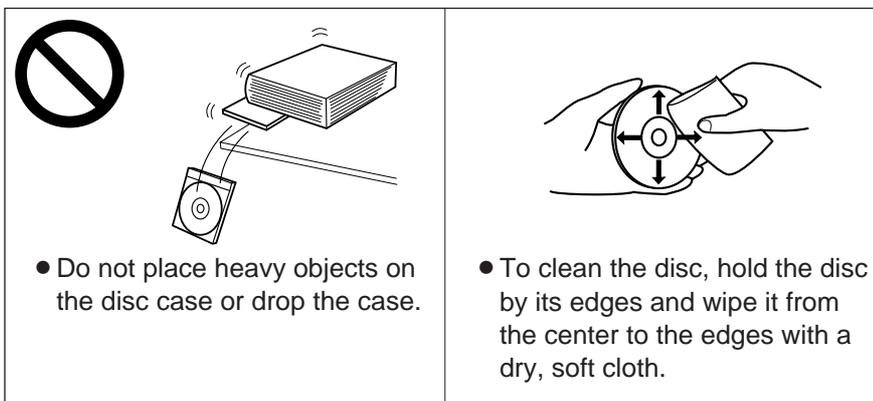


**Not genuine toner**

- Any toner other than genuine Panasonic toner; it may damage the printer.

## ■CD-ROM

To prevent the CD-ROMs from accidental damages:



## ■Static Electricity Damage

To prevent static electricity damage to any of the following components, touch a grounded metal surface, such as the printer's bare metal frame prior to touching the component.

- The interface connectors : SCSI, parallel and optional network
- ADF interface connector
- Electrical components, connectors inside the printer and any components on the optional board (RAM Expansion Board or Ethernet Card)
- The connector pins on the optional 2nd cassette feeder for the printer

## ■Interface Cable

Always use a shielded interface cable. Use of an unshielded cable can result in radio interference with data.

## ■Waste Disposal Method

Waste material may be dumped or incinerated under conditions which meet all federal, state and local environmental regulations.

# Before You Start

## Features

The KX-PS8000 is a high quality system that provides fast color image processing functions, including color scanning, color printing, and color duplicating.

The KX-PS8000 is comprised of two components:

- **Color scanner (KX-PS8002)**
- **Color laser printer (KX-PS8001)**

The KX-PS8000 system offers you the following functions:

- **Scanning**
- **Printing**
- **Digital Duplicating**

These functions are used for various tasks such as Desktop Publishing, or image editing.

**Notes:**

- *Positioning the scanner on top of the printer will conserve space.*
- *Each component can be used individually.*

## Scanner Function

### ■ High quality

#### *Resolution*

	Optical 600 dpi (dots per inch)
Flatbed	30 to 9600 dpi is software selectable.
ADF	60 to 2400 dpi is software selectable.

#### *Color*

Full-color mode:	Maximum 16.7 million colors
Monochrome mode:	Maximum 256 grayscale levels

### ■ Image modification function

Image modification functions, such as density (gamma) adjustment, color adjustment, and sharpening can be used to modify an image so that it meets your requirements.

### ■ High speed

#### *When scanning an A4 size document:*

An A4 size document can be scanned in 7.8 seconds at 300 dpi, and 15.7 seconds at 600 dpi. (Initial time is not included. Actual time depends on SCSI interface and host computer.)

### ■ Easy operation

#### *Scanner driver*

Easily scan full-color documents using a TWAIN-compliant application.

## Printer Function

### ■High quality

#### Resolution

Maximum 1200 dpi \*<sup>1</sup>

(\*<sup>1</sup> with SIMM options installed)

### ■High speed

#### Continuous printing on letter size paper

Full-color mode: Maximum 3.5 ppm (pages per minute) for 4 Color (CMYK)  
Maximum 4.7 ppm for 3 Color (CMY)\*<sup>2</sup>

Monochrome mode: Maximum 14 ppm

(\*<sup>2</sup> only when using plain paper)

### ■Easy operation

#### Printer driver

Easily print full-color documents.

## Digital Duplicator Function

### ■High quality

#### Resolution

Resolution is set according to the selected mode.

Standard mode: 300 x 300 dpi, 600 x 300 dpi

Fine\*<sup>3</sup> mode: 600 x 600 dpi

Enhanced\*<sup>3</sup> mode: 600 x 1200 dpi

(\*<sup>3</sup> with SIMM options installed)

### ■Image conversion function

Adjusts individual toner densities.

Scanned colors R (red), G (green), B (blue) are converted to printed colors C (cyan), M (magenta), Y (yellow), K (black) automatically.

### ■High speed

#### Continuous full-color printing on letter size paper using ADF

	4 Color (CMYK)	3 Color (CMY)* <sup>5</sup>
Standard mode:	Maximum 3.5 ppm (pages per minute)	Maximum 4.7 ppm* <sup>4</sup>
Fine* <sup>4</sup> mode:	Maximum 2.8 ppm	Maximum 2.9 ppm
Enhanced* <sup>4</sup> mode:	Maximum 1.8 ppm	Maximum 2.4 ppm

(\*<sup>4</sup> with SIMM options installed)

(\*<sup>5</sup> only when using plain paper)

### ■Easy operation

#### Front Key Panel

Easily duplicate documents.

### ■Digital Duplicator Utility

Includes various editing operations, such as color adjustment, enlargement/reduction, mirroring, and area duplicate.

# Before You Start

## System Requirements

### PC

To operate the KX-PS8000 Enhanced system effectively, see the following.

CPU:	More than Pentium or Pentium PRO (133 MHz or faster CPU is recommended.)
Operating System:	Windows® 3.1* <sup>1</sup> , Windows 95* <sup>2</sup> or Windows NT® 4.0* <sup>3</sup> * <sup>4</sup> (Intel only)
RAM:	16 MB or more (More than 32 MB is recommended.)
Free disk space:	100 MB or more
Virtual memory:	16 MB or more (More than 32 MB is recommended.) for Windows 3.1/95 50 MB or more* <sup>5</sup> (More than 100 MB is recommended.) for Windows NT 4.0
Display:	Video card that can display more than 256 colors. (A video card that can display more than 32,000 colors is recommended.)
Drive:	CD-ROM drive

\*<sup>1</sup> Microsoft® Windows® operating system Version 3.1 (hereafter Windows 3.1)

\*<sup>2</sup> Microsoft® Windows® 95 operating system (hereafter Windows 95)

\*<sup>3</sup> Microsoft® Windows NT® Workstation operating system, and Microsoft® Windows NT® Server network operating system Version 4.0 (hereafter Windows NT 4.0)

\*<sup>4</sup> Service Pack 3 or later version is required.

\*<sup>5</sup> In the Virtual Memory window, change this setting in the Initial Size box.

### Interface

One of the following can be used:

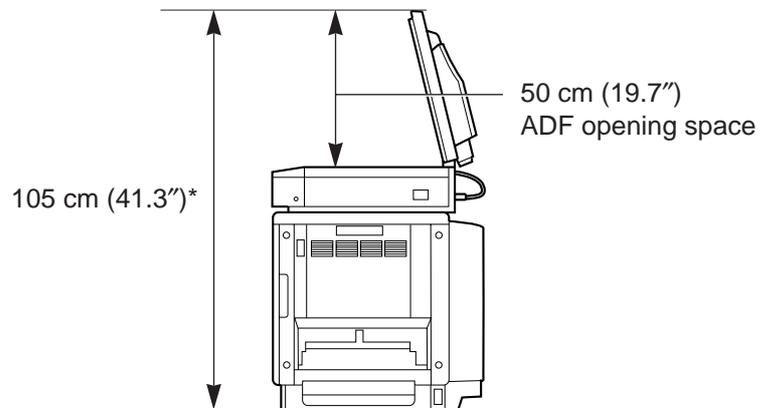
#### ■SCSI interface requirements

SCSI cable	SCSI-2 (FAST SCSI) compatible ( <a href="#">P. 157</a> )
SCSI-2 board	ASPI Manager compatible SCSI-2 board (Adaptec AHA-2940 is recommended.)
ASPI manager	ASPI Manager is required. (Refer to the SCSI-2 board manual.)

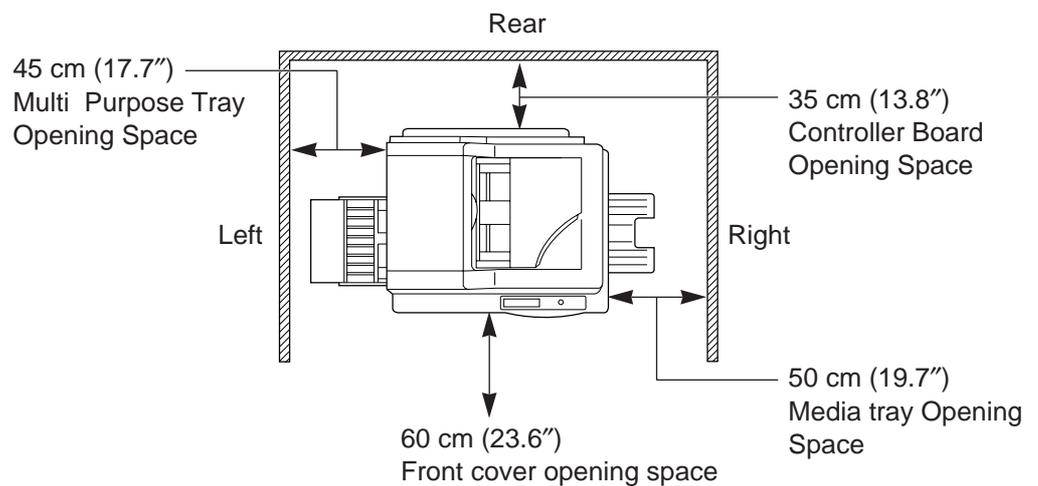
#### ■Parallel interface requirement

Interface	Based on the IEEE P1284-C standard (An ECP compatible parallel port is recommended for Windows 95. To turn on the ECP mode, use the computer's BIOS setup. Refer to the computer's manual for details.)
-----------	--

## Minimum Space Requirements



\* 126.5 cm (49.8") with 2nd cassette feeder (option)



## Power Source

- The voltage level of the power source must not vary more than  $\pm 10\%$  from the voltage level marked on the nameplate (located on the back of the units).
- Do not use an extension cord.
- Do not use a line conditioner, transient suppressor or surge protector as it may cause a machine error.

# Before You Start

---

## Unpacking

Make sure that all of the items shown below were provided and have not been damaged. Report damage or shortages to the reseller from which the units were purchased. **Page 3** includes an area for recording important information such as the name of reseller, serial numbers, and date of purchase.

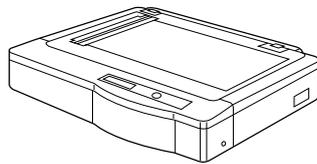
**Note:**

- *Save the original cartons and packing materials for future shipping and transporting of the units. They have been specifically designed to protect the equipment during shipment.*

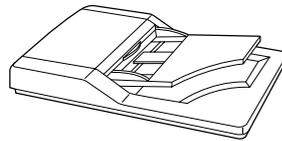
## Scanner Box

1. Scanner
2. ADF (Automatic Document Feeder)
3. Power cord

1



2



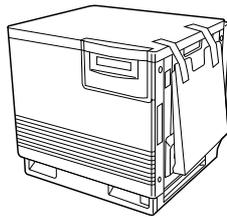
3



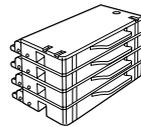
## Printer Box

1. Printer
2. Toner cartridges (black, cyan, magenta, and yellow)
3. Power cord
4. SCSI cable (for connection between the scanner and the printer)
5. Guide pins (2)
6. KX-PS8000 Driver & Utility and Operating Manuals CD-ROM
7. Corel Photo-Paint 5 & 6 (CD-ROM)
8. TextBridge (OCR) CD-ROM
9. Color Calibration Card
10. Setup manual

1



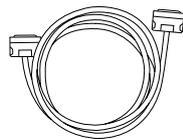
2



3



4



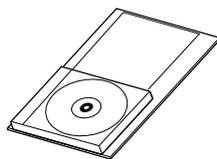
5



6



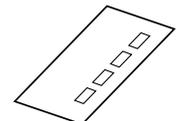
7



8



9



10

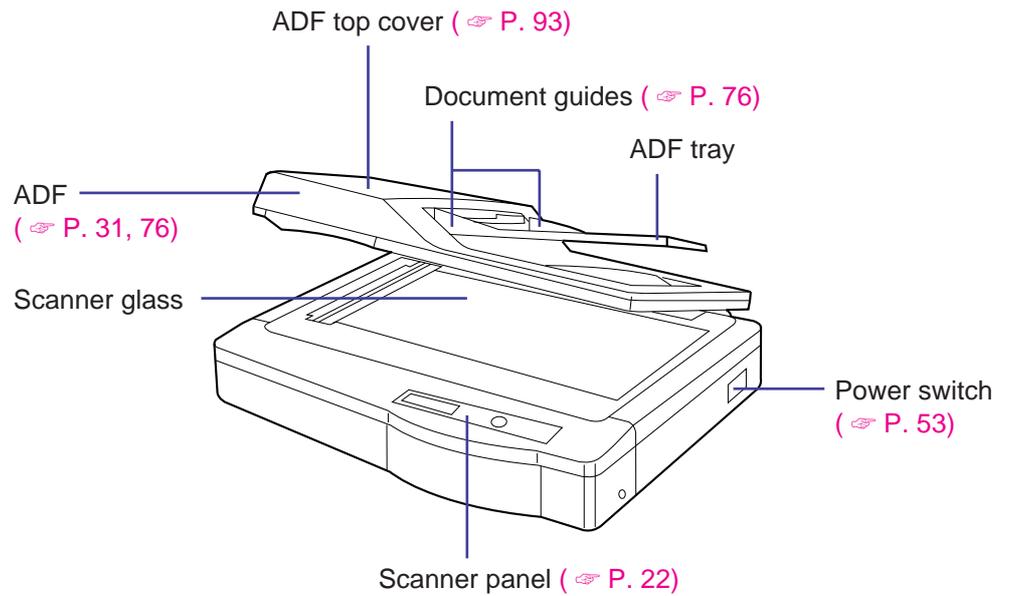


# Before You Start

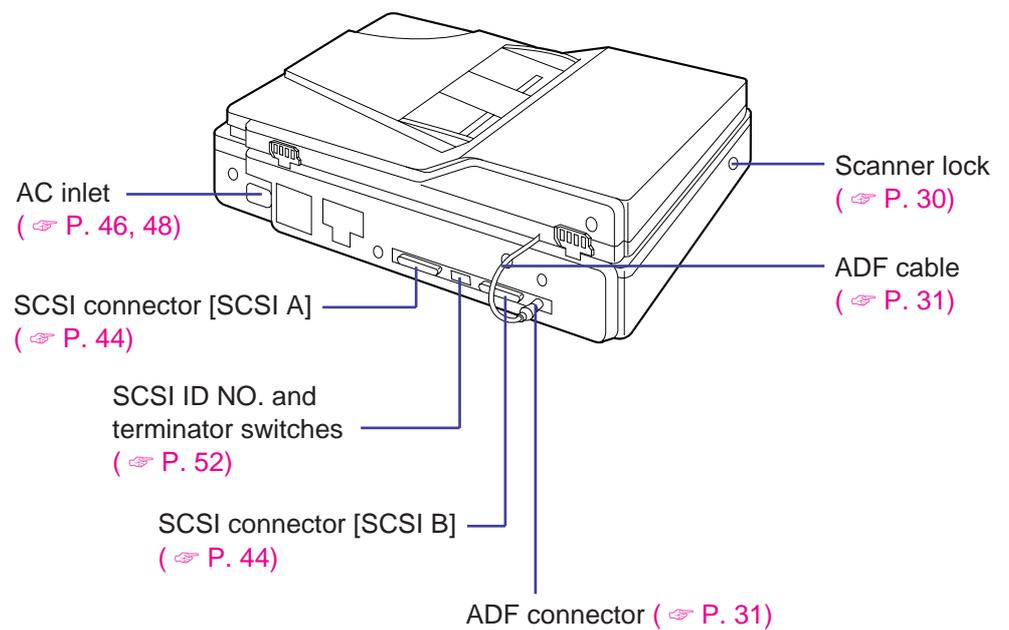
## Part Names

### Scanner

#### ■Front side view

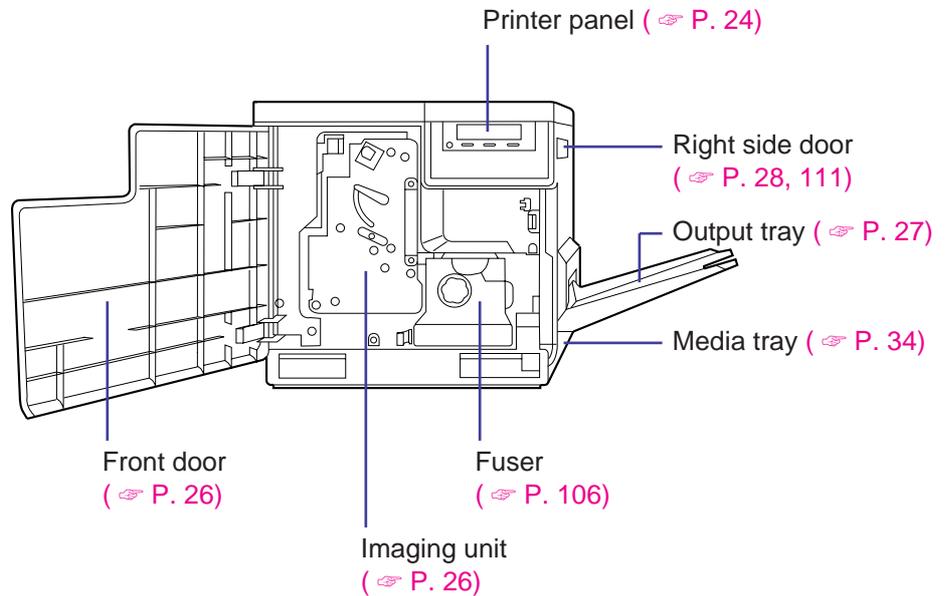


#### ■Rear side view

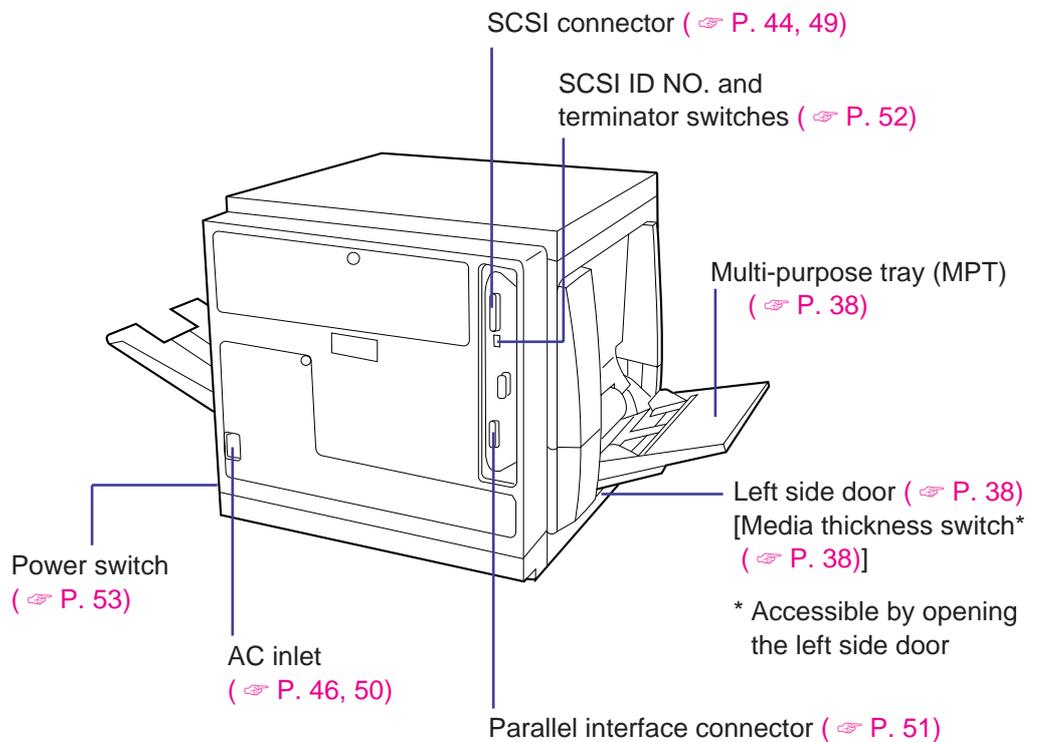


## Printer

### ■Front side view

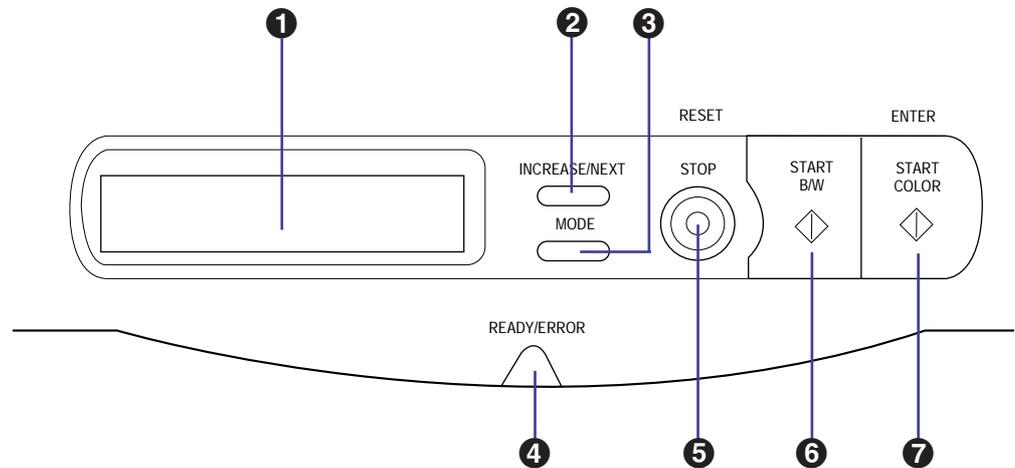


### ■Rear side view



# Before You Start

## Scanner Panel Overview



### 1 LCD (Liquid Crystal Display) panel

The scanner LCD has two 20-character lines to display the scanner's or duplicator's status/error messages or the duplicator's menu settings. When the duplicator is ready, "Ready" with duplicate settings such as number of copy, density setting is displayed.

### 2 INCREASE/NEXT button

- When the scanner is ready, pressing this button increases the number of duplicates by 1. You can set the number of duplicates from 1 to 99. Pressing this button for more than 2 seconds automatically increases the number of duplicates by 1. Pressing this button for more than 8 seconds increases the number of duplicates by 10.
- In the Menu mode, pressing this button displays the next selection.

### 3 MODE button

- When the scanner is ready, pressing this button enters the Menu mode.
- In the Menu mode, pressing this button displays the next menu.
- Pressing MODE + START COLOR, or MODE + START B/W allows you to select an image type (☞ P. 79).

## 4 READY/ERROR indicator

- The READY indicator (green) blinks during initializing/scanning operation and is illuminated (ON) when the scanner is ready.
- The ERROR indicator (orange) blinks only when an error such as ADF jam occurs and is illuminated (ON) when a system error occurs.

Status	READY Indicator	ERROR Indicator
Diagnosing/Initializing	Blinking <sup>*1</sup>	OFF
Ready	ON	OFF
Scanning	Blinking <sup>*2</sup>	OFF
Scanning (for duplicate)	Blinking <sup>*3</sup>	OFF
Printing (for duplicate)	Blinking <sup>*1</sup>	OFF
User Correctable Error	OFF	Blinking
Call for Service Error	OFF	ON

<sup>\*1</sup> Blinking with an interval of approximately 1.7 seconds

<sup>\*2</sup> Blinking with an interval of approximately 0.9 second

<sup>\*3</sup> Blinking with an interval of approximately 0.7 second

## 5 STOP/RESET button

Pressing this button:

- Exits the Menu mode.
- Stops the duplicating process. (However, it does not stop immediately because of data processing.)
- Resets the scanner panel settings to the Menu Default setting (when “Ready” is displayed). Refer to [pages 85](#) and [86](#) for details on the Menu Default setting.

## 6 START B/W button

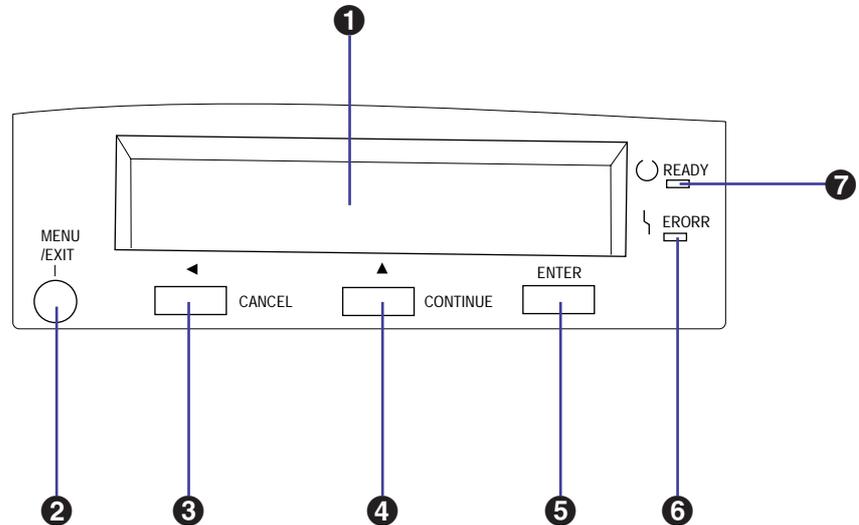
When a document is placed in the ADF tray or on the scanner glass, pressing this button makes a black and white duplicate, regardless of the color of the document.

## 7 START COLOR/ENTER button

- When the scanner is ready and a document is placed in the ADF tray or on the scanner glass, pressing this button makes a duplicate of the document. If the original is a color document, a color duplicate is created.
- In the Menu mode, after changing a selection, pressing this button activates a selection. A “✳” appears to the left of the selection.
- The printer is in the Energy Star mode when the scanner LCD shows “Printer is Ready (Sleep)”. While the printer is in the Energy Star mode, a document cannot be duplicated. To release the Energy Star mode, press the START COLOR/ENTER button. When the printer is ready, “Ready” with duplicate settings will appear on the LCD.
- To resume printing after loading media or clearing a media jam, press this button.

# Before You Start

## Printer Panel Overview



### 1 LCD (Liquid Crystal Display) panel

The printer LCD has two 24-character lines to display the printer's status/error messages or menu settings.

### 2 MENU/EXIT button

- When the printer is ready, pressing this button enters the Menu mode.
- Pressing this button exits the Menu mode.

### 3 ◀/CANCEL button

- Pressing this button for 2 or more seconds cancels the data in the printer.
- When the printer is in the Menu mode, pressing this button:
  - Displays the previous menu, item or selection.
  - Decreases the current numerical value of the selection.
  - Moves the cursor to left.

### 4 ▲/CONTINUE button

- When the printer is in the Menu mode, pressing this button:
  - Displays the next menu, item or selection.
  - Increases the current numerical value of the selection.
- When error messages such as "Memory Overflow" or "SCSI Communication Error" are displayed on the LCD, press this button to recover from an error situation.

### 5 ENTER button

This button is effective only when the printer is in the Menu mode. Pressing this button:

- Enters a sub - menu.
- Activates a selection.

## **6 ERROR indicator (orange)**

- ON: an internal error (Call for Service Error) has occurred.
- Blinking: user correctable error, such as media jam, open door, or a missing replaceable component (e.g. Toner) has occurred.

## **7 READY indicator (green)**

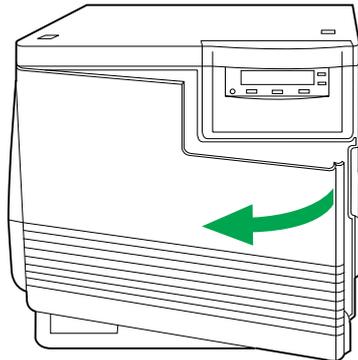
- ON: the printer is ready for operation.
- Blinking: the printer is warming up or in the Menu mode.
- Blinking fast: the printer is printing.

# Setup

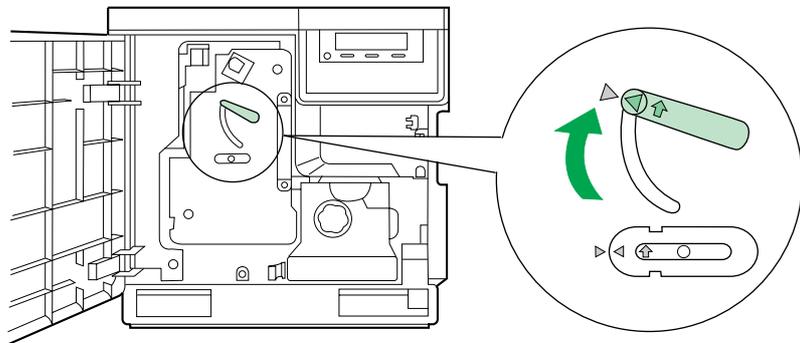
## Setting Up the Printer

### Preparing the Imaging Unit

- 1 Open the front door.



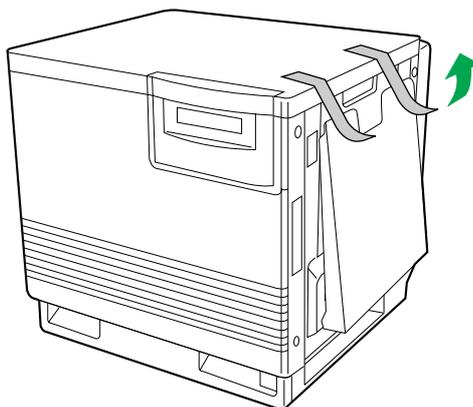
- 2 Turn the upper green lever clockwise until it stops and the arrows are aligned. (This tightens the internal belts to ready the unit for printing.)



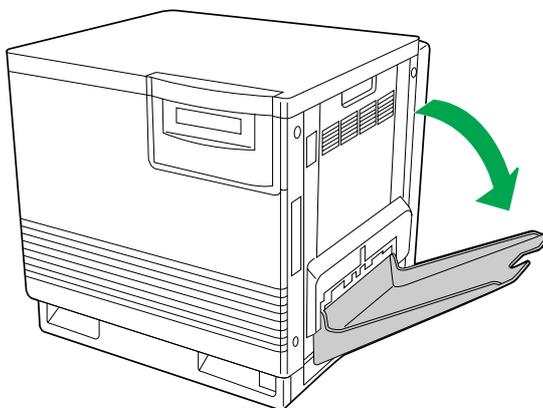
- 3 Close the front door.

## Setting Up the Output Tray

- 1** Remove the adhesive tape that holds the output tray against the printer.



- 2** Lower the tray to the operating position.



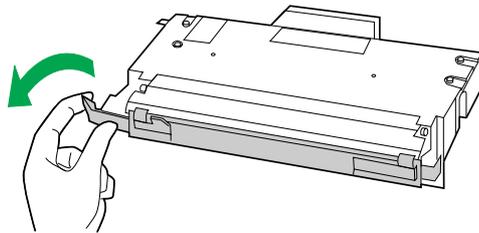
## Installing the Toner Cartridges

**Note:**

- The toner cartridges that are shipped with the printer are starter cartridges. They are installed in exactly the same manner as the optional cartridges; the only difference is that the starter cartridges have less toner. (The page life expectancy is 3,000 pages, which is based on a 5% image area.)

**1** Remove the packaging from the toner cartridge.

**2** Remove the shipping cover from the cartridge.



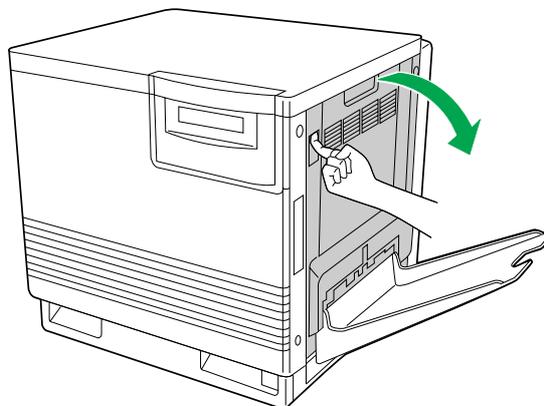
**Caution:**

- To avoid possible toner spillage, do not tilt cartridge.

**Note:**

- Save all packing material for shipping purposes.

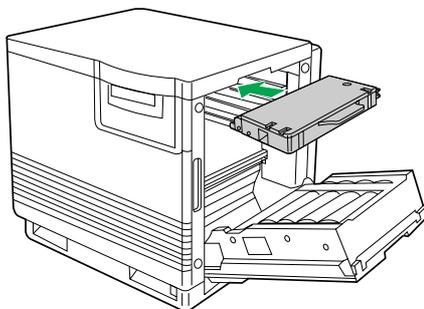
**3** Open the right side door.



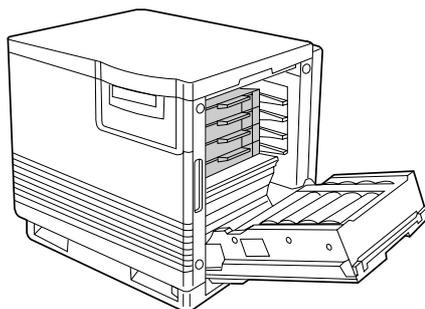
**Caution:**

- Do not leave the right side door open for more than 1 minute; the imaging unit will be exposed to light and could be damaged.

- 4** Insert the toner cartridge in the appropriately labeled slot.  
From top to bottom, the order of the color toner cartridges is BLACK, CYAN, MAGENTA, YELLOW.



- 5** Repeat steps 1, 2 and 4 for each toner cartridge.  
When you have installed all the toner cartridges, go to step 6.



- 6** Close the right side door.

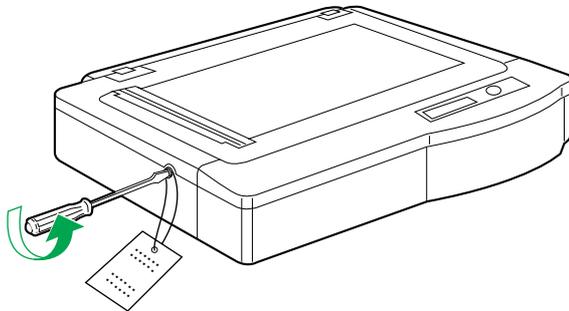
## Setting Up the Scanner

### Unlocking the Scanner

The scanner must be unlocked before it can be used. The scanner lock is located on the left of the scanner.

To unlock the scanner:

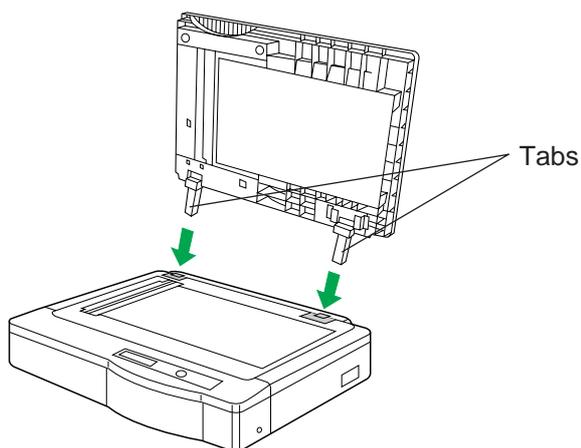
- 1** Turn the scanner lock counterclockwise with a flat-blade screwdriver until the lock pops out.



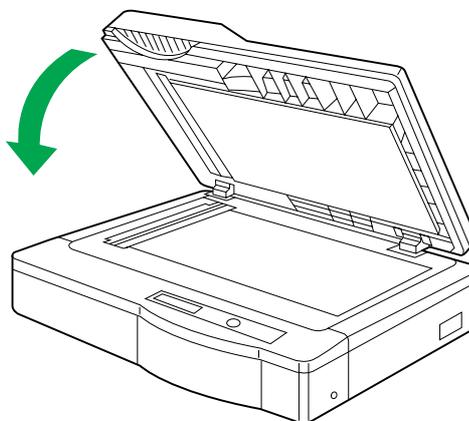
## Installing the Automatic Document Feeder

To install the ADF (Automatic Document Feeder), perform the following steps.

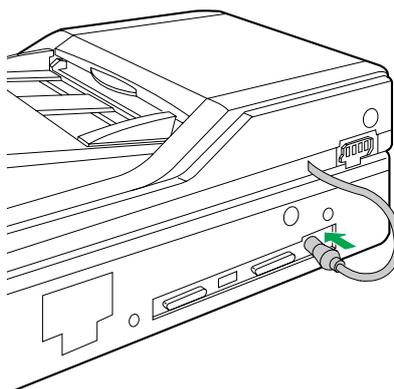
- 1** Hold the ADF vertically, then insert the tabs into the holes on the rear of the scanner.



- 2** Close the ADF.



- 3** Plug the end of the ADF cable into the ADF connector located on the back of the scanner.

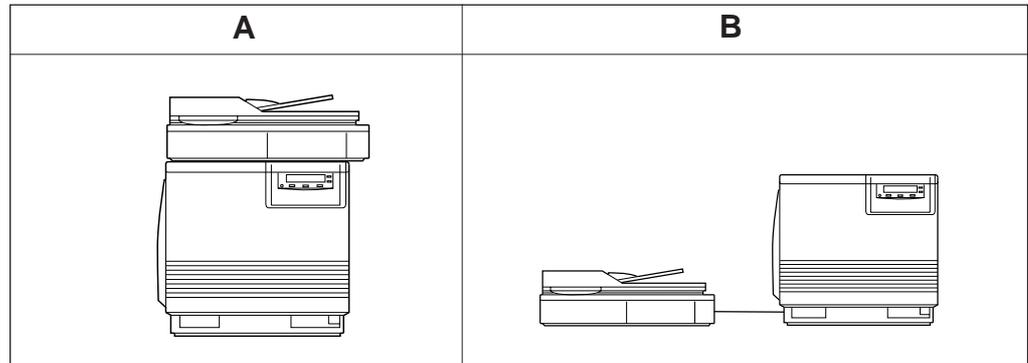


## Installing the Scanner

The scanner can be installed using two methods:

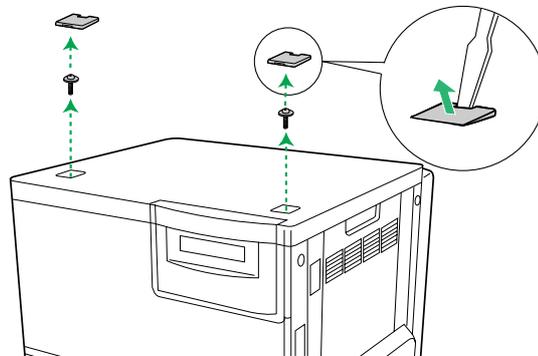
**Method A.** On top of the printer

**Method B.** On left or right side of the printer

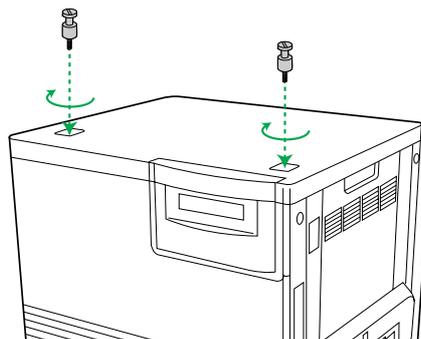


**For method A, perform the following procedure.**

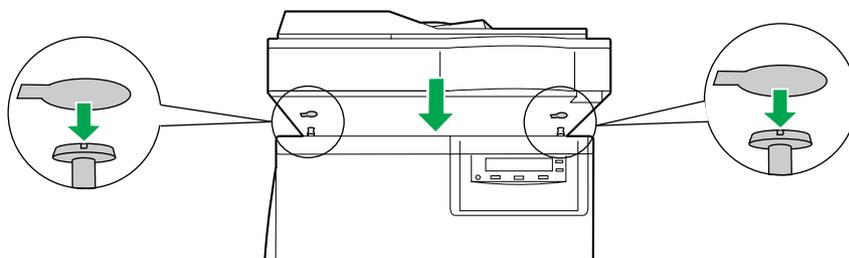
- 1** Remove the two top hole covers with a small flat-blade screwdriver, then remove the two screws from the printer.



- 2** Install the guide pins and tighten them with a flat-blade screwdriver.



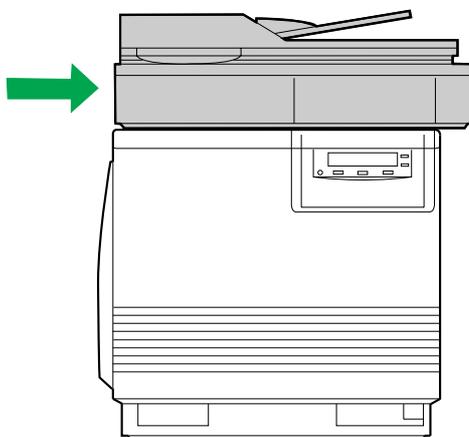
- 3 Match the guide pins to the holes under the scanner, and place the scanner gently onto the printer.



**Safety Caution:**

- The scanner weighs approximately 17.3 kg {38.1 lbs.}. It must be handled by two people.

- 4 Lock the scanner by sliding it toward the right.



## Loading Media

### Loading Paper or Transparencies in the Media Tray

The printer uses five different trays:

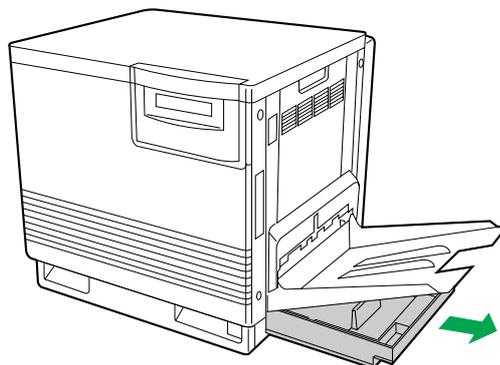
Tray	Size
A4 Paper	210 mm x 297 mm (8.3" x 11.7")
A4 Transparency	210 mm x 297 mm (8.3" x 11.7")
Letter Paper	216 mm x 279 mm (8.5" x 11")
Letter Transparency	216 mm x 279 mm (8.5" x 11")
Legal Paper	216 mm x 356 mm (8.5" x 14")

#### Notes:

- Make sure that you load the correct media. Each tray is designed and labeled for **only** paper or transparency. If you load the incorrect media type in a tray, it may cause a jam.
- If you have the 2nd Cassette Feeder installed:
  - If you wish to use the automatic cassette-switching feature (a large print job, for example), make sure that all trays in the printer are the **same** media type and size.
  - The transparency tray should be inserted in the upper or middle tray slots.

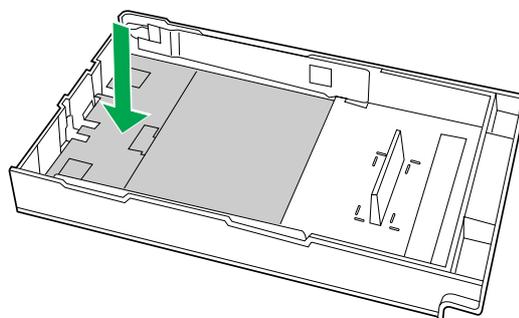
The printer is shipped with a media tray (either Letter paper or A4 paper) installed.

- 1** Pull the media tray out of the printer.

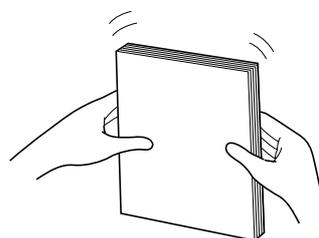


- 2** Remove all packaging materials from inside the media tray; refer to the instruction sheet attached to the tray.

- 3 Push down on the metal plate until it clicks, locking it in place.



- 4 Fan the media (paper/transparencies), then tap it on a level surface to avoid media jams or skewed printing.

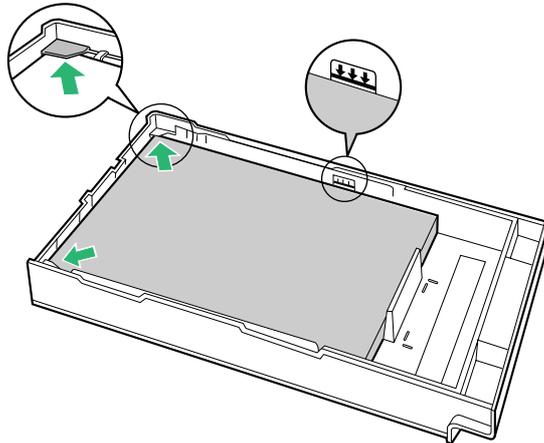


**Notes:**

- To optimize your printer's performance, always use clean, unused media.
- Be careful not to leave fingerprints on the media, which can result in a smudged print.
- Reusing media that has been fed through the printer once (for example, after jams) can reduce the life of the consumables and paper path components.
- The recommended transparency is 3M CG3700. If the print quality is poor, print on the other side.

## 5 Place the media in the tray under the hooks.

The height of media should not exceed the limit mark on the tray, or it may cause a jam.



### Notes:

- Load media with the print side down. Most media has instructions recommending the side to be printed first.
- Do not mix different types or thicknesses of media in the media tray at one time; this may cause a jam.

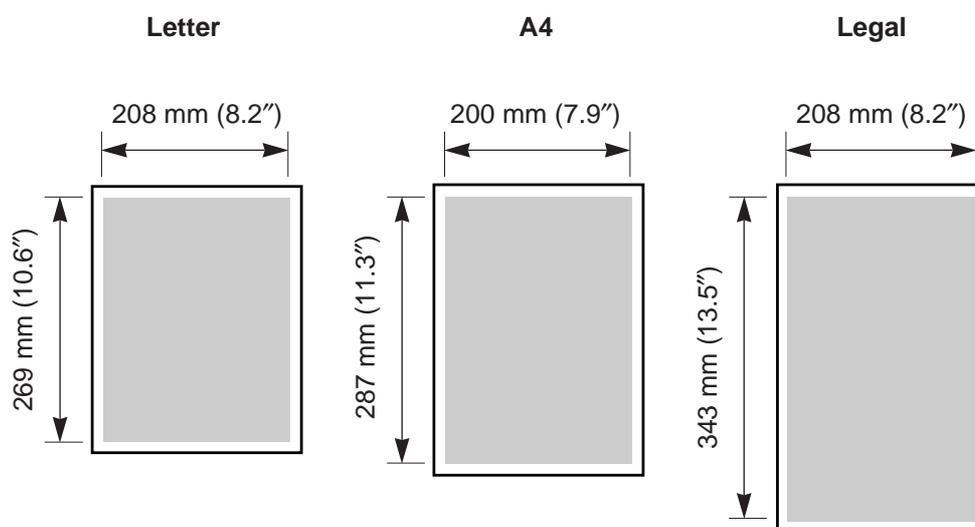
## 6 Slide the media tray completely into the slot.

## Margins and Print Area

When the image is printed on the media, the image (print area) is a bit smaller than the media size. You may need to adjust the page margins in the application software to match the print area.

The following table and illustrations show the page sizes, the largest print areas, and the margins for the media sizes supported on this printer.

Media	Page size	Print area	Margins		
			Top	Bottom	Sides
Letter	216 mm x 279 mm (8.5" x 11")	208 mm x 269 mm (8.2" x 10.6")	5.6 mm (0.22")	5.6 mm (0.22")	3.6 mm (0.14")
A4	210 mm x 297 mm (8.3" x 11.7")	200 mm x 287 mm (7.9" x 11.3")	5.1 mm (0.2")	4.7 mm (0.19")	4.7 mm (0.19")
Legal	216 mm x 356 mm (8.5" x 14")	208 mm x 343 mm (8.2" x 13.5")	5.8 mm (0.23")	5.8 mm (0.23")	3.6 mm (0.14")



## Loading Media in the Multi-purpose Tray

The multi-purpose tray (MPT) serves as an additional tray for loading any type of media that ranges in size from 91 mm x 254 mm to 216 mm x 356 mm (3.6" x 10" to 8.5" x 14"). Use it to load a single sheet or a stack of media. The amount of media you can load depends upon its thickness.

Use the multi-purpose tray to accomplish the following:

### Print on standard and special media

- Standard media
  - Laser paper [75 to 165 g/m<sup>2</sup> (20 to 44 lbs.)]
- Special media
  - Labels
  - Envelope (#10 or larger size)\* [Black Text only]
  - Transparency (The print quality may not be stable. Use the media tray for best reliability.)
  - Coated paper

\* If the Envelope is larger than #10, you must select a paper size that is larger than your envelope ( [P. 124](#), [P. 126](#), [P. 133](#) of the Utilities and Drivers Reference Guide).

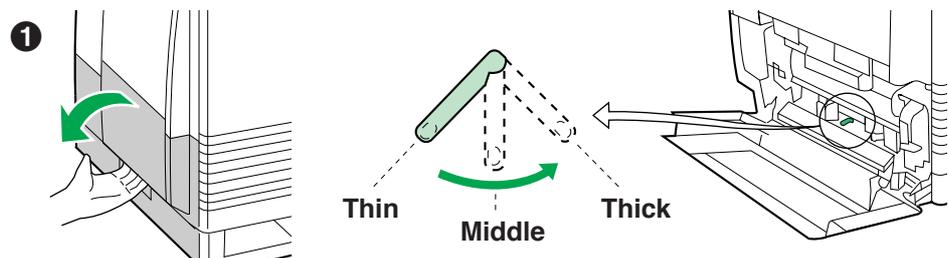
### Two-sided printing (double-sided) on laser paper

You should not expect the same print quality and reliability that you get with one-sided printing. For details, refer to [page 151](#).

### Setting media thickness switch

Because the printer accommodates various media weights from the multi-purpose tray, media thickness can be manually selected for the most reliable paper-picking. Follow these steps:

- 1** Open the left side door (❶). The green media thickness switch is located on the paper feeder and has three settings:



- 2** Move the switch to the desired setting.

Switch setting	Media
Thin (Default)	Laser paper 75 to 90 g/m <sup>2</sup> (20 to 24 lbs.)
Middle	Laser paper 91 to 123 g/m <sup>2</sup> (25 to 32 lbs.), Transparency, Label, Coated paper
Thick	Laser paper 124 to 165 g/m <sup>2</sup> (33 to 44 lbs.) Envelope

- 3** Close the left side door.

## ■ Loading Paper, Transparency, Coated Paper

### Notes:

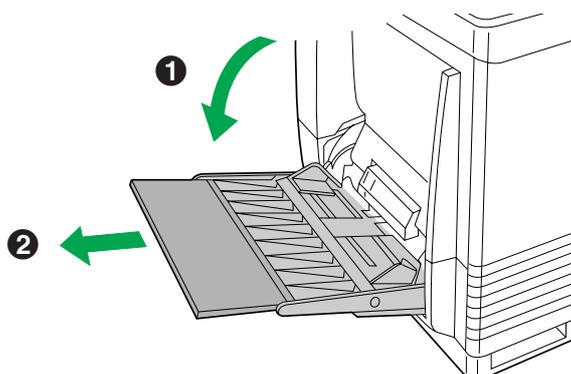
- Reusing media that has been fed through the printer (for example, after jams) can reduce the life of the consumables and paper path components.
- When printing legal size using the multi-purpose tray, backside marking may occur. If this occurs, use the legal tray.

For detailed information on media, refer to [page 150](#).

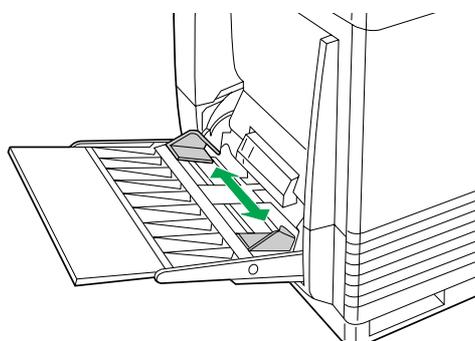
**1** Set the media thickness switch ( [P. 38](#)).

**2** **1** Open the Multi-purpose tray.

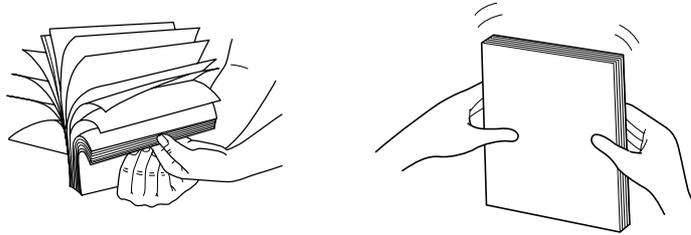
**2** **2** Extend the media support by sliding it outward.



**3** Separate the media guides to the approximate width of the media.

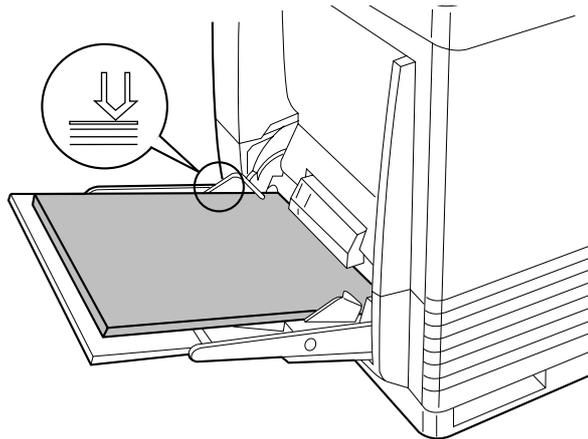


- 4** Fan the media, and then tap it on a level surface to avoid media jams or skewed printing.



- 5** Insert the media with the printing side up into the multi-purpose tray.

The height of media should not exceed the limit mark on the left guide, or it may cause a media jam.



- 6** Adjust the media guides to the media size.
- 7** Use the printer driver or the scanner panel ( [P. 84](#) ) to select the multi-purpose tray.

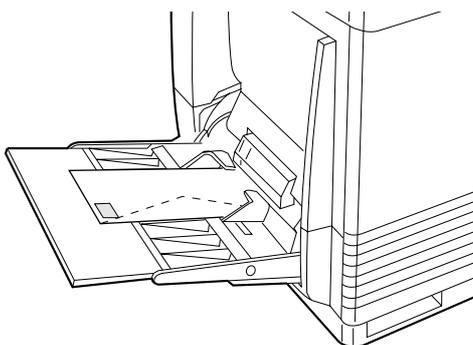
## ■ Loading an Envelope

Do not insert more than one envelope at a time. Only black text can be printed on envelopes. For more detailed information on envelopes, refer to [page 153](#).

### Note:

- The envelope may be creased when printed.

- 1** Set the media thickness switch ( [P. 38](#)).
- 2** Adjust the media guides to the width of the envelope.
- 3** Insert the envelope with the short end entering the printer first and the printing side facing up. The edge where the stamp is located enters the printer last.



- 4** Use the printer driver to select Envelope in the Paper size menu and the Paper source menu.

## ■ Loading Labels

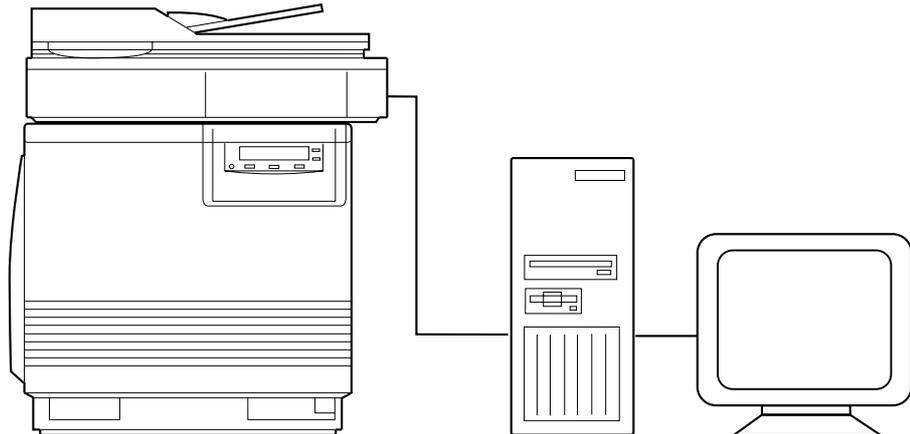
For detailed information on labels, refer to [page 152](#).

- 1** Set the media thickness switch ( [P. 38](#)).
- 2** Adjust the media guides to the width of the label sheets.
- 3** Insert the label sheets in the multi-purpose tray with the printing side up and the top of the sheets enter first.  
The height of labels should not exceed the limit mark on the guide.
- 4** Use the printer driver or the scanner panel ( [P. 84](#) ) to select Label.

## Connecting the System

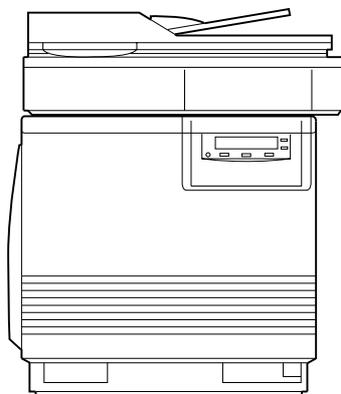
The scanner, printer, and PC (with SCSI-2 board installed) can be installed in different configurations depending on the function(s) to be used. Only one PC can be connected with your DCIS.

### ■ Digital Color Imaging System (DCIS) Standard System ( [P. 44](#) )



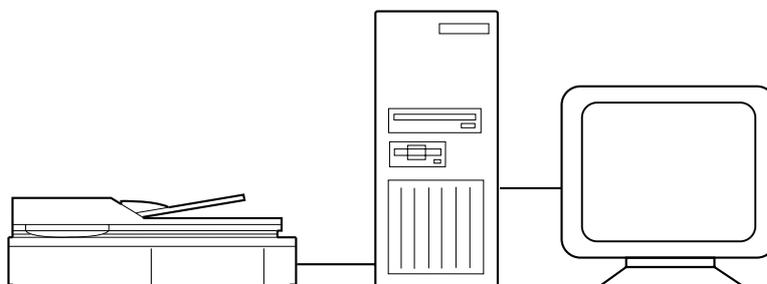
- Functions
  - Duplicating Documents ( [P. 77](#) )
  - Scanning Documents ( [P. 80](#) )
  - Printing

### ■ DCIS Stand Alone System ( [P. 46](#) )



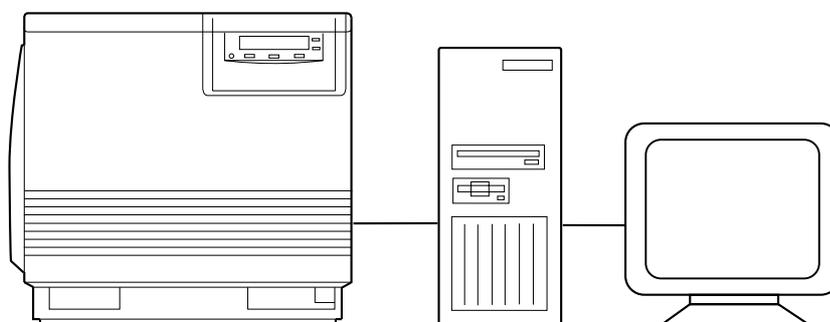
- Function
  - Duplicating Documents ( [P. 77](#) )

## ■ Connecting the Scanner to a Computer ( [P. 47](#) )



- Function
  - Scanning Documents ( [P. 80](#) )

## ■ Connecting the Printer to a Computer ( [P. 49](#) )



- Function
  - Printing

## DCIS Standard System

If a SCSI-2 board has been installed in your computer, be sure it is compatible (☞ P. 157 “SCSI Interface” specifications). If it is not installed, be sure to install only a recommended SCSI-2 board (☞ P. 16).

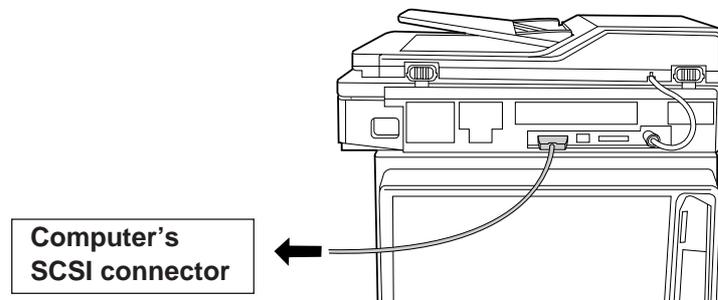
### Recommendation for connecting DCIS:

- We recommend you to connect your DCIS with only one SCSI device.
- For a SCSI chain with up to three SCSI-2 (FAST SCSI) devices connected, the total length of the SCSI cables must be less than 3 m (9.8 ft.).
- Use shielded cables for SCSI-2 (FAST SCSI).

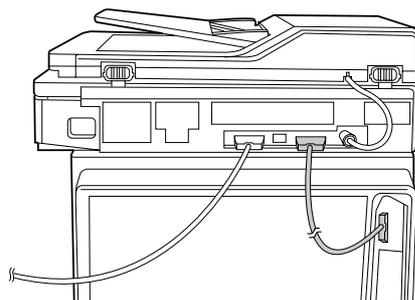
### Note:

- Although a SCSI chain may exceed the recommended length and still operate we cannot guarantee this operation.

- 1** Make sure the computer, scanner, printer and the other connected peripheral devices are turned off.
- 2** Connect the SCSI cable to the computer’s SCSI connector and to the scanner’s SCSI connector A or B.
  - The SCSI-2 board must be installed in the computer.  
If you do not have a SCSI-2 board or a SCSI cable, you will need to purchase one from your local computer store or dealer (☞ P. 16, 157 “SCSI Interface” specifications).

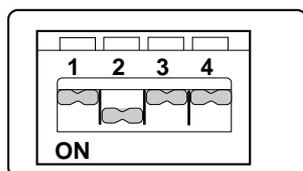


- 3** Connect the SCSI cable provided to the printer’s SCSI connector and to the scanner’s SCSI connector.  
The printer must be the last device in the chain because the printer has only one SCSI connector.

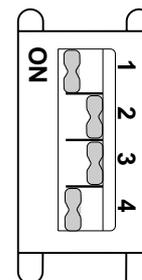


## 4 Make sure the SCSI ID No. of the scanner is 2 and that of the printer is 1. (They are the default settings.)

- If you have other devices connected to the computer, make sure that each SCSI device has a different ID No.
- To change an ID No., use ID No. switches (#1, #2, #3) located on the back of the units. Also refer to Table 1 on [page 52](#).



Scanner

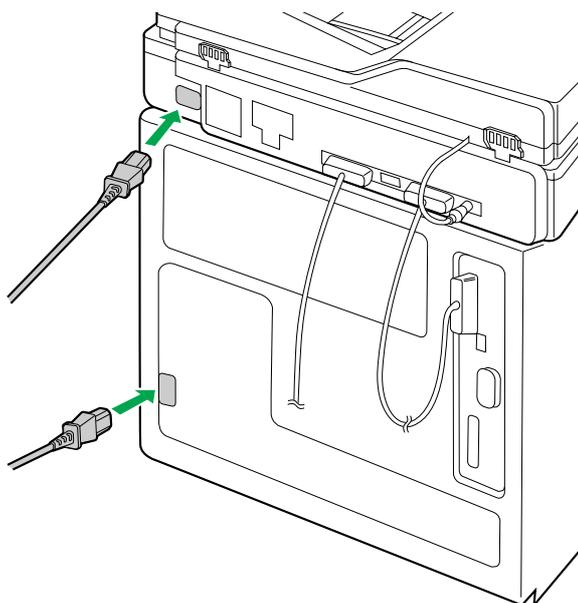


Printer

## 5 Make sure the terminator switch (#4) of the scanner is set to OFF and that of the printer is set to ON. (They are the default settings.)

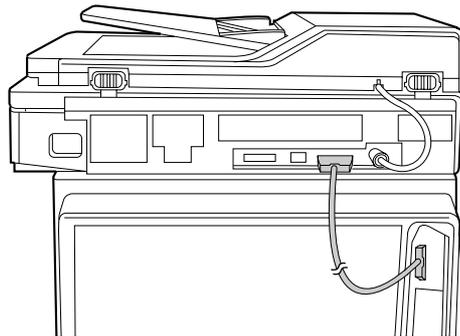
- If you have other devices connected to the computer, make sure the terminator switches of all those devices are set to OFF.
- To change the terminator setting, use the terminator switch (#4) located on the back of the units.

## 6 Connect the power cords to the scanner's AC inlet, to the printer's AC inlet and to AC outlets.

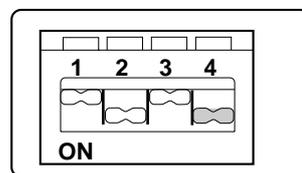


## DCIS Stand Alone System

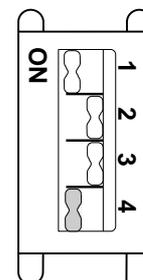
- 1** Make sure the scanner and printer are turned off.
- 2** Connect the SCSI cable provided to the scanner's SCSI connector A or B and to the printer's SCSI connector.



- 3** Make sure the terminator switches (#4) of the scanner and printer are set to ON.



Scanner



Printer

- To change a terminator setting, refer to [page 52](#).

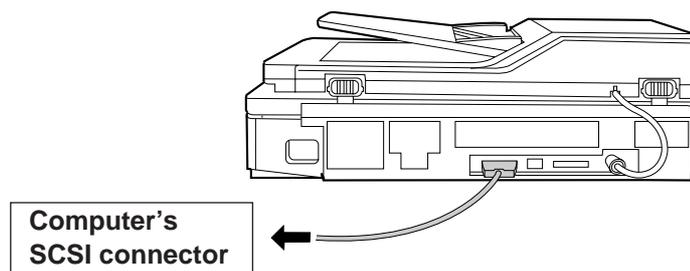
- 4** Connect the power cord to the scanner's AC inlet and to an AC outlet.
- 5** Connect the other power cord to the printer's AC inlet and to an AC outlet.

## Connecting the Scanner to a Computer

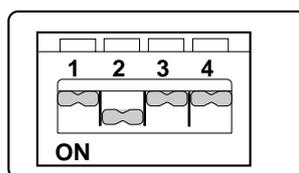
### Note for Terminator setting:

- The terminator must be installed or set to ON on the last SCSI device only.

- 1** Make sure the computer, scanner and the other connected peripheral devices are turned off.
- 2** Connect the SCSI cable to the computer's SCSI connector and to the scanner's SCSI connector A or B.
  - The SCSI-2 board must be installed in the computer.  
If you do not have a SCSI-2 board or a SCSI interface cable, you will need to purchase one from your local computer store or dealer ( [P. 16, 157 "SCSI Interface" specifications](#) ).
  - If other SCSI devices are connected to the computer, connect the scanner anywhere in the SCSI chain.



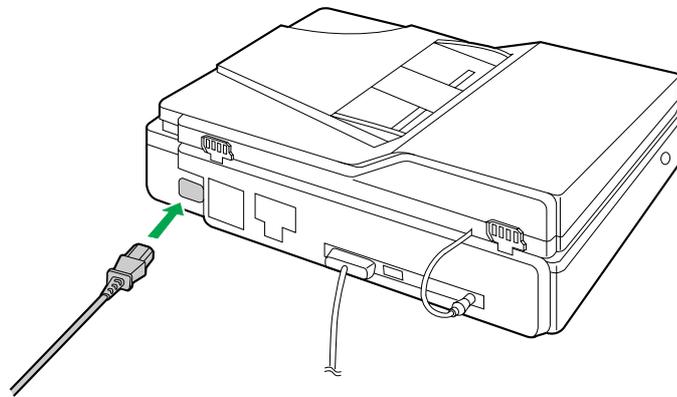
- 3** Make sure the SCSI ID No. of the scanner is 2 (default setting).
  - If other devices are connected to the computer, make sure that each SCSI device has a different ID No.
  - To change the scanner's ID No., use the ID No. switches (#1, #2, #3) located on the back of the scanner. Also refer to Table 1 on [page 52](#).



# Setup

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- 4<sub>A</sub>** If the scanner is the last device, set its terminator switch (#4) to ON. Go to step 5.
- 4<sub>B</sub>** If the scanner is not the last device, make sure the terminator switch (#4) is set to OFF (default setting).
- 5** Connect the power cord to the scanner's AC inlet and to an AC outlet.



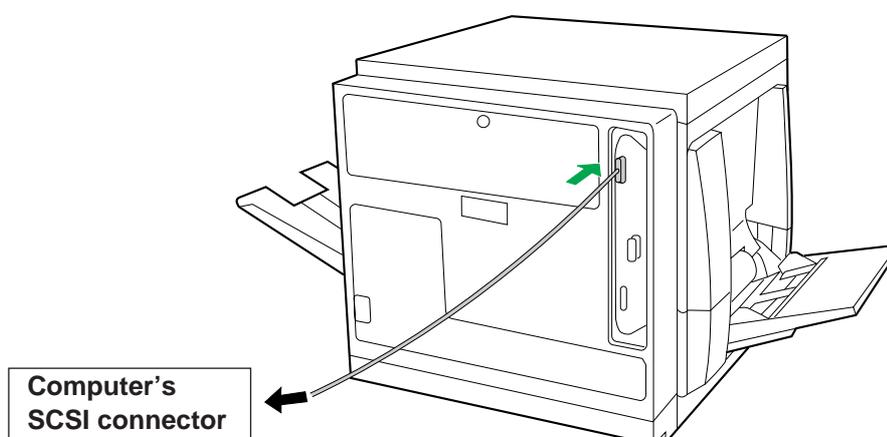
## Connecting the Printer to a Computer

### Note for Terminator setting:

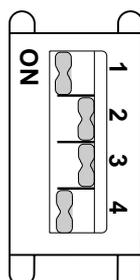
- The printer must be the last device in the chain. The terminator setting of all other devices in the chain must be off.

### ■Using a SCSI cable:

- 1** Make sure the computer, printer and the other connected peripheral devices are turned off.
- 2** Connect the SCSI cable to the computer's SCSI connector and the printer's SCSI connector.
  - A SCSI-2 board must be installed in the computer.  
If you do not have a SCSI-2 board or a SCSI interface cable, you will need to purchase one from your local computer store or dealer (☞ P. 16, 157 "SCSI Interface" specifications).



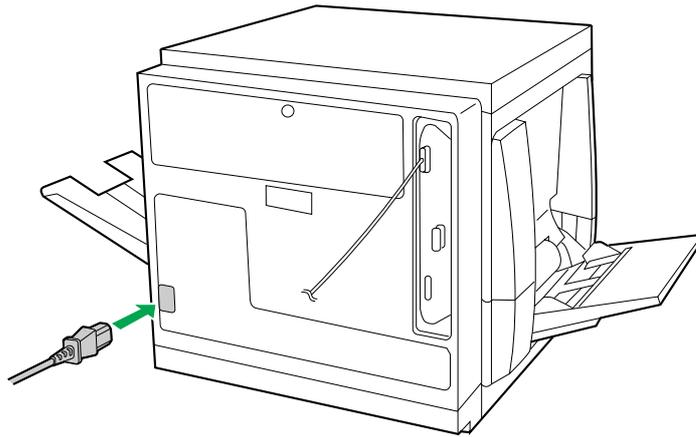
- 3** Make sure the SCSI ID No. of the printer is 1 (default setting).
  - If you have other devices connected to the computer, make sure that each SCSI device has different ID No.
  - To change the printer's ID No., use the ID No. switches (#1, #2, #3) located on the back of the printer. Also refer to Table 1 on page 52.



# Setup

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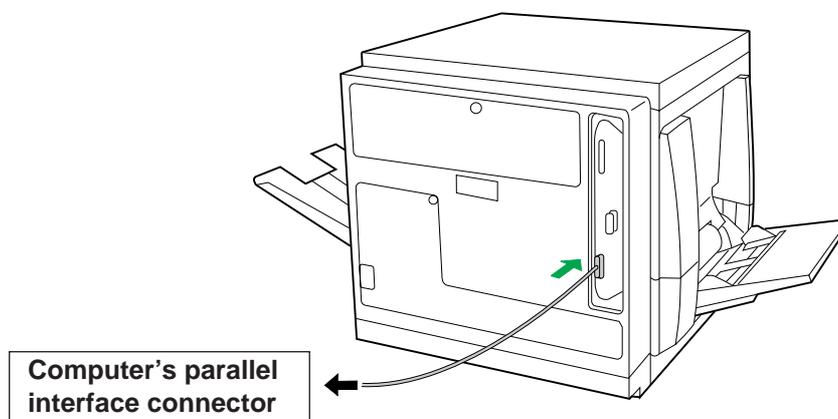
- 4** Make sure the terminator switch (#4) of the printer is set to ON (default setting).
- 5** Connect the power cord to the printer's AC inlet and to an AC outlet.



## ■ Using a parallel interface cable:

If you do not have a parallel interface cable, you will need to purchase one from your local computer store or dealer ( [P. 158](#) for “Parallel Interface” specifications).

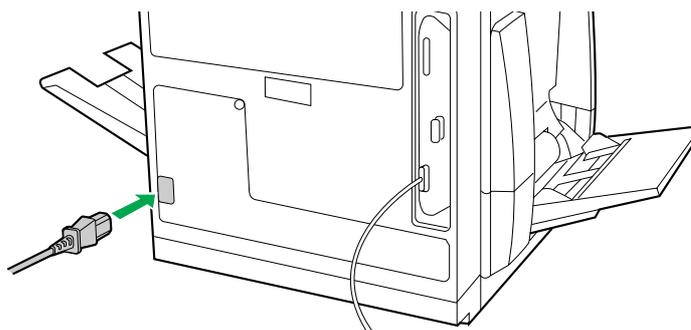
- 1** Make sure the computer, printer and the other connected peripheral devices are turned off.
- 2** Connect the parallel interface cable to the computer’s parallel interface connector and the printer’s parallel interface connector.



### Notes:

- The actual connector on the computer may differ depending on the manufacturer of the computer.
- If the cable is connected to the PC via a printer buffer or selector, the printer may not print.

- 3** Connect the power cord to the printer's AC inlet and to an AC outlet.



## Setting the SCSI ID Number, Terminator

### ■Setting the SCSI ID Number

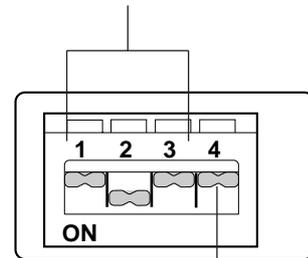
In most cases, there is no need to change the default settings. However, if you have other peripheral devices connected in a SCSI chain, check if their ID numbers conflict with that of the printer or scanner. Be sure to choose an unassigned ID number.

ID number can be changed by using the SCSI ID No. switches (#1, #2, #3) [↔ Table 1 below].

Table 1

ID No.	SCSI ID No. switches		
	#1	#2	#3
0	OFF	OFF	OFF
1	ON	OFF	OFF
2	OFF	ON	OFF
3	ON	ON	OFF
4	OFF	OFF	ON
5	ON	OFF	ON
6	OFF	ON	ON
7	ON	ON	ON

SCSI ID No. switches

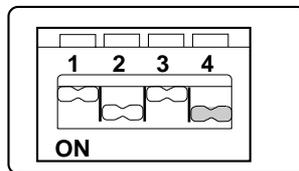


Terminator switch

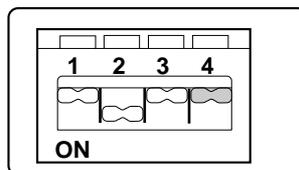
### ■Setting the Terminator

The terminator setting can be changed by using the terminator switch (#4).

Terminator ON:

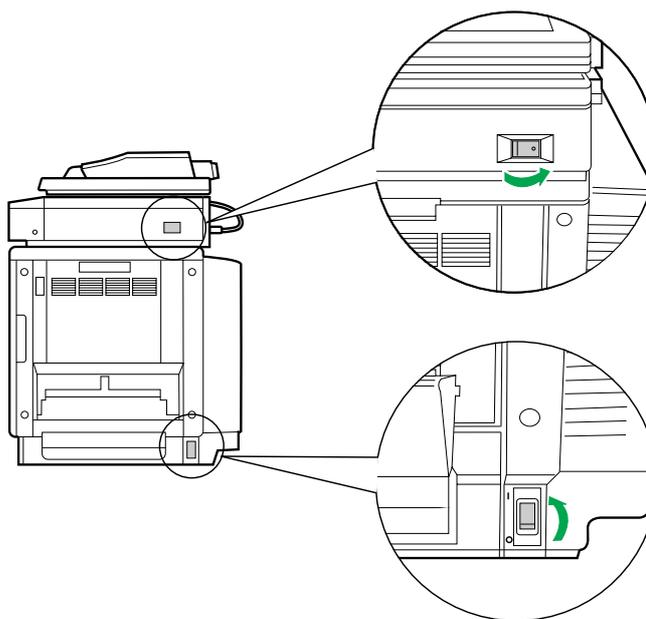


Terminator OFF:



## Power On

- 1 Turn ON the scanner, then the printer. Next turn ON the computer.



- 2 The scanner will be ready after approximately 20 seconds, and “Ready”, “PTR Initializing” will be displayed on the scanner LCD panel.
- 3
  - 1 The READY indicator on the printer starts flashing and “Initializing” is displayed on the printer LCD panel.
  - 2 After approximately 3.5 minutes, the printer’s READY indicator is illuminated and “Ready” is displayed on the printer LCD panel.

The printer is ready for printing.

**Note:**

- When you power on your system for the first time, if “New Hardware Found” is displayed on the computer screen, refer to [page 58](#).

## Printing a Test Page From the Printer Panel

The test page provides general information on printer settings and configuration. Make sure the printer is ready and paper is loaded. Use the following procedure to print a test page:

- 1 Press the **MENU/EXIT** button to enter the **Menu Mode**.

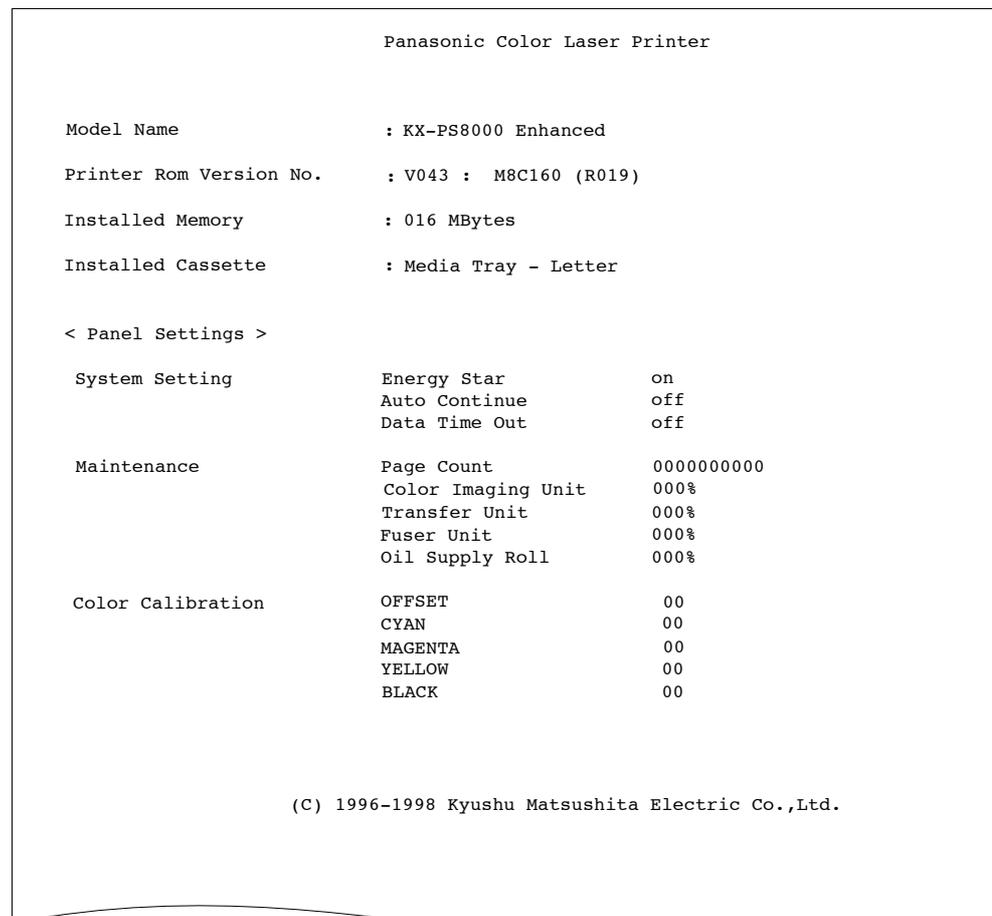
```
Menu Mode
Test Page
```

- 2 Press the **ENTER** button.

```
Test Page
Configuration Page
```

- 3 Press the **ENTER** button again.  
The printer will start printing a configuration page.

(Example)



## Installing the KX-PS8000 Software

The KX-PS8000 software installation will create the following.

- Printer driver for Windows 3.1, Windows 95 or Windows NT 4.0
- TWAIN scanner driver (32 bit and/or 16 bit)
- Digital Duplicator Utility
- Status Display for Windows 3.1, Windows 95 or Windows NT 4.0

**Notes:**

- *If you are using Windows 3.1, disable or uninstall any application software's printer status to prevent conflicts with the KX-PS8000 Status Display for Windows 3.1.*
- *When reinstalling the KX-PS8000 software, do it immediately after restarting Windows.*

To install the bundled software (Corel Photo-Paint, TextBridge, or Panasonic font manager), refer to [page 68 "Installing the Bundled Software"](#).

## Installing the Printer Driver and Utilities for Windows 3.1

- 1** Start Windows 3.1.
- 2** Quit all applications.
- 3** Insert the **KX-PS8000 CD-ROM** into your computer's CD-ROM drive.
- 4** Click **File** from the **Program Manager**, then click **Run...**.
- 5** Click **Browse** and select your CD-ROM drive from the [Drives:] box.
- 6** Select **Setup.exe**, and click **OK**.
- 7** Click **OK**.  
The Installer starts.
- 8** Follow the instructions on the screen to complete the installation.

## Installing the Printer Driver and Utilities for Windows 95

- 1** Start Windows 95.
- 2** Quit all applications.
- 3** Click **Start**, move the pointer to **Settings**, then click **Control Panel**.  
The Control Panel window is displayed.
- 4** Double click **Add/Remove Programs**.  
The Add/Remove Program Properties window is displayed.
- 5** Click **Install**.  
The Install Program From Floppy Disk or CD-ROM window is displayed.
- 6** Insert the **KX-PS8000 CD-ROM** into CD-ROM drive.
- 7** Click **Next**.  
The Run Installation Program window is displayed.
- 8** Click **Finish**.  
Wait until the Panasonic KX-PS8000 Utilities Welcome window is displayed.
- 9** Follow the instructions on the screen to complete the installation.  
After installation, restart your system.

**Note:**

- During installation, when “Setup is adding icon to the Printer folder. Please wait several minutes” is displayed, the processing may take approximately 5 to 10 minutes to complete depending on the system.

## ■ Using Plug and Play

- 1** Turn on the scanner, then the printer.
- 2** Turn on the computer and start Windows 95.  
The New Hardware Found window is displayed for a few seconds, then the Update Device Driver Wizard window is displayed.
- 3** Insert the **KX-PS8000 CD-ROM** into CD-ROM drive.
- 4** Click **Next>** .
- 5** Click **Finish** .  
The Insert Disk window is displayed.
- 6** Click **OK** .  
The Copying Files window is displayed.
- 7** Type in your CD-ROM drive name followed by :\  
(example; **D:**) in the **Copy file from** field and click **OK** .  
Wait until the Panasonic KX-PS8000 Utilities Welcome window is displayed.
- 8** Follow the instructions on the screen to complete the installation.  
After installation, restart your system.

**Note:**

- The Plug and Play installation procedure varies depending on the version of Windows 95. Refer to Help in Windows 95.

## Installing the Printer Driver and Utilities for Windows NT 4.0

- 1** Start Windows NT 4.0.
- 2** Quit all applications.
- 3** Click **Start** , move the pointer to **Settings**, then click **Control Panel**.  
The Control Panel window is displayed.
- 4** Double click **Add/Remove Programs** .  
The Add/Remove Program Properties window is displayed.
- 5** Click **Install** .  
The Install Program From Floppy Disk or CD-ROM window is displayed.
- 6** Insert the **KX-PS8000 CD-ROM** into CD-ROM drive.
- 7** Click **Next>** .  
The Run Installation Program window is displayed.
- 8** Click **Finish** .  
Wait until the Panasonic KX-PS8000 Utilities Welcome window is displayed.
- 9** Click **Next>** .  
The Setup Type window is displayed.
- 10** Click the type of setup, then click **Next>** .  
The Select Program Folder window is displayed.

# Setup

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- 11** Click **Next>** .  
The Start Copying Files window is displayed.
- 12** Click **Next>** .  
After copying files, the Add Printer Wizard window is displayed.
- 13** Click **Next>** .
- 14** Select LPT port by clicking on the check box.
- 15** Click **Next>** .
- 16** Click **Have Disk...** .  
The Install From Disk window is displayed.
- 17** Click **Browse...** .
- 18** Click **Cancel** .  
The Locate File window is displayed.
- 19** Select CD-ROM drive.
- 20** Open **Drivers, Winnt40, Printer**, then select **pgdint.inf** file.
- 21** Click **Open** .
- 22** Follow the instructions on the screen to complete the installation.

To connect the printer to a SCSI port, install the SCSI port.  
Refer to the Ports tab of the Panasonic KX-PS8000 Properties window  
([P. 131 to P. 135](#) of the Utilities and Drivers Reference Guide).

## Installing the SCSI port:

### Notes:

- It is recommended that you do not connect the printer directly to the file server. Otherwise the printer and server performance may be diminished.
- When printing through the SCSI port, the access speed between other connected SCSI devices is diminished.
- To connect the KX-PS8000 to your SCSI port, a SCSI driver and ASPI Manager must be installed. Refer to your SCSI board manual.

- 1** Click **Start** , select **Settings**, then click **Printers**.  
The Printers window is displayed.
- 2** Click the **Panasonic KX-PS8000** icon.
- 3** Click the **File** menu, then click **Properties**.  
The Panasonic KX-PS8000 Properties window is displayed.
- 4** Click the **Ports** tab.
- 5** Click **Add Port...** .  
The Printer Ports window is displayed.
- 6** Click **New Monitor...** .  
The Installing Print Monitor window is displayed.
- 7** Insert the **KX-PS8000 CD-ROM** into CD-ROM drive.
- 8** Click **Browse...** .
- 9** Click **Cancel** .  
The Locate File window is displayed.

### Note:

- The SCSI port cannot be installed through the **Monitor.inf** file when copied to a directory with long file name.

# Setup

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- 10** Select CD-ROM drive.
  
- 11** Open **Drivers**, **WinNT40**, **Printer**, then select **Monitor.inf** file.  
Click **Open**.  
The Installing Print Monitor is displayed.
  
- 12** Click **OK**.  
The Printer Ports window is displayed.
  
- 13** Click **New Port....**.  
The Port Name window is displayed.
  
- 14** Type the port name (for example; KXPS8000GDI), then click **OK**.  
The Printer Ports window is displayed.
  
- 15** Click **Close**.

## ■Using the Printer in a Network Environment

### For the server computer:

To share the printer with other clients on the network, perform the following steps after installing the printer driver.

**1** Double click the **My computer** icon.

**2** Double click the **Printers** icon.

**3** Select the **Panasonic KX-PS8000** printer.

**4** Click **File** menu, then click **Sharing....**

**5** Click **Shared**.

**6** Enter the printer name  
(ex. KX-PS8000).

If the shared printer is used through Windows 95, the printer name must not exceed 12 characters.

**7** Click  .

# Setup

---

## **For a client computer:**

To use the printer connected to the server, perform the following steps after installing the printer driver.

### **<For Windows NT 4.0 Users>**

- 1** Click **Start**, select **Settings**, then click **Printers**.  
The Printers window is displayed.
- 2** Double click the **Add Printer** icon from **Printers**.
- 3** Select **Network printer server**.
- 4** Click **Next>**.
- 5** Select the **Panasonic KX-PS8000 printer** in the **Shared Printers** box.
- 6** Click **OK** and follow the instructions on the screen.
- 7** Click **Finish**.

### **<For Windows 95 Users>**

- 1** Double click the **My computer** icon.
- 2** Double click the **Printers** icon.
- 3** Double click the **Add Printer** icon.
- 4** Click **Next>**.
- 5** Click **Network printer**, then click **Next>**.

- 6** Click **Browse...** .
- 7** Select the **KX-PS8000 printer**.
- 8** Click **OK** .
- 9** Click **Next>** .  
If the server does not have the Printer Driver for Windows 95, click **Have Disk...** .  
The Install From Disk window is displayed.
- 10** Click **Browse...** .
- 11** Insert the **KX-PS8000 CD-ROM** into CD-ROM drive.
- 12** Select CD-ROM drive.
- 13** Open **Drivers, Win95, Printer**, then select **Pgdi95.inf** file.
- 14** Click **OK** .  
The Install From Disk window is displayed.
- 15** Click **OK** .
- 16** Click **Next>** .
- 17** Click **Next>** .
- 18** Click **Finish** .

## ■Removing the Printer Driver

- 1** Click **Start**, move the pointer to **Settings** and click **Printers**.
- 2** Select **Panasonic KX-PS8000**.
- 3** Click **File** menu, then click **Delete**.
- 4** Click **Yes**.

## Removing the KX-PS8000 Software

If you need to remove the KX-PS8000 software, perform the following steps.

### ■For Windows 3.1 users:

- 1** From the **Program Manager** double click the **Panasonic KX-PS8000 Utilities** icon.
- 2** Double click the **Uninstall Utility** icon.
- 3** Click **Yes**.

### ■For Windows 95 / Windows NT 4.0 users:

- 1** Click **Start**, move the pointer to **Programs**, then to **KX-PS8000 Utilities**.
- 2** Click **Uninstall**.
- 3** Click **Yes**.

**Note:**

- For removing the Panasonic KX-PS8000 icon in the Printer Folder, refer to Help in Windows 95 / Windows NT 4.0.

## Installing the Bundled Software

### For Windows 3.1:

- Corel Photo-Paint 5.0 Plus
- TextBridge
- Panasonic font manager (in KX-PS8000 Driver & Utility CD-ROM)

### For Windows 95 / Windows NT 4.0:

- Corel Photo-Paint 6.0
- TextBridge
- Panasonic font manager (in KX-PS8000 Driver & Utility CD-ROM)

To install the above applications, perform the following steps.

### ■ For Windows 3.1 users:

- 1** Start Windows 3.1.
- 2** Quit all applications.
- 3** Insert the **KX-PS8000 Driver & Utility CD-ROM** into your computer CD-ROM drive.
- 4** Click **File** from the **Program Manager**, then click **Run...**.
- 5** Click **Browse** and select your CD-ROM drive from the [Drives:] box.
- 6** Select **Instapp.exe**, and click **OK**.
- 7** Click **OK**.  
The installer starts.
- 8** Follow the instructions on the screen to complete the installation.

## ■ For Windows 95 / Windows NT 4.0 users:

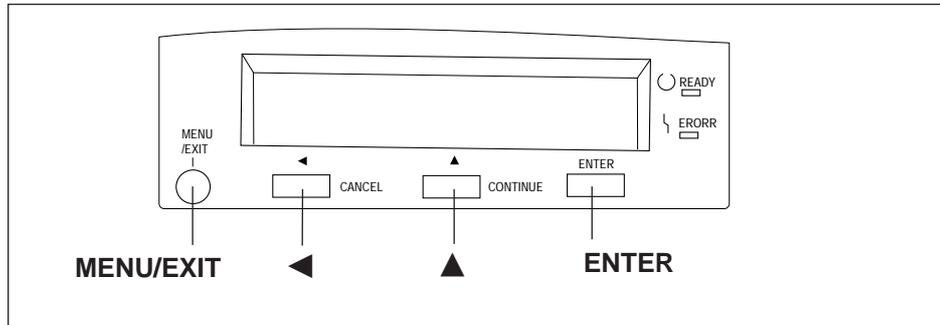
- 1** Start Windows 95 / Windows NT 4.0.
- 2** Quit all applications.
- 3** Insert the **KX-PS8000 Driver & Utility CD-ROM** into your computer CD-ROM drive.
- 4** Click **Start**, move the pointer to **Run...**, then click **Run**.
- 5** Click **Browse** and select your CD-ROM drive from the [Drives:] box.
- 6** Select **Instapp.exe**, and click **OPEN**.
- 7** Click **OK**.  
The installer starts.
- 8** Follow the instructions on the screen to complete the installation.

### **Note:**

- *If you are using Windows 95/Windows NT 4.0, when you insert CD-ROM into your drive, the bundled application installer may start automatically. In this case, quit the Panasonic quick installer and use the application installer. For information on how to use the applications, refer to their manuals.*

## Setting the Color Density

The printer panel provides an interface to adjust the density of the toner applied to the media. This feature compensates for the changes in density that can occur as environmental conditions change, toner cartridges or the imaging unit age.



Perform the following steps to adjust the color density:

- 1** To print a Color Calibration Page:
  - 1** Press the **MENU/EXIT** button on the printer panel.

Menu Mode  
Test Page
  - 2** Press the **▲** button.

Menu Mode  
Color Calibration
  - 3** Press the **ENTER** button.

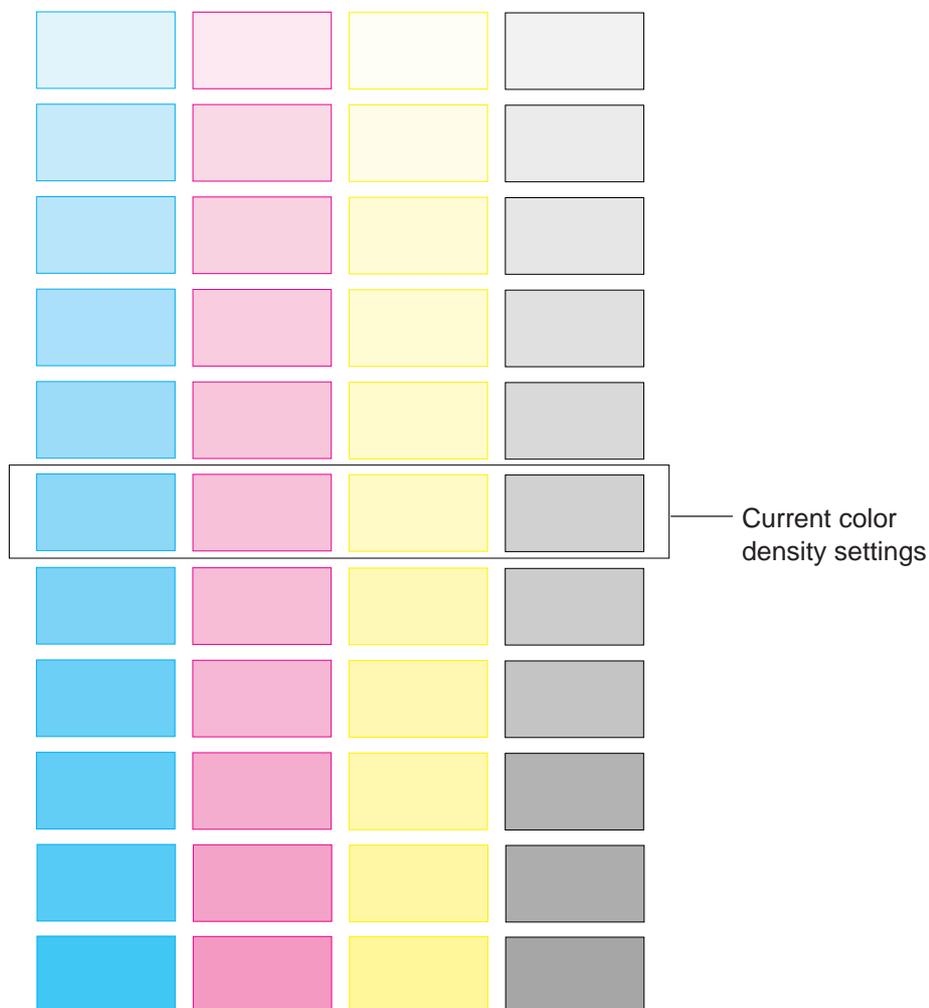
Color Calibration  
Calibration Offset
  - 4** Press the **▲** button 5 times and the following is displayed.

Color Calibration  
Calibration Test Print
  - 5** Press the **ENTER** button.

A Color Calibration Page will be printed.

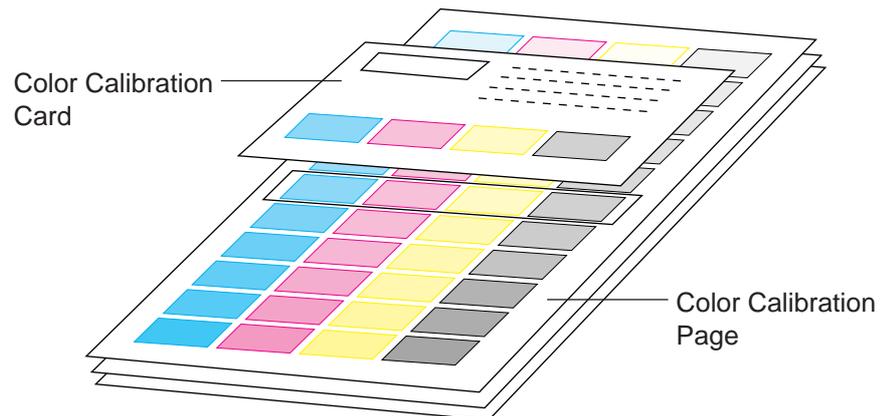
The current density setting for each color is indicated by the line enclosure on the Color Calibration Page as shown in the following example. The factory default setting for each color density is 0.

### Color Calibration Page (Example):



- 2** Compare the current color density settings on the Color Calibration Page with the color density samples on the Color Calibration Card to see if they match.

Place the Color Calibration Page on at least 2 sheets of clean white paper in a well-lighted area.



- If they match, then you do not need to adjust the color density and you may proceed with any operation you wish to perform.
  - If they do not match, go to step 3.
- 3** Determine which block on the Color Calibration Page most closely matches the density of the cyan sample on the Color Calibration Card.
    - Repeat step 3 for each color.

**4A** If you wish to adjust the density for all colors simultaneously, perform the following, then go to step 5.

❶ Repeat instructions ❶ through ❸ of step 1 on [page 70](#).

```
Color Calibration
Calibration Offset
```

❷ Press the **ENTER** button.

```
Calibration Offset
0* (-5 to 5)
```

❸ Press the ▲/◀ button to darken/lighten all the colors.  
Pressing the ▲/◀ button twice selects the next/previous level settings.

**(For example:)**

- If you wish to make the density setting darker by 2 levels:  
— Press the ▲ button 4 times.
- If you wish to make the density setting lighter by 1 level:  
— Press the ◀ button 2 times.

❹ Press the **ENTER** button.

```
Color Calibration
CYAN
```

❺ Press the ▲ button 4 times and the following is displayed.

```
Color Calibration
Calibration Test Print
```

**4B** If you wish to adjust the density for each color independently, perform the following, then go to step 5.

❶ Repeat instructions ❶ through ❸ of step 1 on [page 70](#).

❷ Press the ▲ button.

```
Color Calibration
CYAN
```

❸ Press the ENTER button.

```
CYAN
0* (-10 to 10)
```

❹ Press the ▲/◀ button to darken/lighten the cyan color. Pressing the ▲/◀ button twice selects the next/previous level setting.

**(For example:)**

- If you wish to make the density setting darker by 4 levels:  
— Press the ▲ button 8 times.
- If you wish to make the density setting lighter by 2 levels:  
— Press the ◀ button 4 times.

❺ Press the ENTER button.

```
Color Calibration
MAGENTA
```

❻ Repeat instructions ❸ through ❺ for each color (MAGENTA, YELLOW, BLACK).

- To skip a color, press the ▲ button.
- To return to a previous color, press the ◀ button.
- Before going to step 5, make sure the following is displayed.

```
Color Calibration
Calibration Test Print
```

**5** Press the ENTER button to reprint the Color Calibration Page.

- The line enclosure reflects the changes made to the settings.
- If you are not satisfied with the current color density settings, repeat steps 4 and 5 above.

**Notes:**

- The color density setting affects the average life of toner.
- Save the Color Calibration Card for future calibrations.

# Basic Operations

---

## Before Operation

### Acceptable Documents

The documents that meet the following conditions can be scanned.

**For scanner glass:**

— Max. 216 mm x 356 mm (8.5" x 14")

**For ADF (Automatic Document Feeder):**

— Document width: 100 mm to 216 mm (3.94" to 8.5")

— Document length: 178 mm to 356 mm (7" to 14")

— ADF tray: up to 50 pages of document [75 g/m<sup>2</sup> (20 lbs.) fresh paper]

— Document weight: 52.5 g/m<sup>2</sup> to 127.5 g/m<sup>2</sup> (14 lbs. to 34 lbs.)

### Unacceptable Documents

Do not use the following types of documents.

**For scanner glass:**

— Document on which ink, paste or correction fluid has not completely dried

— Heavily curled or creased paper

**For ADF (Automatic Document Feeder):**

— Document on which ink, paste or correction fluid has not completely dried

Do not use the following types of documents to avoid a jam or prevent the documents from getting torn.

— Original or precious photographs

— Paper with curls, wrinkles, twists

— Documents bound with clips or staples

— Paper with carbon on the backside or rough paper

— Transparency or electrostatically charged paper

— Labels or paper with holes

— Extremely thin or thick paper

— Document with coated surfaces and poorly fixed

— Plastic or metal sheet

**Important:**

- *All literary, artistic and typographical works are copyrighted. While certain reproduction of copyrighted work may be permitted for "fair dealing" e.g., for research, private study or for the purpose of criticism or review, generally, reproduction of copyrighted works are not permitted without the permission of the copyright owner.*

# Basic Operations

## Placing Documents

Perform the following and go to [page 77](#) or [80](#) depending upon the operation.

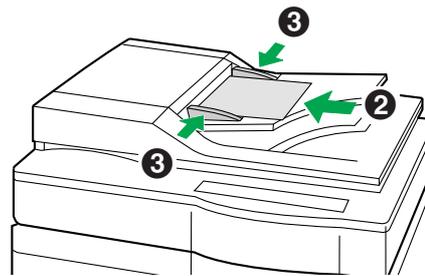
### ■Using the ADF

❶ Fan the stack of documents and tap it on a level surface to avoid document jams.

❷ Insert the documents fully in the ADF tray with the printed sides facing up and top of the documents first.

The height of document should not exceed the limit mark on the document guide, or it may cause a jam.

❸ Adjust the document guides to the width of the documents.

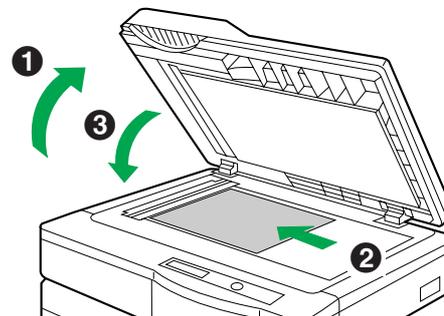


### ■Using the scanner glass

❶ Open the ADF.

❷ Place the document face down on the scanner glass referring to the document position marks.

❸ Close the ADF.



#### Notes:

- **When scanning a book type document of more than 2 cm (0.79") thickness, scan it with the ADF open.**
- **Scanning a document using the flatbed (scanner glass) produces better quality than scanning it using the ADF. For best scanning quality use flatbed scanning.**
- **If you scan poorly fixed originals such as catalogs using ADF, they may be partially stained. To prevent the originals from getting stained, use the flat bed scanning.**

## Duplicating Documents

Any acceptable documents (☞ P. 75) can be duplicated. Before you start operation, make sure the printer is ready. (The “READY” indicator is illuminated.)

There are two methods to duplicate a document:

- A. Using the Digital Duplicator Utility (☞ below)
- B. Using the Scanner Panel (☞ P. 79)

### Using the Digital Duplicator Utility

#### ■ For Windows 3.1 users:

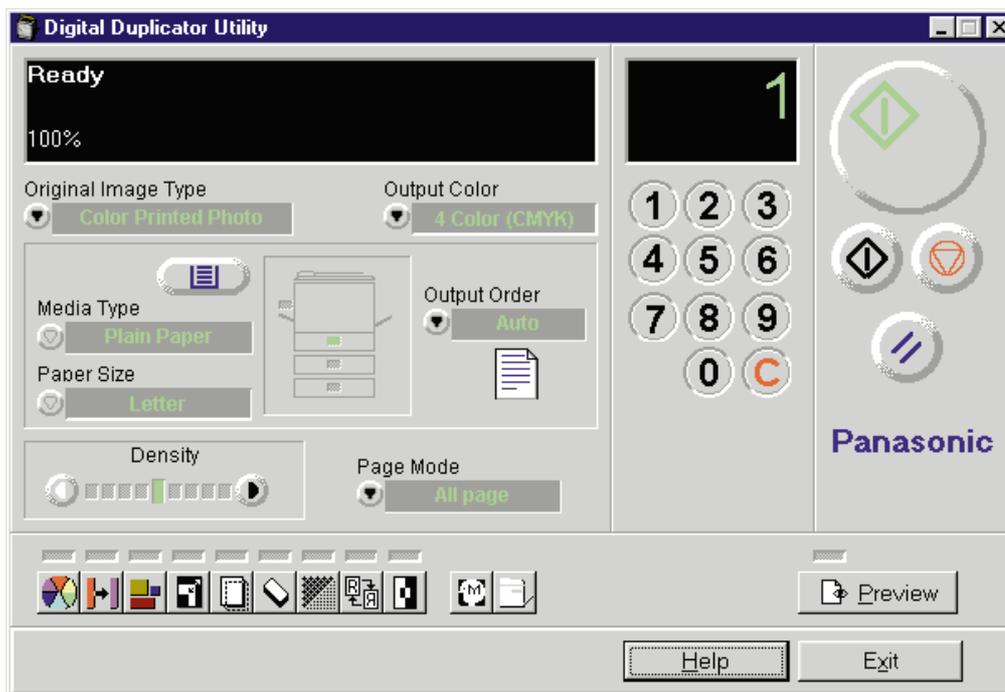
- 1 From the Program Manager, double click the **KX-PS8000 Utilities** icon and double click the **Digital Duplicator Utility** icon.

The Digital Duplicator Utility window is displayed.  
Go to step 2.

#### ■ For Windows 95 / Windows NT 4.0 users:

- 1 Click **Start**, move the pointer to **Programs**, then to **KX-PS8000 Utilities**. Next, click **Digital Duplicator Utility**.

The Digital Duplicator Utility window is displayed.



- 2 Place the document(s) in the ADF tray or on the scanner glass (☞ P. 76).

#### Note:

- Scanning a document using the flatbed (scanner glass) produces better quality than using the ADF. For best quality use flatbed scanning.

# Basic Operations

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- 3** If you wish to make more than one duplicate, set the number of duplicates using numbers 0-9.
- You can set the number of duplicates between 1 and 999.
  - Clicking  will reset the number of duplicates to 1.
- 4** If you wish to use the multi-purpose tray, perform the following and go to step 5.
- 1** Insert the paper in the multi-purpose tray.
    - For instructions on how to insert the media in the multi-purpose tray, refer to [page 38](#).
  - 2** Click  to select the multi-purpose tray.
    - The green indicator shows which tray has been selected.
  - 3** Select a Media Type and a Paper Size.
- 5** To produce a high quality duplicate(s) of the original document(s), perform the following by referring to the table below:

- 1** Select an image type that corresponds to your original document by clicking on ▼ at the left of Original Image Type box.

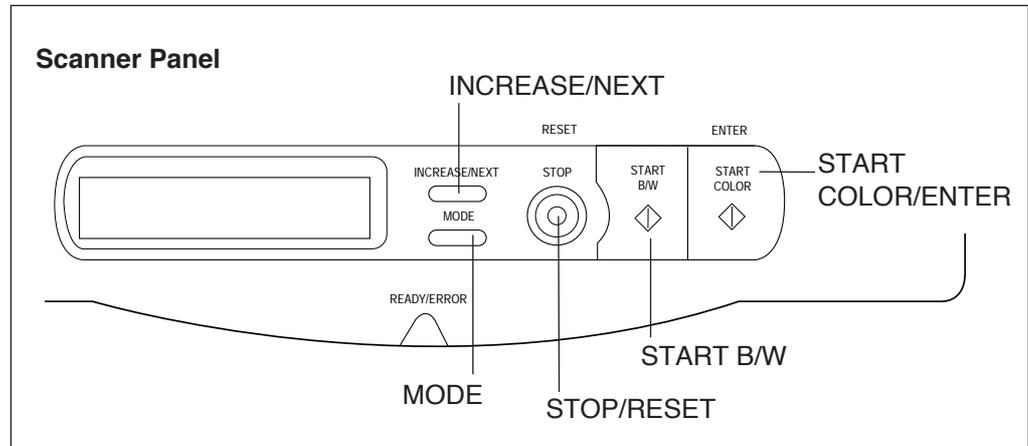
Image Type	Original Document
Color Printed Photo	Color printed material (Catalog, etc.)
Color Glossy Photo	Color photo
B/W Text	Text
B/W Halftone, Photo	Monochrome halftone or photo original

- 2** Click  .

**Notes:**

- When making a duplicate of a black and white document, click the **B/W Text Start** button to make a duplicate quickly.
- For additional information refer to the Utilities and Drivers Reference Guide.

## Using the Scanner Panel



- 1 Place the document in the ADF tray or on the scanner glass ( P. 76).
  
- 2 When using the multi-purpose tray, be sure to select **Multi-purpose Tray** in the **Paper Source** menu ( P. 84).
  - For instructions on how to set the scanner menu, refer to pages 84-87.
  - For instructions on how to insert the media in the multi-purpose tray, refer to page 38.
  
- 3 Press the button(s) that corresponds to your original document.

Button	Print Type	Original Document
START COLOR	4 Color (CMYK)	Color printed material (Catalog, etc.)
MODE + START COLOR	3 Color (CMY)	Color printed material (Catalog, etc.)
START B/W	B/W Text	Text
MODE + START B/W	B/W Halftone	Monochrome halftone or photo original

### Notes:

- When making a duplicate of a black and white document, press **START B/W** to make a duplicate quickly. If you press **START COLOR**, you will still get a black and white duplicate, but the process will take slightly longer.
- When the printer is in the Energy Star mode ["PRT is ready (sleep)" is displayed on the printer LCD.], press any button on the scanner panel to release the Energy Star mode. The **START COLOR/ENTER** button and **START B/W** button have no effect until the printer is ready. However, the menu settings can be changed.

# Basic Operations

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## Scanning Documents

Any acceptable documents (☞ P. 75) can be scanned.

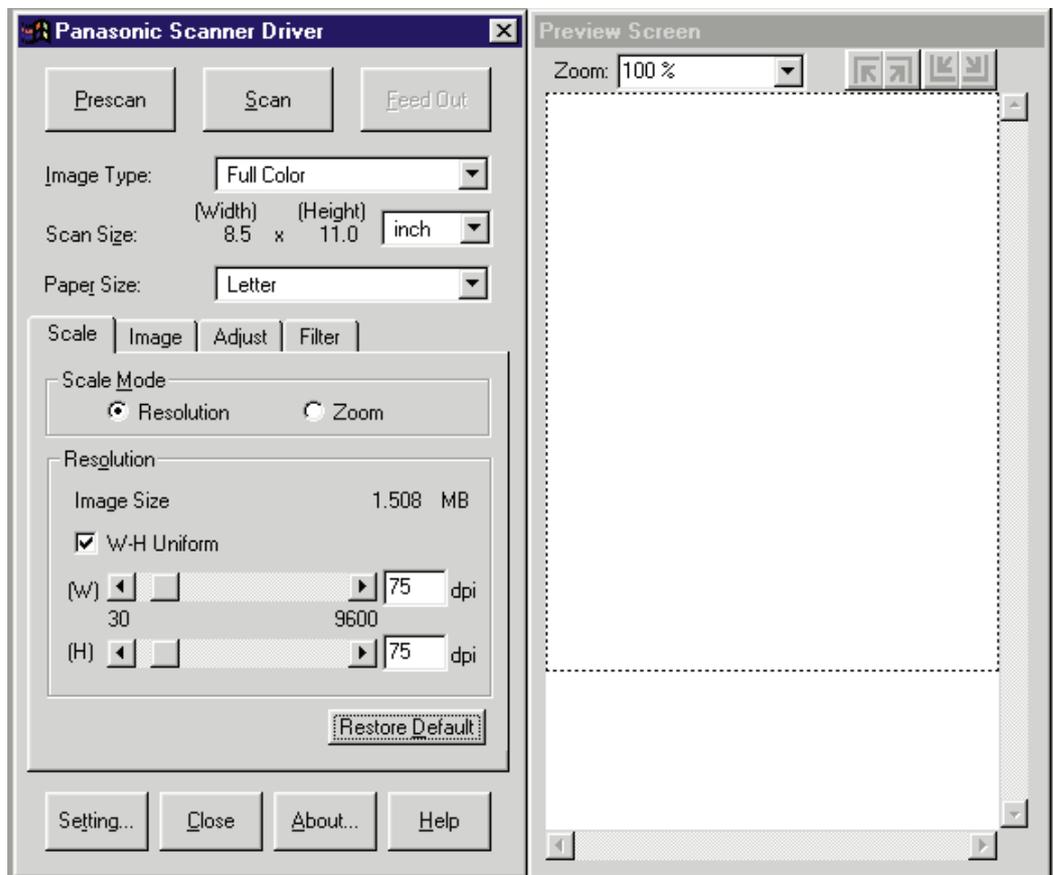
### ■For Windows 3.1 users:

- 1** Start Windows 3.1.
- 2** From the **Program Manager**, click the **Window** menu.  
Then click **Corel PHOTO-PAINT 5**.  
The Corel PHOTO-PAINT 5 window is displayed.
- 3** Double click the **Corel PHOTO-PAINT** icon.  
The Corel PHOTO-PAINT Plus window is displayed.
- 4** Click the **File** menu, then click **Acquire Image**.
- 5** Click  .  
The Select Source window is displayed.
- 6** Select Panasonic KX-PS8000 16-bit Driver, then click  .
- 7** Click the **File** menu, then click **Acquire Image**, and go to step 8.

### ■For Windows 95 / Windows NT 4.0 users:

- 1** Start Windows 95 / Windows NT 4.0.
- 2** Click  , move the pointer to **Programs**, then to **Corel PHOTO-PAINT 6**.
- 3** Click **Corel PHOTO-PAINT 6**.  
The Corel PHOTO-PAINT 6 window is displayed.
- 4** Click the **File** menu, and move the pointer to **Acquire Image**.

- 5 Click **Select Source...** .  
The Select Source window is displayed.
- 6 Select Panasonic KX-PS8000 32-bit Driver, then click **Select** .
- 7 Click the **File** menu, and move the pointer to **Acquire Image**.
- 8 Click **Acquire...** .  
The Panasonic Scanner Driver and the Preview Screen are displayed.



- 9 Place the document(s) in the ADF tray or on the scanner glass ( [P. 76](#)).
- 10 Click **Prescan** to display the document image in the Preview Screen and select a scanning area.
- 11 Click **Scan** .  
The scanner will start scanning the document(s).

**Note:**

- For additional information refer to the *Utilities and Drivers Reference Guide*.

# Basic Operations

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## Printing a Scanned Document

Make sure the document that you wish to print has been selected.

### ■For Windows 3.1 users:

- 1** Click the **File** menu, then click **Print** .  
The Print window is displayed.

- 2** Click **OK** .  
After several minutes, the document will be printed. Print time depends on the size of the document.

**Note:**

- For additional information refer to the *Utilities and Drivers Reference Guide*.

### ■For Windows 95 / Windows NT 4.0 users:

- 1** Click the **File** menu, then click **Print** .  
The Print window is displayed.

- 2** Click **OK** .  
After several minutes, the document will be printed. Print time depends on the size of the document.

**Note:**

- For additional information refer to the *Utilities and Drivers Reference Guide*.

## Saving a Scanned Document

Make sure the document that you wish to save has been selected.

### ■For Windows 3.1 users:

- 1** Click the **File** menu, then click **Save As** .  
The Save an Image to Disk window is displayed.
- 2** Enter the File Name.
- 3** Select the File Type.
- 4** Click **OK** .  
The document will be saved.

### ■For Windows 95 / Windows NT 4.0 users:

- 1** Click the **File** menu, then click **Save As** .  
The Save an Image to Disk window is displayed.
- 2** Enter the File Name.
- 3** Select the File Type.
- 4** Click **Save** .  
The document will be saved.

# Basic Operations

## Scanner Menu Mode

The scanner Menu mode includes a Main menu and a Selection menu that can be changed from the scanner panel.

In the duplicate ready status (when “Ready” is displayed in the upper line of the LCD), pressing the Mode button will allow you to enter the Menu mode.

Once in the Menu mode:

- Press the MODE button to display the next menu.
- Press the INCREASE/NEXT button to display the next selection.
- Press the START/ENTER button to activate the selection.

Note the factory defaults before changing any settings.

Main Menu (Upper line in LCD)	Selection Menu (Lower line in LCD)	Notes
Density	■ □ □ □ □	
	■ ■ □ □ □	
	■ ■ ■ □ □ *1	
	■ ■ ■ ■ □	
	■ ■ ■ ■ ■	
Paper Source	Media (Upper) Tray *1	“Upper”, “Middle Tray” and “Lower Tray” are displayed only when the option 2nd cassette feeder is attached.
	MP Tray	
	Middle Tray	
	Lower Tray	
MPT Paper Size	Letter *2	
	A4 *2	
	Legal	
MPT Paper Type	Plain Paper *1	
	Transparency	
	Label	
	Coated Paper	
	Paper 2nd Side	
Quality (Flatbed)	Standard 300 x 300	“Fine” 600 x 600 dpi (Scanning) 600 x 600 dpi (Printing) “Enhanced” 600 x 600 dpi (Scanning) 600 x 1200 dpi (Printing)
	Standard 600 x 300 *1	
	Fine *3	
	Enhanced *3	
Quality (ADF)	Standard 300 x 300 *1	
	Standard 600 x 300	
	Fine *3	
	Enhanced *3	

\*1 Factory default setting

\*2 Factory default setting is either Letter or A4.

\*3 Additional memory (SIMM options) is required to select these modes (☞ P. 148).

(continued)

Main Menu (Upper line in LCD)	Selection Menu (Lower line in LCD)	Notes
Output Order (ADF)	Face Up	
	Face Down *1	
JAM Recovery	On	
	Off *1	
Energy Star	On *1	
	Off	
Menu Default	Set *1	
	Reset	

\*1 Factory default setting

## Outline for Menus

### Density

Adjusts a print density from level 1 to 5. Level 1 produces the lightest printout (duplicate), and level 5 produces the darkest.

### Paper Source

Selects a media tray.

### MPT Paper Size

Selects the same media size that you have inserted in the multi-purpose tray. Only Letter, A4 and Legal media sizes can be used with the multi-purpose tray.

### MPT Paper Type

Selects the same media type that you have inserted in the multi-purpose tray.

### Quality (Flatbed)

Allows you to select a resolution at which you wish to make a duplicate of your original document placed on the flatbed (scanner glass).

### Quality (ADF)

Allows you to select a resolution at which you wish to make a duplicate(s) of your original document(s) inserted in the ADF tray.

### Output Order (ADF)

Allows you to select Face Up or Face Down printing.

**Face Up:** Makes a duplicate(s) of your original document(s) face up in the printer's output tray.

**Face Down:** Makes a duplicate(s) of your original document(s) face down in the printer's output tray.

The Output Order (ADF) is effective only when using ADF.

- When using flatbed (scanner glass), your duplicate will always be printed face up.
- When using the multi-purpose tray, your duplicate will always be printed face up.

# Basic Operations

---

## Jam Recovery

### After clearing a media jam in the printer:

If Jam Recovery is set to On, printing resumes from the same page at which the jam occurred by pressing the **START COLOR/ENTER** button. If it is set to Off, printing does not resume.

When Jam Recovery is set to On, the printing speed is slower.

For a jam in the ADF, the setting has no effect.

## Energy Star

To conserve energy and operating cost, this scanner is provided with a programmable power save feature. Scanner is factory set with the power save feature turned on.

If Energy Star is set to On, the scanner enters the Energy Star mode when it is idle for approximately 5 minutes. To reactivate the scanner, scan a document.

The Energy Star setting will remain effective even if the scanner is turned off.

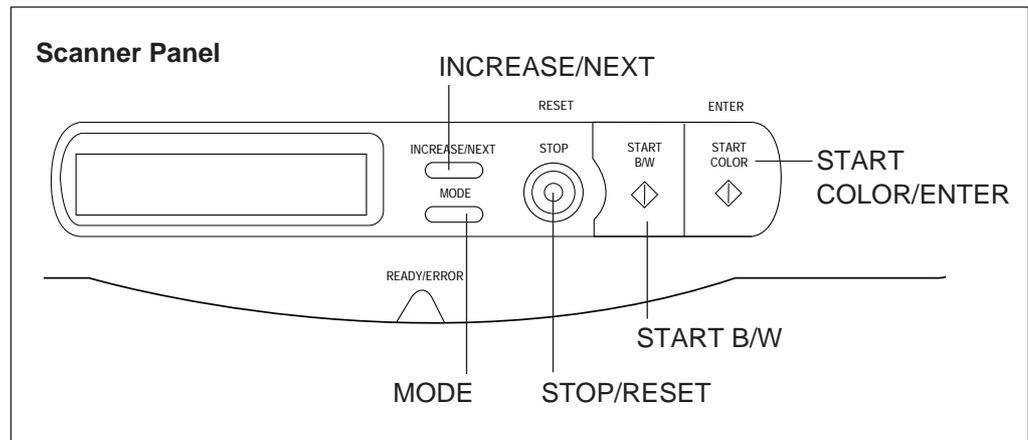
### Note:

- When the printer is in the Energy Star mode ["PRT is ready (sleep)" is displayed on the scanner LCD.] , press any button on the scanner panel to release the Energy Star mode. The **START COLOR/ENTER** button and **START B/W** button have no effect until the printer is ready. However, the menu settings can be changed.

## Menu Default

If the **START COLOR/ENTER** button is pressed when Set is selected for Menu Default, all current menu settings will remain effective even if the scanner is turned off. If Reset is selected, all menu settings except the Energy Star setting will return to the factory default settings.

## Outline for Operation



- 1** Press the **MODE** button to enter the Menu mode.  
The Menu Mode is displayed momentarily, then the Density menu is displayed.
- 2** Press the **MODE** button repeatedly until the desired menu is displayed.
- 3** Press the **INCREASE/NEXT** button repeatedly until the selection you wish to change is displayed.
- 4** Press the **START COLOR/ENTER** button to activate your selection.
  - A “✳” appears to the left of the selection.
  - If you wish to change the selections of other menus, repeat steps 2 to 4 above.
- 5** Press the **STOP/RESET** button to exit the Menu mode.

# Basic Operations

## Printer Menu Mode

The printer Menu mode includes a Main menu, Item menu, Selection 1 menu and Selection 2 menu which can be changed from the printer panel.

When Ready is displayed in the upper line of the LCD, pressing the MENU/EXIT button will allow you to enter the Menu mode.

Once in the Menu mode:

- Press the ▲/CONTINUE button to:
  - Display the next menu.
  - Display the next item.
  - Increase the numerical value of the selection by 1 or display the next selection.
- Press the ◀/CANCEL button to:
  - Display the previous menu.
  - Display the previous item.
  - Decrease the numerical value of the selection by 1 or display the next selection.
- Press the ENTER button to:
  - Enter a sub - menu.
  - Activate a selection.
  - Print a Configuration/Maintenance/Color Calibration Page.

Before you attempt to change any settings, check the factory default settings in the following table. For details on changing the settings, refer to Outline for Operation (P. 91).

Once you have changed the printer panel settings, they are automatically saved as user default settings even if the power is turned off.

Main Menu	Item Menu	Selection 1 Menu	Selection 2 Menu
Test Page	Configuration Page		
	Maintenance Page	CYAN	
		MAGENTA	
		YELLOW	
	BLACK		
Color Calibration	Calibration Offset	0* <sup>1</sup> (-5 to 5)	
	CYAN	0* <sup>1</sup> (-10 to 10)	
	MAGENTA	0* <sup>1</sup> (-10 to 10)	
	YELLOW	0* <sup>1</sup> (-10 to 10)	
	BLACK	0* <sup>1</sup> (-10 to 10)	
	Calibration Test Print		
	Reset Calibration	YES	
	NO		

\*<sup>1</sup> Factory default setting

(continued)

Main Menu	Item Menu	Selection 1 Menu	Selection 2 Menu
System Setting	Energy Star	ON* <sup>1</sup>	
		OFF	
	Auto Continue	ON	
		OFF* <sup>1</sup>	
	Data Timeout	ON	30* <sup>1</sup> (30 to 240s)
OFF* <sup>1</sup>			
Network * <sup>2</sup>	IP Address	xxx.xxx.xxx.xxx	
	Subnet Mask	xxx.xxx.xxx.xxx	
	Default Gateway	xxx.xxx.xxx.xxx	
Maintenance	Page Count	xxxxxx	
	Imaging Unit	Usage=xx%	
	Transfer Unit	Usage=xx%	
	Fuser Unit	Usage=xx%	
	Oil Roll	Usage=xx%	

\*<sup>1</sup> Factory default setting

\*<sup>2</sup> This menu appears when the optional network card is installed.

## Outline for Menus

### Test Page

Prints the Configuration Page and Maintenance Page.

#### ■ Configuration Page

Prints general information on printer settings and configuration.

#### ■ Maintenance Page

Prints each color (Cyan, Magenta, Yellow or Black) halftone to check for print quality.

### Color Calibration

Adjusts the toner density for each color independently or all colors.

#### ■ Calibration Offset

Adjusts the density for all colors (CYAN, MAGENTA, YELLOW and BLACK). Setting a higher number provides darker colors and setting a lower number provides lighter colors.

#### ■ CYAN / MAGENTA / YELLOW / BLACK

Adjusts the density for each color independently. Setting a higher number provides darker color and setting a lower number provides lighter color.

#### ■ Calibration Test Print

Prints a Color Calibration Page with the current density settings.

# Basic Operations

---

## ■Reset Calibration

Setting YES resets the current settings back to the default settings.

### Note:

- The color density setting affects the average life of toner.

## System Setting

Configures the printer.

### ■Energy Star

To conserve energy and operating cost, this printer is provided with a programmable power save feature. Printer is factory set with the power save feature turned on.

If Energy Star is enabled, the printer enters the Energy Star mode when the printer is idle for 30 minutes.

### ■Auto Continue

With the Auto Continue set to ON, the printer automatically recovers from the following error conditions if no recovery operation is done for 10 seconds.

- Memory Overflow
- SCSI communication error

### ■Data Timeout

With the Data Timeout set to ON, the printer automatically returns to Ready status if the printer does not receive any data from a computer within the time period set in this selection (30 to 240 seconds).

## Network

Sets the addresses used in TCP / IP Protocol. During setting, use the ◀/CANCEL button to move the cursor and the ▲/CONTINUE button to increase the numerical value.

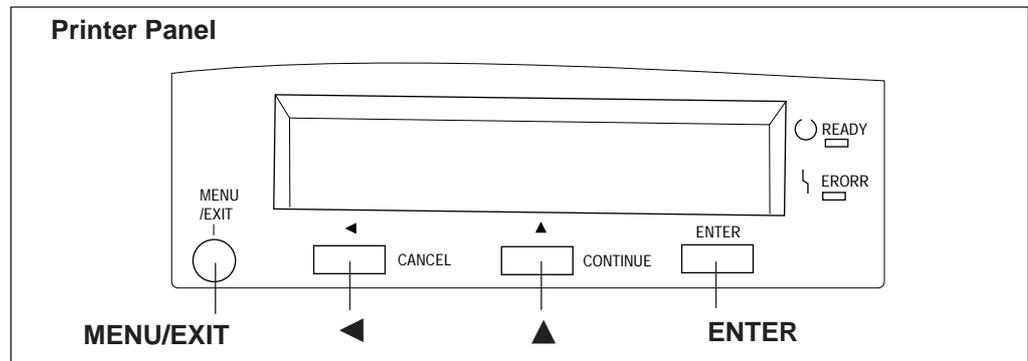
## Maintenance

Displays the page count of the printer and the consumption of supplies. It also gives you an idea when the following supplies need to be replaced. The following table shows the average life of each supply, which is based on a 5% image area and standard density. Refer to [pages 98](#) and [99](#) for details.

Supplies	Average life
Imaging Unit *	60,000 images
Transfer Unit	80,000 pages
Fuser Unit *	31,000 pages
Oil Supply Roll *	15,500 pages

\* When a supply is replaced with a new one, the printer will automatically reset the page counter for that supply to 0.

## Outline for Operation



- 1** Press the **MENU/EXIT** button to enter the Menu mode.
- 2** Press the **▲/◀** button until the desired menu is displayed.
- 3** Press the **ENTER** button to enter the item menu.
- 4** Press the **▲/◀** button until the desired item is displayed.
- 5** Press the **ENTER** button to enter the Selection 1 menu.
  - If you have selected Configuration Page or Calibration Test Print in step 4, the printer will exit the Menu mode after printing the page.
- 6** Press the **▲/◀** button to increase/decrease the numerical value or display the desired selection.
- 7** Press the **ENTER** button to activate your selection and advance to the next item in the same menu that you selected in step 2.
  - If you have selected Maintenance Page in step 4, the printer will exit the Menu mode after printing a maintenance page in the selected color.
  - If you have selected Data Timeout in step 4, you will enter the Selection 2 menu. Press the **▲/◀** button to increase/decrease the data time out, then press the Enter button to activate your selection and exit the Menu mode.

## ***Basic Operations***

---

**8** If you wish to set more items in the same menu, repeat steps 4 to 7 above.

- To exit the Menu mode at any stage, press the MENU/EXIT button.
- To change the setting of an item of a different menu, first exit the Menu mode, then repeat steps 1 to 8 above.

# Care and Maintenance

## Cleaning

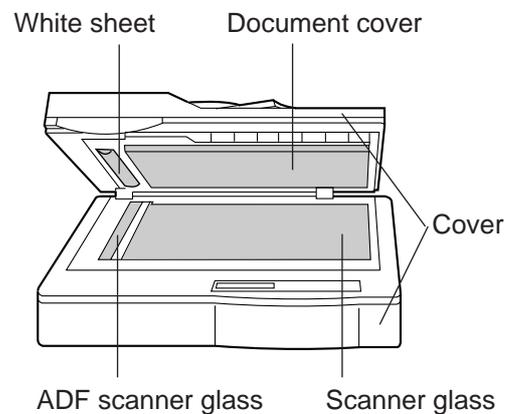
### Scanner

Periodic cleaning of the scanner is recommended. The frequency of cleaning is dependent upon the environment in which the scanner is used. You should clean the scanner:

- At least once a month.
- When the scanner experiences frequent document jams.
- When scan quality has deteriorated.

#### ■ External

- 1** Turn the power OFF.
- 2** Clean the cover, the scanner glass, the ADF scanner glass, the document cover and the white sheet with a soft cloth. Use any mild commercial cleaner.



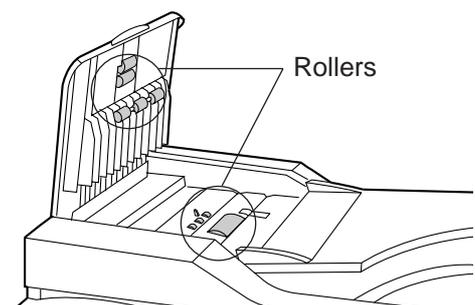
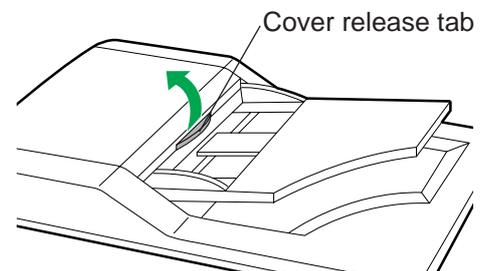
#### **Caution:**

- Do not use benzine, thinner, aerosol cleaners or any abrasive powder.

#### ■ Internal

When using isopropyl alcohol with a lint-free cloth, make sure that the alcohol is at least 90% pure, obtainable from your local pharmacy. (Do not use rubbing alcohol; it can damage the printer.)

- 1** Turn the power OFF.
- 2** Open the ADF top cover by lifting the cover release tab.
- 3** Clean the rollers with a dry lint-free cloth that has been moistened with isopropyle alcohol.



# Care and Maintenance

## Printer

Periodic cleaning of the printer is recommended. The frequency of cleaning is dependent upon the environment in which the printer is used. You should clean the printer:

- At least once a month.
- When the printer experiences frequent media jams.
- When print quality has deteriorated.

### ■ External

- 1** Turn the power OFF.
- 2** Clean all the covers with a soft cloth. Use any mild commercial cleaner.

#### **Caution:**

- Do not use benzine, thinner, aerosol cleaners, or any abrasive powder.

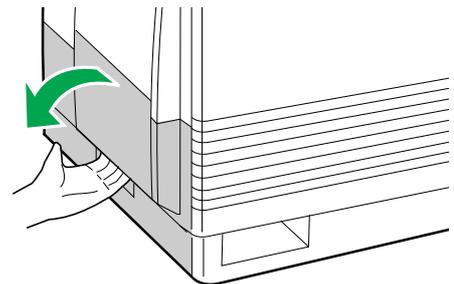
### ■ Internal

When using isopropyl alcohol with a lint-free cloth, make sure that the alcohol is at least 90% pure, obtainable from your local pharmacy. (Do not use rubbing alcohol; it can damage the printer.)

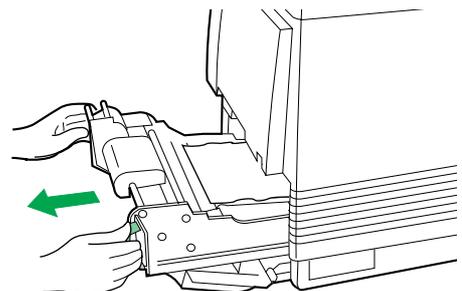
### Cleaning the paper-pick rollers

- 1** Slide the media tray out (you do not have to remove it) to allow access to the paper-pick rollers.

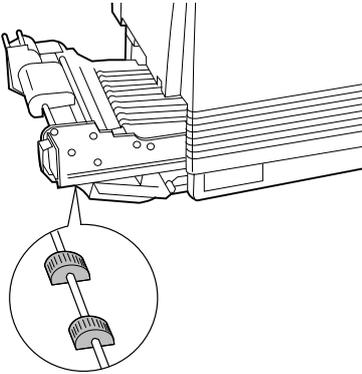
- 2** Open the left side door.



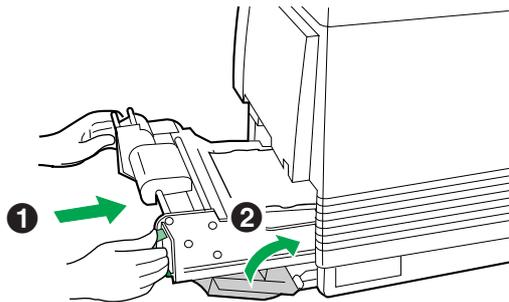
- 3** Use the green handles to pull out the paper feeder.



- 4 Gently rotate the paper-pick rollers 180° (the paper-pick rollers are D-shaped) and wipe them with a lint-free cloth that has been moistened with isopropyl alcohol.



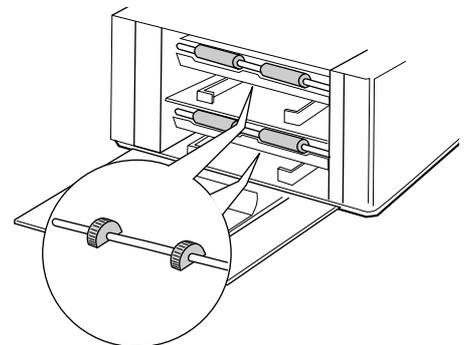
- 5 Reinsert the paper feeder (1) and close the left side door (2).



- 6 Slide the media tray back into place.

**Note:**

- If you have a 2nd Cassette Feeder, you may also need to clean the rollers for the middle and lower media trays, which are accessed through the **lower** left side door.



## Cleaning the home sensor

If your printer panel displays Printer Error 30, clean the home sensor inside the printer.

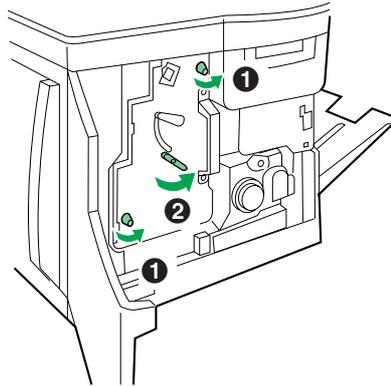
- 1 Open the printer's front door.

# Care and Maintenance

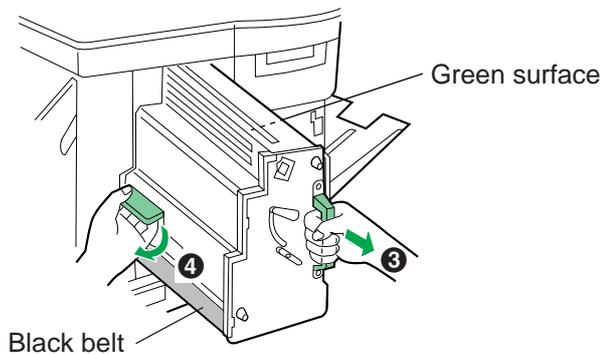
---

## 2 Remove the imaging unit:

- 1 Loosen the two thumbscrews by turning them counterclockwise.
- 2 Turn the lower green lever 180° counterclockwise.



- 3 Grasping the front green handle, slide the imaging unit out until it catches.
- 4 Lift up the left green handle. Pull the imaging unit out of the printer and cover it to protect it from light exposure.



### **Important:**

- Do not touch the green surface (the right side) or the black belt (the underside). Finger prints may affect the print quality.

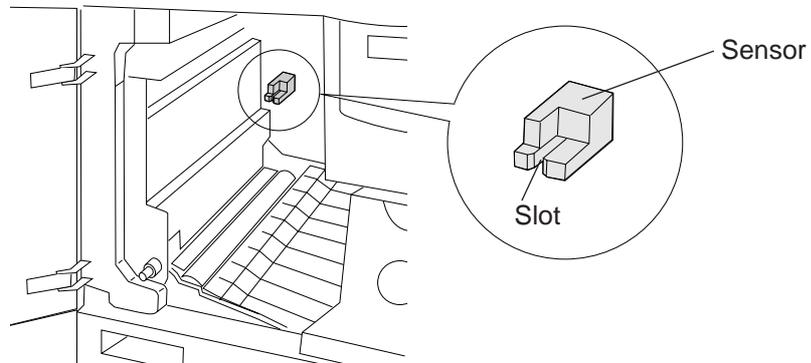
### **Safety Caution:**

- The imaging unit weighs approximately 6.5 kg (14.3 lbs.). Always use the handles when lifting it.

### **Cautions:**

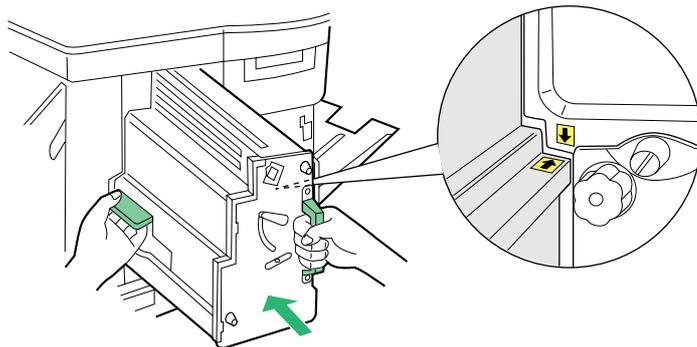
- Do not expose the imaging unit to artificial light for more than 45 seconds; or you may damage the unit. Never expose it to direct sunlight.
- Do not leave the printer's front door open for an extended period of time (for example, several hours).

- 3** Use a dry, lint-free cloth to wipe the slot of the sensor.

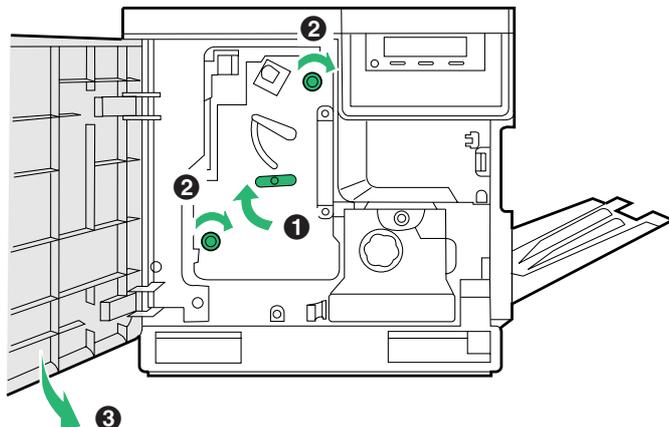


- 4** Reinsert the imaging unit into the printer, holding it by its green handles.

Match the arrow on the right side of the imaging unit with the arrow on the printer, and slightly push the imaging unit into the printer. Then release the left handle and push the unit in until it stops.



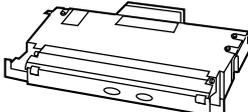
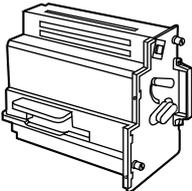
- 5**
- 1** Turn the lower green lever clockwise 180° to insert the unit completely and to lock it.
  - 2** Tighten the two green thumbscrews by turning them clockwise.
  - 3** Close the front door.



# Care and Maintenance

## User Replaceable Components

When the printer panel indicates that a supply needs to be replaced, make sure that you have replacement supplies on hand. The printer may continue to print until the supply is completely used up; then it stops until you replace the indicated supply.

Printer component	Printer panel message	Average life* <sup>1</sup>
Toner cartridges 	<div style="border: 1px solid black; padding: 5px; background-color: #e0f0e0;">Low &lt;Color&gt; Toner</div> Change the color toner cartridge soon.	10,000 pages (CMY)* <sup>2</sup>
	<div style="border: 1px solid black; padding: 5px; background-color: #e0f0e0;">&lt;Color&gt; Toner Empty</div> Change the color toner cartridge now.	12,000 pages (Black)* <sup>2</sup>
Color imaging unit 	<div style="border: 1px solid black; padding: 5px; background-color: #e0f0e0;">Imaging Unit wearing out</div> Change the Imaging unit soon.	Monochrome 57,000 pages or Color 14,250 pages
	<div style="border: 1px solid black; padding: 5px; background-color: #e0f0e0;">Imaging Unit Worn out</div> Change the Imaging unit now.	Monochrome 60,000 pages or Color 15,000 pages

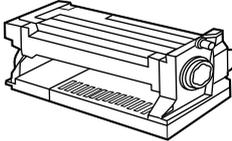
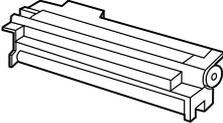
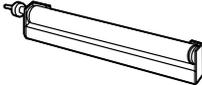
\*<sup>1</sup> These figures are based on an average of 5% coverage of the printable area and standard density for any one color. The frequency of replacement will vary, depending on the complexity of the prints and the percentage of coverage and print density.

\*<sup>2</sup> The starter cartridges that are shipped with the printer have an average life of approximately 3,000 pages, based on an average of 5% coverage.

**Note:**

*If you print with high density when "Low <Color> Toner" is displayed, you may get faded printout before "<Color> Toner Empty" is displayed.*

## Care and Maintenance

Printer component	Printer panel message	Average life
Fuser unit *1 (Oil supply roll installed)  	<div style="border: 1px solid black; padding: 2px; display: inline-block;">Fuser Unit wearing out</div> <div style="border: 1px solid black; padding: 2px; display: inline-block; vertical-align: middle;">Oil Roll wearing out</div> <div style="font-size: 2em; vertical-align: middle;">}</div> Display alternately	28,500 pages
	Change the Fuser unit soon.  <div style="border: 1px solid black; padding: 2px; display: inline-block;">Fuser Unit and Oil Roll Worn out</div>	
Oil supply roll  	<div style="border: 1px solid black; padding: 2px; display: inline-block;">Oil Roll wearing out</div>	15,000 pages
	Change the Oil supply roll soon.  <div style="border: 1px solid black; padding: 2px; display: inline-block;">Oil Roll Worn out</div>	15,500 pages
Transfer unit  	<div style="border: 1px solid black; padding: 2px; display: inline-block;">Transfer wearing out</div>	80,000 pages
	Change the Transfer unit soon.	

\*1 Transparencies, coated paper and other specialty media will result in shortening the life of a consumable. When replacing the fuser unit, replace the oil supply roll as well. **Do not insert the used oil supply roll into the new fuser unit.**

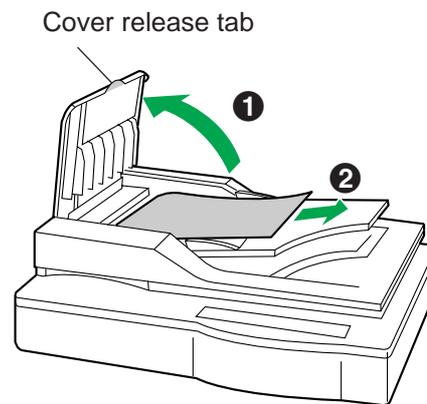
# Care and Maintenance

## Clearing a Jam

### Scanner

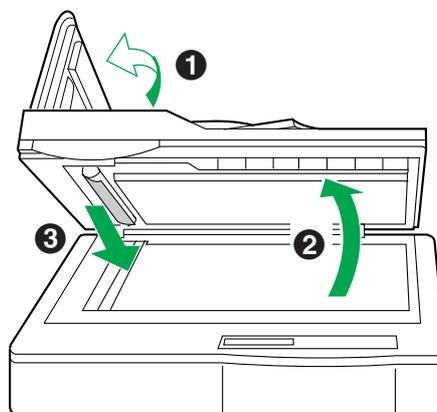
■ When a jam occurs at the document input area:

- 1 **1** Open the ADF top cover by lifting the cover release tab.
- 2** Remove the jammed document.



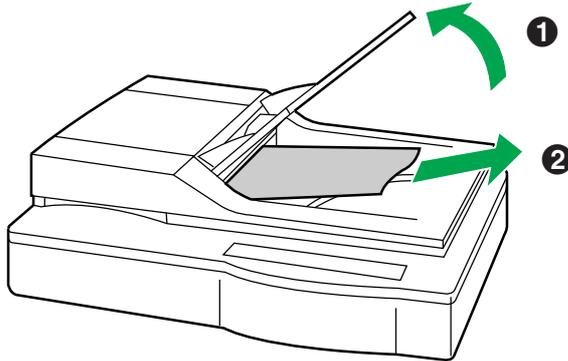
— OR —

- 1** Open the ADF top cover by lifting the cover release tab.
- 2** Open the ADF.
- 3** Remove the jammed document.



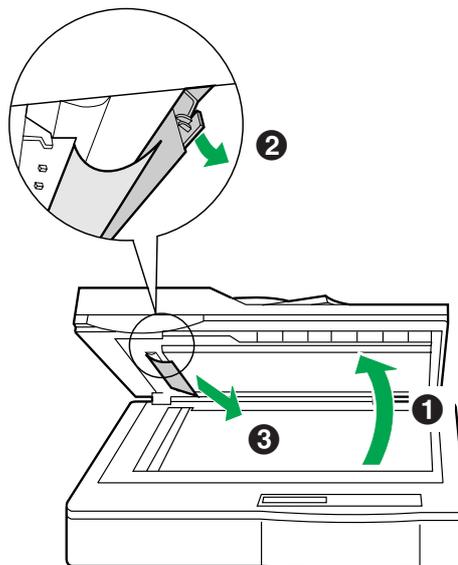
## ■ When a jam occurs at the document output area:

- 1** ① Open the ADF tray.
- ② Remove the jammed document while keeping the ADF tray raised.



— OR —

- ① Open the ADF.
- ② Open the exit guide.
- ③ Remove the jammed document.



## Printer

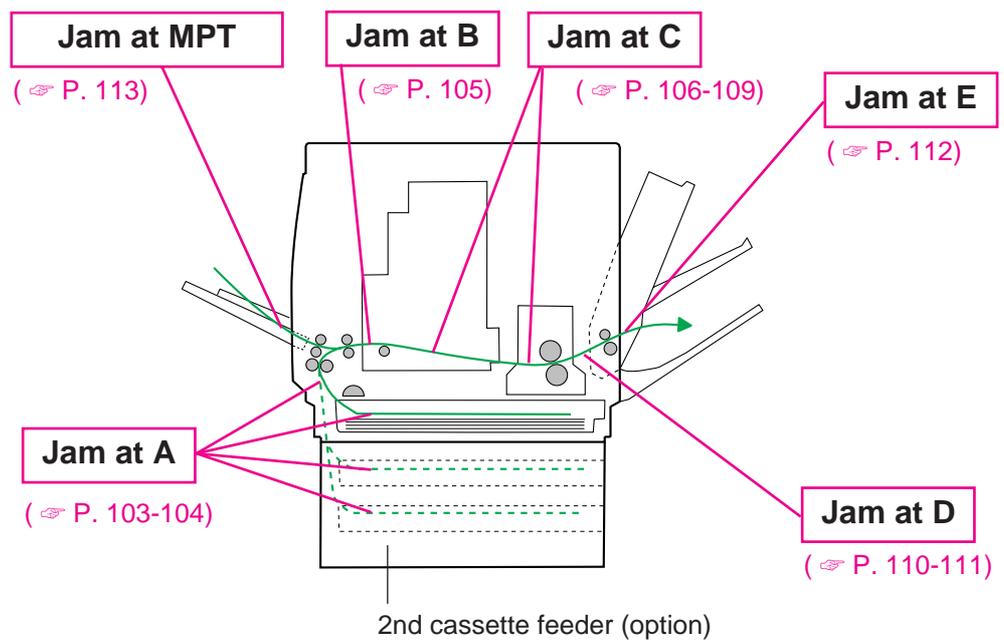
### ■Clearing a media jam

If the printer has frequent media jams, make sure that you follow these guidelines:

- Always use high-quality laser paper and transparencies. Refer to [pages 151 and 152](#).
- Make sure that you load specialty media only in the multi-purpose tray and that you set the media thickness switch to the correct setting for the media used.

If a media jam occurs, the printer panel reports Jam at <Location>. The <Locations> are the various sensors throughout the paper path, listed as A through E.

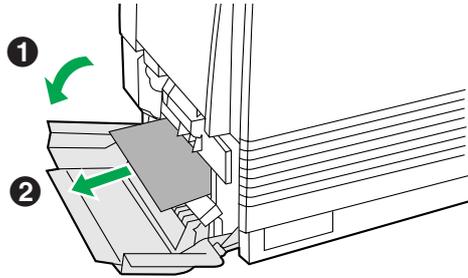
The following illustration shows the locations of the sensors that report media jams (A through E).



## ■ Jam at A

**1A** ① Open the left side door corresponding to the selected media tray.

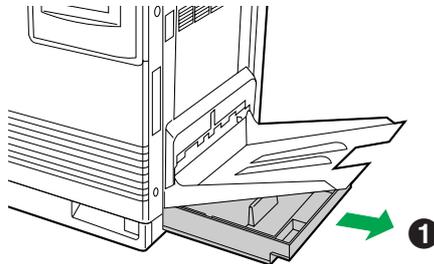
② Remove the jammed media.



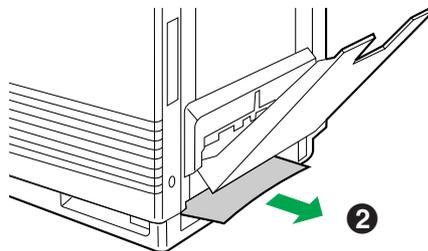
③ Close the left side door.

— OR —

① Remove the media tray.



② Remove the jammed media from inside the printer.



③ Reinsert the media tray.

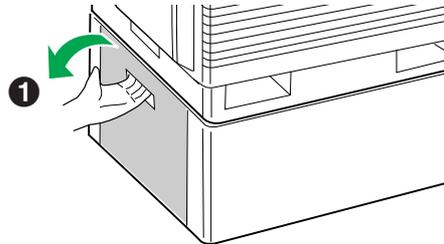
④ Open and close the front door to clear the error message from the LCD.

# Care and Maintenance

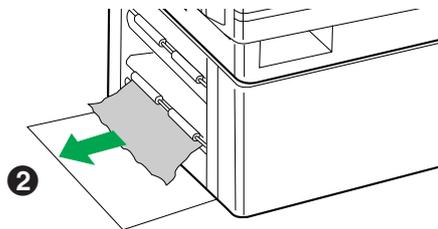
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## (2nd cassette feeder)

**1B** ① Open the lower left side door.



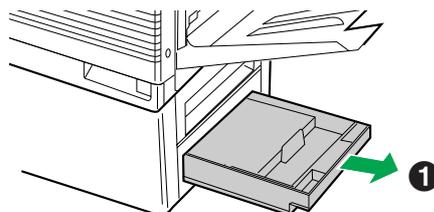
② Remove the jammed media.



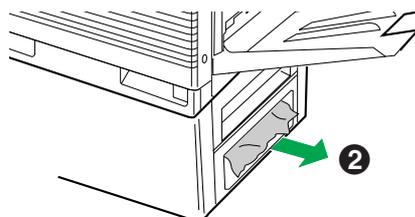
③ Close the lower left side door.

— OR —

① Remove the selected media tray (middle or lower media tray).



② Remove the jammed media from inside the printer.

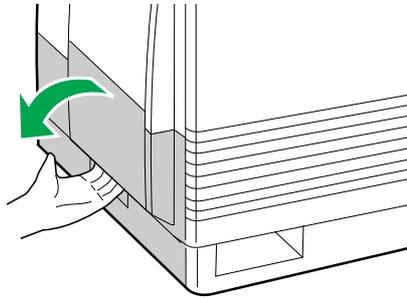


③ Reinsert the media tray.

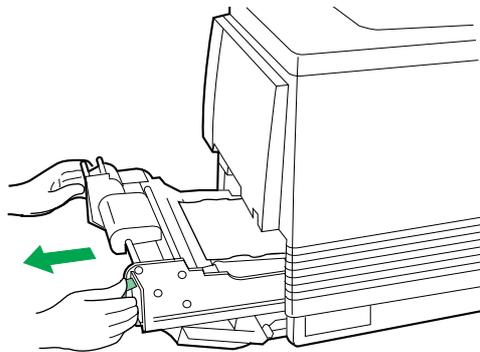
④ Open and close the front door to clear the error message from the LCD.

## ■ Jam at B

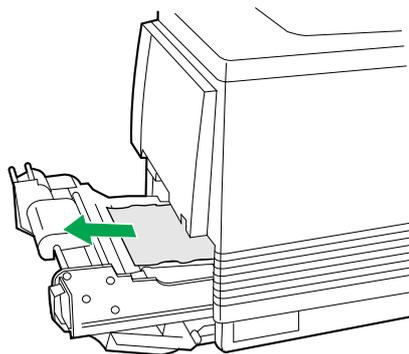
- 1 Open the left side door.



- 2 Use the green handles to pull out the paper feeder.



- 3 Remove the jammed media on the paper feeder.



- 4 Reinsert the paper feeder and close the left side door.

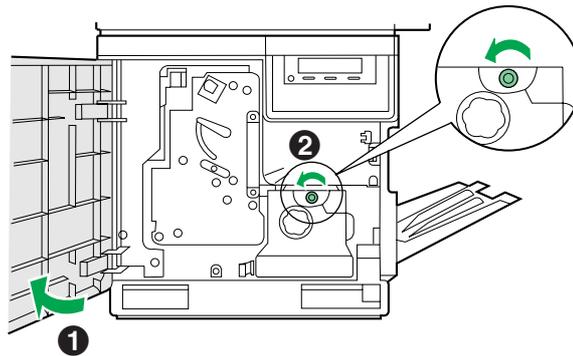
# Care and Maintenance

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## ■ Jam at C

### 1 Remove the fuser:

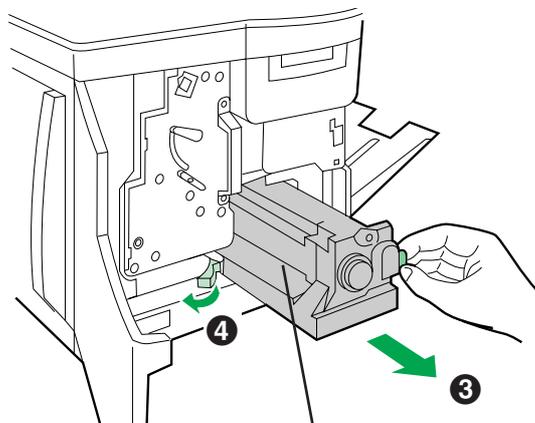
- 1 Open the printer front door.
- 2 Turn the small green thumbscrew counterclockwise to unlock the fuser.



#### **Safety Caution:**

- *The fuser is hot; to avoid personal injury, turn off the printer and wait 10 minutes (after opening the front door) for the fuser to cool before touching it.*

- 3 Holding the green tab on the right, slide the fuser out until the safety catch stops it.
- 4 Press the green lever on the left to release the safety catch.



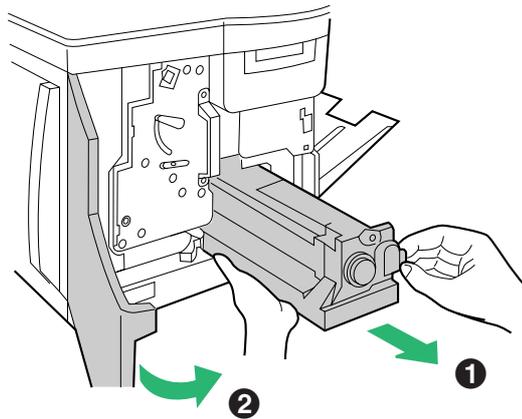
**CAUTION:**  
HOT SURFACE INSIDE

- 2** **1** Hold the fuser as shown below, and slide it out of the printer.

**Safety Caution:**

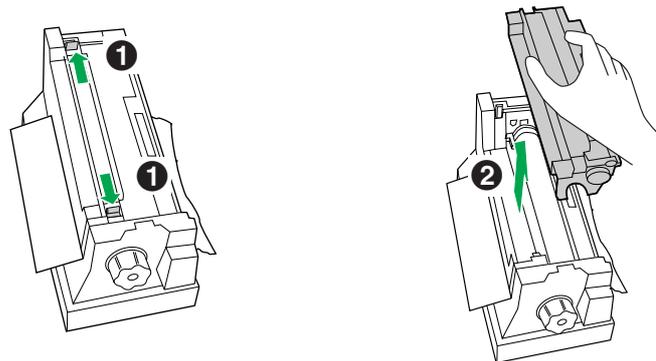
- The fuser unit weighs approximately 3.1 kg {6.8 lbs.}. Take care when handling it.

- 2** Close the front door.



- 3** Remove the oil supply roll:

- 1** Press out on tabs to unlock the oil supply roll.  
**2** Remove the oil supply roll out of the fuser.



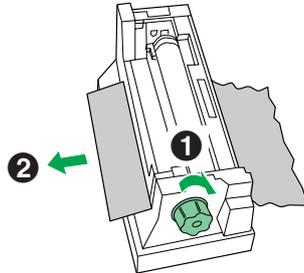
**Note:**

- If the paper is not jammed in the fuser unit, perform the following.
  - 1** Repeat steps 1 to 4 of Jam B on [page 105](#).
  - 2** Skip step 4 and go to step 5.

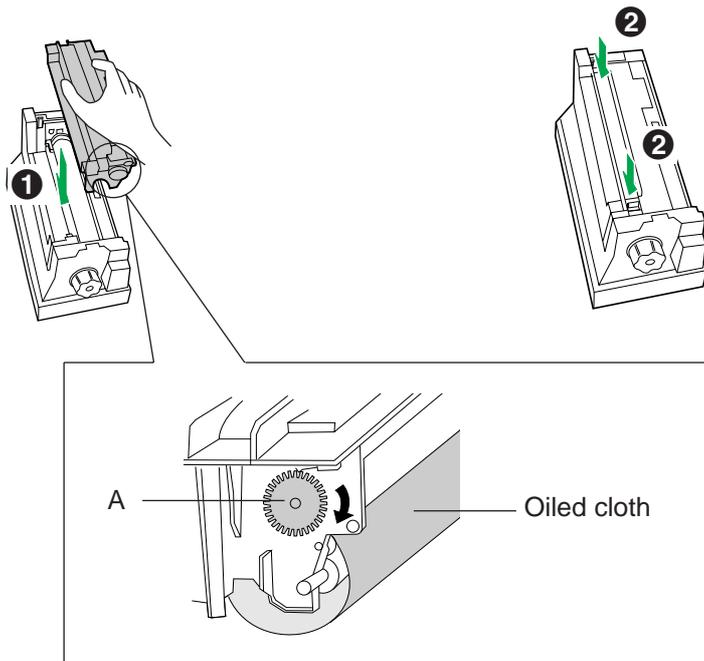
# Care and Maintenance

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- 4** ① Turn the fuser's large green knob clockwise.  
② Remove the jammed media.



- 5** ① Replace the oil supply roll into the fuser.  
② Press down firmly on the oil supply roll to snap both sides into place.



**Note:**

- If the oiled cloth is loose, rotate the gear (A) clockwise until it is tight. Do not touch the oiled cloth.

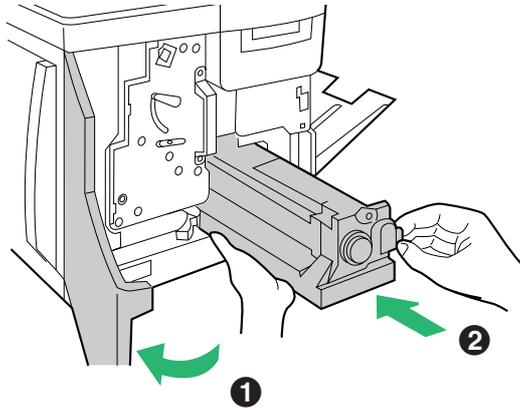
**Caution:**

- If the oil supply roll is not installed correctly, print quality will be diminished.

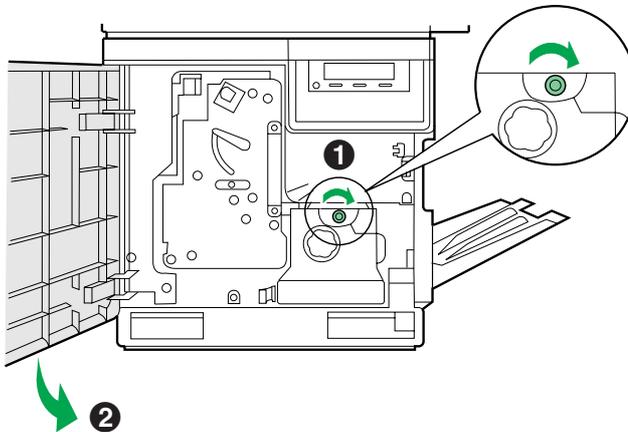
## Care and Maintenance

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- 6** ① Open the front door.  
② Slide the fuser back into the printer.



- 7** ① Turn the small green thumbscrew clockwise to lock the fuser.  
② Close the front door.



# Care and Maintenance

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## ■ Jam at D

### **Safety Caution:**

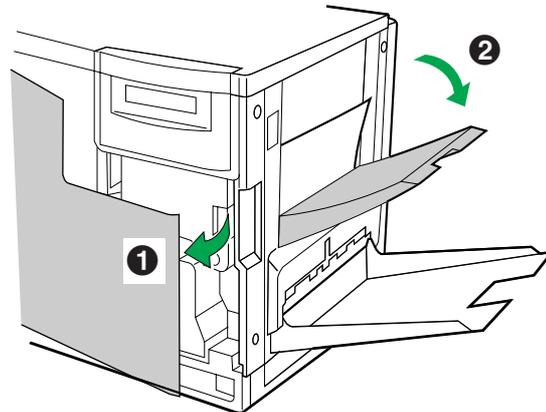
- The fuser is hot. To avoid personal injury, turn off the printer and wait 10 minutes (after opening the front door) for the fuser to cool before touching it.

### **Note:**

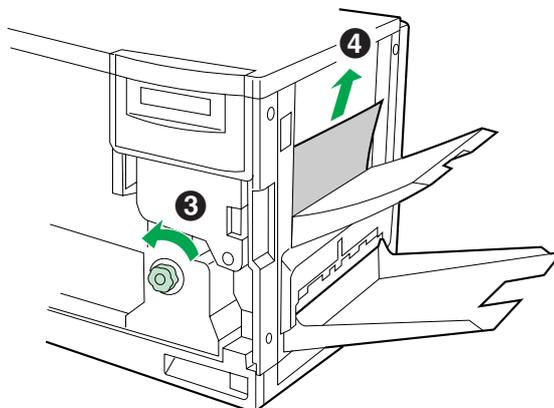
- First check the exit opening for media that has jammed and folded like an accordion. It is especially difficult to see if the media is transparency film.

### **1A** (Printing face down)

- ➊ Open the front door.
- ➋ Pull open the access door (above the plastic output tray); see if the media is visible.



- ➌ Turn the large green knob on the fuser counterclockwise.
- ➍ Remove the media from inside the access door.



**Caution:**

- If the fuser knob will not turn, do not force it, or you may damage the fuser. Instead, follow these steps:
  - a) Unlock the fuser by turning the small green thumbscrew counterclockwise.
  - b) Pull the fuser out. The media will probably tear.
  - c) Remove the oil supply roll.
  - d) Turn the fuser's large green knob to release the jammed media.
  - e) Remove the jammed media from the fuser and the printer.

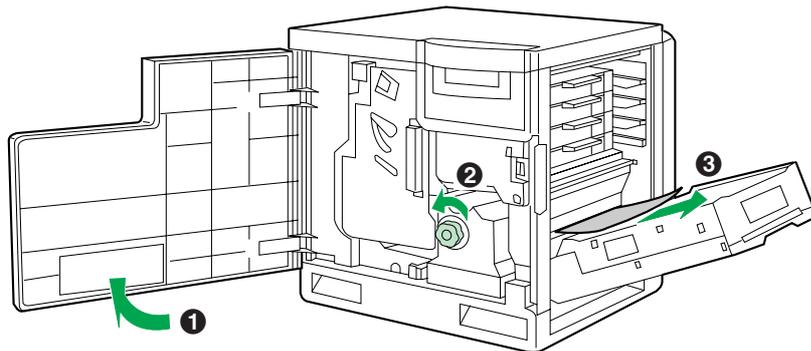
**Safety Caution:**

- The fuser is hot; to avoid personal injury, turn off the printer and wait 10 minutes for the fuser to cool before touching it.

- 5 Close the front door.

**1B** (Printing face up)

- 1 Open the front door and the right side door.
- 2 Turn the fuser's large green knob counterclockwise to release the jammed media.
- 3 Remove the jammed media from the right side of the printer.



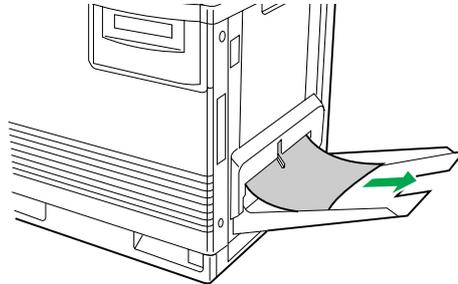
- 4 Close the front door.
- 5 If the right side door is open, close it.

# Care and Maintenance

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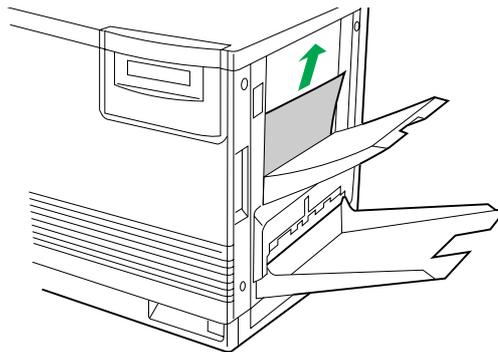
## ■ Jam at E

- 1** Remove the jammed media from the output tray.



— OR —

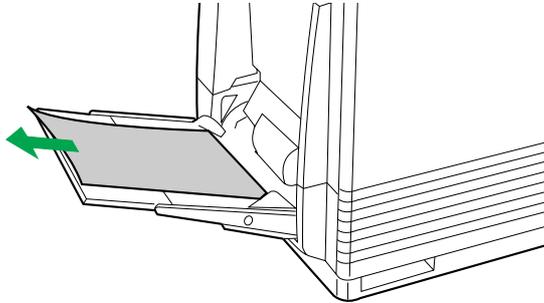
Pull open the access door (above the plastic output tray) and remove the media.



- 2** Open and close the front door to clear the error message from the LCD.

### ■ Jam at MPT (Multi-purpose tray)

- 1** Remove the jammed media from the multi-purpose tray.

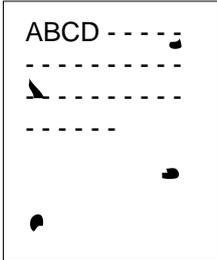


- 2** Open and close the front door to clear the error message from the LCD.

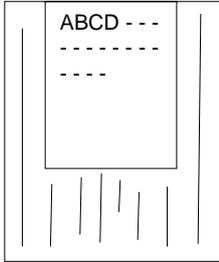
# Care and Maintenance

## Troubleshooting

### Scanner

Trouble	Possible Cause	Corrective Action
Scanner does not turn on.	AC cord is not connected.	Connect the AC cord.
Scanner Error 49 is displayed on LCD when powered on.	Scanner is locked.	Unlock the scanner (☞ P. 30).
Scanning operation cannot be performed.	SCSI cable is not properly connected.	Connect the SCSI cable (☞ P. 44-50).
	SCSI ID No. is not set correctly.	Set the SCSI ID No. correctly (☞ P. 52).
	SCSI-2 board is not compatible.	Use a recommended SCSI-2 board (☞ P. 16).
	Software may not be installed.	Install the software (☞ P. 55).
Scanned image is dirty. 	Original document is dirty.	Clean the document.
	Scanner glass is dirty.	Clean the scanner glass.
One or both ends of image is/are not scanned.	Document is not positioned correctly.	Reposition the document correctly according to the size.
Scanned image is blurred or partially colored.	Document is not evenly set on the scanner glass.	Set the document evenly.
Scan quality is bad.	You may not be using the software utility correctly.	Consult the Utilities and Drivers Reference manual.
	Condensation has occurred.	Leave the unit for 4 or 5 hours.
ADF doesn't feed document.	Document thickness is out of specifications.	Scan the document by placing it on the scanner glass.
	Too many documents are inserted in the ADF tray.	The height of document should not exceed the limit mark on the document guide.

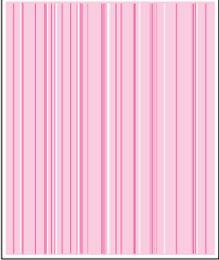
# Care and Maintenance

Trouble	Possible Cause	Corrective Action
<p>Scanned image has vertical lines when a document is scanned using the ADF.</p> 	ADF scanner glass or white sheet is dirty.	Clean the ADF scanner glass and white sheet (👉 P. 93).
Scanned image is skewed when a document is scanned using the ADF.	Document guides are not adjusted correctly.	Adjust the guides according to the width of the document.
Scanned image is blank when a document is scanned using the ADF.	Document is inserted face down.	Insert the document face up.
Service Error is displayed on LCD.	An internal error has occurred.	Turn the scanner off and on 2-3 times. If the error persists, call for service.

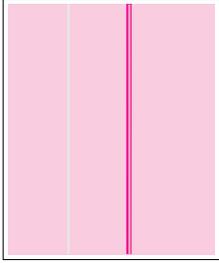
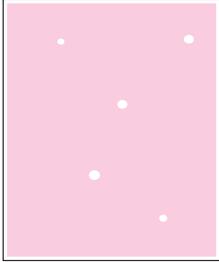
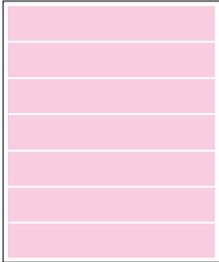
## Printer

Trouble	Possible Cause	Corrective Action
READY indicator is blinking.	The printer is receiving, processing or printing job.	Wait for the job to be completed or cancel the job.
	You have entered the Menu mode in the printer panel.	Exit the Menu mode by pressing the MENU/EXIT button.
READY indicator is off.	The printer is not ready, is disabled, or has detected an error.	Read the printer panel message to determine the printer status.
ERROR indicator is on.	Error occurred that is not user-correctable.	Turn the printer off and back on again. If the indicator is still on, the printer requires service.
ERROR indicator is blinking.	The printer has stopped because it detected a user-correctable error such as an open door or a media jam.	Correct the condition displayed on the printer panel (e.g., close the door or clear the media jam).

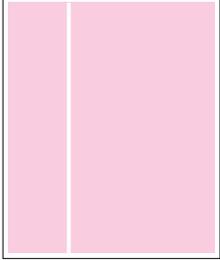
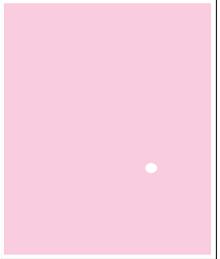
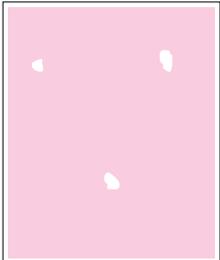
# Care and Maintenance

Trouble	Possible Cause	Corrective Action
<p>On the Maintenance Page, a single color is not uniform or many vertical streaks (both light and dark) of slightly different density and non-uniform color.</p> 	<p>The toner is almost depleted.</p>	<p>Replace the color toner cartridge.</p>
<p>On the Maintenance Page, half tone area has areas of weak color.</p> 	<p>Paper doesn't match the environmental conditions, or it has too much moisture.</p>	<p>Try fresh paper, or another type of paper.</p>
<p>A single color appears faded.</p>	<p>The color density is set incorrectly in the printer panel.</p>	<p>Check the density setting by printing the Color Calibration Page in the Color Calibration menu from the printer panel. Compare the settings with the color density samples on the Color Calibration Card and, if necessary, adjust the density from the printer panel. Refer to Setting the Color Density on <a href="#">page 70</a>.</p>
	<p>The toner is almost depleted.</p>	<p>Replace the color toner cartridge soon (depending on the complexity of your prints, you can continue to print up to 100 more pages).</p>

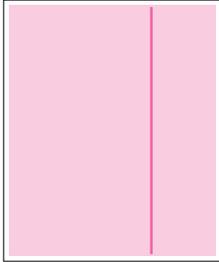
## Care and Maintenance

Trouble	Possible Cause	Corrective Action
<p>On the Maintenance Page, a single color has a sharp, dark or light vertical streak.</p> 	<p>The toner cartridge is almost depleted and is not properly applying toner.</p>	<p>Replace the color toner cartridge.</p>
<p>Small white spots appear on OHP transparency.</p> 	<p>OHP transparency has dust on its surface.</p>	<p>Remove dust or stain from OHP transparency.</p>
<p>On the Maintenance Page, a single color shows a light, repeating horizontal line.</p> 	<p>The roller in the toner cartridge has a slight impression after a long period of storage.</p>	<p>Run 20-30 prints. The impression will disappear with continued use.</p>
<p>Prints are missing fine-line detail.</p>	<p>The imaging unit has reached the end of its useful life.</p>	<p>Replace the imaging unit.</p>
<p>Dark color spots and dark or light streaks appear in all colors.</p>	<p>The imaging unit has reached the end of its useful life.</p>	<p>Replace the imaging unit.</p>

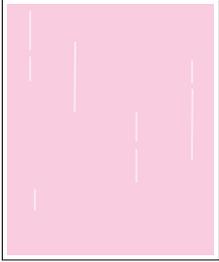
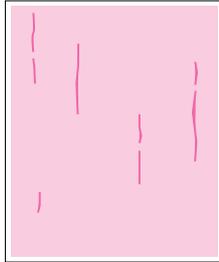
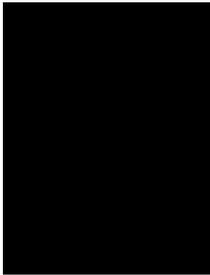
# Care and Maintenance

Trouble	Possible Cause	Corrective Action
<p>On the Maintenance Page, straight, thin light vertical line in colors.</p> 	<p>The photosensitive belt inside the imaging unit is scratched.</p>	<p>Replace the imaging unit.</p>
<p>On the Maintenance Page, each color “bleeds” into the color band.</p> 	<p>The imaging unit’s internal waste toner box is full.</p>	<p>Replace the imaging unit.</p>
<p>On the Maintenance Page, a single white spot appears in approximately the same vertical place on the page.</p> 	<p>The imaging unit is damaged.</p>	<p>Replace the imaging unit.</p>
<p>On the Maintenance Page, large light spot(s) appear randomly.</p> 	<p>Fingerprint(s) on the underside belt or photosensitive belt (inside) of the imaging unit.</p>	<p>Print several pages until the spots fade.</p>

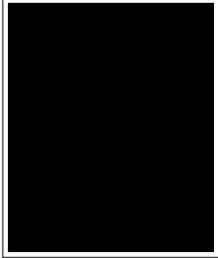
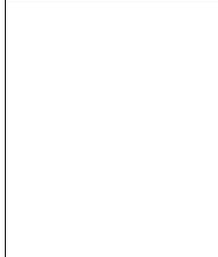
## Care and Maintenance

Trouble	Possible Cause	Corrective Action
<p>On the Maintenance Page, one or more dark vertical lines appear on the print in all colors.</p> 	<p>The imaging unit is scratched.</p>	<p>Replace the imaging unit; make sure that the old imaging unit is not exposed to light for more than 45 seconds. If a new imaging unit does not correct the problem:</p> <ul style="list-style-type: none"> <li>● Put the old imaging unit back into the printer.</li> <li>● Repack the new imaging unit.</li> </ul>
	<p>The fuser is damaged.</p>	<p>Replace the fuser.</p>
<p>A piece of the printed image is missing and reappears out of place, approximately 129 mm (5") down the page.</p>	<p>The fuser's internal roller is not being consistently oiled. or The fuser's internal roller is contaminated with toner particles.</p>	<p>Print 5-10 pages of blank pages to clean the roller. If you still see the problem:</p> <ul style="list-style-type: none"> <li>● Replace the oil supply roll.</li> </ul> <p>If you still see the problem:</p> <ul style="list-style-type: none"> <li>● Replace the fuser.</li> </ul>
<p>The surface of the printed image appears to have vertical scratches (visible by holding the print at an angle and observing the "shine" of the image). At first, the scratches appear only on the printed image; eventually, dark vertical scratches appear on the unprinted portion of the page.</p>	<p>The fuser is near the end of its useful life.</p>	<p>Replace the fuser (depending on your quality needs, you can continue to print until the dark vertical lines appear).</p>
<p>Media frequently wraps around the fuser.</p>	<p>The oil supply roll has reached the end of its useful life.</p>	<p>Replace the oil supply roll.</p>

# Care and Maintenance

Trouble	Possible Cause	Corrective Action
<p>Light vertical streaks appear in all colors.</p> 	<p>The main charge grid is dirty.</p>	<p>Replace the imaging unit.</p>
<p>Dark and wavy vertical streaks appear in all colors.</p> 	<p>The main charge grid is dirty.</p>	<p>Replace the imaging unit.</p>
<p>The entire page prints in black, including the borders.</p> 	<p>Bad electrical contact for the main charge grid.</p> <p>The main charge grid is broken.</p>	<p>Reinsert the imaging unit to correct the contact for the main charge grid.</p> <p>Replace the imaging unit.</p>
<p>Toner spots appear on the back of the media.</p>	<p>The transfer unit is worn out.</p>	<p>Replace the transfer unit.</p>

## Care and Maintenance

Trouble	Possible Cause	Corrective Action
<p>The page prints in black in the image area only. (The borders are clear.)</p> 	<p>Either the image processor board or engine control board is not functioning properly.</p>	<p>Turn the printer off and back on again. If the problem persists, call for service on your printer.</p>
<p>The page is completely blank.</p> 	<p>The problem could be with one of the following:</p> <ul style="list-style-type: none"><li>• Engine control board.</li><li>• Developer voltage.</li><li>• Laser scanning unit mirror.</li></ul>	<p>Turn the printer off and back on again. If the problem persists, call for service on your printer.</p>
<p>Service Error is displayed on the LCD.</p>	<p>An error occurred that is not user-correctable.</p>	<p>Turn the printer off and back on again. If the error persists, call for service.</p>

## Care and Maintenance

### ■If you can't make a print

Trouble	Corrective Action
Printer not operating.	Make sure that you plugged in the printer and turned it on.
	Make sure that you connected the interface cable(s) properly.
More info to come for these messages.	If the communication link between your computer and the printer is working but the printer ejects a blank page when printing from your application or through Windows, make sure that the appropriate driver is installed and that you have selected the printer correctly.

Trouble	Possible Cause	Corrective Action
The printer does not print correctly.	The computer is not properly communicating with the printer.	<p>Follow the procedure below and disable the bi-directional interface. (The <b>Status Display</b> function becomes ineffective.)</p> <p><b>Windows 95:</b></p> <ol style="list-style-type: none"> <li>1. Click <b>Start</b>, select <b>Settings</b>, then click <b>Printers</b>.</li> <li>2. Click the <b>Panasonic KX-PS8000</b> icon.</li> <li>3. Click the <b>File</b> menu, then click <b>Properties</b>.</li> <li>4. Click the <b>Details</b> tab and <b>Spool settings...</b></li> <li>5. Click <b>Disable bi-directional support for this printer</b>, then click <b>OK</b>.</li> </ol> <p><b>Windows 3.1:</b></p> <ol style="list-style-type: none"> <li>1. Double-click <b>Status monitor setup</b> icon in the <b>KX-PS8000 Utilities</b> program group.</li> <li>2. Click the <b>Device</b> tab.</li> <li>3. Click off the <b>Monitor Printer</b> check box.</li> <li>4. Click <b>OK</b>.</li> </ol> <p><b>Windows NT 4.0:</b></p> <ol style="list-style-type: none"> <li>1. Click <b>Start</b>, select <b>Settings</b>, then click <b>Printers</b>.</li> <li>2. Click the <b>Panasonic KX-PS8000</b> icon.</li> <li>3. Click the <b>File</b> menu, then click <b>Properties</b>.</li> <li>4. Click the <b>Ports</b> tab.</li> <li>5. Click off the <b>Enable bidirectional support</b> check box.</li> <li>6. Click <b>OK</b>.</li> </ol>

## ■Media problems

Trouble	Corrective Action
Frequent paper-picking errors.	Fan the paper or transparencies before installing them in their respective trays; this is especially important for transparencies because they tend to stick together.
	Make sure that you have loaded paper in the paper tray and transparencies in the transparency tray.
	Make sure that the media is installed under the hooks at the front of the media tray.
	If printing on transparencies and your printer has a 2nd Cassette Feeder, make sure that the transparency tray is installed in the upper or middle tray slot.
	Clean the paper-pick rollers ( <a href="#">P. 94 for instructions</a> ).
Frequent media jams.	Make sure that you use a high-quality laser paper: 60-105 g/m <sup>2</sup> (16-28 lbs.) paper in the media trays and 75-165 g/m <sup>2</sup> (20-44 lbs.) paper in the multi-purpose tray.
	If you are using media that is 105 g/m <sup>2</sup> (28 lbs.), check if the Face Down media output setting is selected in the driver. If it is, change the setting to Face Up.
	Use only recommended transparencies ( <a href="#">P. 152</a> ). We cannot guarantee the results of other transparencies in KX-PS8000 printers.
	Make sure that the media is installed under the hooks at the front of the media tray.
	Do not overfill the media tray, as indicated by the red line on the right side of the tray.
	Clean the paper-pick rollers ( <a href="#">P. 94 for instructions</a> ).
	Make sure that the media thickness switch is set correctly for the installed media ( <a href="#">P. 38</a> ).

## ■Problems with image size and position

Trouble	Corrective Action
Off-set images.	Check your application for correct image sizing.
Cut-off images.	Check your application for image sizing.
	Make sure that the correct size media is in the media tray.

# Care and Maintenance

## ■ Print quality problems

Trouble	Corrective Action
Prints have dull, faded colors.	Print the Color Calibration Page from the Color Calibration menu in the printer panel. Check the density settings for each color and compare them to the examples on the Color Density Samples. Refer to Setting the Color Density on <a href="#">page 70</a> for instructions on comparing and setting color density.
	Make sure that the imaging unit stays covered until immediately before installing it in the printer. Exposure to light can damage the imaging unit and will produce light streaks or faded prints.
	Make sure that the toner cartridges are installed correctly.
	Make sure that you use a high-quality laser paper: 60-105 g/m <sup>2</sup> (16-28 lbs.) paper in the media trays and 75-165 g/m <sup>2</sup> (20-44 lbs.) paper in the multi-purpose tray.
Image is very faded or pieces of the image are missing; toner on the page is loose.	When using the multi-purpose tray, make sure that you have selected the correct media type in the driver or in the Menu mode of the printer panel.
Streaks or spots	Most spots are caused by fingerprints or dust introduced into the printer while installing the imaging unit or loading media. Make sure that the surface where you unpack the imaging unit, paper, and transparencies is free of dust. Keep supplies in a covered area or a closed box.
	Make sure that the imaging unit stays covered until immediately before installing it in the printer. Exposure to light for more than 45 seconds can damage the imaging unit.
	Do not touch the right side or underside of the imaging unit; fingerprints affect print quality.
	Make sure that the paper or transparency film is clean.
	Make sure that you handle the media on the outside edges to avoid fingerprints.
	To get rid of fingerprint spots, print a few prints.
The back of the printed page appears dirty.	Toner particles have contaminated the transfer roller. This can happen if the printed image is larger than the media (for example, when printing on envelopes). Run 10-20 prints to clean the transfer roller.
The print quality of a transparency is poor.	There is a defect on the coated surface of the transparency. Print on the other side.

## Error Messages

### Scanner LCD Panel

Error Message	Possible Cause	Corrective Action
ADF top cover open. Close the ADF top cover	ADF top cover is open.	Close the ADF top cover.
ADF paper Jam.	A jam has occurred in the ADF.	Open the ADF top cover, remove the jammed document.
Remove document from ADF tray.	A document is placed in the ADF tray when power is turned on.	Remove the document from the ADF tray.
	A document is placed in the ADF tray when a jam is cleared.	
ADF open. Close the ADF.	ADF is open.	Close the ADF.
No detection marker in ADF	The white sheet is dirty.	Clean the white sheet (  P. 93).
Memory Error Select lower quality	Print memory is not enough for duplicating.	Add memory.
		Select a lower quality.
		Reduce the image size.

# Care and Maintenance

## Printer LCD Panel

Error Message	Possible Cause	Corrective Action
Jam at A See front door label	A jam has occurred in the media feed area.	Refer to <a href="#">page 103</a> to clear the jam.
Jam at B See front door label	A jam has occurred in the media feed area.	Refer to <a href="#">page 105</a> to clear the jam.
Jam at C See front door label	A jam has occurred in the fuser unit.	Refer to <a href="#">page 106</a> to clear the jam.
Jam at D See front door label	A jam has occurred inside the access door or the right side door.	Refer to <a href="#">page 110</a> to clear the jam.
Jam at E See front door label	A jam has occurred in the output area.	Refer to <a href="#">page 112</a> to clear the jam.
Jam at MPT See front door label	A jam has occurred in the multi-purpose tray.	Refer to <a href="#">page 113</a> to clear the jam.
Front or Right door Open	Front or right side door is open.	Close the front or right side door.
Left side door Open	Left side door is open.	Close the left side door.
Lower Left side door Open	Optional cassette side door is open.	Close the optional cassette side door.
Upper Left side door Open	Standard cassette side door is open.	Close the left side door.
Black Toner Cartridge Not installed	Black toner cartridge is not installed.	Install the black toner cartridge.
Cyan Toner Cartridge Not installed	Cyan toner cartridge is not installed.	Install the cyan toner cartridge.
Magenta Toner Cartridge Not installed	Magenta toner cartridge is not installed.	Install the magenta toner cartridge.
Yellow Toner Cartridge Not installed	Yellow toner cartridge is not installed.	Install the yellow toner cartridge.
Imaging Unit Not installed	Imaging unit is not installed.	Install the imaging unit.
Fuser Unit Not installed	Fuser unit is not installed.	Install the fuser unit.
Paper feeder Not installed	Paper feeder is not installed.	Install the paper feeder.
Oil Roll Not installed	Oil supply roll is not installed.	Install the oil supply roll.
Imaging Unit No tension	Imaging unit is not installed correctly.	Install the imaging unit correctly.
Charger Not installed	Charger is not installed.	Install the charger.
All Media Tray missing or empty	All media trays are missing or empty.	Install a media tray with media in it.
Media Tray Empty	Media tray is missing or empty	Install the media tray with media in it.

## Care and Maintenance

Error Message	Possible Cause	Corrective Action
Upper Tray Empty	Media tray is empty.	Install media in the upper media tray.
Middle Tray Empty	Middle tray is empty in the 2nd cassette feeder option.	Install media in the middle media tray.
Lower Tray Empty	Lower tray is empty in the 2nd cassette feeder option.	Install media in the lower media tray.
Multi-Purpose Tray Empty	Multi-purpose tray is empty.	Install media in the multi-purpose tray.
Paper Tray Empty	No media tray is installed or media tray is empty.	Install a media tray with paper in it.
Transparency Tray Empty	No media tray is installed or media tray is empty.	Install a media tray with transparencies in it.
Output Tray Full	Output tray is full.	Remove the printed media from the output tray.
SIMM Check Error	Controller Optional SIMM check error.	Call for service.
SCSI error	Communication cannot be established between the scanner and your computer.	Connect the SCSI cable correctly.
Ethernet Card Check Error	Printer Ethernet Card I/F Error.	Install the Ethernet Card correctly.
Imaging Unit Worn out	Imaging unit is worn out.	Replace the imaging unit now.
Imaging Unit wearing out	Imaging unit is wearing out.	Replace the imaging unit soon.
Transfer wearing out	Second transfer roller is wearing out.	Replace the transfer roller soon.
Fuser Unit and Oil Roll Worn out	Fuser is worn out.	Replace the fuser unit now.
Fuser Unit wearing out	Fuser is wearing out.	Replace the fuser unit soon.
Oil Roll Worn out	Oil supply roll is worn out.	Replace the oil supply roll now.
Oil Roll wearing out	Oil supply roll is wearing out.	Replace the oil supply roll soon.
Black Toner Empty	Black toner cartridge is empty.	Replace the black toner cartridge now.
Cyan Toner Empty	Cyan toner cartridge is empty.	Replace the cyan toner cartridge now.
Magenta Toner Empty	Magenta toner cartridge is empty.	Replace the magenta toner cartridge now.

## Care and Maintenance

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Error Message	Possible Cause	Corrective Action
Yellow Toner Empty	Yellow toner cartridge is empty.	Replace the yellow toner cartridge now.
Low Black Toner	Black toner cartridge is almost empty.	Replace the black toner cartridge soon.
Low Cyan Toner	Cyan toner cartridge is almost empty.	Replace the cyan toner cartridge soon.
Low Magenta Toner	Magenta toner cartridge is almost empty.	Replace the magenta toner cartridge soon.
Low Yellow Toner	Yellow toner cartridge is almost empty.	Replace the yellow toner cartridge soon.
Memory Overflow	There is not enough memory in the printer.	Press CONTINUE button on the panel or wait for auto recovery after 10 seconds. (only when Auto Continue setting is ON) Perform the following procedure. 1. Add memory. 2. Select a lower resolution on the Printer Driver. 3. Select Dither A on the Printer Driver.
Too hot to print Label Remove Label, Cancel job	The printer is too hot or room temperature is too high to print Labels.	Wait until the printer cools down, or use in a cooler place [below 32.5°C (90.5°F)].

## Status Display Program

The Status Display program alerts the user to any errors. It displays an error message, identifies the problem area on the printer/scanner, and provides information regarding corrective action.

### ■For Windows 3.1 users:

When Windows 3.1 is started, the Panasonic Printer/Scanner Status icon appears and stays on the screen. This enables you to display the printer's/scanner's status at any stage during operation.

The Panasonic Printer/Scanner Status dialog box appears when:

- A SCSI device error is found while using the printer driver, scanner driver (16 bit) or the digital duplicator utility

This dialog box reduces to an icon when:

- The printer/scanner recovers from an error situation

If you have selected the "When device error" option in the Start Up box of the Setup for Status Display dialog box:

- The Panasonic Printer/Scanner Status icon does not appear when Windows 3.1 is started
- The Panasonic Printer/Scanner Status dialog box disappears after recovering from an error situation

#### **Note:**

- The Setup for Status Display dialog box can be displayed by double clicking the Status display setup icon. In this dialog box you can display the Start Up box by clicking the Start Up tab.

### ■For Windows 95 / Windows NT 4.0 users:

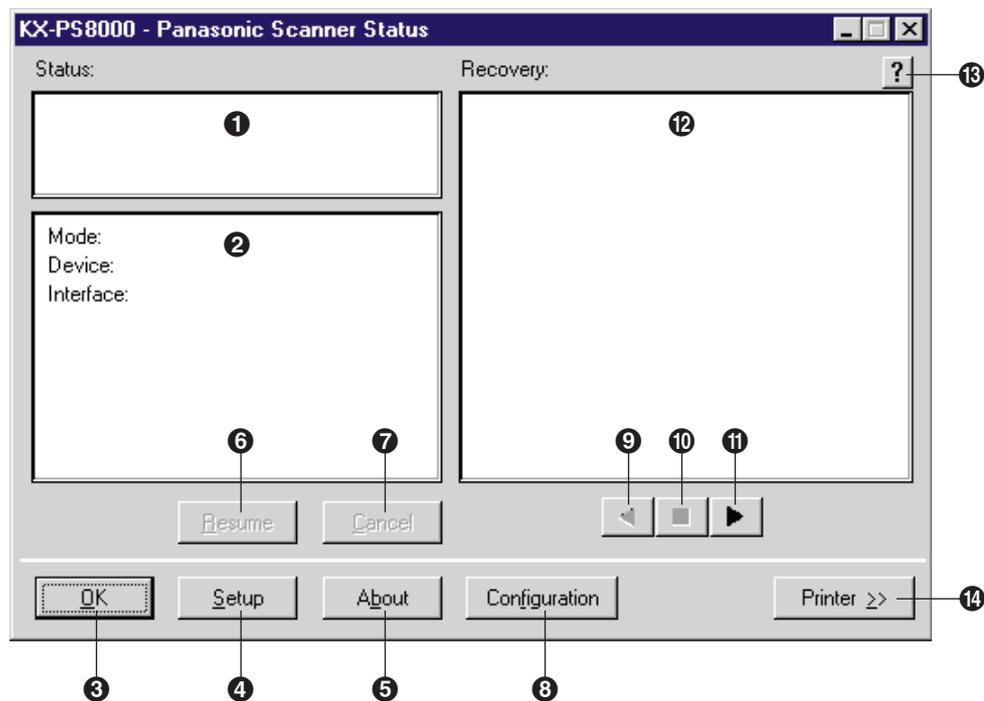
The Panasonic Printer/Scanner Status dialog box appears when:

- A SCSI device error is found while using the printer driver, scanner driver (16 bit or 32 bit), or the digital duplicator utility

This dialog box disappears when:

- The printer/scanner recovers from an error situation

## Scanner Status Dialog Box



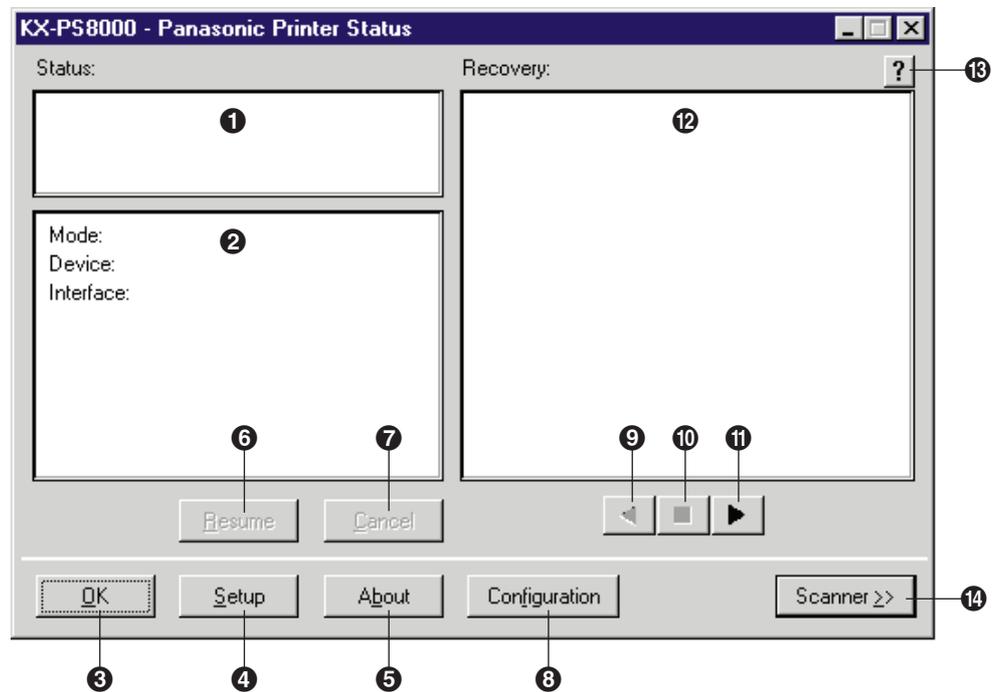
- ❶ This box shows an error or status message and the corresponding icon.
- ❷ This box lists the mode your scanner is in, device name (scanner), and the interface cable being used, and the name of the scan job.
- ❸ This button minimizes the Panasonic Scanner Display dialog box. Pressing the ESC key on the keyboard can also minimize it.
- ❹ This button displays the Status Display Setup dialog box, where you can change different settings.
- ❺ This button displays the version of the Status Display.
- ❻ This button resumes scanning after recovering from an error situation.
- ❼ This button cancels the scan job which caused an error.
- ❽ This button displays the Panasonic Show configuration dialog box.
- ❾ This button displays the previous recovery message.
- ❿ This button displays the initial recovery message.
- ⓫ This button displays the next recovery message.
- ⓬ This box displays a recovery procedure along with a picture.

## ***Care and Maintenance***

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- ⑬ This button provides you additional help.
- ⑭ This button changes the Panasonic Scanner Status dialog box to the Panasonic Printer Status dialog box, and is displayed only when using the digital duplicator utility.

## Printer Status Dialog Box



- ❶ This box shows an error or status message and the corresponding icon.
- ❷ This box lists the mode your printer is in, device name (printer), interface cable and tray being used, the built-in memory size of the printer and the name of the print job.
- ❸ This button minimizes the Panasonic Printer Status dialog box. Pressing the ESC key on the keyboard can also minimize it.
- ❹ This button displays the Setup for Status Display dialog box, where you can change different settings.
- ❺ This button displays the version of the Status Display.
- ❻ This button resumes printing after recovering from an error situation.
- ❼ This button cancels the print job which caused an error.
- ❽ This button displays the Panasonic Show Configuration dialog box.
- ❾ This button displays the previous recovery message.
- ❿ This button displays the initial recovery message.
- ⓫ This button displays the next recovery message.
- ⓬ This box displays a recovery procedure along with a picture.
- ⓭ This button provides you additional help.

## *Care and Maintenance*

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- ⑭ This button changes the Panasonic Printer Status dialog box to the Panasonic Scanner Status dialog box, and is displayed only when using the digital duplicator utility.

# Care and Maintenance

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## Repacking

It is highly recommended that you keep the original cartons and ALL packing materials. Should you need to transport or ship your scanner and/or printer, please follow these instructions.

**Safety Caution:**

- *The scanner weighs about 17.3 kg {38.1 lbs.} and the printer weighs approximately 47.9 kg {105.5 lbs.}. They must be handled by two people.*

**Notes:**

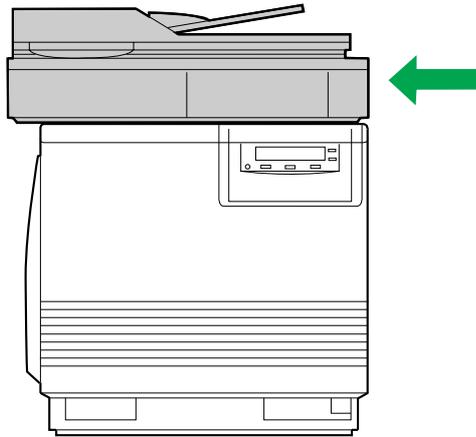
- *Should you need to send your scanner and/or printer for service, consult your reseller first or Panasonic.*
- *Please use the original cartons and all of the original packing materials.*
- *Improper repacking of the printer may result in a service charge to remove spilled toner.*
- *Since the printer uses dry toner, extreme care must be taken when handling. The printer should be handled in the upright (vertical) position.*

**Material required:**

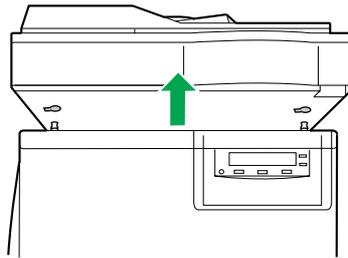
- Original cartons and packing materials
- Newspaper or drop cloth
- Shipping tape and scissors

## Packing the Scanner

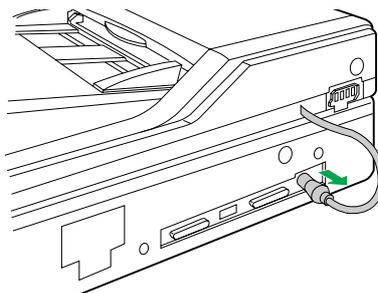
- 1** Turn off the scanner. Remove the power cord and all interface cables.
- 2** **1** If the scanner is installed on the top of the printer, unlock the scanner by sliding it toward the left.



- 2** Gently raise and remove the scanner by releasing it from the guide pins.



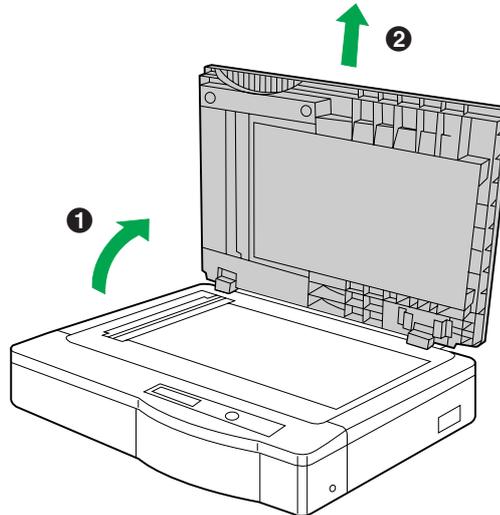
- 3** Unplug the ADF cable.



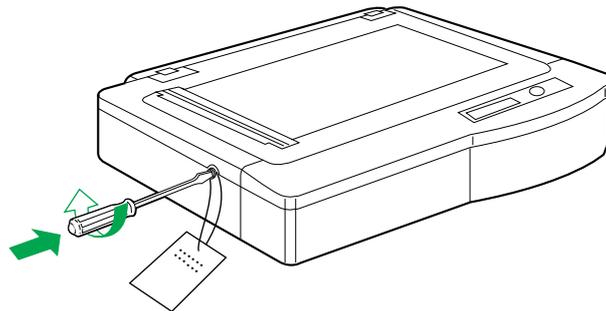
## Care and Maintenance

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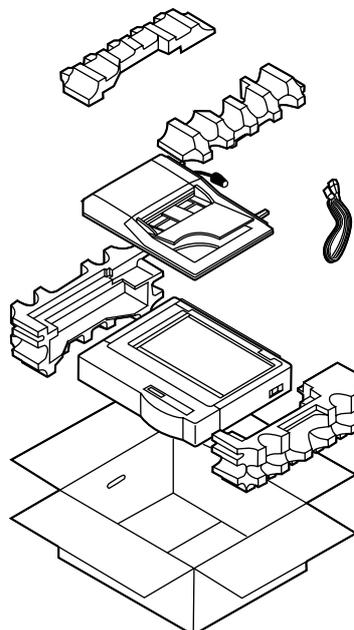
- 4** Open the ADF and remove it from the scanner bed by lifting it up.



- 5** To lock the scanner, push and turn the lock clockwise with a flat-blade screwdriver.



- 6** Repack the ADF and the scanner bed into the original carton.

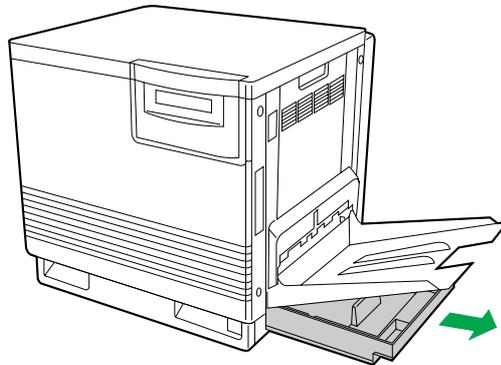


## Packing the Printer

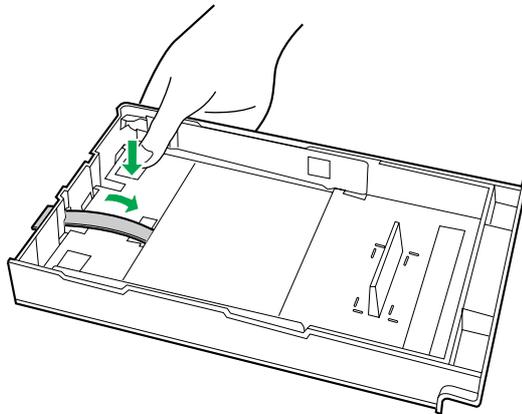
**Note:**

- If you do not have the packing for the imaging unit and the transfer unit: contact Panasonic for packaging.

- 1** Turn off the printer; remove the power cord and all interface cables.
- 2** Remove the media tray(s) from the printer; remove the media from the tray(s).



- 3** Press down on a media tray's metal plate. Place the cardboard packing material into the media tray.



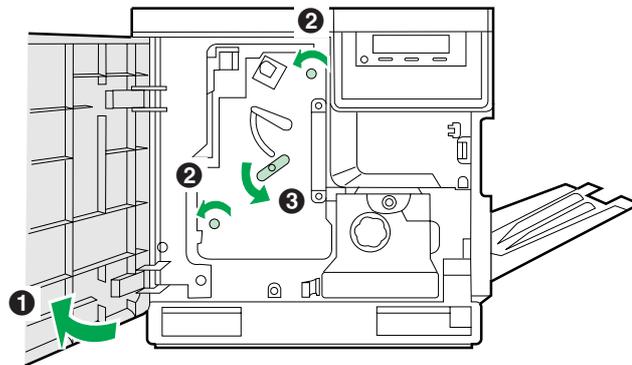
# Care and Maintenance

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**4** Reinsert the media tray into the printer; use adhesive tape to secure the tray to the printer.

**5** If you have other media trays, repack them for shipping or storage in their original shipping boxes.

- 6**
- 1** Open the printer's front door.
  - 2** Loosen the two thumbscrews by turning them counterclockwise.
  - 3** Turn the lower green lever 180° counterclockwise.



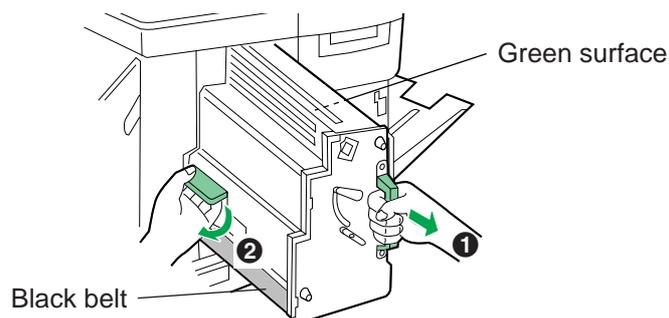
- 7**
- 1** Grasping the front green handle, slide the unit out until it catches.
  - 2** Lift up the green handle on the left. Pull the imaging unit out of the printer.

**Important:**

- Do not touch the green surface (the right side) or the black belt (the under side). Finger prints may affect the print quality.

**Safety Caution:**

- The imaging unit weighs approximately 6.5 kg {14.3 lbs.}. Always use the handles when lifting it.



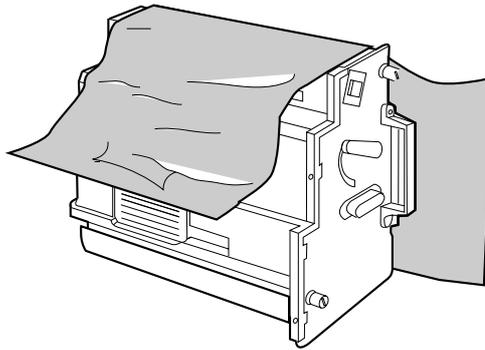
## Care and Maintenance

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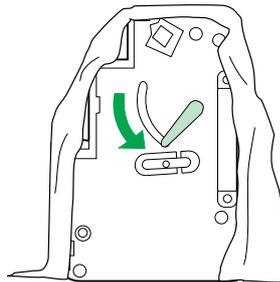
- 8** Wrap the imaging unit with a protective black plastic sheet.

**Caution:**

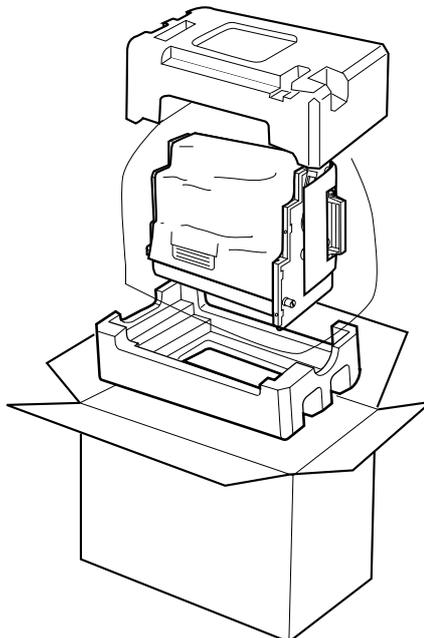
- Do not expose the imaging unit to light for more than 45 seconds to avoid damage.



- 9** On the imaging unit, turn the upper lever 90° counterclockwise; this is necessary to protect the imaging unit during shipment.



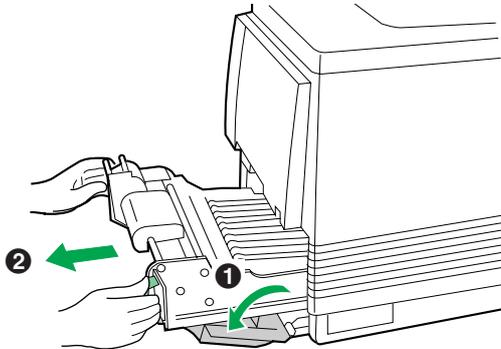
- 10** Insert the imaging unit into the packaging.



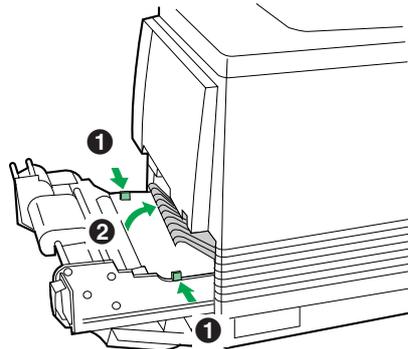
# Care and Maintenance

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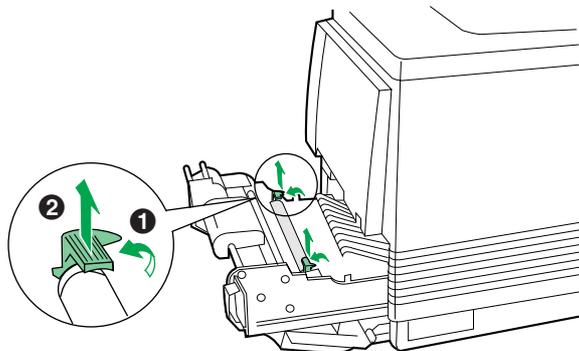
- 11** ❶ Open the left side door.  
❷ Using the green handles, slide the paper feeder out.



- 12** ❶ Push in on green tabs to unlock the cover.  
❷ Raise the cover until it catches in the open position.



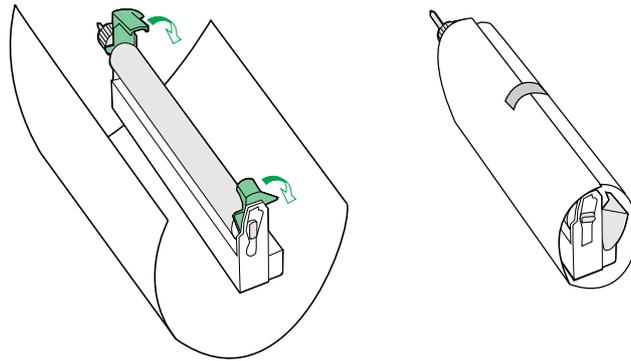
- 13** ❶ Rotate the transfer unit's green handles up.  
❷ Lift out the transfer unit.



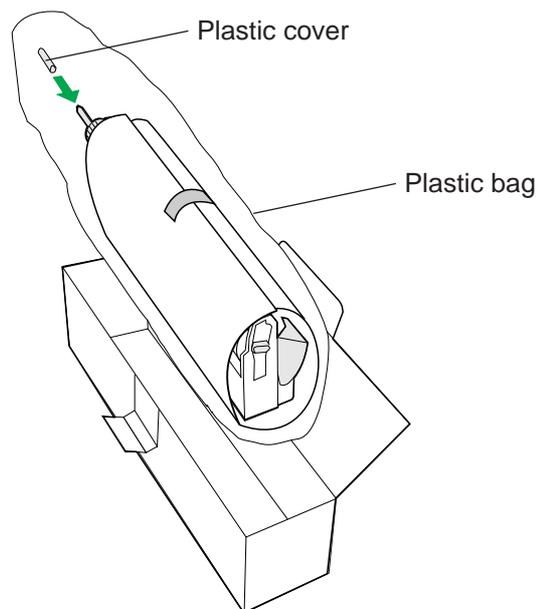
- 14** Place the transfer unit on newspaper or drop cloth. Rotate the handles down and wrap the transfer unit with a piece of paper and adhesive tape.

**Note:**

- Do not touch or bump the roller: it can damage the roller



- 15** Install the plastic cover and insert the transfer unit into a plastic bag and seal the end tightly. Install the transfer unit into the packaging.

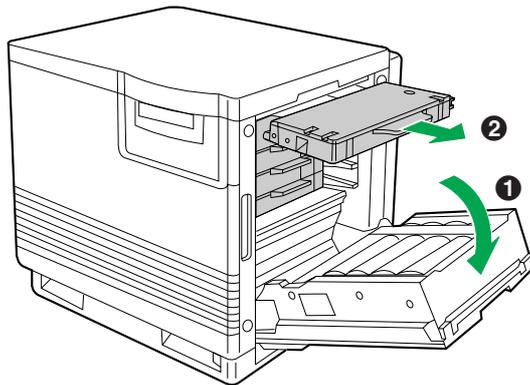


# Care and Maintenance

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## 16 Packing the toner cartridges:

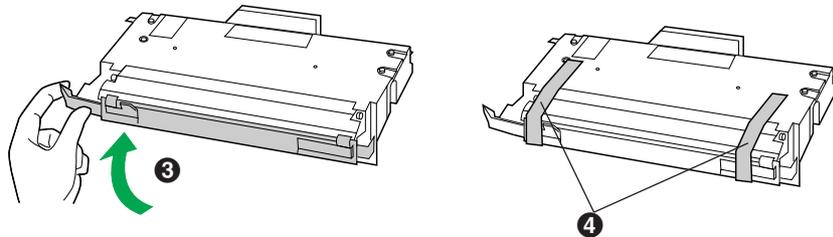
- 1 Open the right side door.
- 2 Remove a toner cartridge.



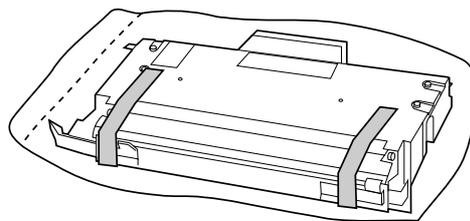
**Caution:**

- To avoid possible toner spillage, do not tilt the cartridge.

- 3 Replace the shipping cover.
- 4 Secure the shipping cover with adhesive tape.



- 5 Insert each toner cartridge into a plastic bag and seal the end of the bag tightly.



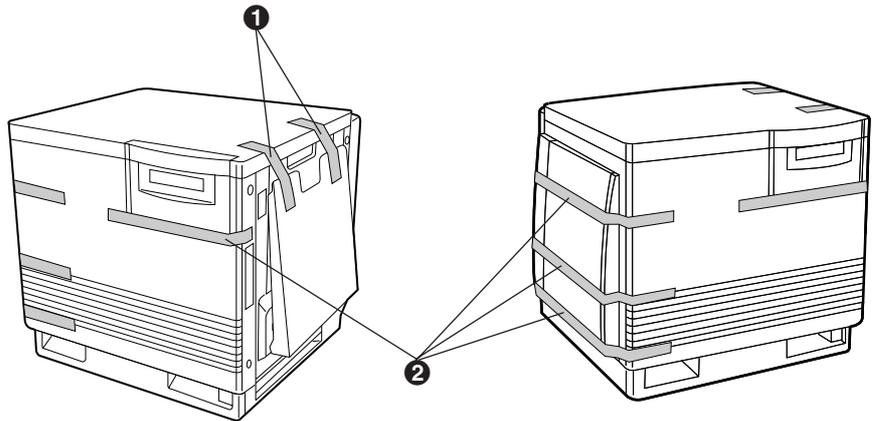
- 6 Repeat instructions 2 to 5 for each toner cartridge.

## 17 Wipe off any loose toner in and around the printer.

**Note:**

- If a toner vacuum is available, it is the best tool for cleaning spilled toner. Do not use a standard office vacuum; the toner will not be retained by typical vacuum dust collectors.

- ## 18
- 1 Raise the output tray and secure it to the printer with adhesive tape.
  - 2 Secure the front door, the multi-purpose tray and the left side door to the printer with adhesive tape.



If you don't have a 2nd Cassette Feeder, go to step 20.

## 19 If you have a 2nd Cassette Feeder:

- 1 Lift the printer up and away from the 2nd Cassette Feeder.

**Safety Caution:**

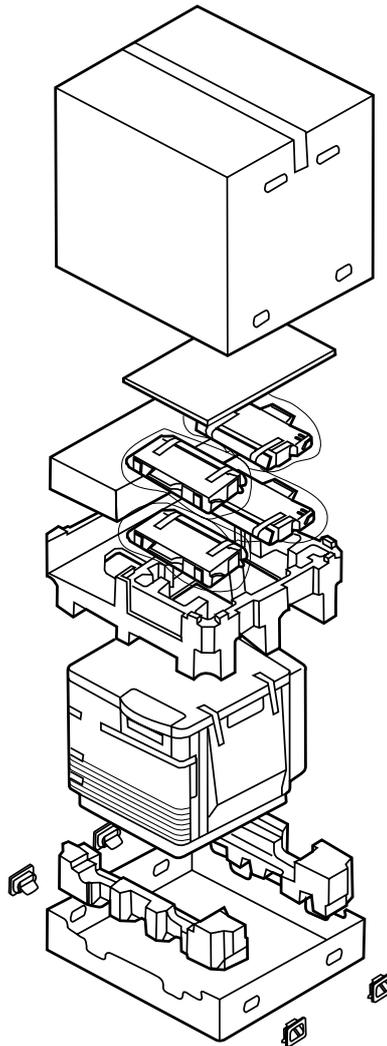
- The printer weighs approximately 41.4 kg {91.2 lbs.} and the 2nd Cassette Feeder weighs approximately 14.3 kg {31.5 lbs.}. Observe standard precautions for lifting heavy objects.

- 2 Repack the 2nd Cassette Feeder in its original shipping box.

## Care and Maintenance

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- 20** Repack any other accessories in the original shipping box.
- 21** Repack the printer in the original shipping box. Make sure that you keep the printer upright and level when moving.



# Appendix

## Specifications

### Scanner

**Power source**

Refer to the nameplate on the rear of the unit.

**Temperature**

Operating: 10°C to 32.5°C

Storage: 0°C to 40°C

**Humidity**

Operating: 20% to 80% RH

Storage: 10% to 90% RH

**Warm Up Time**

Less than 20 seconds

**Power Consumption**

55 W Max. (Scanning)

16 W (Standby)

10 W (Energy Star mode)

**Mass {Weight}**

17.3 kg {38.1 lbs.} (with ADF)

**Dimensions**

Height: 181 mm (7.1")

Depth: 425 mm (16.7")

Width: 513 mm (20.2")

**Noise Level**

53 dB(A) [with ADF]

**Scanner Type**

Flatbed Color CCD Scanner

**Scanning System**

Mirror moving optical system with R. G. B. 3 line Color CCD

**Document Type**

Sheet, Book

**Maximum Scanning Size**

Horizontal: 216 mm (8.5")

Vertical: 356 mm (14")

# Appendix

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## Resolution

Flatbed	Horizontal Line:	Optical 600 dpi 30-2400 dpi (1 dpi step) by hardware interpolation 2401-9600 dpi (1 dpi step) by software interpolation
	Vertical Line:	30-2400 dpi (1 dpi step) by changing carriage speed 2401-9600 dpi (1 dpi step) by software interpolation
ADF	Horizontal Line:	Optical 600 dpi 60-600 dpi (1 dpi step) by hardware interpolation 601-2400 dpi (1 dpi step) by software interpolation
	Vertical Line:	60-600 dpi (1 dpi step) by changing paper feed speed 601-2400 dpi (1 dpi step) by software interpolation

## Color Depth

Internal:	30 bits/1billion color (RGB)
Output:	24 bits/16.7million color

## Image Data Processing

- Image sharpening and unsharpening (3 x 5 MTF correction)
- Brightness/Contrast adjustment
- Pseudo halftone (Dither/error diffusion)
- Mirror, Positive / Negative reverse
- $\gamma$  correction: Linear/Adjustable
- Background reduction
- Color / B & W mode

## Scanning Time\*

Color, B&W gray scale (A4 size)		
1.6 seconds		30, 60 dpi (prescan)
3.9 seconds		150 dpi
5.2 seconds		200 dpi
7.8 seconds		300 dpi
15.7 seconds		600 dpi
31.4 seconds		1200 dpi
62.7 seconds		2400 dpi
more than 62.7 seconds		2401-9600 dpi
Auto Document Feeder (ADF)		
26.0 seconds (2.3 ppm)		600 dpi
18.5 seconds (3.2 ppm)		300 dpi
13.3 seconds (4.5 ppm)		200 dpi

\* Initial time is not included.

\* Actual time depends on I/F speed and host environment.

## Interface

SCSI-2 Connector: 50 pin half size x 2

## Paper Handling

Document width: 100 mm to 216 mm (3.94" to 8.5")

Document length: 178 mm to 356 mm (7" to 14")

Document weight: 52.5 g/m<sup>2</sup> to 127.5 g/m<sup>2</sup> (14 lbs. to 34 lbs.)

ADF tray: up to 50 pages of document [75 g/m<sup>2</sup> (20 lbs.) fresh paper]

## Printer

### Power source

Refer to the nameplate on the rear of the unit.

### Temperature

Operating: 10°C to 32.5°C (50°F to 90.5°F)  
Best Print Quality: 15°C to 25°C (59°F to 77°F)  
Storage: 0°C to 40°C (32°F to 104°F)

### Humidity

Operating: 20% to 80% RH  
Best Print Quality: 30% to 70% RH  
Storage: 10% to 80% RH

### Warm-up time

Less than 200 seconds (at 20°C)

### Power consumption

850 W Max. (printing with fuser on)  
35 W (standby with fuser off)  
25 W (Energy Star mode)  
Meets Energy Star power conservation requirements.

### Mass {Weight} of standard unit with all consumables

(without optional 2nd Cassette Feeder)  
47.9 kg {105.5 lbs.}

### Dimensions of standard unit (Without 2nd Cassette Feeder)

Height: 463 mm (18.2")  
Depth: 493 mm (19.4")  
Width: 510 mm (20.1") [784 mm (30.9") with the output tray]

### Noise level

53 dB(A) [Printing mode]  
47 dB(A) [Standby mode]

### Printing method

Semiconductor Laser

# Appendix

## Paper output

Up to 500 sheets [75 g/m<sup>2</sup> (20 lbs.)]

## Resolution

600 x 600 dpi

1200 x 1200 dpi (additional RAM required)

## Maximum printing speed

The print speeds listed in the following table represent the time the printer produces multiple prints on various media and resolution (**Continuous throughput rate**).

Continuous Print Speed (ppm)

	Plain Paper			Legal			Transparency	
	color		mono	color		mono	color	mono
	4 Color (CMYK)	3 Color (CMY) <sup>*1</sup>		4 Color (CMYK)	3 Color (CMY) <sup>*1</sup>		4 Color (CMYK)	mono
600 x 600 dpi	3.5	4.7	14	1.75	2.35	7	1.75	7
1200 x 1200 dpi	1.75	2.35	7	0.87	1.17	3.5		

(\*1 only when using plain paper)

## RAM buffer

Standard 16 MB (expandable to a maximum of 80 MB with optional SIMMs)

Duplicate:

Total Printer Memory	Selectable Print Quality Mode <sup>*3</sup> (Scanning Resolution)		Full-Size Print Area
16 MB (Standard)	Standard	300 x 300 dpi	Letter, A4, Legal
		600 x 300 dpi	Letter, A4, Legal <sup>*2</sup>
20 or 24 MB (Add 4 MB or 8 MB)	Standard	300 x 300 dpi	Letter, A4, Legal
		600 x 300 dpi	
32 MB (Add 16 MB)	Standard	300 x 300 dpi	
		600 x 300 dpi	
	Fine	600 x 600 dpi	Letter, A4, Legal <sup>*2</sup>
More than 48 MB (Add more than 32 MB)	Standard	300 x 300 dpi	Letter, A4, Legal
		600 x 300 dpi	
	Fine	600 x 600 dpi	
Enhanced	600 x 600 dpi		

<sup>\*2</sup> Legal size is not available when a color print is selected.

<sup>\*3</sup> Printing Resolution

The printing resolution of each mode is as follows.

Standard	600 x 600 dpi
Fine	600 x 600 dpi
Enhanced	600 x 1200 dpi

Printing:

Total Memory	Selectable Print Quality Mode	Printable without Memory Overflow
16 MB (Standard)	Fast (300 dpi)	Letter, A4, Legal
	Standard (600 dpi)	Letter, A4 * <sup>1</sup>
20 MB (Add 4 MB)	Standard (600 dpi)	Letter, A4, Legal
64 MB (Add 48 MB)	High Quality (1200 dpi)	Letter, A4 * <sup>1</sup>
80 MB (Add 64 MB)		Letter, A4, Legal

\*<sup>1</sup> Documents can be printed on Legal size paper when the print style is set to Color Graphics (see P. 115 of the Utilities and Drivers Reference Guide) provided the data size of the document is small.

**Note:**

- More than 32 MB is required on the printer to use "Printer memory usage" in the printer driver (see P. 121 of the Utilities and Drivers Reference Guide).

**Interface**

Standard: Parallel, SCSI-2  
Option: 10 baseT, 10 base2

**Altitude**

Operating: 0 to 2,500 m (8,000 ft.)  
Storage: 0 to 4,000 m (13,125 ft.)

## Media

### Media Sizes

Medium	Size	Dimensions
Paper	Letter	216 mm x 279 mm (8.5" x 11")
	A4	210 mm x 297 mm (8.3" x 11.7")
	Legal	216 mm x 356 mm (8.5" x 14")
Transparency	Letter	216 mm x 279 mm (8.5" x 11")
	A4	210 mm x 297 mm (8.3" x 11.7")
Envelope	#10	104.9 mm x 241.3 mm (4.13" x 9.5")

**Note:**

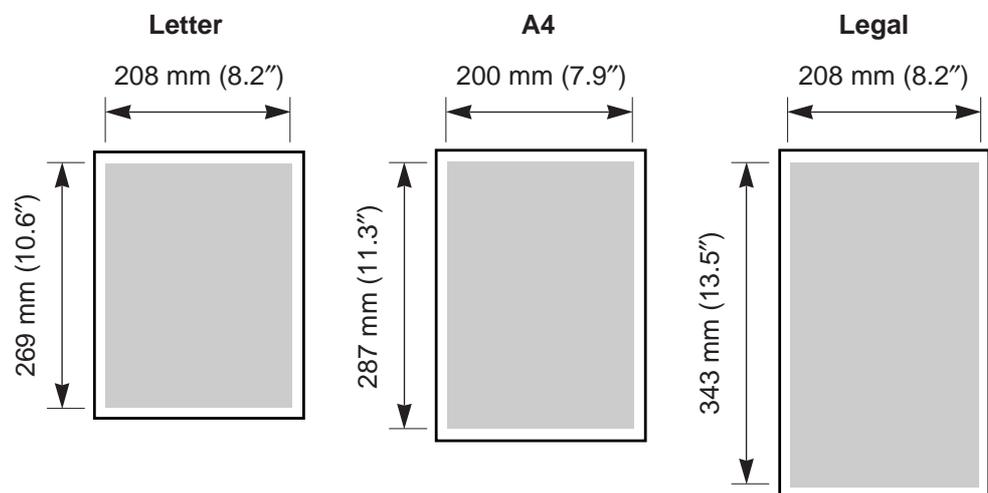
- Please store your paper according to the recommendations of the manufacturer.

### Margins and Print Area

When the image is printed on the media, the image (print area) is a bit smaller than the media size. You may need to adjust the page margins in the application software to match the print area.

The following table and illustrations show the page sizes, the largest print areas, and the margins for the media sizes supported on this printer.

Media	Page size	Print area	Margins		
			Top	Bottom	Sides
Letter	216 mm x 279 mm (8.5" x 11")	208 mm x 269 mm (8.2" x 10.6")	5.6 mm (0.22")	5.6 mm (0.22")	3.6 mm (0.14")
A4	210 mm x 297 mm (8.3" x 11.7")	200 mm x 287 mm (7.9" x 11.3")	5.1 mm (0.2")	4.7 mm (0.19")	4.7 mm (0.19")
Legal	216 mm x 356 mm (8.5" x 14")	208 mm x 343 mm (8.2" x 13.5")	5.8 mm (0.23")	5.8 mm (0.23")	3.6 mm (0.14")



## ■ Paper Weight

The printer is designed to work well with most types of paper. However, differences in paper may have significant effects on the quality of the print or the reliability of paper handling.

It is strongly recommended that you always test paper before purchasing it to make sure it provides desirable performance.

Media tray *	One-sided printing	B&W	60 to 105 g/m <sup>2</sup> (16 to 28 lbs.)
		Color	75 to 105 g/m <sup>2</sup> (20 to 28 lbs.)
Multi-purpose tray	One-sided printing	B&W	75 to 165 g/m <sup>2</sup> (20 to 44 lbs.)
		Color	75 to 165 g/m <sup>2</sup> (20 to 44 lbs.)
	Two-sided printing	B&W	75 to 105 g/m <sup>2</sup> (20 to 28 lbs.)
		Color	90 to 105 g/m <sup>2</sup> (24 to 28 lbs.)

- Recommended paper (for optimum performance):

LETTER/LEGAL	Hammermill LASERPRINT 90 g/m <sup>2</sup> (24 lbs.)
A4	NEUSIEDLER COLOR COPY 90 g/m <sup>2</sup>

\* We do not recommend the use of 105 g/m<sup>2</sup> (28 lbs.) paper in areas of high or low humidity and temperature since paper feed problems may be experienced.

## ■ Types of Paper to Avoid

- Extremely smooth or shiny paper or paper that is highly textured
- Letterhead imprinted with low temperature or thermography. These materials may transfer onto the fusing roller and cause damage. Any pre-printed paper should use inks compatible with 200°C (392°F) for 0.1 second.
- Damaged or wrinkled paper, or paper with irregularities such as tabs, staples, etc.
- Multipart forms or carbonless paper
- Paper with a 25% or more cotton and/or fiber content
- Ink jet paper (It may transfer onto the fuser roller and cause damage.)

## ■ Two-Sided Printing

Two-sided printing is possible by using the multi-purpose tray. However, you should not expect the same print quality and reliability that you get with one-sided printing. We strongly recommend that you follow the guidelines below.

- Do not load more than 10 sheets in the multi-purpose tray.
- Before loading paper in the multi-purpose tray, adjust it so that the edges are even.

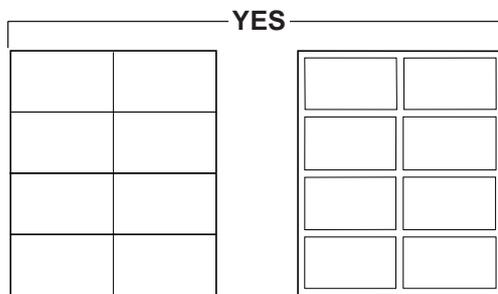
# Appendix

## ■ Transparencies and Labels

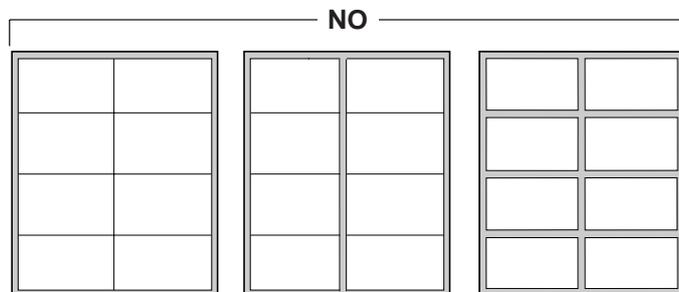
You may also print on transparencies and labels that are made for the printer. Panasonic has tested and found that the following work satisfactorily.

OHP transparency	3M CG3700
Labels	AVERY 5163, AVERY 5164, AVERY 5165 Avery L7163, Avery L7165, Avery L7166, Avery L7167 Avery L7168, Avery L7169

- *Re-using transparencies that have been fed through the printer once (for example, after jams or if the transparency is ejected without being printed) can reduce the life of the consumables and paper path components.*
- *When using transparencies, if the print quality is poor, print on the other side.*
- *With any label stock, the labels must completely cover the backing material.*



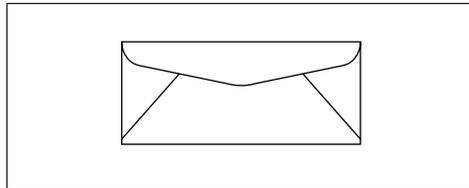
Labels cover the entire backing material.



The backing material is exposed.

## ■ Envelopes

It is recommended that you print in black text only and purchase high quality #10 or larger laser envelopes with diagonal seams, as shown in the diagram below:

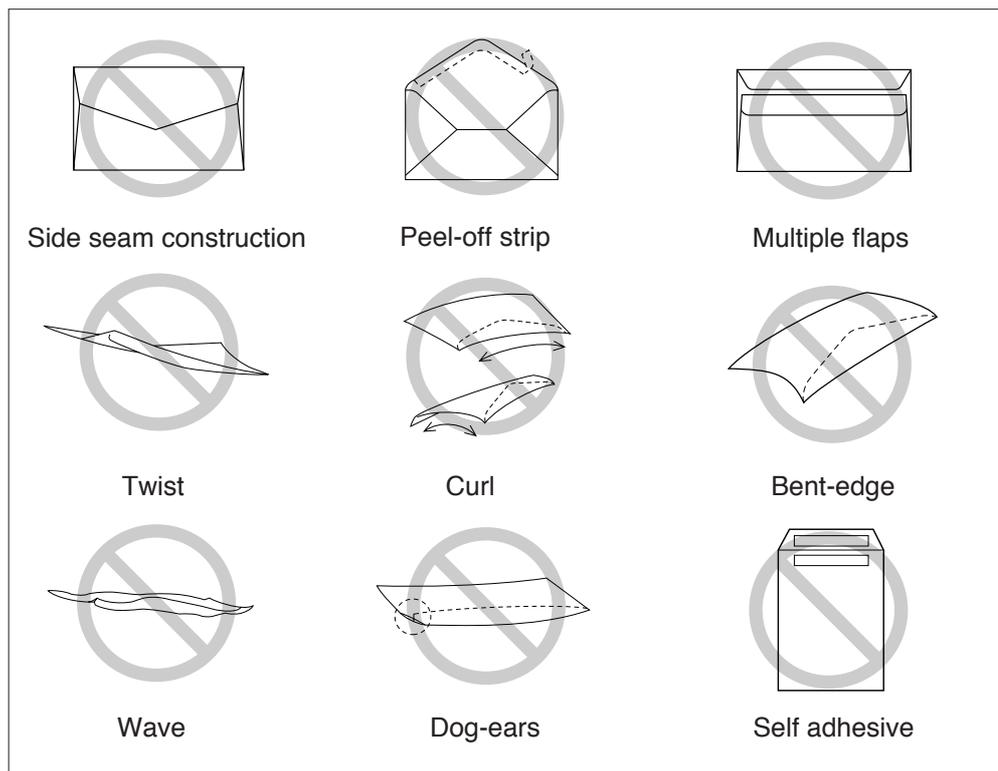


High quality envelopes have the following characteristics:

- A thin, sharply creased leading edge
- Paper weight of 90 g/m<sup>2</sup> (24 lbs.)
- Flat, free of curls, wrinkles, nicks, etc.

It is not recommended that you use envelopes with any of the following characteristics (using these may result in paper jams):

- Irregularly shaped envelopes
- Envelopes with curls, wrinkles, nicks, twists, dog-ears or other damage
- Envelopes with side seam construction
- Highly textured envelopes, or with extremely shiny surfaces
- Envelopes that seal by removing a peel-off strip
- Envelopes with more than one flap to be sealed
- Self-adhesive envelopes
- Envelopes that are baggy or not sharply creased
- Embossed envelopes
- Envelopes that have previously been printed on

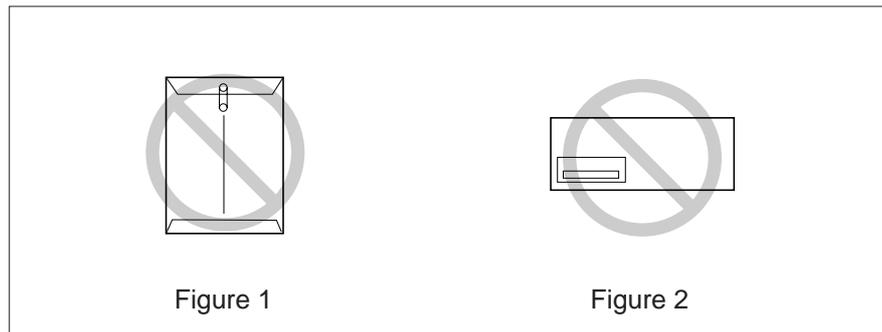


# Appendix

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Do not attempt to print on any of the following types of envelopes. These may cause damage to your printer.

- Envelopes with clasps, snaps or tie strings (see Figure 1)
- Envelopes with transparent windows (see Figure 2)
- Envelopes that will melt, discolor, scorch offset or release hazardous emissions when exposed to 200°C (392°F) for 0.1 second
- Envelopes that use encapsulated types of adhesive that do not require moistening but rely on pressure to seal them



Always test a sample of the envelopes you are thinking of buying. Confirm that the envelope performs acceptably.

### For best printing results

- Avoid printing in high humidity i.e., above 70%.  
High humidity may cause the envelope to curl and pick up excess toner.  
High humidity may also cause the envelope to seal.
- Avoid printing below 10°C (50°F) with less than 30% relative humidity.  
Low temperature with low humidity may cause light printing.

Envelope storage is very important. Store them away from moisture and humid air, where they can lay flat and their edges won't be bent or damaged. The humidity should not exceed 70% RH.

## Duplicate

### Document Size

Original document size:

Flatbed: Max. Legal (216 mm x 356 mm)

ADF: 100 mm x 178 mm-Legal

Duplicate paper size: A4, Letter, Legal

### Original Image Type

Color: Printed Photo Mode, Glossy Photo Mode

Mono: Text Mode, Halftone / Photo Mode

**Duplicate Speed** (Standard 300 x 300, Standard memory, Letter size paper)

Continuous (Same original): 3.5 ppm [4 Color (CMYK)]

4.7 ppm [3 Color (CMY)]

14 ppm (mono.)

ADF duplicate (Different original): 3.5 ppm [4 Color (CMYK)]

4.4 ppm [3 Color (CMY)]\*

13.5 ppm (mono.)

(\* Maximum 4.7 ppm with SIMM options installed)

### Multiple Duplicate

Digital Duplicator Utility: 1-999

Duplicate: 1-99

### Zoom

Digital Duplicator Utility: 20-400 (in 1% steps) XY Independent

Duplicate: 100%

### Image Editing

Area Duplicate

Color Adjustment

Negative/Positive

Mirror

Image Repeat

### Interface

SCSI-2

Synchronous transfer up to 6.7 MB/s

## Software

### Windows Version

- Windows 3.1, Windows 95, Windows NT 4.0 (Intel only)

TWAIN Scanner Driver

Printer Driver

Digital Duplicator Utility

Color Management: ICM (Windows 95 only)

### System Requirement

CPU:	More than Pentium or Pentium PRO (133 MHz or faster CPU is recommended.)
Operating System:	Windows 3.1, Windows 95 or Windows NT 4.0 (Intel only)
Memory:	16 MB or more (More than 32 MB is recommended.)
Free disk space	100 MB or more
Virtual memory:	16 MB or more (More than 32 MB is recommended.) for Windows 3.1/95 50 MB or more (More than 100 MB is recommended.) for Windows NT 4.0
Display:	Video card that can display more than 256 colors. (A video card that can display more than 32,000 colors is recommended.)
Drive:	CD-ROM drive

### Bundled Software

- Corel Photo Paint 5 & 6
- TextBridge (OCR)
- Panasonic font manager with 96 fonts

## SCSI Interface

The Panasonic DCIS SCSI interface is based on fast SCSI-2 ANSI standard.

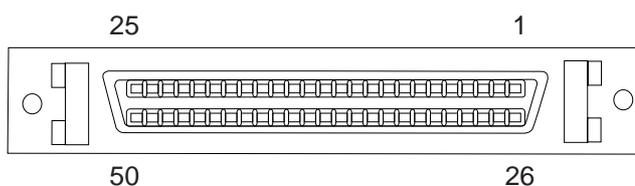
### Specifications

Connector Type	50-Pin Half Pitch Pin-type Connector
Cable	Use a shielded cable for SCSI-2 (FAST SCSI). The total length of the SCSI chain must not exceed 3 m (9.8 ft.) to ensure reliable operation.

### Pin Configuration

Signal Pin	Signal	Signal Pin	Signal
1	GND	26	-DB(0)
2	GND	27	-DB(1)
3	GND	28	-DB(2)
4	GND	29	-DB(3)
5	GND	30	-DB(4)
6	GND	31	-DB(5)
7	GND	32	-DB(6)
8	GND	33	-DB(7)
9	GND	34	-DB(P)
10	GND	35	GND
11	GND	36	GND
12	(RESERVED)	37	(RESERVED)
13	(OPEN)	38	TERMPWR
14	(RESERVED)	39	(RESERVED)
15	GND	40	GND
16	GND	41	-ATN
17	GND	42	GND
18	GND	43	-BSY
19	GND	44	-ACK
20	GND	45	-RST
21	GND	46	-MSG
22	GND	47	-SEL
23	GND	48	-C/D
24	GND	49	-REQ
25	GND	50	-I/O

### SCSI Interface Connector (Printer and Scanner side)



## Parallel Interface

The parallel interface is based on the IEEE P1284-C standard.

If your computer has a parallel port, the printer driver and printer can take advantage of faster data transfer.

### Specifications

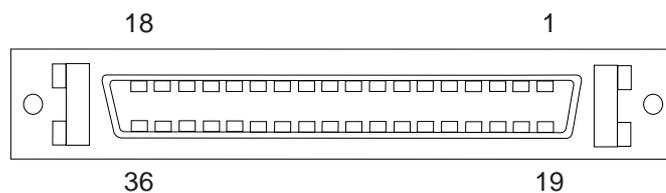
Connector Type	IEEE 1284-C type connector
Cable	Use a shielded cable 2 m (6.6 ft.) or less in length.

### Pin configuration

Signal Pin	Return side pin	Signal
1	19	Busy
2	20	Select
3	21	nAck
4	22	nFault
5	23	PError
6	24	Data 1
7	25	Data 2
8	26	Data 3
9	27	Data 4
10	28	Data 5
11	29	Data 6
12	30	Data 7

Signal Pin	Return side pin	Signal
13	31	Data 8
14	32	nInit
15	33	nStrobe
16	34	nSelectin
17	35	nAutoFd
18	—	+5V(Host)
36	—	+5V(Peripheral)

### Parallel Interface connector (printer side)



### Notes:

- "Return" denotes the return side wire of a twisted pair cable and is connected to signal ground.
- Be sure to use only a shielded cable. The printer will not operate properly if any of the pins is not connected.

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