PagePro™ 1390 MF Printer / Copier / Scanner User's Guide

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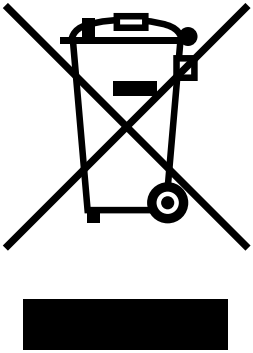

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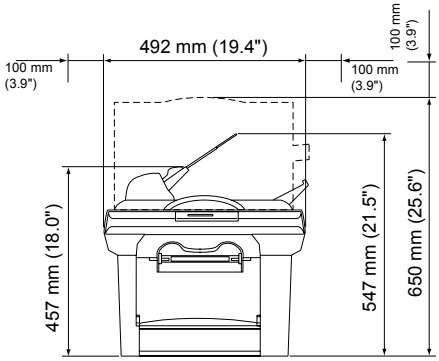
1 Introduction

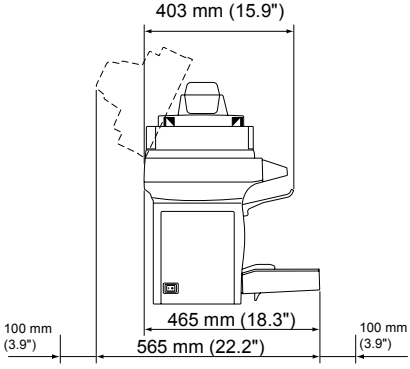
Getting Acquainted with Your Machine

Space Requirements

To ensure easy operation, consumable replacement and maintenance, adhere to the recommended space requirements detailed below.



Front View



Side View

Machine Parts

The following drawings illustrate the parts of your Machine referred to throughout this guide, so please take some time to become familiar with them.

Front View

1–Automatic document feeder (ADF) input tray

2–Paper stopper

3–Automatic document feeder (ADF) lid

4–Control panel

5–Output tray

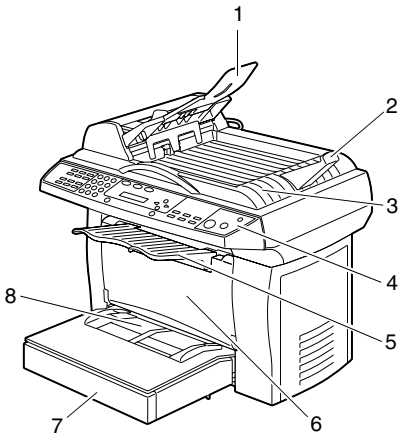
6–Front cover

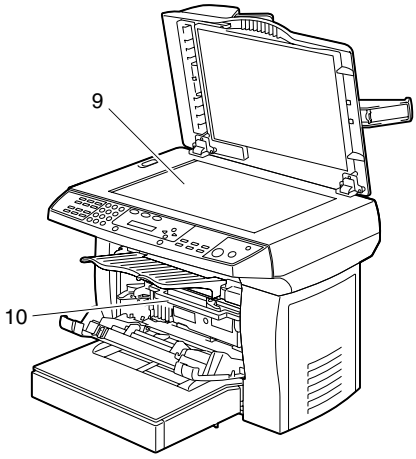
7–Media tray

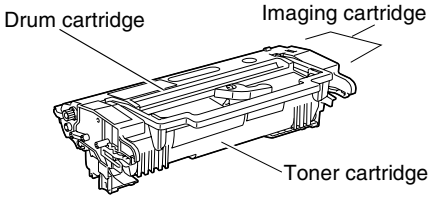
8–Manual feed tray

9–Flatbed glass

10–Imaging cartridge (Toner cartridge, Drum cartridge)







Rear View

1–ADF cover

2–Power switch

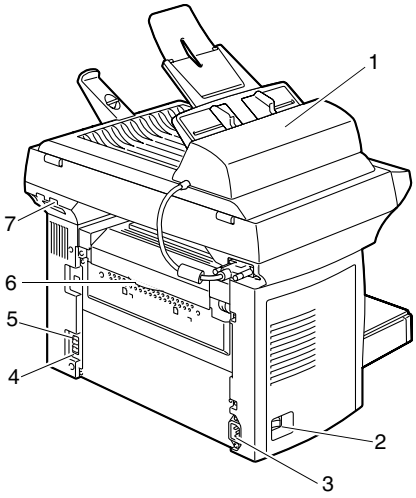
3–Power Connection

4–LINE jack

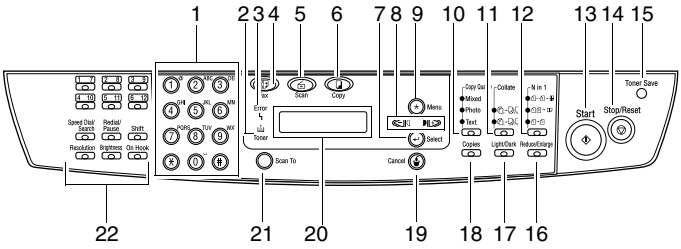
5–EXT. jack

6–Rear cover

7–USB port



About the Control Panel



No.	Part Name	Description
1	Keypad	Enters the number of copies.
2	Toner indicator	Toner cartridge warning LED. Flashes when the toner cartridge is empty or the drum needs to be replaced. Stays on when the toner has been completely consumed, a wrong toner cartridge is used, or the drum needs to be replaced.
3	Error indicator	Indicates a paper jam occurs.
4	Fax key	Enters Fax mode.
5	Scan key	Enters Scan mode.
6	Copy key	Enters Copy mode.
7	Select key	Goes to the next menu level. Selects an option.
8	Scroll keys	Display the options on the current menu level. Sets the number of copies.
9	Menu key	Enters Menu mode and displays the menus available.
10	Copy Quality key	Selects the document type mode for the current copy job.
11	Collate key	Automatically collates multiple copies into sets.

12	N in 1 key	Reduces original images to fit onto one sheet of paper. Prints 1–4 pages reduced to fit onto one sheet of paper. Prints 1–2 pages reduced to fit onto one sheet of paper. Prints 1 page on one sheet of paper.
13	Start key	Starts a copy or scan job.
14	Stop/Reset key	Exits the menu. Stops an operation at any time. In Standby mode, clears the copy options.
15	Toner Save key	Saves toner by using less toner to copy or print a document.
16	Reduce/Enlarge key	Makes a copy smaller or larger than the original document.
17	Light/Dark key	Adjusts the document brightness for the current copy job.
18	Copies key	Sets the number of copies. (Pressing the key one time increases the count by one page.)
19	Cancel key	Cancels the setting or returns to the previous menu level. Exits the menu if pressed repeatedly. Goes back to the previous menu level.
20	Message window	Displays settings and messages.
21	Scan To key	Scans the original document to a designated software program.
22	Fax Operations keys	Provides fax operations. For details, refer to the Facsimile User's Guide.

2 About the Software

Utilities and Documentation CD-ROM

Printer Drivers

Drivers	Use/Benefit
Printer Driver for Windows XP/2000	These drivers give you access to all of the printer features, including finishing and advanced layout. See also “Displaying Printer Driver Settings” on page 10.
Printer Driver for Windows Me/98SE	

Scanner Driver

Driver	Use/Benefit
TWAIN Driver for Windows XP/2000/Me/98SE	This driver enables you to set scanning functions, such as the color setting and size adjustments. For details, refer to chapter 5, “Scanner Operation.”
WIA Driver for Windows XP	This driver enables you to set scanning functions, such as the color setting and size adjustments. For details, refer to “WIA Driver Settings” on page 47.

For details on the installation of the drivers, refer to the PagePro 1390 MF Installation Guide. After the driver is installed on Windows 98, be sure to restart the computer. If the computer is not restarted, LinkMagic may not run correctly.

Utility

Utility	Use/Benefit
LinkMagic	This utility enables you to send scan data by email or immediately save the data as a file on the computer. For details, refer to chapter 7, “Using LinkMagic.”

System Requirements

- Personal computer
  Pentium 3: 450 MHz or higher
- Operating System
  Microsoft Windows XP Home Edition/Professional,
  Windows 2000, Windows Me, Windows 98SE
- Free hard disk space
  - Approximately 20 MB of free hard disk space for printer driver
  - Approximately 128 MB of free hard disk space for image processing
- RAM
  Windows XP: 128MB
  Windows 2000: 64MB
  Windows Me/98SE: 32MB
- CD-ROM/DVD drive
- I/O interface
  USB Revision 2.0 compliant port

If Windows Me or 98 SE is being used, it is recommended that a USB 1.1 cable will be used to connect the printer to the computer.

If Windows Me is being used, turn on the printer before starting up the computer since the driver or LinkMagic may not be running correctly.

Selecting Driver Defaults

Before you start working with your printer, you are advised to verify/change the default driver settings.

1 Choose the driver's properties as follows:

- (Windows XP)
  From the Windows menu bar, select **start - Printers and Faxes**.
  Right-click the **KONICA MINOLTA PagePro 1390 MF** printer icon.
  Select **Printing Preferences - Basic** tab.
- (Windows 2000)
  From the Windows menu bar, select **Start - Settings - Printers**.
  Right-click the **KONICA MINOLTA PagePro 1390 MF** printer icon.
  Select **Printing Preferences - Basic** tab.
- (Windows Me/98SE)
  From the Windows menu bar, select **Start - Settings - Printers**.
  Right-click the **KONICA MINOLTA PagePro 1390 MF** printer icon.
  Select **Properties - Printer Properties - Basic** tab.

2 Select the default settings for your printer, such as the default media size you use.
3 Click **Apply**.
4 Click **OK** to exit from the Properties dialog box.

Uninstalling the Printer Driver

This section describes how to uninstall the PagePro 1390 MF Printer Driver if necessary.

1 From the **Start** menu, choose **Programs** (Windows XP: **All Programs**), then **PagePro1390 MF**, and then **Uninstall Driver**.
2 In the dialog box, click **Yes**.
3 The PagePro 1390 MF driver will be uninstalled from your computer.

Displaying Printer Driver Settings

Windows XP

1 From the **start** menu, choose **Printers and Faxes** to display the **Printers and Faxes** directory.
2 Right-click the KONICA MINOLTA PagePro 1390 MF printer icon and choose **Printing Preferences**.
The **Basic** tab displays first.

Windows 2000/Me/98SE

1 From the **Start** menu, point to **Settings**, and then click **Printers** to display the **Printers** directory.
2 Display the printer driver settings:

- **Windows 2000**—Right-click the KONICA MINOLTA PagePro 1390 MF printer icon and choose **Printing Preferences**.
- **Windows Me/98SE**—Right-click the PagePro 1390 MF printer icon and choose **Properties**, then select **Printer Properties**.
The **Basic** tab displays first.

Using the Printer Driver

When using Windows Me/98SE, the General tab, Details tab and Sharing tab appear. Specify the necessary settings.

Common Buttons

The buttons described below appear on each tab.

OK

Click to exit the Properties dialog box, saving any changes made.

Cancel

Click to exit the Properties dialog box without saving any changes made.

Apply

Click to save all changes without exiting the Properties dialog box.

*Depending on the version of the operating system, **Apply** may not appear.*

Basic Tab

The following parameters can be set from the Basic tab.

Orientation

- “Portrait” prints across the width of the page, letter-style.
- “Landscape” prints across the length of the page, spreadsheet-style.

Copies

Allows you to set the number of copies to be printed. You can enter up to 99.

When “Collate” is selected, one complete copy of the document is printed before the next copy is printed. When “Collate” is not selected, each all copies of a single page are printed before the next page is printed.

“N to 1” allows you to print the document pages in reverse order.

Effect

The following resolution settings are available.

- 600 dpi
- 1200 × 600

“Print Density” adjusts the density level of the printer document between 1 (lighter) and 7 (darker).

“Toner Save” allows you to save toner by using less toner to print a document.

“Invert” inverts the brightness and colors of the printed image.

Paper Tab

The following parameters can be set from the Paper tab.

Paper

- “Original Size” allows you to set the size of media loaded in the media tray.
- “Media Type” allows you to choose the desired media type.

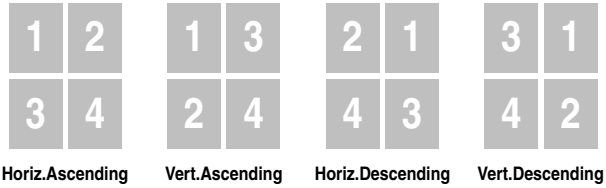
Layout Tab

The following parameters can be set from the Layout tab.

N-up

- You can select the number of document “N-up” to print on a single sheet of paper. When printing more than one page per sheet, the pages will appear decreased in size and arranged on the sheet. You can print 2, 4, or 9 pages on one sheet. From the “N-up” drop-down list, select the number of pages you want to print per sheet.
- From the “Border” drop-down list, you can select a border to print around each page on the sheet.

- From the “N-up” drop-down list, select the desired page order.



Output Paper Size

Allows you to scale the print job on a page. (25% - 400%)

Watermark Tab

The following parameters can be set from the watermark tab.

You can add a logo or text to your document as a watermark. You can use a bitmap file or text file that you have created.

1st Page Only

Select this option to put the watermark or bitmap file only on the first page.

Text Watermark

Select the text watermark to be used. Add, edit, or remove text watermark files.

Click **New/Add** to open the Watermark dialog box, allowing you to specify various settings for your watermark text.

*When using a text watermark, select **String**.*

Bitmap

From the drop-down list, select the file to be used. A bitmap file can be added or deleted.

To add a file, click **Specify**, and then select the file to be added.

*When using a bitmap, select **Image**.*

3

Control Panel and Configuration Menu

Introduction

This machine is designed to be easy to use through message window on-screen programming with the control panel keys. User-friendly programming helps you take full advantage of all the menu selections offered. The step-by-step on-screen instructions below guide you through the menu selections and programming options.

For details on the control panel, refer to “About the Control Panel” on page 5.

Menu Table

You could probably program the machine without the User’s Guide. But to better understand the menu selections and options available, you can refer to the following menu table. Default settings are in bold.

1.Common Setup	11.Language	Select the desired language.
	12.Paper Size	A4[*1] **Letter** Legal A5 B5
	13.Sleep Mode	Time: 5 min **Time: 15 min** Time: 30 min Time: 1 hr Time: 2 hr
	14.Reset OPC.	
	15.Button Sound	**On** Off
	Adjust ADF Edge	-9 mm, -8 mm, -7 mm, -6 mm, -5 mm, -4 mm, -3 mm, -2 mm, -1 mm, **0 mm**, 1 mm, 2 mm, 3 mm, 4 mm, 5 mm, 6 mm, 7 mm, 8 mm, 9 mm

2.Copy Setup	21.Def Copy Mode	**Text** Photo Mixed	
	22.Def Density	1-7 Levels (**4**)	
	23.Def Zoom	**Original(100%)** Custom(25%-400%) Fit to Paper A4 to Letter Letter to A4 Legal to Letter Legal to A4	
	24.Def Collate	**Collate:Off** Collate:On	
	25.Def TonerSave	**Toner Save: Off** Toner Save: On	
	26.Def Bg Remove	Text mode	**Bg Remove: Off** Bg Remove: On
		Mixed mode	**Bg Remove: Off** Bg Remove: On

3.Report	31.Configuration	
	32.Menu map	
	33.Usage report	
	34.Fax Act. Rept[*2]	
	35.Phone Book[*2]	

4.Fax Setup	[*2]	
5.PhoneBook	[*2]	
6.Special Fax	[*2]	

[*1] Depending on the region, the default setting is A4.

[*2] This menu is for faxing. For details on the fax functions, refer to the Facsimile User's Guide.

Entering Menu Mode

1 Press the **Menu** key to enter Menu mode. The message window displays the menus.

2 Press the scroll keys or a numeric key (1–6) to choose from the following menus: `1.Common Setup`, `2.Copy Setup`, `3.Report`, `4.Fax Setup`, `5.PhoneBook` or `6.Special Fax`.

Hold the appropriate scroll key down to navigate more quickly through each menu level.

3 Press the **Select** key to select an option when it appears on the message window. The message window displays the next menu level.

4 Press the scroll keys to view the next menu item.

5 Press the **Select** key.

When an option has been selected, the message window displays `Setting OK` on the bottom line. The current setting is always the option with a checkmark (v).

4 Using Media

Print Media

What Sizes of Media Can I Use?

Media	Media Size	
	Millimeters	**Inches**
A4	210.0 × 297.0	8.3 × 11.7
B5 (JIS)	182.0 × 257.0	7.2 × 10.1
A5	148.0 × 210.0	5.8 × 8.3
Legal	215.9 × 355.6	8.5 × 14.0
Letter	215.9 × 279.4	8.5 × 11.0
Executive	184.2 × 266.7	7.25 × 10.5
Envelope #10	104.8 × 241.3	4.125 × 9.5
Envelope C5	162.0 × 229.0	6.4 × 9.0
Envelope DL	110.0 × 220.0	4.3 × 8.7
Envelope Monarch	98.4 × 190.5	3.875 × 7.5
Japanese Postcard	100.0 × 148.0	3.9 × 5.8

Media Types

Before purchasing a large quantity of special media, do a trial print with the same media and check the print quality.

Keep media on a flat, level surface in its original wrapper until it is time to load it. For a list of approved media, refer to printer.konicaminolta.com.

Plain Paper

Capacity	**Media Tray**	Up to 250 sheets, depending on the paper weight
	Manual Feed Tray	1 sheet only
Orientation	Face up	
Driver Media Type	Plain Paper	
Weight	60 to 90 g/m² (16 to 24 lb bond)	

Use plain paper that is

- Approved for laser printing

Note

Do not use the media types listed below. These could cause poor print quality, media misfeeds, or damage to the machine.

DO NOT use media that is

- Coated with a processed surface (such as carbon paper, digitally gloss-coated media, and colored paper that has been treated)
- Carbon backed
- Unapproved iron-on transfer media (such as heat-sensitive paper, heat-pressure paper, and heat-press transfer paper)
- Cold-water-transfer paper
- Pressure sensitive
- Designed specifically for inkjet printers (such as superfine paper, glossy film, and postcards)
- Already been printed on by another printer, copier, or fax machine
- Dusty
- Wet (or damp)

Keep media between 30% and 65% relative humidity. Toner does not adhere well to moist or wet paper.

- Layered
- Adhesive
- Folded, creased, curled, embossed, warped, or wrinkled
- Perforated, three-hole punched, or torn
- Too slick, too coarse, or too textured
- Different in texture (roughness) on the front and back
- Too thin or too thick
- Stuck together with static electricity
- Composed of foil or gilt; too luminous
- Heat sensitive or cannot withstand the fusing temperature (205°C [401°F])
- Irregularly shaped (not rectangular or not cut at right angles)
- Attached with glue, tape, paper clips, staples, ribbons, hooks, or buttons
- Acidic
- Any other media that is not approved

Thick Stock

Paper thicker than 90 g/m^2 (24 lb bond) is referred to as thick stock. Test all thick stock to ensure acceptable performance and to ensure that the image does not shift.

Capacity	**Media Tray**	Up to 10 thick stock sheets, depending on their thickness
	Manual Feed Tray	1 sheet only
Orientation	Face up	
Driver Media Type	Thick Paper	
Weight	91 to 163 g/m² (25 to 43 lb bond)	

DO NOT use thick stock that is

- Mixed with any other media in the trays (as this will cause misfeeds)

Envelopes

Print on the front (address) side only. Some parts of the envelope consist of three layers of paper—the front, back, and flap. Anything printed in these layered regions may be lost or faded.

Capacity	**Media Tray**	Up to 10 envelopes, depending on their thickness
	Manual Feed Tray	1 sheet only
Orientation	Face up	
Driver Media Type	Envelope	
Weight	91 to 163 g/m² (25 to 43 lb bond)	

Use envelopes that are

- Common office envelopes with diagonal joints, sharp folds and edges, and ordinary gummed flaps

  Because the envelopes pass through heated rollers, the gummed area on the flaps may seal. Using envelopes with emulsion-based glue avoids this problem.

- Approved for laser printing
- Dry

DO NOT use envelopes that have

- Sticky flaps
- Tape seals, metal clasps, paper clips, fasteners, or peel-off strips for sealing
- Transparent windows
- Too rough of a surface
- Material that will melt, vaporize, offset, discolor, or emit dangerous fumes
- Been presealed

Postcard

Try printing on a sheet of plain paper first to check placement.

Capacity	**Media Tray**	Up to 50 postcards, depending on their thickness
	Manual Feed Tray	1 sheet only
Orientation	Face up	
Driver Media Type	Thick Paper	
Weight	60 to 163 g/m² (16 to 43 lb bond)	

Use postcards that are

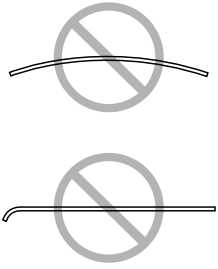
- Approved for laser printers

DO NOT use postcards that are

- Coated
- Designed for inkjet printers
- Precut or perforated
- Preprinted or multicolored

If the postcard is warped, press on the warped area before putting it in the tray.

- Folded or wrinkled



Transparencies

Do not fan transparencies before loading them. Resulting static electricity may cause printing errors.

If you touch the face of the transparencies with your bare hands, print quality may be affected.

Remove transparencies as soon as possible from the output tray to avoid static buildup.

You can print continuously with transparencies. However, this could affect the media feed, depending on the media quality, static buildup, and printing environment. If problems occur, stop the continuous printing and print one sheet at a time.

Loading a large number of transparencies at one time may cause static buildup, thus causing feeding problems.
Format the information to be printed on the transparencies within your application. Try printing your data on a sheet of plain paper first to check placement.

Capacity	**Media Tray**	Up to 5 transparencies, depending on their thickness
	Manual Feed Tray	1 sheet only
Orientation	Face up	
Driver Media Type	Transparency	

Use transparencies that are

- Approved for laser printing

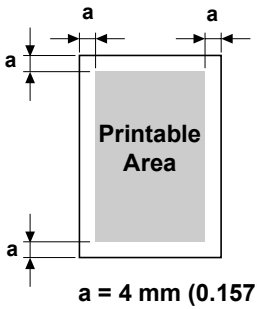
DO NOT use transparencies that

- Have static electricity that will cause them to stick together
- Are specified for inkjet printers only

What Is the Guaranteed Imageable (Printable) Area?

The printable area on all media sizes is up to 4 mm (0.157") from the edges of the media.

Each media size has a specific imageable area, the maximum area on which the machine can print clearly and without distortion.



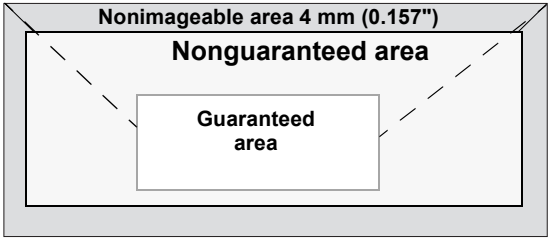
a = 4 mm (0.157")

This area is subject to both hardware limits (the physical media size and the margins required by the machine) and software constraints (the amount of memory available for the full-page frame buffer). The guaranteed imageable (printable) area for all media sizes is the page size minus 4 mm (0.157") from all edges of the media.

Imageable Area—Envelopes

Envelopes have a nonguaranteed imageable area that varies with envelope type.

The envelope print orientation is determined by your application.



Page Margins

Margins are set through your application. Some applications allow you to set custom page sizes and margins while others have only standard page sizes and margins from which to choose. If you choose a standard format, you may lose part of your image (due to imageable area constraints). If you can custom-size your page in your application, use those sizes given for the imageable area for optimum results.

Media Storage

How do I store media?

- Keep media on a flat, level surface in its original wrapper until it is time to load it.

  Media that has been stored for a long time out of its packaging may dry up too much and cause misfeeding.

- If media has been removed from its wrapper, place it in its original packaging and store in a cool, dark place on a level surface.
- Avoid moisture, excessive humidity, direct sunlight, excessive heat (above 35°C [95°F]), and dust
- Avoid leaning against other objects or placing it in an upright position.

Before using stored media, do a trial print and check print quality.

Output Tray

All printed media is output to the face-down output tray. This tray has a capacity of approximately 100 sheets (A4/Letter) of 80 g/m^2 (22 lb) paper.

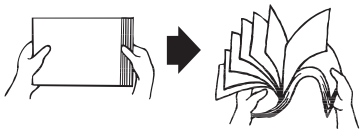
If the media is stacked too high in the output tray, your machine may experience media misfeeds, excessive media curl, or static buildup.

Remove transparencies as soon as possible from the output tray to avoid static buildup.

Loading Media

How do I load media?

Take off the top and bottom sheets of a ream of paper. Holding a stack of approximately 200 sheets at a time, fan the stack to prevent static buildup before inserting it in a tray.



Do not fan transparencies.

Note

Although this machine was designed for printing on a wide range of media types, it is not intended to print exclusively on a single media type except plain paper. Continuous printing on media other than plain paper (such as envelopes, thick stock, or transparencies) may adversely affect print quality or reduce engine life.

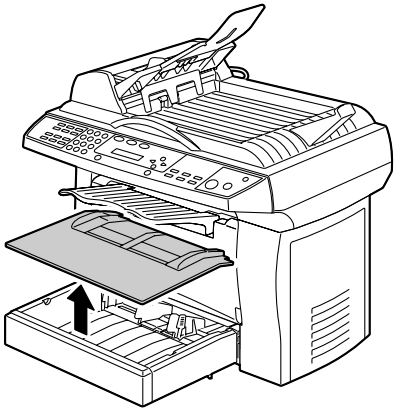
When refilling media, first remove any media remaining in the tray. Stack it with the new media, even the edges, then reload it.

Do not mix media of different types and sizes, as this will cause media misfeeds.

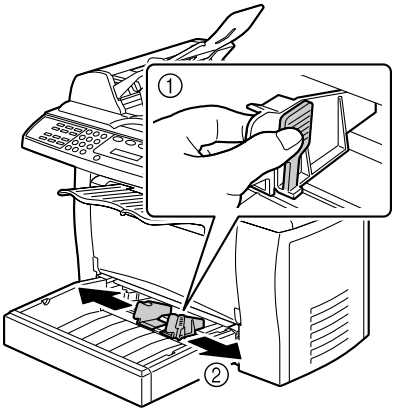
Media Tray

For details on the types and sizes of media that can be printed from media tray, refer to “Print Media” on page 20.

1 Remove the tray cover from media tray.



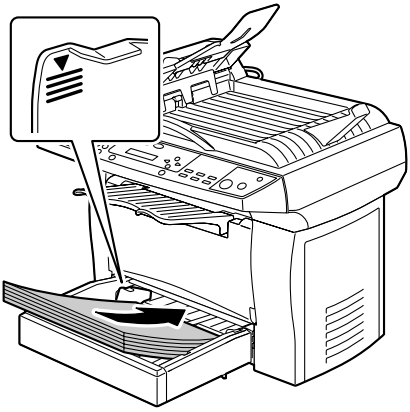
2 Squeeze the right paper guide and open the paper guides.



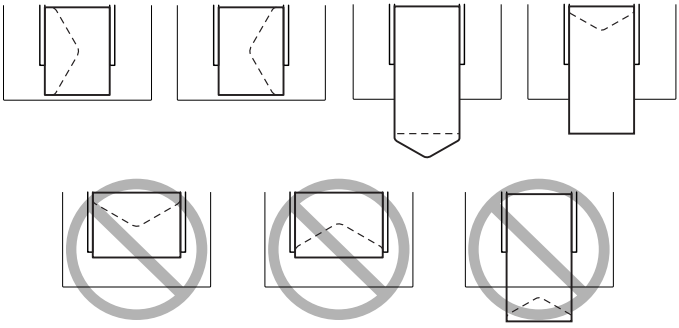
3 Load the media lengthwise in the tray with the printing side up.

If media is loaded past the media limit mark, it may not be fed correctly.

For details on the loading capacity for each type of paper, refer to "Media Types" on page 21.

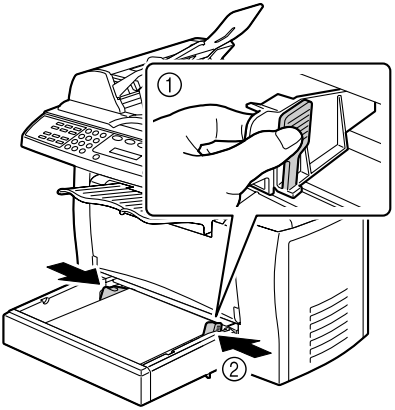


When loading envelopes, load them lengthwise with the side to be printed facing up as shown in the illustration.

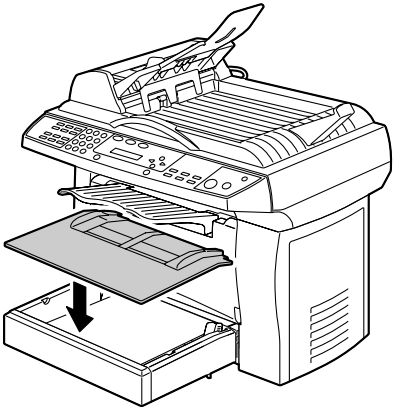


Before loading envelopes, press them down to make sure that all air is removed, and make sure that the folds of the flaps are firmly pressed, otherwise the envelopes may become wrinkled or a media misfeed may occur.

4 Squeeze the right paper guide and adjust the paper guides so that both the left and right sides of the media are secure.



5 Attach the tray cover.

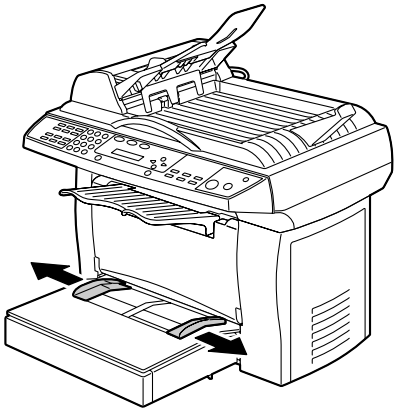


Manual Feed Tray

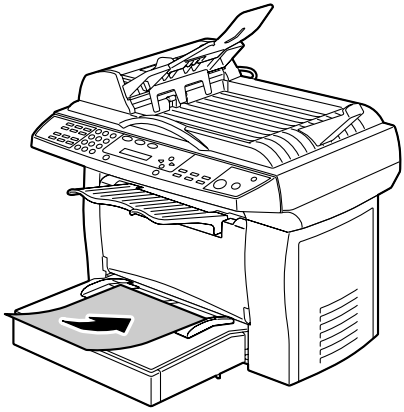
When using the manual feed tray, the sheet of paper must be fed in one at a time. If the manual feed tray runs out of paper while the machine is printing, paper is automatically supplied by the media tray.

1 Make sure that the tray cover is properly attached to media tray.

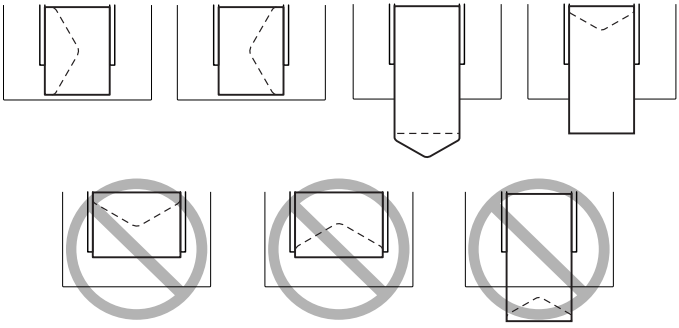
2 Open the paper guides.



3 Insert the sheet of paper as far as possible into the manual feed tray with the side to be printed on facing up, and then adjust the paper guides so that both sides of paper are secure.

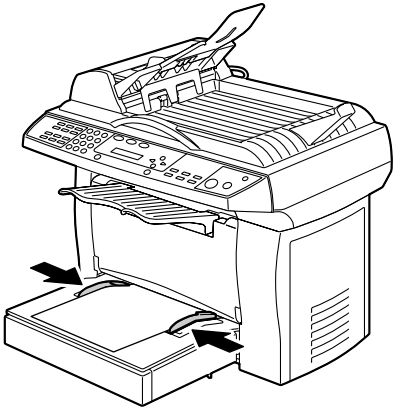


When loading envelopes, load them lengthwise with the side to be printed facing up as shown in the illustration.



Before loading envelopes, press them down to make sure that all air is removed, and make sure that the folds of the flaps are firmly pressed, otherwise the envelopes may become wrinkled or a media misfeed may occur.

4 Slide the paper guides against the left and right sides of the loaded media.



Specifying the Paper Size

This section describes the procedure for specifying the size of paper loaded in the media tray or manual feed tray.

1 Press the **Menu** key.
2 Press a scroll key until `1.Common Setup` appears on the display.
3 Press the **Select** key.
4 Press a scroll key until `12.Paper Size` appears on the display.
5 Press the **Select** key.
6 Press a scroll key, and then select the desired paper size.
7 Press the **Select** key to make the selection.

Original Media

Specifications

Documents that Can be Placed on the Flatbed Glass

The following types of documents can be placed on the flatbed glass.

Document type	Sheets or books
Maximum document size	216 mm × 297 mm (8.5" × 11.69")

Observe the following precautions when placing a document on the flatbed glass.

- Do not press down extremely hard on a book spread on the flatbed glass; otherwise, the flatbed glass may be damaged.

Documents that Can be Loaded into the ADF

The following types of documents can be loaded into the ADF.

Document paper type/ Weight	Plain paper/60 to 90 g/m^2
Maximum document size	216 mm × 356 mm (8.5" × 14")
Paper capacity	50 sheets

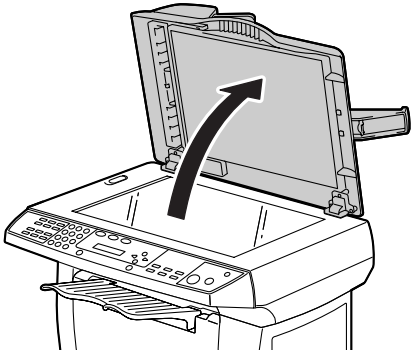
Do not load the following types of documents into the ADF.

- Documents containing pages of different sizes
- Wrinkled, folded, curled, or torn documents
- Highly translucent or transparent documents, such as overhead transparencies or diazo photosensitive paper
- Coated documents such as carbon-backed paper
- Documents printed on paper thicker than 90 g/m^2
- Documents with pages bound together with paper clips or staples
- Documents that are bound in a book or booklet
- Documents with pages bound together with glue
- Documents with pages that have had cutouts removed or are cutouts
- Label sheets
- Offset printing masters
- Documents with binder holes

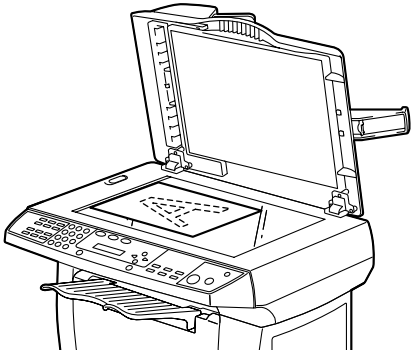
Feeding the Document

Placing a Document on the Flatbed Glass

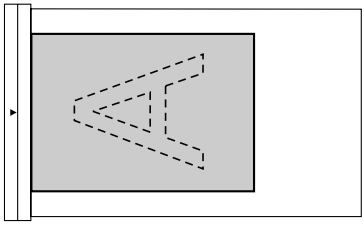
1 Open the ADF lid.



2 Place the document to be copied face down on the flatbed glass.

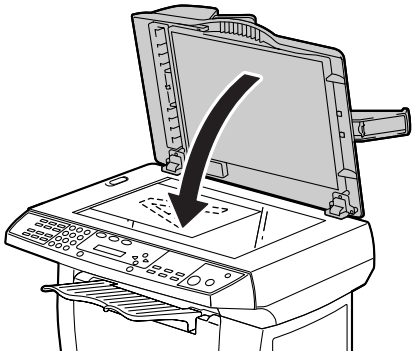


Align the center of the paper with the arrow.



3 Close the ADF lid.

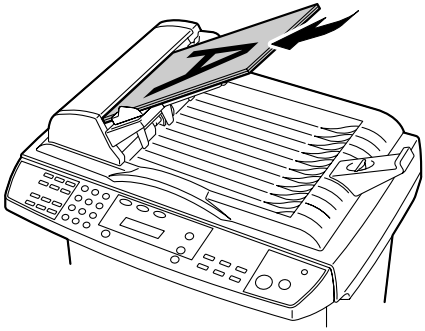
Gently close the ADF lid. Closing it too quickly may cause the document to move on the flatbed glass.



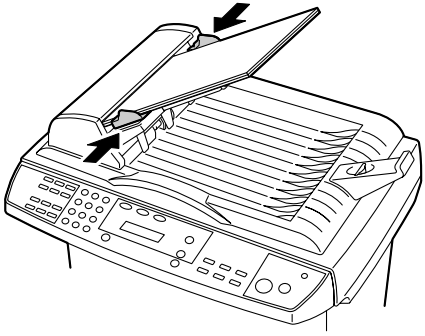
Loading a Document into the ADF

1 Place the document in the document feed tray with the side to be copied facing up.

Before loading the document into the ADF, check that no document pages remain on the flatbed glass.



2 Slide the document guides against the edges of the document.



5

Scanner Operation

Introduction

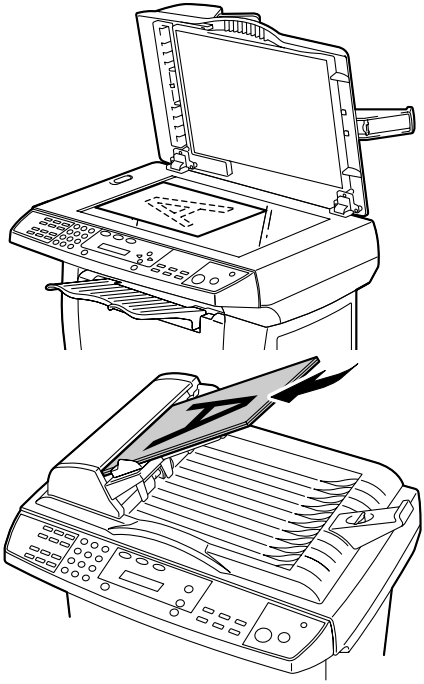
This machine allows you to scan from a TWAIN-compliant or plug-in application. Since the scanner driver is not stand-alone software, it has to be started from a TWAIN-compliant application to be able to scan and load an image to your computer. The command to start the scanner driver may vary depending on the application. To determine the correct command, refer to the user manual for the application.

User Interface Operation

1 Position the document to be scanned.

For details on positioning the document, refer to "Placing a Document on the Flatbed Glass" on page 34 and "Loading a Document into the ADF" on page 35.

If you are using the flatbed glass to scan, do not load any documents into the ADF.



2 Start the application to be used for scanning.

3 Start the scanner driver according to the application settings.

4 Specify the necessary scanner driver settings.

5 Click the **Scan** button in the scanner driver.

TWAIN Driver Settings

In the TWAIN driver, the various functions appear as icons. Descriptions of the various functions are provided below.

Scan Method

You can select how to scan from the Scan Method drop-down list.

- Flatbed: Use this setting if you are scanning one page at a time using the flatbed glass.
- Simplex/Multi-page: Use this setting if you are scanning a multi-page document using the ADF.

Selecting the Proper Image Type

Select the appropriate image type for your purpose through the scanner user interface.

The different image types are described below.

Black and White

Black and White represents the image in black and white only, without intermediate shades of gray in-between. That means each pixel of the image is either 100% black or 100% white. Black and White is the best choice of image type for scanning text or a pen or ink drawing. Since only 1 bit of black or white information is required for each ***pixel****, the disk space required for saving a line art image is only about 1/24 of that required to save a 24-bit True Color image.

* A combination of the words “picture” and “element,” a pixel is a single dot on a computer display or in a digital image.

8-Bit Gray

A single-channel image consists of at least 256 shades of gray. An 8-bit scanner produces a grayscale image with 1,024 shades of gray between pure black and pure white. Choose this option for scanning black-and-white photographs.

With 8 bits of color information per pixel, the file size of an image is eight times larger than that of a black-and-white image and 1/3 the size of a 24-bit color image.

24-Bit Color

A 24-bit color image consists of three 8-bit color channels. The red, green, and blue channels are mixed together to create a combination of one billion colors, which give a more true-to-life quality to the image. Choose “24-Bit Color” for scanning color photos.

Selecting the Proper Resolution

Good control of the resolution results in satisfactory details in the scanned image. The resolution is measured in dots per inch (dpi). Typically, the greater the dpi, the higher the resolution and image file size.

Be aware that a greater resolution requires more time, memory, and disk space. Note that above a certain dpi, the resolution does not visually improve the image, but only makes your file larger.

For your information, an A4-or Letter-sized color image scanned at 300 dpi in True Color mode consumes approximately 25 MB of disk space. A higher resolution (over 600 dpi) is recommended only when you need to scan a small area in True Color mode.

Refer to the following table to choose the proper resolution for your image, depending on the application.

Scanner Setting Application	Image Type	Resolution (dpi)
Filing, faxing, e-mailing a document	Black and White	200
Viewing, copying, editing a color picture	24-Bit Color	150
OCRing* a document	Black and White	300

* **O**ptical **C**haracter **R**ecognition: the process of converting an image to text

*If a resolution higher than 600 dpi was selected, a warning message appears. To automatically set the resolution to 300 dpi and begin scanning, click **OK**. To begin scanning with the selected resolution, click **Cancel**.*

Enhancing the Image

Brightness

Adjusts the lightness or darkness of an image. The higher the value, the brighter the image.

Contrast

Adjusts the range between the darkest and the lightest shades in the image. The higher the value, the bigger the difference in gray scales.

Invert Image

Inverts the brightness and color in the image. With color images, each pixel will be changed to its complementary color.

Mirror

Creates a mirror (or reverse) image.

Preview Auto-Area

Automatically crops the scan area of the previewed document. This then becomes the cropping area for all scanned documents until it is changed again.

Original Size

Select a size from the Paper Size list of frequently used scan sizes, including card (4 x 2.5 in), Photo (5 x 3.5 in), Photo (6 x 4 in), B5, A5, A4, Letter, or your current scan area, to perform an immediate selection of the scan size.

Units

Indicates the measuring unit in use (inch, cm, or pixel).

Descreen

Displays a drop-down list that allows you to specify the type of document you are scanning in order to eliminate the moiré pattern* commonly found in printed matter. You can specify “Newspaper,” “Magazine,” or “Catalog.”

* An undesirable pattern resulting from the incorrect screen angle of the over-printing halftone

Sharpen

Displays a drop-down list that allows you to specify a level of sharpening the scanned image. You can specify “Light,” “More,” “Heavy,” or “Extra Heavy.”

Color Adjustment

Makes the Hue / Saturation / Lightness function available.

The Advanced Settings button must be clicked in order to use the Hue / Saturation / Lightness function. (See page 44.)

Auto Level

Adds shadows to reveal more details in an image.

Advanced Settings

Displays the following six Advanced Settings buttons on the right side of the TWAIN dialog box: Highlight / Shadow Levels, Curves, Color Balance, Hue / Saturation / Lightness, Color Drop-out, and Custom Settings.

Highlight / Shadow Levels

This function is available when “8-Bit Gray,” or “24-Bit Color” is selected from the Image Type drop-down list. “H (Highlight)” refers to the lightest point in a scanned image, “S (Shadow)” to the darkest.

Clicking on the Highlight / Shadow button displays the Highlight / Shadow Levels dialog box. To specify values, you can either type them into the boxes, or you can place the mouse cursor on the line, click the right mouse button, then drag the line.

Use the Highlight / Shadow settings to extend the range of color and reveal more details in a color image.

Curves

Displays a dialog box that allows you to adjust the midtone of the image without losing details in the lightest and darkest areas.

Click **CURVE** or **LINE**, depending on whether you want a curved or an angled line. To change the curve, place the mouse cursor on the line, click the left mouse button, and then drag the line.

Color Balance

Displays a dialog box that allows you to adjust the color of the image so that it comes close to that of the original.

To adjust the image, you can either type values in the Color Levels boxes, or you can drag the color sliders.

Hue / Saturation / Lightness

Adjusts the hue, saturation, and lightness of an image. This button becomes available when the Color Adjustment button is clicked. You can type values in the boxes, or you can drag the sliders.

Hue

Specify a value in the Hue box to adjust the hue.

Note that the level of intensity of a color changes as the hue is adjusted.

Saturation

Specify a value in the Saturation box to adjust the saturation level of the color. The level of saturation indicates whether the color is pale or rich.

Lightness

Specify a value in the Lightness box to adjust the color strength.

Color Drop-out

This function is available when “Black and White”, or “8-Bit Gray” is selected from the Image Type drop-down list. Clicking on Color Drop-out displays a dialog box that allows you to remove the R (Red), G (Green), or B (Blue) color channel from the scan.

For example, if your image contains red text or a red background, choose “R Channel” (red) to remove the red text or red background.

Increasing the brightness after removing one of the color channels makes the image clearer.

Custom Settings

Displays a dialog box where you can save your scanning and configuration settings. There are two tabs: Scan Settings and Configuration Settings.

Scan Settings

The Scan Settings tab allows you to save your scanning settings in a file, load an existing file, or delete an existing file.

- Saving a Scan Settings file

  Type a name for your settings in the File Name box, and then click **Save**. Your settings are saved, and the file name appears in the list box.

- Using a Scan Settings file

  To use an existing Scan Settings file, right-click on the file name for the settings you want to use, and then click **Load**. The settings in the file are automatically specified in the scanning dialog box.

- Deleting a Scan Settings file

  To delete a file, click the file name, and then press the **Delete** key on the computer keyboard. You cannot delete the default Scan Settings file “default.av2.”

Configuration Settings

The Configuration Settings tab allows you to customize some special settings.

- Energy Saving Mode

  You can specify a time delay in the Minutes box. Click **Apply** to save the changes.

- Hint Setting

  Select “Show Hints” to have flags show the name of an item when you place the mouse cursor on an item in a dialog box. Click **Apply** to save the changes.

Width / Length / Size

- Width:

  Shows the current image width.

- Length:

  Shows the current image length.

- Size:

  Shows the current file size of the scanned image.

Lock Scale

The image that is scanned is enlarged/reduced while maintaining the height-to-width ratio.

The scale value automatically changes when you apply this option and resizes the selected area.

Information

Displays a window that gives you information about the scanner and Twain driver.

Preview

Scans the document so you can review the scanned image. This allows you to specify an area to be scanned and any scanning settings to be used for future scans. When a scan setting is changed and applied, the preview image is updated for a real-time view of the change.

You can define the area to be scanned by dragging the cursor lines with the mouse.

Zoom

Previews a selected area.

Scan

Scans the area with the specified settings.

You can define the area to be scanned by dragging the cursor lines with the mouse.

Close

Closes the dialog box.

WIA Driver Settings

Color Picture

Select this setting when scanning in color.

Grayscale Picture

Select this setting when scanning in grayscale.

Black and White Picture or Text

Select this setting when scanning in black and white.

Custom Settings

Select this setting when scanning with **Adjust the quality of the scanned picture** settings applied.

*If settings have been specified with **Adjust the quality of the scanned picture**, **Custom Setting** is automatically selected.*

Adjust the Quality of the Scanned Picture

Click this button to display the Advanced Properties dialog box. In the Advanced Properties dialog box, settings can be specified for **Brightness**, **Contrast**, **Resolution**, and **Picture type** (select from color, grayscale or monochrome).

*These settings are applied when **Custom Setting** is selected.*

Preview Window

Shows a preview of the scan.

Preview

Click to display a preview in the preview window.

Scan

Click to begin scanning.

Cancel

Click to close the WIA driver window.

6 Copying

Entering Copy Mode

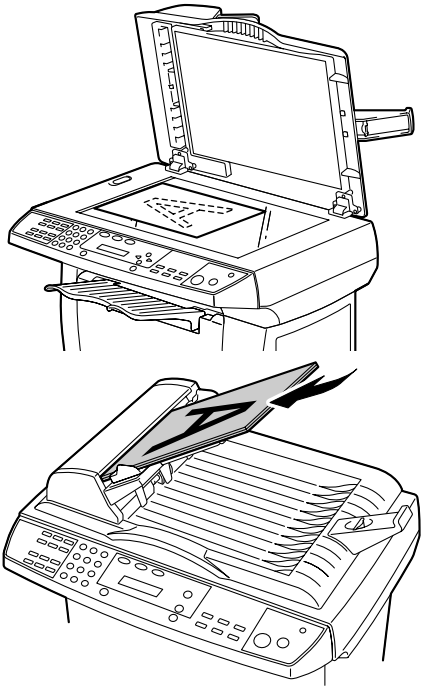
Before making copies, make sure that **Copy** key is lit in green. Otherwise, press the **Copy** key to enter Copy mode. Copy mode is the default setting.

Loading Original Documents to Copy

1 Position the document to be copied.

For details on positioning the document, refer to "Placing a Document on the Flatbed Glass" on page 34 and "Loading a Document into the ADF" on page 35.

If you are using the flatbed glass to scan, do not load any documents into the ADF.



2 Customize the copy settings by using the control panel keys. Refer to "Setting Copy Options" on page 51. To cancel settings, press the **Stop/ Reset** key.

3 Press the **Start** key to begin copying.

If multiple copies are printed with the ADF, the memory may become full and only one copy may be printed, depending on the selected copy settings. When making copies with multiple copy settings selected, such as the image type and the Collate function, copy each set individually.

Setting Copy Options

The keys on the control panel can be used for all the basic copy options. For details on the control panel, refer to “About the Control Panel” on page 5. Set the following options for the current copy job before pressing the **Start** key to make the copies.

Light/Dark

If the original document contains faint markings and dark images, you can adjust the brightness to make a copy that is easier to read.

To adjust the density:

1 Press the **Light/Dark** key.

2 Repeatedly press the **Light/Dark** key to find the desired density setting.

Copy Quality

You can improve the copy quality for your type of document.

To select the copy mode type, press the **Copy Quality** key. Each time you press the key, the LED labeled with the selected mode comes on.

You can choose from the following copy modes.

- Mixed: For documents with mixed text and graphics
- Photo: For photographs
- Text: For documents containing mostly text

Reduce/Enlarge

You can select the following enlargement or reduction ratios.

Original 100%
Custom (25-400%)
Fit To Paper
A4 ➔ Letter 94%
Letter ➔ A4 97%
Legal ➔ Letter 78%
Legal ➔ A4 83%

`Fit To Paper` calculates the ratio that fits the size of your media. A document where the image is printed to the edges of the paper can be slightly reduced so that no part of the image is cut off in the copy.

`Custom` allows you to set a ratio between 25% and 400% in 1% increments.

To Select From the Predefined Copy Sizes

1 Press the **Reduce/Enlarge** key. The default setting appears on the upper line of the display.
2 Press the **Reduce/Enlarge** key or a scroll key to find the desired size setting.
3 Press the **Select** key to make the selection.

To Fine-Tune the Size of the Copies

1 Press the **Reduce/Enlarge** key.
2 Press the **Reduce/Enlarge** key or a scroll key until `Custom xx%` appears on the upper line of the display.
3 Press the **Select** key.
4 Use the numeric keypad or the scroll keys to enter the desired copy size.
5 Press the **Select** key to make the selection.

Copies

Using the **Copies** key, you can set a number of copies from 1 to 99.

Repeatedly press the **Copies** key count until the desired number appears on the display.

OR

Enter the number of copies by using the number keypad.

OR

Use the scroll keys to find the desired setting. (Holding a scroll key pressed displays the numbers more quickly.)

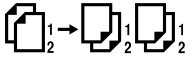
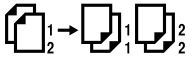
Collate

To sort multiple copies, use the ADF. Document pages are printed in the order 1-2, 1-2, and so on.

To use the Collate function, press the **Collate** key.

Each time you press the key, the LED labeled with the selected mode comes on.

You can choose from the following Collate modes.

-  : Pages will be printed in the order 1-2, 1-2, and so on.
-  : Pages will be printed in the order 1-1, 2-2, and so on.

The number of pages to be collated depends on the scan mode and the original document.

If you load the original document into the ADF, the function automatically starts scanning all the pages. If you place the document on the flatbed glass, manually perform the following operation.

1 Place the original document face down on the flatbed glass and align its center with the arrow mark on the glass.

2 Gently close the ADF lid.

3 Press the **Collate** key.

4 Select the number of copies to collate.

5 Press the **Start** key. The message window displays `Next Scan :START  Scan End : #`.

6 Place the next document page on the flatbed glass. Press the **Start** key. The message window displays `Next Scan :START  Scan End : #`.

7 Repeat the previous step to finish scanning all pages of the document.

8 Press the **#** key on the number keypad to start collating.

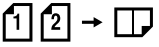
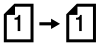
9 The machine starts printing according to the selected Collate option.

N in 1

To use the N in 1 function, press the **N in 1** key.

Each time you press the key, the LED labeled with the selected mode lights.

You can choose from the following N in 1 modes.

- : Prints 4 original images reduced to fit onto one sheet of paper.
-  : Prints 2 original images reduced to fit onto one sheet of paper.
-  : Prints 1 original image reduced to fit onto one sheet of paper.

The N in 1 function does not support the Collate or Zoom functions.

If you load the original document into the ADF, the function automatically starts scanning all the pages. If you place the document on the flatbed glass, manually perform the following operation.

1 Place the original document face down on the flatbed glass and align its center with the arrow mark on the glass.

2 Gently close the ADF lid.

3 Press the **N in 1** key to select your option.

4 Press the **Start** key. The message window displays `Next Scan :START  Scan End : #`.

5 Place the next document page on the flatbed glass. Press the **Start** key. The message window displays `Next Scan :START  Scan End : #`.

6 Repeat the previous step to finish scanning all pages of the document.

7 The machine starts printing. (If you selected `2-in-1`, the machine scans two pages, then prints out one. If you selected `4-in-1`, the machine scans four pages, then prints out one.)

To Quit the N in 1 Function

Suppose you selected `2-in-1` and want to quit the N in 1 function after scanning the first of two document pages.

1. Place the original document face down on the flatbed glass and align its center with the arrow mark on the glass.
2. Press the **N in 1** key to select `2-in-1`.
3. Press the **Start** key. The message window displays `Next Scan :START  Scan End : #`.
4. Press the **#** key on the number keypad to quit the N in 1 function. The machine prints the first document page.

Toner Save

You can conserve toner using this function. When you turn on Toner Save, print appears somewhat lighter. The default setting is off.

Each time you press the **Toner Save** key on the control panel to turn on the function, the LED labeled “Toner Save” comes on.

If you press the **Toner Save** key on the control panel again to turn off the function, the LED labeled “Toner Save” goes off.

Changing the Default Menu Settings

The copy options, including Density, Copy Mode, Zoom and Collate, can be set to the most frequently used ones. When you copy a document, the default settings are used, unless they are changed by using the corresponding keys on the control panel.

To Update the Default Copy Mode Setting

1. Press the **Menu** key.
2. Press a scroll key until `2.Copy Setup` appears on the display.
3. Press the **Select** key.
4. Press a scroll key until `21.Def Copy Mode` appears on the display.
5. Press the **Select** key.
6. Press a scroll key to select the desired Copy Mode item.
7. Press the **Select** key to make the selection.

To Update the Default Density Setting

1 Press the **Menu** key.
2 Press a scroll key until `2.Copy Setup` appears on the display.
3 Press the **Select** key.
4 Press a scroll key until `22.Def Density` appears on the display.
5 Press the **Select** key.
6 Press a scroll key to select the desired Density level.
7 Press the **Select** key to make the selection.

To Update the Default Zoom Setting

1 Press the **Menu** key.
2 Press a scroll key until `2.Copy Setup` appears on the display.
3 Press the **Select** key.
4 Press a scroll key until `23.Def Zoom` appears on the display.
5 Press the **Select** key.
6 Press a scroll key to select the desired Zoom item.
7 Press the **Select** key to make the selection.

To Update the Default Collate Setting

1 Press the **Menu** key.
2 Press a scroll key until `2.Copy Setup` appears on the display.
3 Press the **Select** key.
4 Press a scroll key until `24.Def Collate` appears on the display.
5 Press the **Select** key.
6 Press a scroll key to turn on or off the Collate function.
7 Press the **Select** key to make the selection.

7

Using LinkMagic

Introduction

LinkMagic is a software utility that provides easy access to the most frequently used scanning applications. Using LinkMagic eliminates the need to manually launch the specific applications and allows you to scan a document directly to a folder on your computer. LinkMagic provides the following four categories of operation:

- "MFP button setting" section: Configure the **Scan To** key on the control panel.
- "Copy Function" section: Specify 1-to-1, 2-to-1, or 4-to-1 copying.
- "Scan Function" section: Scan directly to email or a file. User-defined buttons allow you to configure a button to meet your own application requirements.
- Fax Phonebook: Edit the fax phone book. For details, refer to the Facsimile User's Guide.

*To cancel copy or scan jobs sent from LinkMagic, press the **Esc** key on the computer's keyboard. Pressing the **Cancel** key on the control panel to cancel the job may take too long to process.*

Starting LinkMagic

From the **Start** menu, choose **Programs** (Windows XP: **All Programs**), then **PagePro 1390 MF**, and then **LINKMAGIC**.

The LinkMagic window appears.

"MFP Button Setting" Section

Configure the **Scan To** key in this section to your specific requirements.

Click **Scan to** to display the Edit Application List dialog box.

Edit

The Edit button allows you to change an application or its properties in the list. Click one of the applications in the list, and then click on Edit to display the Preferences dialog box.

Program Path

Click **Browse** to select the path where your application's executable file is located on your computer.

Program Name

Your application's original name is shown here.

Program Name on MFP LCD

Enter a name for the application which will appear on the PagePro 1390 MF's message window.

Scan

Set all other preferred scanner settings, including Original Image Type, Original Size, Resolution, Brightness, and Contrast.

File Format

From the File Format drop-down list, you can choose to save the scan as a PDF, BMP, TIFF, or JPEG file.

Depending on the original image type setting selected for Scanner Setting, the formats that can be selected may be different.

The formats in which files can be saved differ depending on the application.

File Path

Click **Browse** to choose a folder/directory where the scanned file will be saved.

New Application

The New Application button allows you to add another application to the Edit Application list and edit its properties.

After a new application has been installed and the computer has been restarted, the application is automatically registered in the Edit Application list.

Delete

The Delete button allows you to delete an application item from the Edit Application list. Click one of the applications in the list, and then click on Delete to delete the application.

OK

This button saves your updated settings.

Using the Scan To Key on the Control Panel To Scan

1 Place the original face up in the ADF or face down on the flatbed glass.

2 Press the **Scan To** key on the control panel.

3 Press the scroll keys to select an application in the display on the control panel.

4 Press the **Select** key to confirm the selected application.

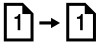
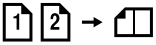
5 Press the **Start** key to start the scanning process.

“Copy Function” Section

The three copy buttons in the “Copy Function” section of the LinkMagic window can be customized to perform the N in1 function if you load documents in the ADF.

Follow the directions below to choose one of the three copy buttons.

*Do not press the **Start** key on the machine while copying; otherwise, decreased image quality may result.*

-  : Prints 1 original image on one sheet of paper.
-  : Prints 2 original images reduced to fit onto one sheet of paper.
- : Prints 4 original images reduced to fit onto one sheet of paper.

To configure one of the three copy buttons, right-click it, and then click **Configuration**. The Copy dialog box for the button appears.

2-to-1 and 4-to-1 copying is not possible with LinkMagic from the flatbed glass. Use the PagePro 1390 MF control panel to print 2-to-1 and 4-to-1 copies from the flatbed glass.

Copy Setting

Copies

Selects the number of copies.

Scale

Increases or decreases copy scaling.

Printer

Check that KONICA MINOLTA PagePro 1390 MF appears in the drop-down list.

Collate

Enables the Collate function.

If the Collate function is selected, a maximum of 10 document pages can be loaded into the ADF when the resolution is set to 600 dpi.

OK

This button saves your updated settings.

Scanner Setting

By clicking the arrow beside the drop-down list, you can choose from the following image types.

- Text
- Photo
- Mixed

If the content of the original document contains only photo images or photo images with a little text, select “Photo” to get a photo-concentrated image copy. Select “Text” to get a text-concentrated copy. However, if the proportion of photo images to text is almost the same in the original document, it is recommended that you select “Mixed” in order to get an optimal printout with mixed photo and text.

Advanced Setting can be specified for each image type (Text, Photo, and Mixed).

Advanced Setting

Use the Preferences dialog box to adjust all other preferred scan settings, including Scan Size, Resolution, Brightness, and Contrast.

“Scan Function” Section

Scan To Email

The “Scan to email” button allows you to scan a page or document directly into the email application Outlook Express as a standard attachment.

To scan your originals to the email application, click the “Scan to email” button in the LinkMagic window.

If the Outlook Express application does not open, try launching it before clicking the “Scan to email” button.

Scan To File

The “Scan to file” button allows you to scan an image and save it to any directory on your hard disk. This lets you easily archive your paper documents.

To scan original documents to a file, click the “Scan to file” button in the LinkMagic window.

“User Define” Buttons

There are up to three user-defined buttons in the LinkMagic window. You can set your own preferences and configuration to fit applications of your choice.

To configure a “User define” button, right-click it, and then click **Configuration**.

Target Application

Select Scan To Send

The drop-down list allows you to select an application of your choice. The list contains the 6 default applications, which are commonly used scanning applications, as well as “To File” and “Email.”

OK

This button saves your updated settings.

To scan original documents to the application assigned to a “User define” button, click the appropriate “User define” button in the LinkMagic window.

8

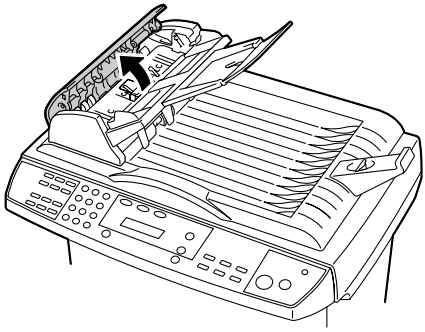
Replacing Consumables

Replacing the ADF Pad

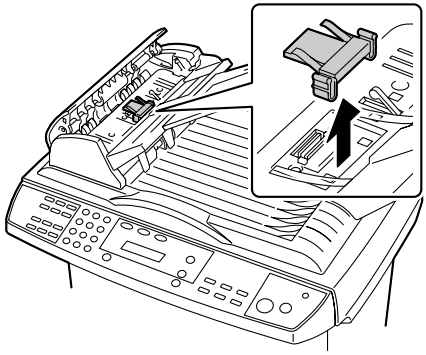
After scanning approximately 50,000 pages through the ADF, the pressure pad may be worn out and you may experience problems with document feeding. In this case, it is highly recommended that you replace the pad with a new one. Consult your nearest dealer to order an ADF pad, and follow the procedure below to replace it.

Deinstallation

1 Gently open the ADF cover.



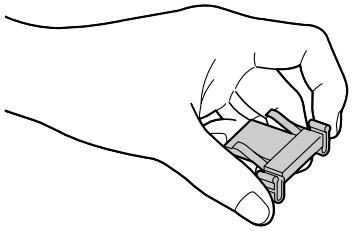
2 Press both arms of the ADF pad inwardly with your fingers and then pull out the ADF pad.



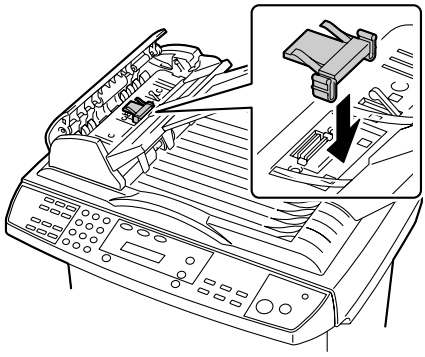
Installation

1 Remove the ADF pad from the box.

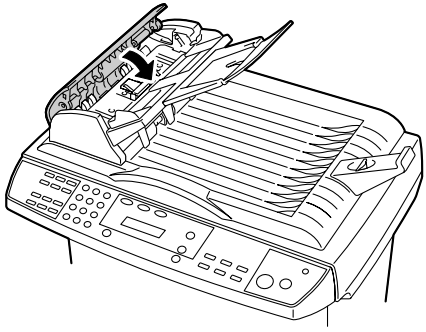
2 Press both arms of the ADF pad inwardly with your fingers.



3 Place the pad into the holes until it snaps into place.

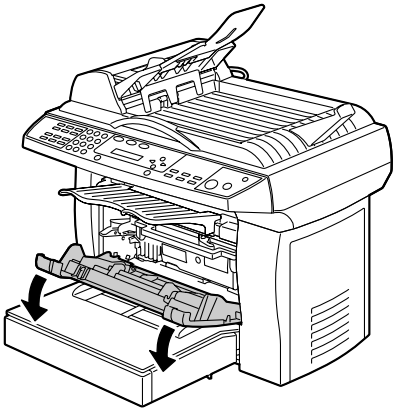


4 Close the ADF cover.

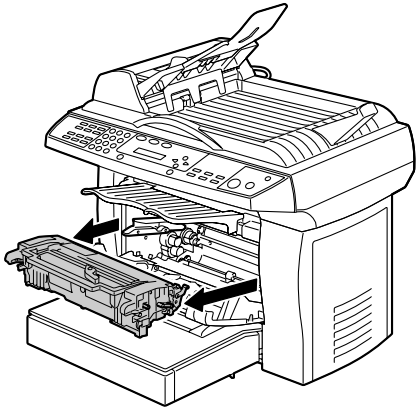


Replacing the Toner Cartridge

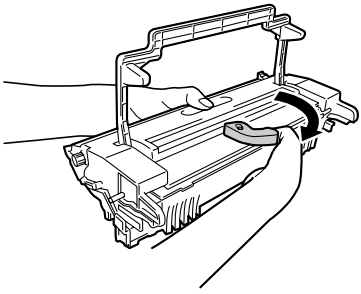
1 Open the front cover.



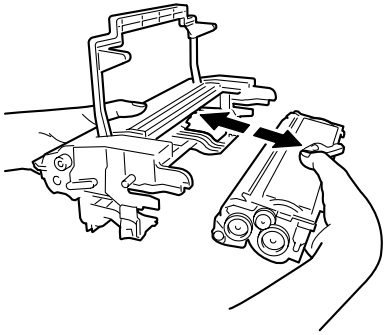
2 Remove the imaging cartridge from the machine.



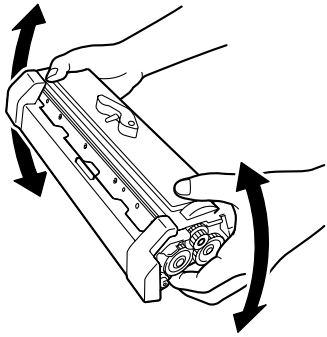
3 Move the lever on the toner cartridge in the direction of the arrow.



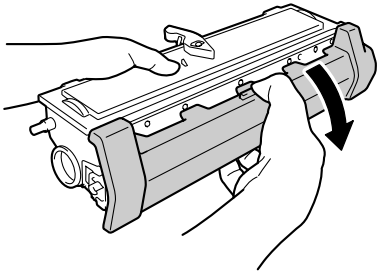
4 Release the toner cartridge as shown.



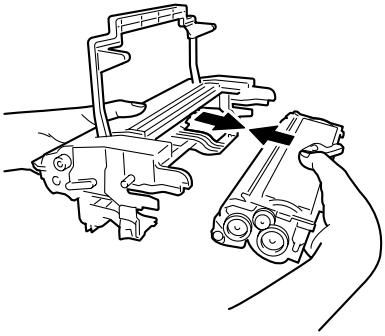
5 Gently rock the new toner cartridge from side to side several times to distribute the toner evenly inside the cartridge.



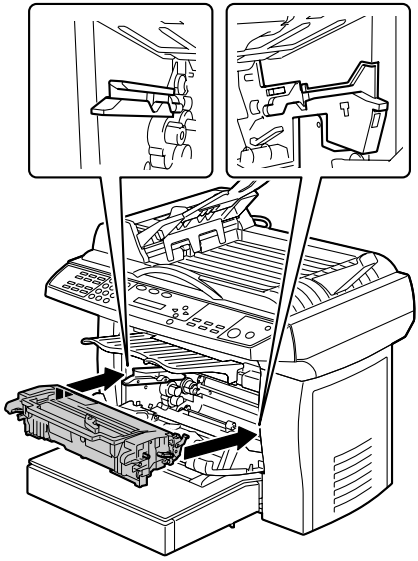
6 Remove the protective cover from the toner cartridge



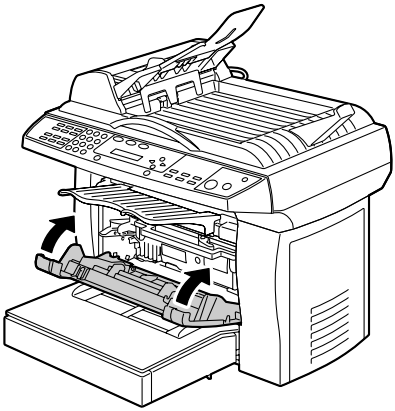
7 Insert the new toner cartridge as shown, until it clicks into place.



8 Install the imaging cartridge.

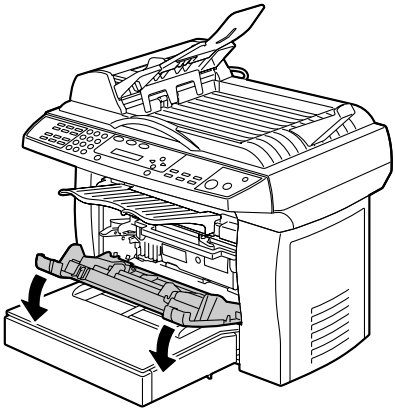


9 Close the front cover.

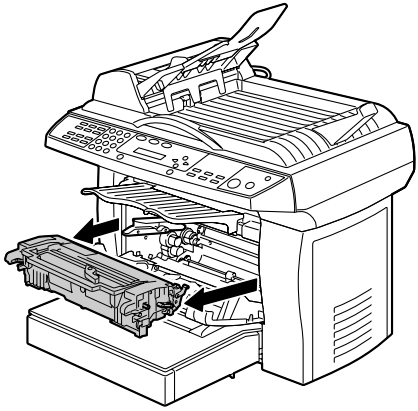


Replacing the Drum Cartridge

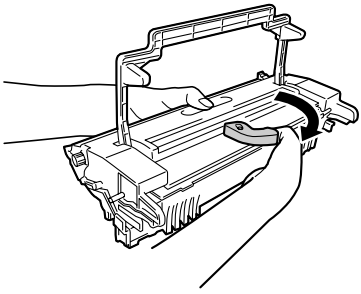
1 Open the front cover.



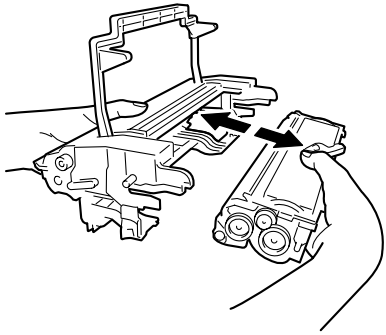
2 Remove the imaging cartridge from the machine.



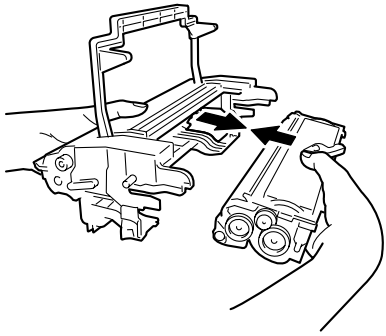
3 Move the lever on the toner cartridge in the direction of the arrow.



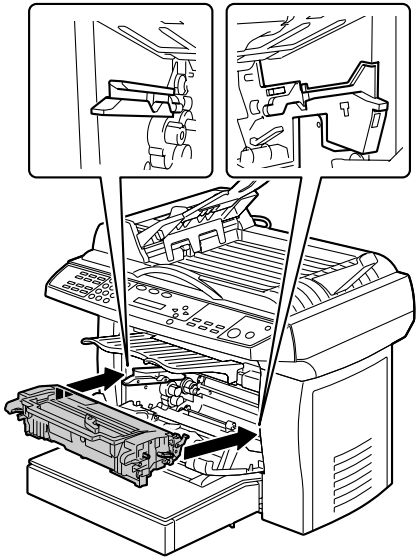
4 Release the drum cartridge as shown.



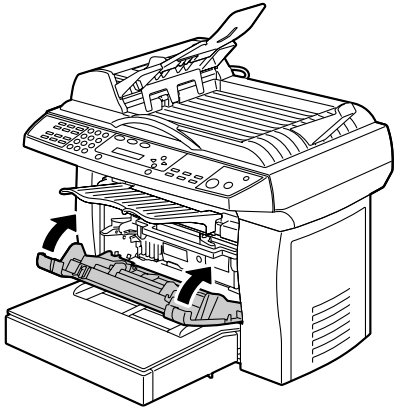
5 Insert the new drum cartridge as shown, until it clicks into place.



6 Install the imaging cartridge.



7 Close the front cover.



8 Press the **Menu** key.

9 Press a scroll key until `1.Common Setup` appears on the display, and then press the **Select** key.

10 Press a scroll key until `14.Reset OPC` appears on the display, and then press the **Select** key.

The service life counter for the drum cartridge is reset.

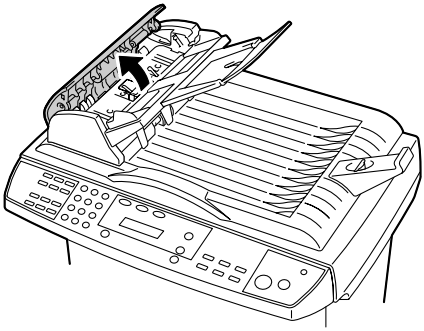
9 Maintenance

Cleaning the ADF

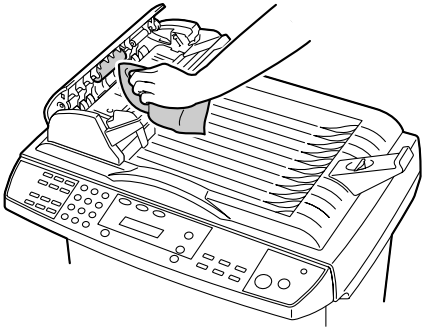
From time to time the ADF pad and feeding rollers may become contaminated with ink, toner particles, or paper dust. In this case, documents may not feed smoothly. If this occurs, follow the cleaning procedure described below.

1 Moisten a cotton swab with isopropyl alcohol (95%).

2 Gently open the ADF cover.

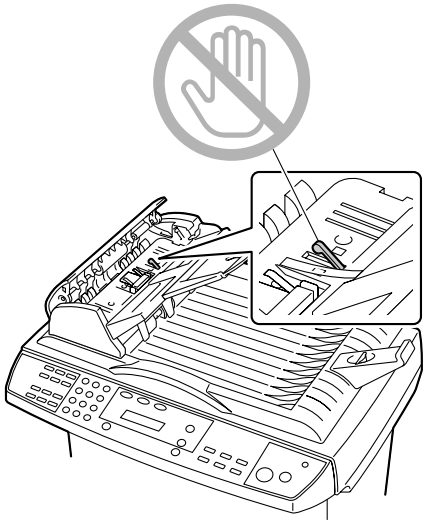


3 Wipe the feeding rollers by moving the swab from side to side. Rotate the rollers forward with your finger and repeat the above cleaning procedure until the rollers are clean.



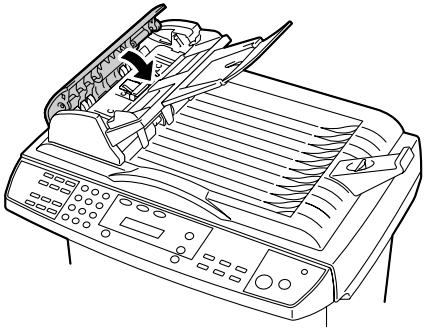
Note

Be careful not to snag or damage the pick springs.



4 Wipe the pad from top to bottom. Be careful not to snag the pick springs.

5 Close the ADF cover.

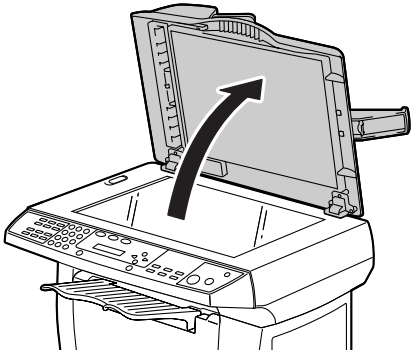


Cleaning the Flatbed Glass

The machine is designed to be almost maintenance-free. However, it still needs to be cleaned occasionally to ensure optimum image quality and performance.

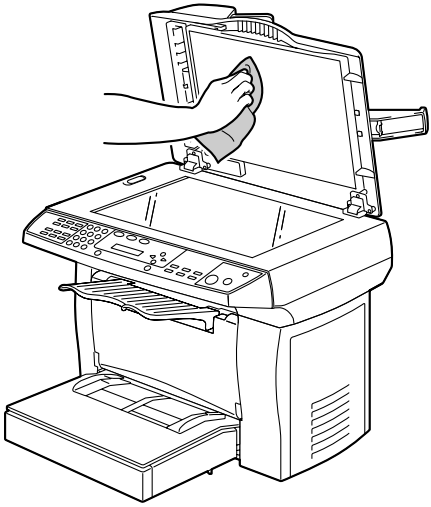
To clean the flatbed glass:

1 Open the ADF lid.

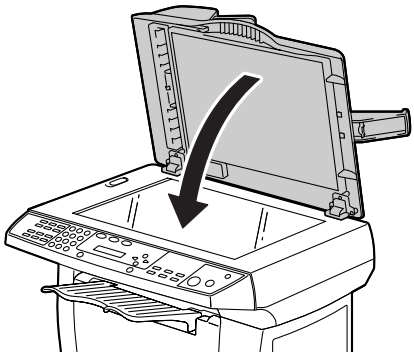


2 Moisten a soft clean cloth with isopropyl alcohol (95%).

3 Gently wipe the flatbed glass and the white sheet under the ADF lid to remove dust or toner particles.



4 Close the ADF lid.



Adjusting the image position

The print image may not be straight when the ADF is used to scan the document.

If the image is not straight, follow the procedure described below to adjust the image position.

1 Press the **Menu** key.

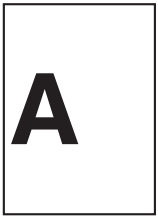
2 Press a scroll key until `1.Common Setup` appears on the display.

3 Press the **Select** key.

4 Press a scroll key until `Adjust ADF Edge` appears on the display.

5 Press the **Select** key.

6 Refer to the following table for the necessary adjustment direction.

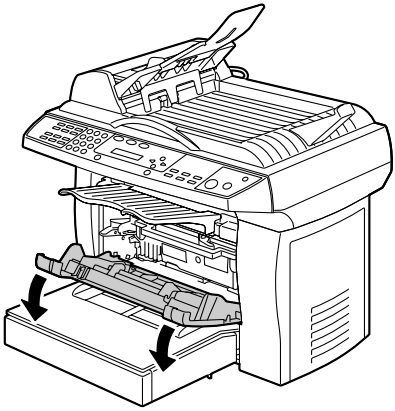
Result	Adjustment Direction (-9 ~ +9 mm)
	When the image is located too far to the right, adjust its position in the + (plus) direction.
	When the image is located too far to the left, adjust its position in the - (minus) direction.

10 Troubleshooting

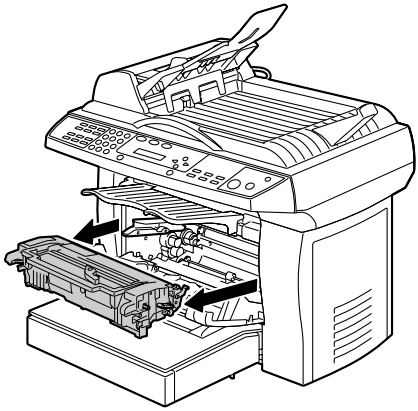
Media Misfeeds

Clearing a Media Misfeed

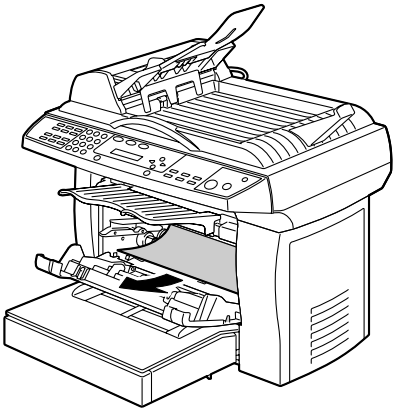
1 Open the front cover.



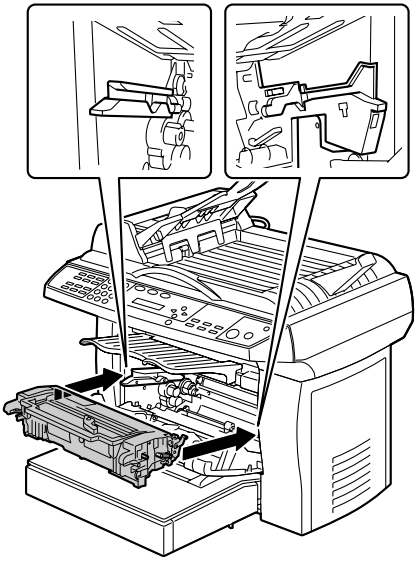
2 Remove the imaging cartridge.



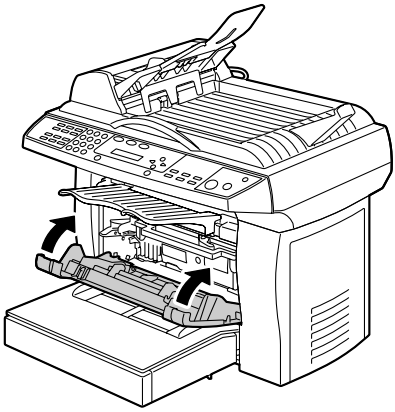
3 Remove the jammed media.



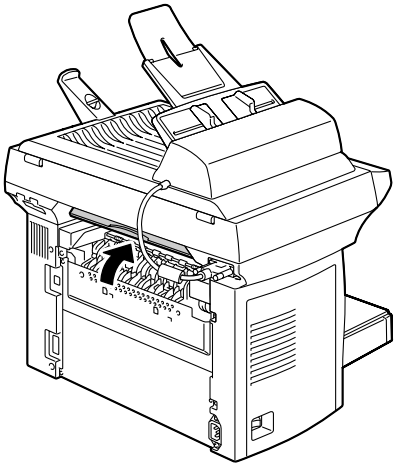
4 Reinsert the imaging cartridge.



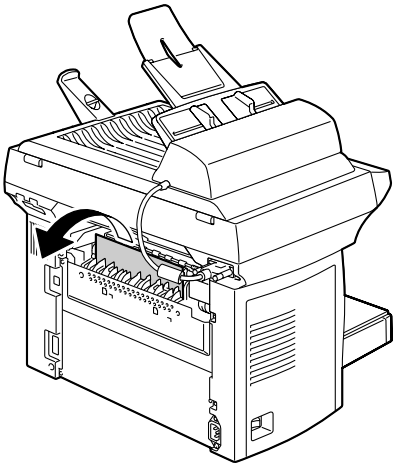
5 Close the front cover.



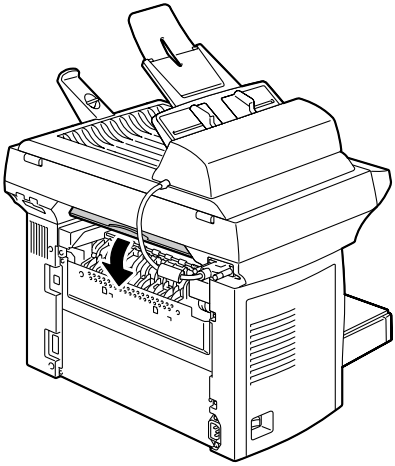
6 Gently open the rear cover.



7 Pull out any jammed media.

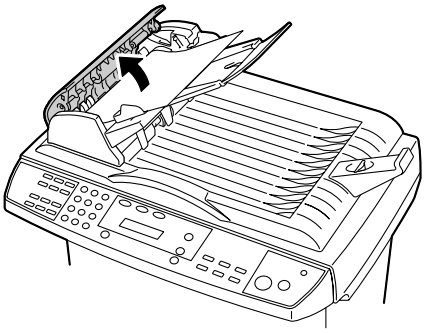


8 Close the rear cover.

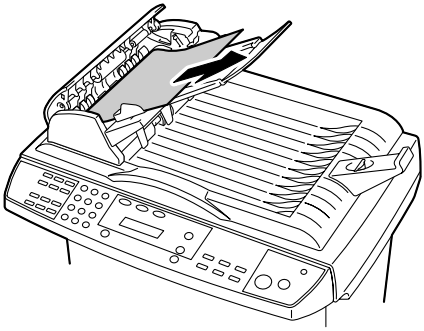


Clearing a Media Misfeed in the ADF

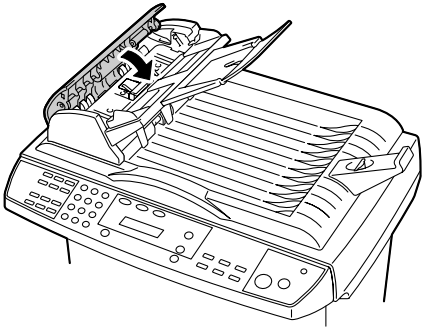
1 Gently open the ADF cover.



2 Carefully pull the jammed paper out of the ADF.



3 Close the ADF cover.



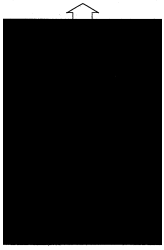
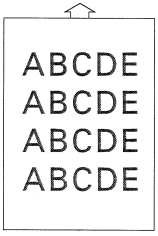
Error Messages on the Display

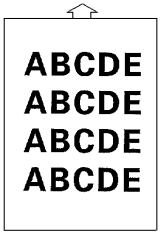
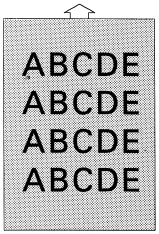
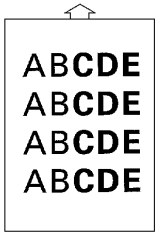
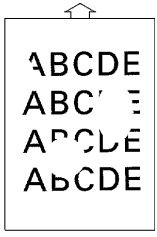
For details on the error messages concerning the fax functions, refer to the Facsimile User's Guide.

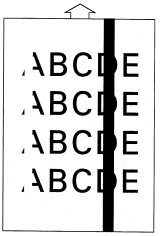
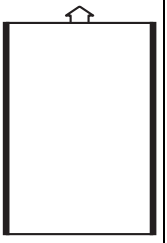
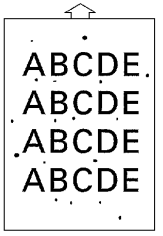
Error state	Message window line1	Message window line 2
No paper in printer	Paper Empty	PLS add paper
Front cover open for printer	Front Cover Open	PLS close cover
Rear cover open for printer	Rear Cover Open	PLS close cover
Paper Jam for printer	Open front cover	Remove the paper
Paper Mismatch for printer	Paper Mismatch	Continue: START
Service Call for printer	[PRINTER ERROR]	Service Call
Toner Low for printer	[PRINTER ERROR]	Toner Low
Toner Empty for printer	PLS replace a	new Toner
Out of memory for printer	Mem Low. 1 Copy	Press Stop/Reset
Chassis locked for scanner	Unlock scanner	Continue: START
ADF paper jam for scanner	Open ADF cover	Remove the paper
Lamp Error for scanner	[SCANNER ERROR]	Lamp Error
AFE R/W Error for scanner.	[SCANNER ERROR]	AFE R/W Error
Home sensor for scanner	[SCANNER ERROR]	Home Sensor
NVRAM for scanner	[SCANNER ERROR]	NVRAM R/W Fail
Motor stall for scanner	[SCANNER ERROR]	Motor Stall
Incorrect toner	[PRINTER ERROR]	Incorrect Toner

If you are using an NEC USB2.0 on-board or add-on card, you need to update the driver to Microsoft release version 5.1.2600 or later.

Solving Problems-Printing Quality

Symptom	Cause	Solution
Blank page	The toner cartridge may be defective.	Remove the toner cartridge and check it for damage. Replace the toner cartridge, if necessary.
Black page 	The toner cartridge may be defective.	Remove the toner cartridge and check it for damage. Replace the toner cartridge, if necessary.
	Your machine may require servicing.	Refer to the General Information Guide to contact your local vendor.
Print too light 	The toner cartridge may running out of toner.	Remove the toner cartridge and shake it left and right a few times to distribute remaining toner. If the problem persists, replace the toner cartridge.
	The toner cartridge may be defective.	Remove the toner cartridge and check it for damage. Replace the toner cartridge, if necessary.

Symptom	Cause	Solution
Print too dark 	The toner cartridge may be defective.	Remove the toner cartridge and check it for damage. Replace the toner cartridge, if necessary.
Blurred background 	The toner cartridge may be defective.	Remove the toner cartridge and check it for damage. Replace the toner cartridge, if necessary.
Uneven print density 	The toner may be unevenly distributed inside the toner cartridge.	Remove the toner cartridge and shake it left and right a few times to distribute the remaining toner.
	The toner cartridge may be defective.	Remove the toner cartridge and check it for damage. Replace the toner cartridge, if necessary.
	The image transfer roller may be defective.	Contact your local vendor.
Irregularities 	The media may have absorbed some moisture due to high humidity or because of direct contact with water.	Since toner will not adhere well to wet media, replace the media you are using with dry media and try printing again.

Symptom	Cause	Solution
White or black lines 	The toner cartridge may be defective.	Remove the toner cartridge and check it for damage. Replace the toner cartridge, if necessary.
Dark lines on the edges. 	The transfer roller is dirty.	Contact your local vendor.
Toner smudges 	The toner may be unevenly distributed inside the toner cartridge.	Remove the toner cartridge and shake it left and right a few times to distribute remaining toner.
	The toner cartridge may be defective.	Remove the toner cartridge and check it for damage. Replace the toner cartridge, if necessary.
	Smudges on the media indicate a dirty feed roller.	Contact your local vendor.

Symptom	Cause	Solution
There is insufficient fusing or the image comes off when rubbed. 	The media is moist from humidity.	Remove the moist media and replace it with new, dry media.
	Media with specifications not covered by the machine warranty is being used.	Use media that is covered by the machine warranty.

Appendix A

Specifications

For details on the fax functions, refer to the Facsimile User's Guide.

Print system	B/W Laser (NC-L701 engine)
Type	Desktop Page Printer
Method	Image Writing: Laser diode, Polygon mirror
	Developing: Electro Photographic Printing System
Power Supply	220 to 240 V, 50 to 60 Hz +/–3 Hz
	110 to 120 V, 50 to 60 Hz +/–3 Hz
Power Consumption	Operating: 900 W
	Standby: 80 W
	Power Saving: 15 W
Current Consumption	220 to 240 V, 4.5 A
	110 to 120 V, 7.2 A
Acoustic Noise	Operating: 55 db
	Standby: No Acoustic Noise
Weight	14.2 kg (31.3 lb)
External dimensions	Height: 547 mm (21.5")
	Width: 492 mm (14.7")
	Depth: 465 mm (18.6")

■ Copier Function

Copy Speed	20 cpm (Letter)
Scan Resolution	1200 dpi
Copy Resolution	600 dpi
First Copy Time	18 sec for Flatbed copy 19 sec for ADF copy
Warm Up Time	60 sec.
Input Capacity	250 sheets
Output Capacity	100 sheets
Max. Original Size (Flatbed Glass)	216 mm × 297 mm (8.5" × 11.69")

Max. Original Size (ADF)	216 mm × 356 mm (8.5" × 14")
Std. System Memory	48 MB SDRAM
ADF	50 sheets
Image Mode Selection	Mixed, Text, Photo
Zoom Range	25% to 400%
1 to 1 Speed (Flatbed Glass)	18 cpm (Letter)
2 in 1	Yes
Quantity Selector	1 to 99
Copy Size	A4, A5, B5, Letter, Legal
Halftones	64 levels
Copy Settings	Def Copy Mode, Def Density, Def Zoom, Def Collation, Def TonerSave

■ Printer Function

Print Speed (continuation print)	21 ppm (Letter), 20 ppm (A4)
First Print Time	14 sec. (Letter)
Resolution	Up to 1200 × 600 dpi
PDL	GDI language
Operating System	Windows XP/2000/Me/98SE
Interface	USB 2.0 Hi-Speed

■ Scan Function

Reading method	CCD image sensor
Scan Speed A4	4 ppm
Scan Resolution	Up to 1200dpi
Input A/D	16 bits
Output A/D	8 bits
Image Data Type (Color)	Raw data (Image type depending on AP)
Image Data Type (Mono)	Raw data (Image type depending on AP)
Interface	USB 2.0 Hi-Speed
Max Document Size (Flatbed Glass)	216 mm × 297 mm (8.5" × 11.69")
Max Document Size (ADF)	216 mm × 356 mm (8.5" × 14")

Bit Depth	16/48 bits
Scanning Element	CCD image sensor
Color Depth	24-bit
Levels of greyscale	256
Scanner Driver Support OS	Windows XP/2000/Me/98SE

■ Function with the ADF

Speed	1 to 1 Speed (Mono): 18 cpm
Original Set position	Center position
Original size	216 mm × 356 mm (8.5" × 14")
Paper set	Sort (Collate): Yes 2 in 1 :Yes 4 in 1 :Yes

Consumable Life Expectancy Chart

Item	Average Life Expectancy (in Simplex Pages)
Toner Cartridge	Starter Cartridge: Average Cartridge Yield 1,500 standard pages. Replacement Standard Capacity Cartridge: Average Cartridge Yield 3,000 standard pages. Replacement High Capacity Cartridge: Average Cartridge Yield 6,000 standard pages. Declared yield value in accordance with ISO/IEC 19752 *The toner cartridge life will be shorter when using intermittent printing.*
Drum cartridge	20,000 continuous printing *The drum cartridge life will be shorter when using intermittent printing.*

Our Concern for Environmental Protection

As an ENERGY STAR® Partner, we have determined that this machine meets the ENERGY STAR Guidelines for energy efficiency.

What is an ENERGY STAR product?

An ENERGY STAR product has a special feature that allows it to automatically switch to a “low-power mode” after a period of inactivity. An ENERGY STAR product uses energy more efficiently, saves you money on utility bills and helps protect the environment.

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