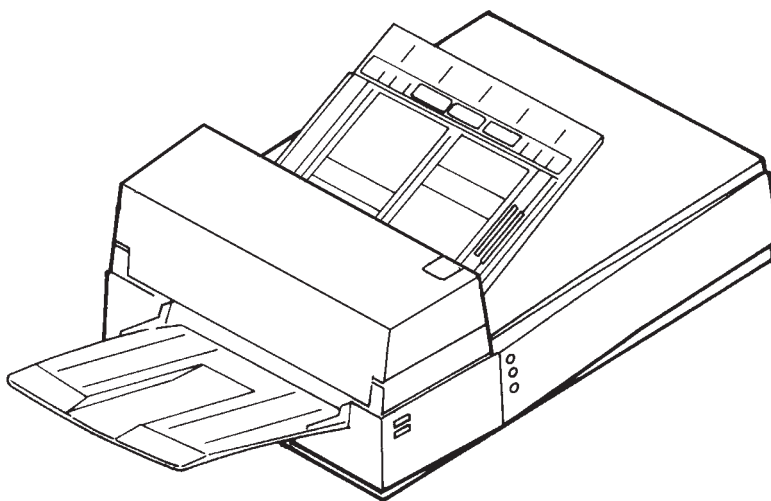

M3093DE AND M3093DG IMAGE SCANNER OPERATOR'S GUIDE



8P

M3093DE AND M3093DG IMAGE SCANNER OPERATOR'S GUIDE

C150-E062-04EN

7.5P

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7P

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C150-E062-04EN

REVISION RECORD		
Edition	Date published	Revised contents
01	June, 1996	First edition
02	September, 1996	Error revised
03	November, 1996	Resolution and Zooming function added. Troubleshooting and APPENDIX revised.
04	August, 1997	Section 2.4 revised
Specification No.: C150-E062-04EN		

This digital apparatus does not exceed the Class A limit for radio noise emissions from digital apparatus set out in the Radio interference Regulations of the Canadian Department of Communications.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la classe A prescrites dans le Règlement sur le brouillage radioélectrique édicté par le ministère des Communications du Canada.

Maschinenlärminformationsverordnung 3. GSGV, 18.01.1991: Der arbeitsplatzbezogene Schalldruckpegel beträgt 70 dB(A) oder weniger gemäß ISO 7779.

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

The contents of this manual is subject to change without prior notice.

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Conventions

Special information, such as warnings, cautions are indicated as follows:

WARNING

A WARNING indicates that personal injury may result if you do not follow a procedure correctly.

CAUTION

A CAUTION indicates that damage to the scanner may result if you do not follow a procedure correctly.

NOTICE

A NOTICE provides "how-to" tips or suggestions to help you perform a procedure correctly. NOTES are particularly useful for first-time users.

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CHAPTER 1 PREFACE

This manual describes how to operate the M3093DE and M3093DG image scanners. This image scanner can optically read image information from both sides of the documents and output the information to the host system. The differences between the M3093DE and the M3093DG image scanners are listed in table 1.1.

Table 1.1 The differences between the M3093DE and the M3093DG

Model number	Interface	Shipping models	Image size	Automatic document feeder
M3093DE	RS232C + VIDEO	North America	A4 size or letter size	Yes Max. 50 pages (A4)
		Europe		
M3093DG	SCSI2	North America		
		Europe		

This manual should be read before operating the image scanner to ensure correct operation.

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CHAPTER 2 COMPONENTS

- 2.1 Checking the Components
- 2.2 Part Names and Functions
- 2.3 Indicator Functions
- 2.4 Resolution and Zooming Functions

After unpacking image scanner, confirm that all the components have been received. This section describes the components of the image scanner and their functions.

2.1 Checking the Components

These high precision components must be handled with care. Confirm that all the components shown in figure 2.1 have been received. If any component is missing, please contact your local Fujitsu sales person.

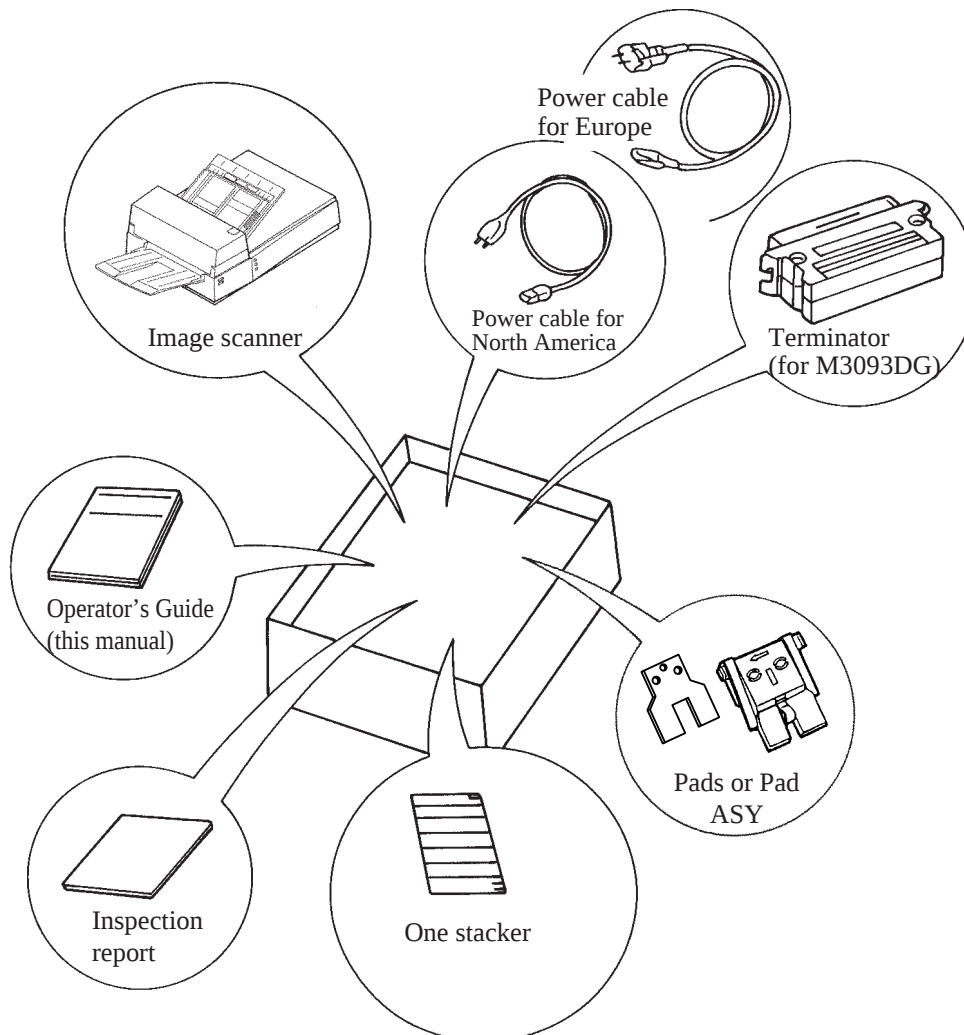


Figure 2.1 Received components

2.2 Part Names and Functions

This section shows the exterior view of image scanner. This section also provides names of each part and describes their functions.

2.2.1 Exterior view of image scanner

The image scanner can read a document of A4 or letter size at maximum.

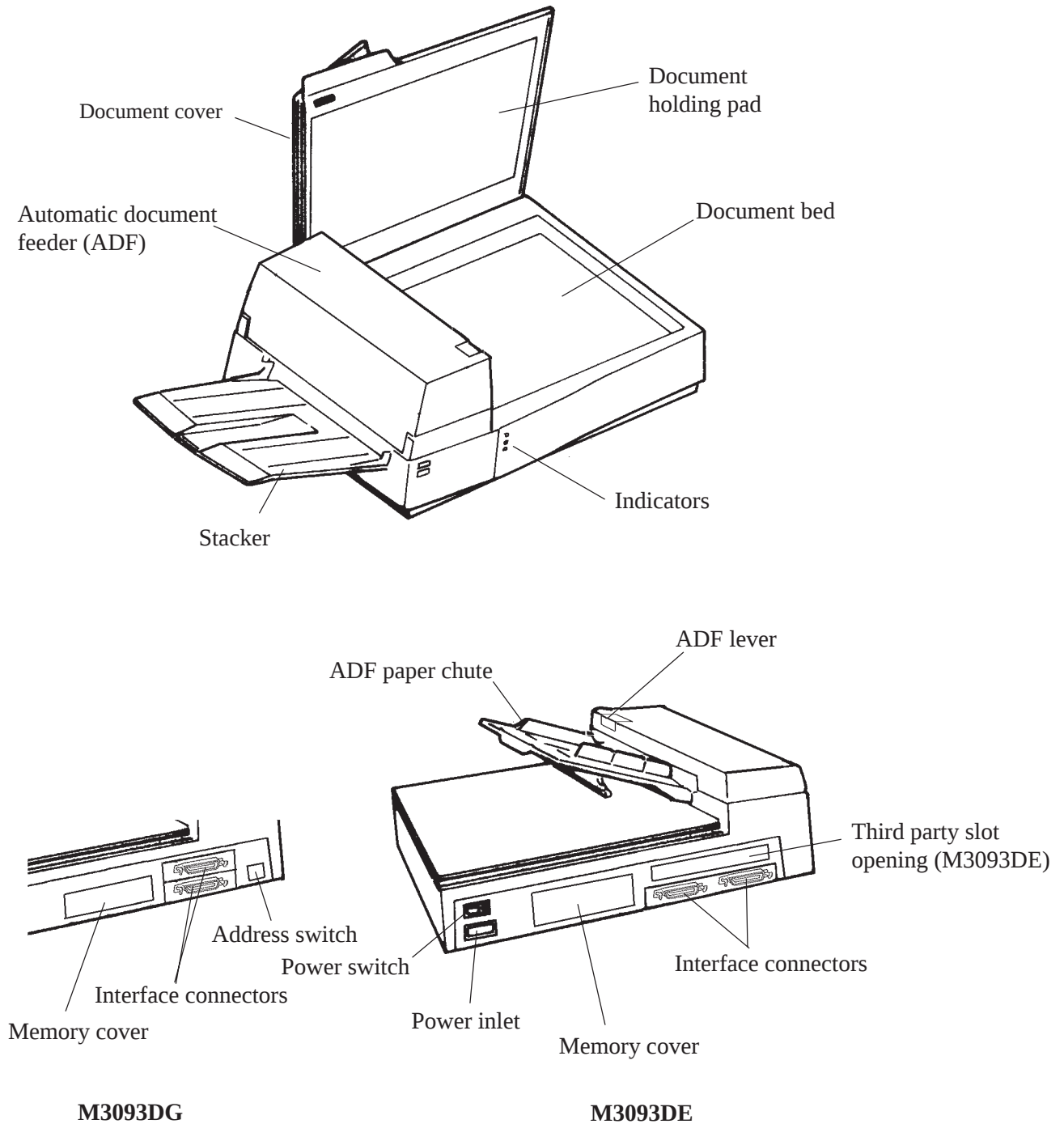


Figure 2.2 M3093DE/DG parts names

2.2.2 Functions of each part

Document cover:	Closed over and holds a document to be read.
Document bed:	A document to be read is placed on the bed also called Flatbed (FB).
Document holding pad:	Presses a document to the document bed.
Automatic document feeder (ADF):	Automatically feeds documents to the reading position.
Stacker:	Stacks the read documents.
Power switch:	Turns the power on or off.
Indicators:	These LEDs indicate the status of the scanner.
ADF paper chute:	Holds the documents to be fed by the automatic document feeder.
ADF lever:	Opens or closes the automatic document feeder to remove documents jammed in the feeder.
Power inlet:	To be connected to an AC power outlet with the power cable.
Interface connectors:	To be connected to the host system with interface cables.
Third party slot opening:	Reserved (M3093DE)
Memory cover:	To be opened when installing or replacing the memory option.
Address switch:	To be used for SCSI ID setting

2.3 Indicator Functions

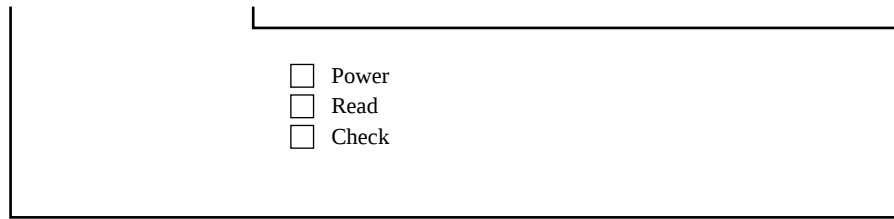


Figure 2.3 M3093DE/DG Indicators

2.3.1 Indicators

The meaning of each indicator is as follows:

Power indicator (Green):

Lights to indicate the power is on.

Read (reading in progress) indicator (Green):

Lights to indicate reading is in progress.

Check (device check) indicator (Yellow):

Lights if a device error occurs which may result in a service call. This indicator blinks if a document is jammed in the automatic document feeder. This indicator turns off when the jammed documents are removed from the feeder and the feeder is closed.

This indicator blinks in four seconds period if the ADF cleaning is necessary. (See section 5.3.2)

2.4 Resolution and Zooming Functions

Supported Resolutions

Interpolated resolutions above 400 dots per inch are dependent upon the scanner memory option. Scanner resolution is not dependent upon the IPC-2D option. The table below shows the relationship between supported resolutions and optional memory.

M3093DE and M3093DG Resolution Support			
Resolution	Binary, Simplex and Duplex	Grayscale Simplex	Grayscale Duplex
100 150 200 240 300 400	Additional Memory not Required	M3093DG: Supported M3093DE: Available only when supported via third party slot.	Not Supported
600	Memory option CA02939-B182 required	Not supported	Not supported

Zooming Function

Zooming is a function of the IPC-2D option. It is used as a magnifying glass for viewing signatures, details on a map, fingerprints or other features of a document. Normally, a specific area of the document is specified for zooming using application software. IPC-2D can zoom in on images in increments specified as percentages or dpi depending on the user interface of the imaging application used.

Note: Zooming is not compatible with DTC options so both can not be enabled at the same time.

Note: The limitation of zooming is given by the formula below.

$$\frac{(\text{Resolution}) \times (\text{Magnification})}{100} \leq 800$$

Zooming by Percentage for Letter, Legal and A4 Size Documents									
							Scanning Modes		
	Selected Resolution (dpi)	200	240	300	400	600	Binary Simplex and Duplex	Grayscale Simplex	Grayscale Duplex
Additional Memory not Required	Percentage of Zoom Possible	25% to 200%	25% to 166%	25% to 133%	25% to 100%	25% to 66%	Supported	Supported	Not Supported
Memory Option CA02939-B182 Required	Percentage of Zoom Possible	201% to 400%	167% to 333%	134% to 266%	101% to 200%	67% to 133%	Supported	Not Supported	

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CHAPTER 3 INSTALLATION AND CONNECTIONS

- 3.1 Precautions
- 3.2 Removing the Carrier Fixing Bracket
- 3.3 Connections
- 3.4 Mounting the Stacker
- 3.5 SCSI-ID Setting

This chapter explains how to install and connect the image scanner.

3.1 Precautions

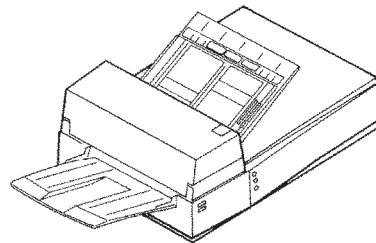
Do not install the image scanner in the following places and environments. See the appendix A.1 “Installation Specifications” for the information such as size of installation space.

Place the scanner away from electrical noise sources and strong magnetic fields. If the image scanner is used near an air conditioner, copying machine, or TV set, the scanner may operate incorrectly.

Do not install the scanner in a humid, dusty, or damp places. These environments may shorten scanner life or cause hardware failures. Do not place the image scanner where liquid spills may occur. Place it on a flat and even surface.

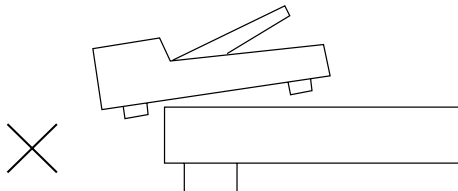
Keep the scanner out of the sun and away from heaters. These environments may shorten scanner life or cause hardware failures.

Do not install the scanner in a place where vibrations may occur. This environment may cause hardware failures or may cause the scanner to operate incorrectly.



CAUTION

Place the image scanner on a level surface. Place the image scanner so that the rubber pads are secured on a flat and solid desktop.

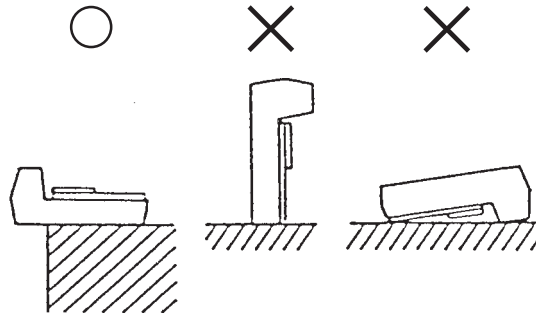


Be aware of static electricity. If static electricity is generated, the scanner may operate incorrectly. Be sure that the flooring and the desk are made of materials that do not generate static electricity.

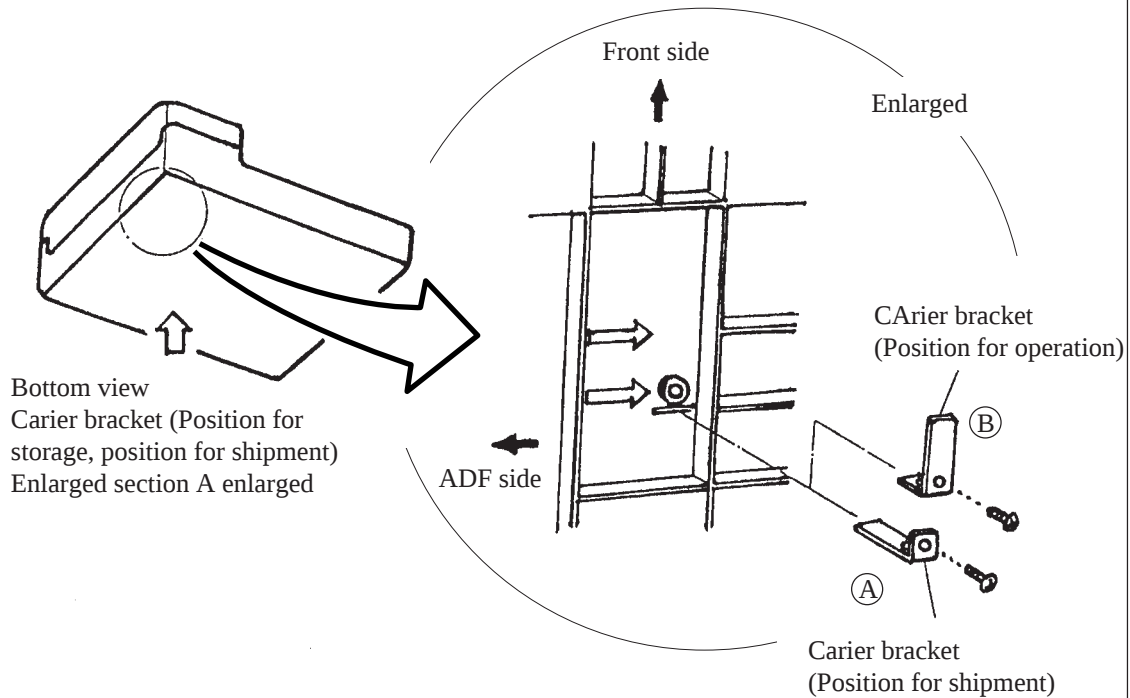
3.2 Removing the Carrier Fixing Bracket

To keep the scanner from being damaged during shipping, the carrier unit is fixed with a bracket. After placing the carrier unit at the installation place, remove this bracket as explained below.

- ① Place the image scanner on the edge of the desk top so that the left side (where ADF is placed) of the scanner extends from the desk top. Do not set the image scanner upside down or on its side.



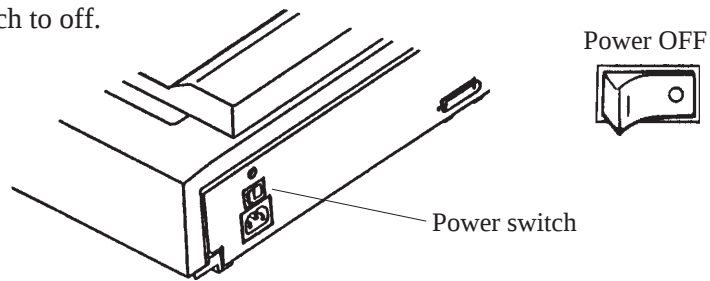
- ② Remove the carrier fixing bracket from position (A). Then install the carrier fixing bracket at position (B).



3.3 Connections

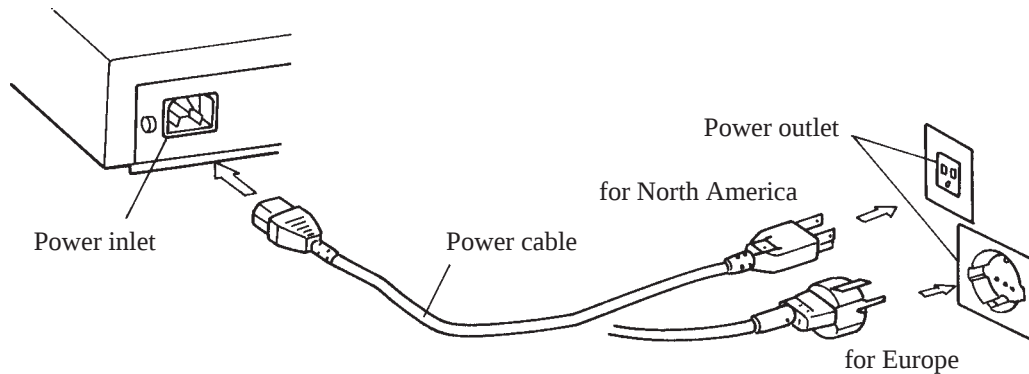
Connect the image scanner using the following procedure.

- ① Set the power switch to off.



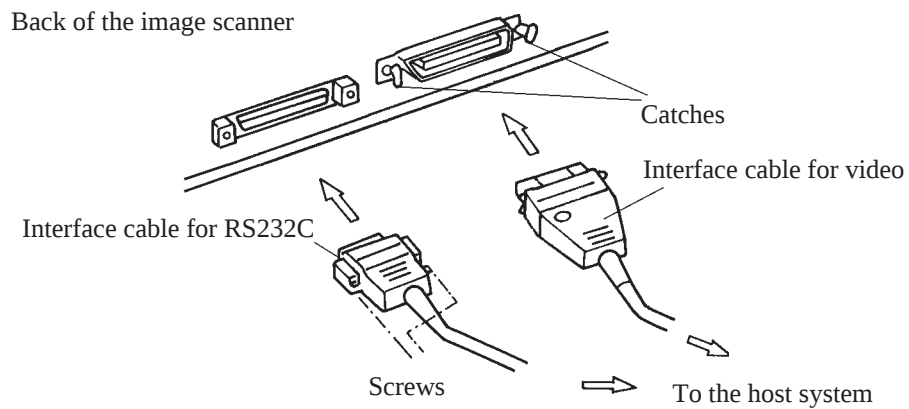
- ② Connect the power cable.

Connect the power cable to the power inlet on the back of the image scanner.
Connect the other end of the power cable to a power outlet.



- ③ Connect the interface cables (for M3093DE).

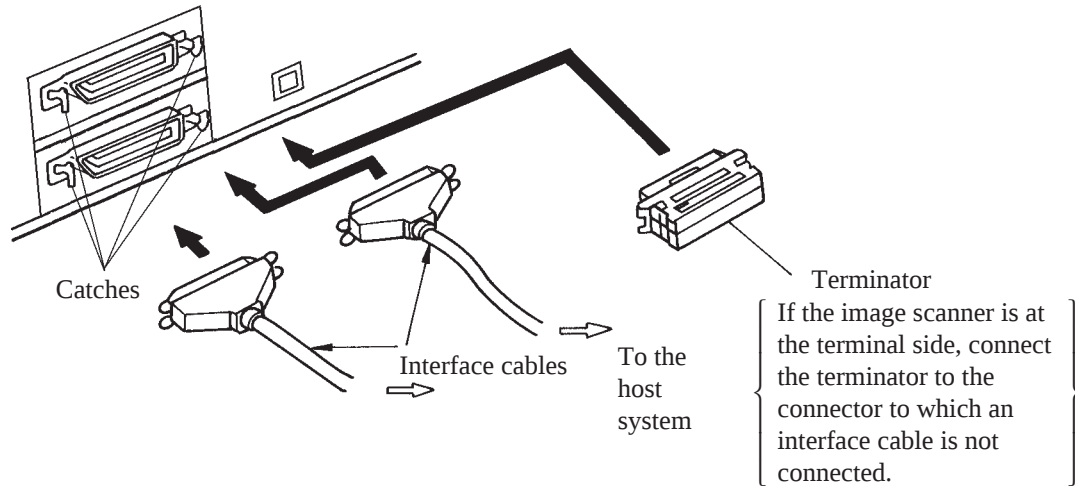
Connect the interface cables to the interface connectors and fasten the cables with catches and screws as shown below.
Connect the other end of each interface cable to the host computer.



(M3093DG)

Connect the interface cables to the interface connectors and fasten the cables with the catches. Connect the other ends of the cables to the host system. If the image scanner is at the terminal side, connect the terminator.

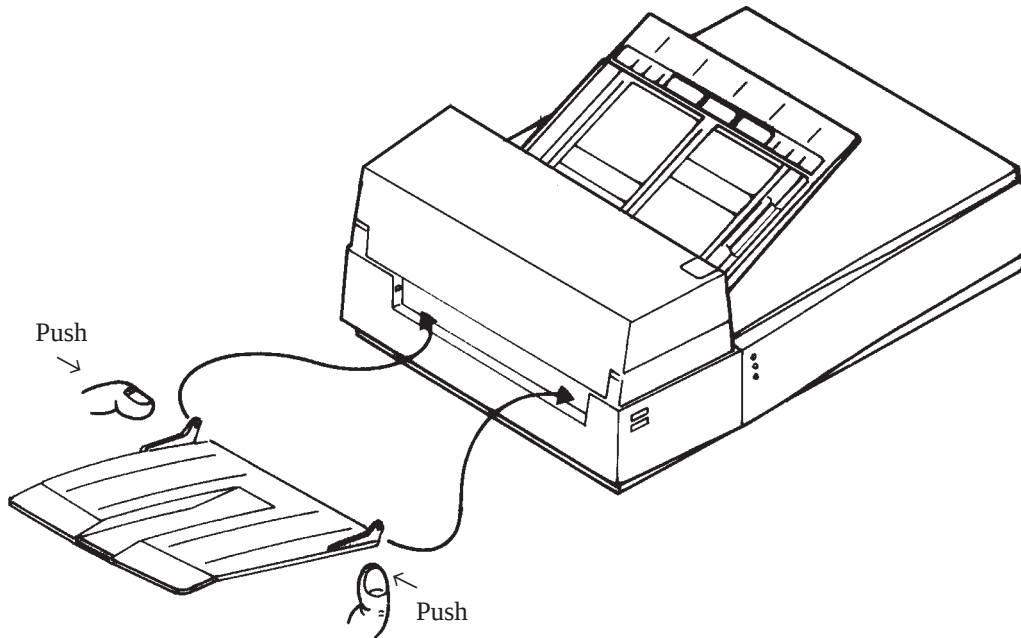
Back of the image scanner



3.4 Mounting the Stacker

Mount the stacker using the following procedure.

Hook the pins on the stacker to the holes of the image scanner.



3.5 SCSI-ID Setting

Use the address switches to set the device address. After the setting turn the power on.

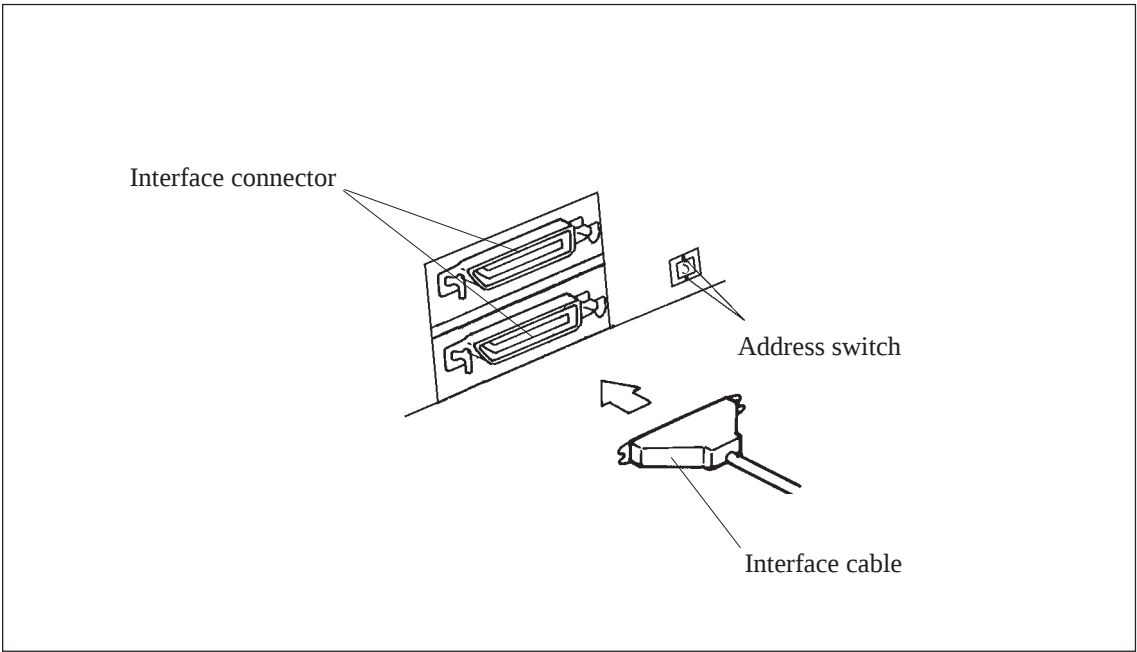


Figure 3.1 SCSI-ID setting

Table 3.1 SCSI-ID setting

ID	Contents
0 to 7	Available
8, 9	No Operation

CHAPTER 4 OPERATIONS

- 4.1 Turning on the Power
- 4.2 Reading a Document in Flatbed Mode
- 4.3 Reading Documents in ADF Mode

Documents can be read in the flatbed mode or automatic document feeder (ADF) mode. In the flat-bed mode, each document is placed on the document bed and is read one by one. In ADF mode, documents are fed and read automatically.

This section explains how to turn on the power and how to read documents.

CAUTION: Do not apply excessive force to the automatic document feeder (ADF) or place any heavy objects on it. Doing so may lead to distortion of the scanned image.

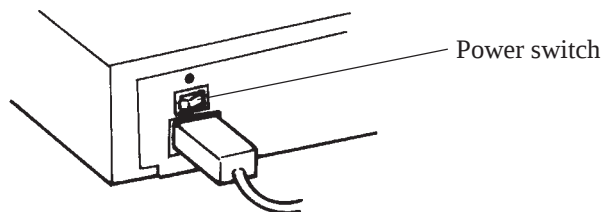
NOTICE: If the “Check” indicator blinks in four seconds period, clean the ADF in accordance with the section 5.3.

NOTICE: If the top 3 mm of the read area isn’t left blank (grounding color) by specifying a drop-out color, read the document by selecting photo. Drop-out color is a color which is used to the document but does not appear in the read image.

4.1 Turning on the Power

This section explains how to turn on the power.

Press “I” on the power switch. When the power is turned on, the power indicator is lit.



Press “O” on the power switch to turn off the power.

Power OFF



Power ON



4.2 Reading a Document in Flatbed Mode

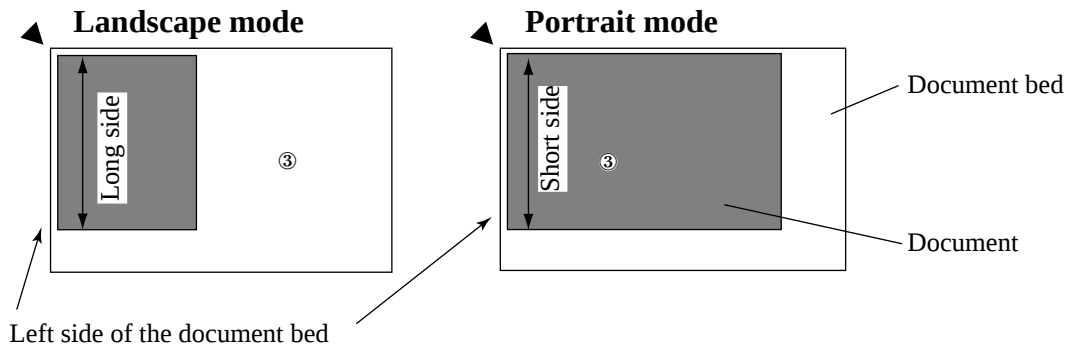
This section explains how to read a document placed on the document bed.

WARNING: Do not look directly at the light source during read operation.

4.2.1 Reading a standard-size document

If the size of the document is smaller than the document bed, read the document using the following procedure:

- ① Open the document cover.
- ② Place the document face down on the document board. Correct any curled or folded parts of the document.
- ③ Position the long side (in landscape mode) or the short side (in portrait mode) of the document to the left side of the document bed.



- ④ Position the left top of the document to the reference mark. If the document is not placed correctly, reading cannot be done correctly.
- ⑤ Close the document cover slowly. If the document cover is closed too quickly, the document may move.
- ⑥ Instruct the scanner to start scanning from the host computer. Do not press on or open the document cover during the read operation.
- ⑦ After reading, open the document cover to remove the document.

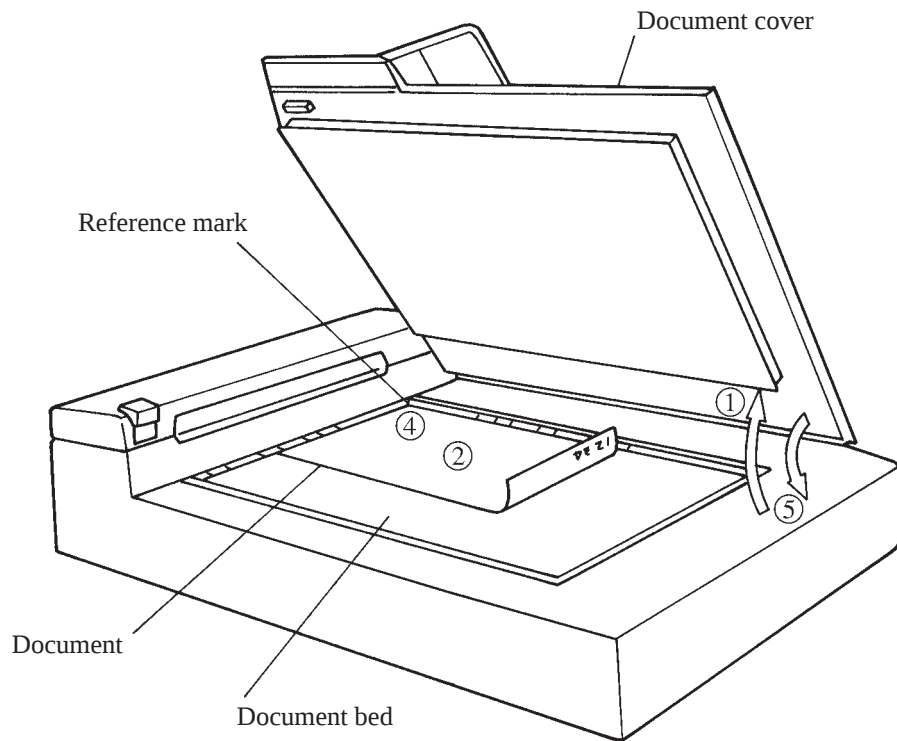


Figure 4.1 Flatbed reading

4.2.2 Reading a page from a thick book

To read a page from a thick book, remember the following points:

- ① Do not close the document cover forcibly. Keep the cover open for reading.
- ② Any document parts that are not in contact with the glass will not be read correctly.
- ③ Do not move the document during the read operation.

4.2.3 Reading a document larger than the document board

If the size of the document is larger than the document board, read the document using the following procedure:

- ① Open the document cover at an angle of about 80°, then slide the cover to the direction of the arrow to remove it.
- ② Place the document face down on the document bed.
- ③ Place the document cover over the document.
- ④ Instruct the scanner to start scanning from the host computer.
- ⑤ After the read operation, remove the document, replace the document cover. Mount the document cover to the original position, and close the document cover.

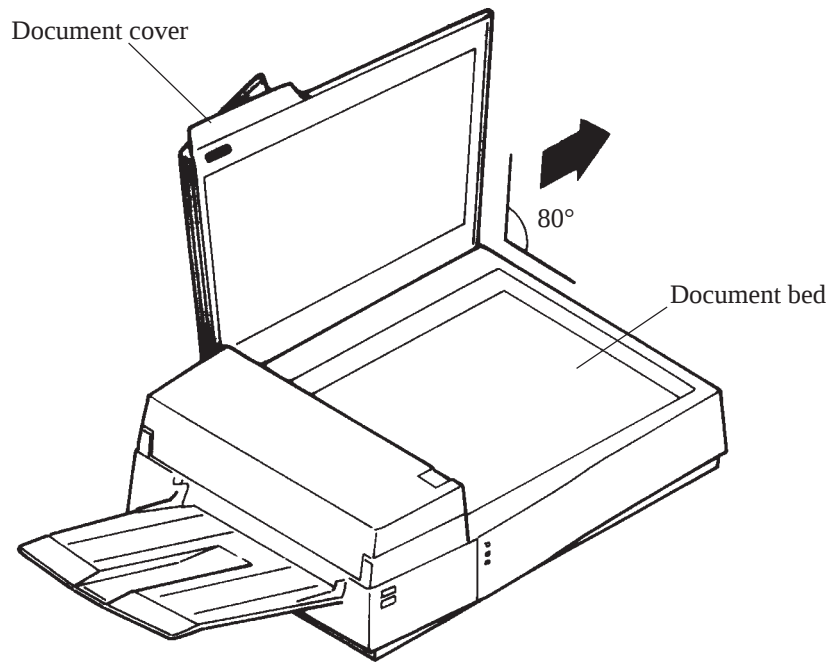


Figure 4.2 Removing the document cover

NOTICE: Do not remove the document cover for any other purpose.

4.3 Reading Documents in ADF Mode

This section explains how to read documents using the automatic document feeder. If the following steps are not closely followed, a feed error may occur.

- ① Check the documents as follows:
 - (a) Paper quality
 - Wood-free paper.
 - PPC paper; Specified by XEROX Corporation.
 - (b) Paper weight
 - 13.91bs to 27.91bs (52 g/m² to 104 g/m²)
 - (c) Paper size
 - Letter, Legal, A4, A5, B5
 - (d) Items to avoid
 - The following documents may be hard to read by ADF. Before you start the large quantity reading, check that the document is read appropriately. If the reading is not appropriate, read them by flatbet.
 - Paper with a clip or staple.
 - Paper that has ink which is not dry.
 - Paper thickness is not constant, such as an envelope.
 - Paper that has large rumples or curl. (See NOTICE)
 - Paper that has folds or tears.
 - Tracing paper.
 - Coating paper.
 - Carbon paper.
 - Paper that is smaller than A6 size or larger than A4 width.
 - Items other than paper, such as clothes, metal sheet, or OHP film.
 - Photographic paper.
 - Paper that has perforations on its side.
 - Paper that has a shape other than square.
 - Paper that is very thin.

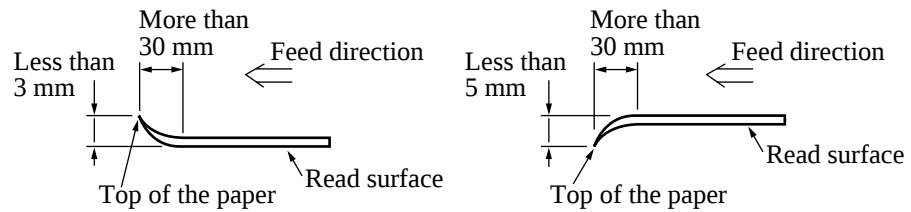
NOTICE: The important document which shall not be torn must be read by flatbet.

NOTICE: Carbonless papers have the chemical composition which damages the pad and pickroller. Therefore, note the following remarks

Cleaning: If the miss pick occurs frequently, clean the pad and pickroller in accordance with the section 5.3.2.

Replacement of parts: The life of the pad and the pickroller may be shorter than the case that PPC document is fed. Replacement cycle of the pad and the pickroller may be 100,000 sheets or more if the paper quality is good and cleaning is done well. Before you start the large quantity reading, check the replacement cycle of them and prepare pads and pickrollers.

NOTICE: Paper should be straightened to fit the condition below.

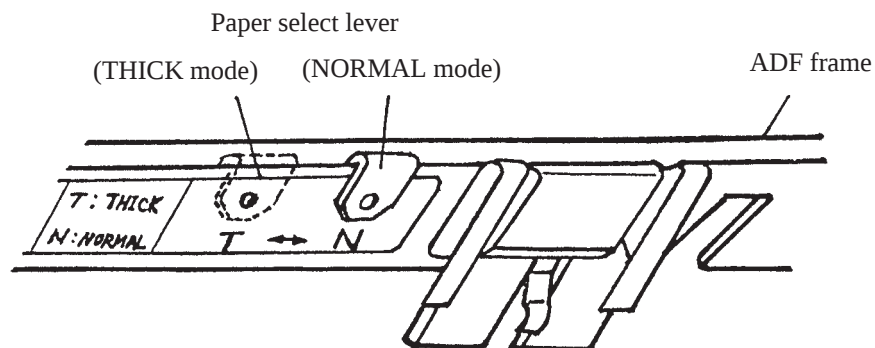
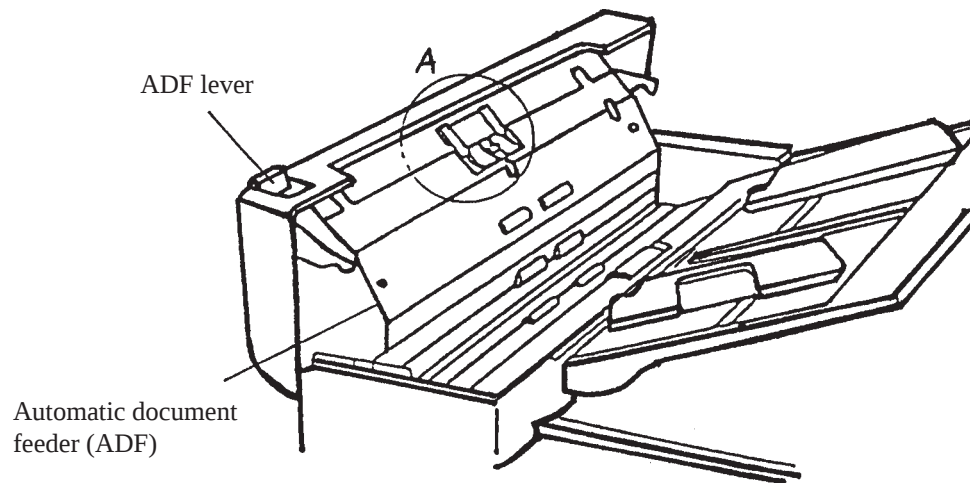


② Switch the paper select lever.

Switch the lever in the following procedures:

- Open the automatic document feeder (ADF) while lifting up the ADF lever.
- Set the paper select lever.
Plain paper: "NORMAL"
Heavy paper: "THICK"
- Reset the ADF. (Check that the ADF lever is set at the normal position.)

NOTICE: Always reset the paper select lever to "NORMAL" position, when you feed the paper other than heavy paper.



Section A enlarged

③ Pull up the ADF paper chute as follows:

- Hold the document cover with one hand and pull up the ADF paper chute with the other hand until it clicks.

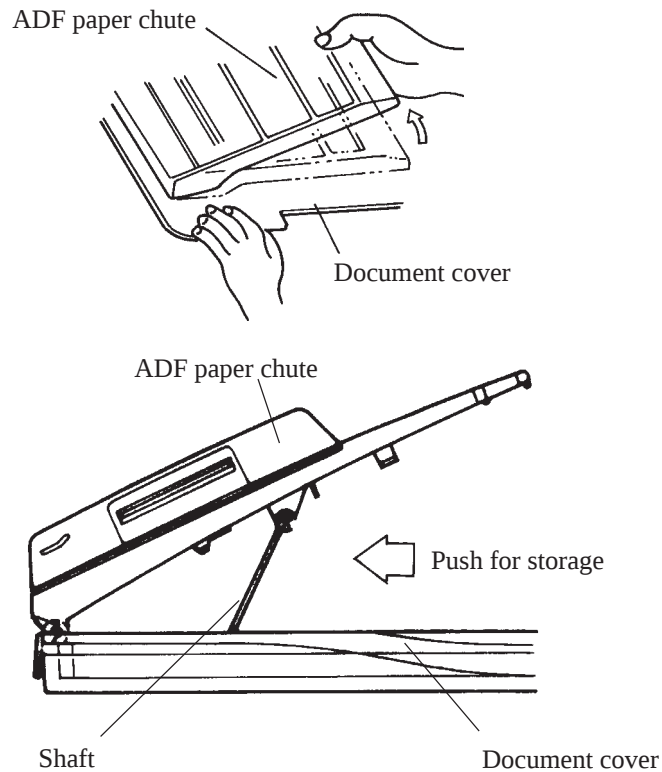
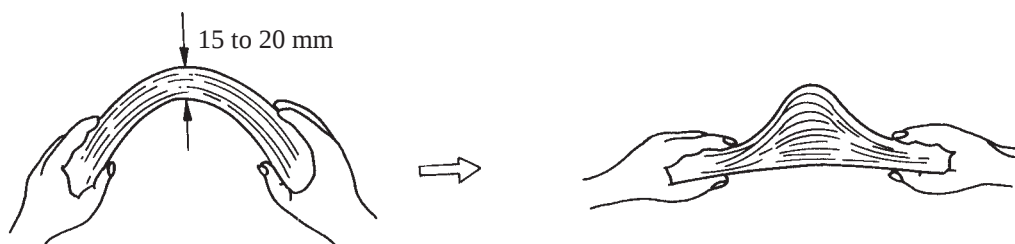


Figure 4.3 ADF paper chute setting

④ Fan the documents as follows:

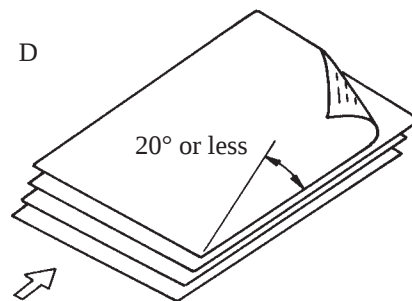
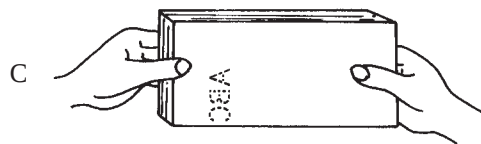
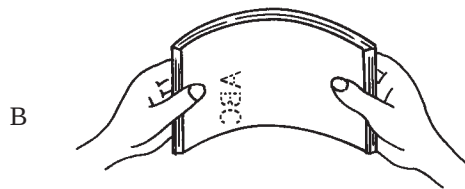
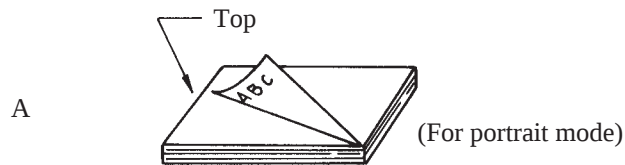
- Take a 15 to 20 mm thickness of documents. Lightly hold both ends with both hands. Bend the documents into an arch as shown below.
- Then hold the documents tightly with both hands, and straighten the documents. The center of documents swell and air is introduced between the documents.
- Repeat this operation two or three times.
- Turn the documents 90°, and repeat the operation again.



⑤ Take documents to be placed in the ADF paper chute. The thickness of the documents to be placed in the ADF paper chute is limited to 4 mm (0.16").

⑥ Angling the documents
Angle the document edges as follows:

- Place the documents face down with the top to the left as shown in A. The long side is the top for landscape mode and the short side is the top for portrait mode.
- Lift the documents holding the both ends with both hands.
- Hold the documents tightly with your left hand and bend the documents as shown in B.
- Grip tightly with your right hand, loosen the grip of your left hand, and straighten the documents as shown in C.
- Repeat these operations until the top is angled 20° or less as shown in D.



- ⑦ Open the right and left guides of the ADF paper chute about 5 mm (0.2") wider than the document width.
- ⑧ Place the documents face down onto the ADF paper chute with the top edges facing the automatic feeder hole.
- ⑨ Adjust the guides to the document sides. Skewing may occur if there is a gap between the guides and documents.
- ⑩ Slide the documents down until they touch the far end of the automatic feeder opening. If the documents hit the far end hard, two or more pages may be fed at once. Make sure that the upper end of documents are not turned.
- ⑪ Instruct the scanner to start scanning from the host computer. If a wrong document size or mode (portrait or landscape) is selected, the document may not be read entirely.

NOTICE: Unless 3 mm (0.12") of the leading edge of forms are not white or dropout color, set the document type to "Photo."

- ⑫ After reading, remove the documents from the stacker.

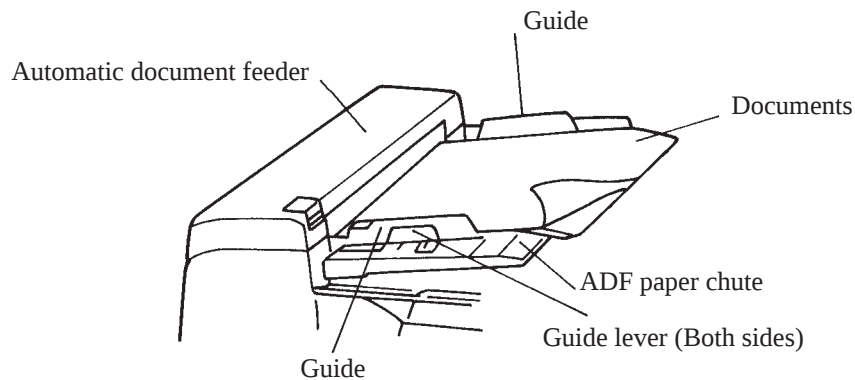
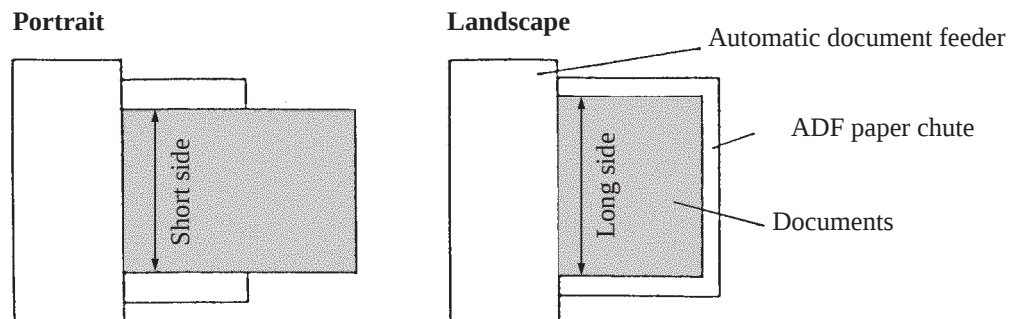


Figure 4.4 Loading the document



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CHAPTER 5 MAINTENANCE

- 5.1 Removing Jammed Documents
- 5.2 Notes on Daily Use
- 5.3 Cleaning
- 5.4 Consumables/Periodical replacement parts

This section explains how to remove jammed documents, and provides notes on daily use and cleaning.

5.1 Removing Jammed Documents

If documents jam while being fed by the ADF, remove the jammed documents as follows:

- ① Remove the documents from the ADF paper chute.
- ② Pulling up the ADF lever, open the automatic document feeder.
- ③ Remove the jammed documents.
- ④ Close the ADF until the ADF lever locks.

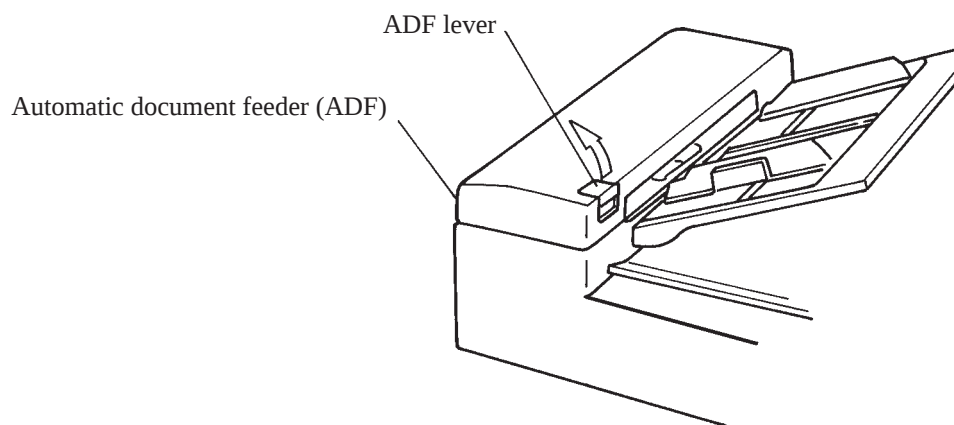


Figure 5.1 Removing jammed documents

5.2 Notes on Daily Use

Note the following points on daily use:

NOTICE

- Do not look directly at the light source during the read operation.
Keep the document cover in place.

NOTICE

- See Section 5.3 “Cleaning”, to clean the document cover, document holding pad, document bed, and the automatic document feeder. Especially, clean the automatic document feeder (ADF) periodically. For the cleaning cycle, see Section 5.3.2, “Cleaning the ADF.”

5.3 Cleaning

This section explains how to clean the image scanner.

5.3.1 Cleaning the document cover, document holding pad, and document bed

- Use a dry cloth or a cloth with a neutral cleanser to remove dirt from the document cover, document holding pad, and document bed. Do not use organic solvents such as a thinner.
- Make sure that no liquid enters the scanner from the edges of the document bed glass.

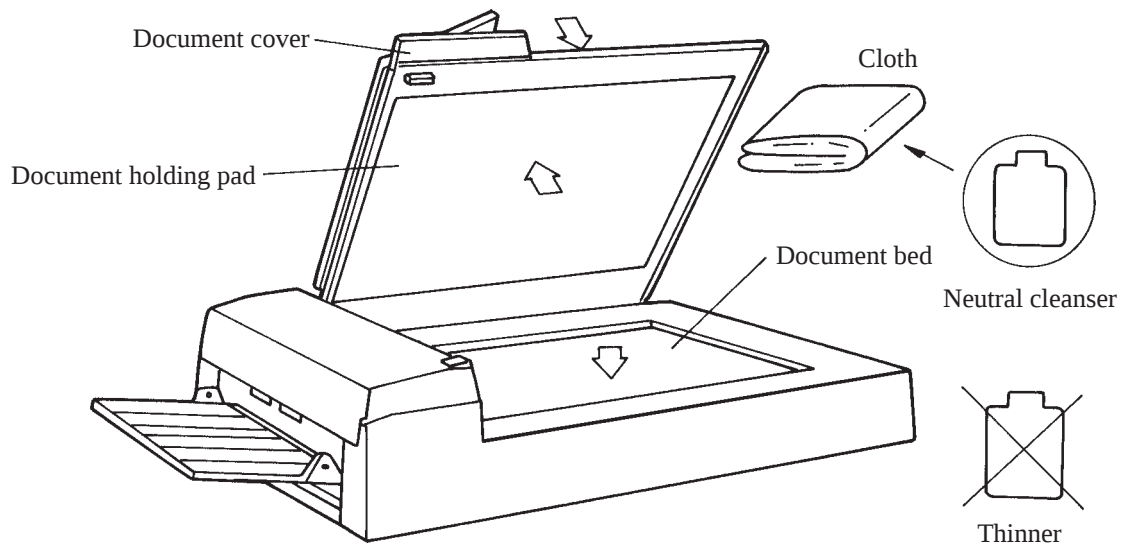


Figure 5.2 Cleaning the document cover, document holding pad, and document bed

5.3.2 Cleaning the ADF

Clean the automatic document feeder (ADF) once every 5,000 pages. The cycle depends on the types of documents used (paper quality, a level of toner fusing on paper).

- ① Pull the ADF lever up to open the ADF.
- ② Use the dry cloth or a cloth with ethyl alcohol to softly remove dirt and dust as follows.

Pad: Wipe the pad in a downward direction (indicated by the arrow). Be careful not to hook the pick spring when wiping.

Glass: Wipe the glass lightly.

Pick roller : Wipe the roller softly. Be careful not to damage the surface of the roller.

Feed roller and coupled feed roller:
Wipe the rollers softly. Be careful not to damage the surface of the rollers.

Ejection roller and coupled ejection roller:
Wipe the rollers softly. Be careful not to damage the surface of the rollers.

Sheet guide (white part):
Wipe the sheet guide softly.

- ③ Close the ADF to lock the ADF lever.

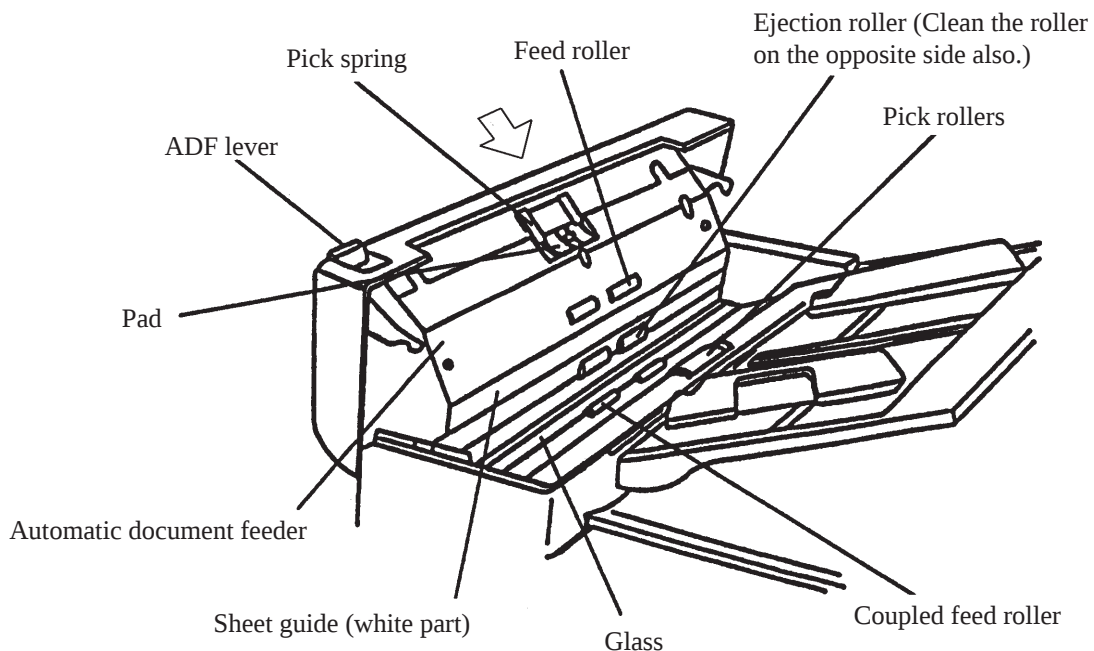


Figure 5.3 Cleaning the ADF

5.4 Consumables / Periodical replacement parts

5.4.1 Parts number and replacement cycle

Customer is responsible to change these items periodically.

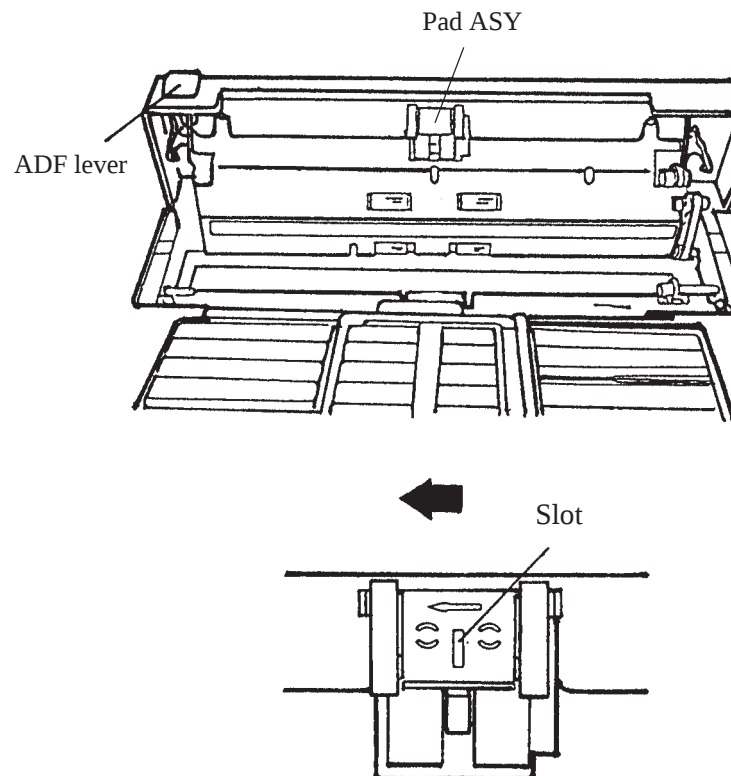
No.	Part name	Part number	Replacement cycle
1	Pad ASY	PA02201-0020	Every 100,000 pages or annually(*1)
2	Pick roller	PA02212-K001(*2)	Every 200,000 pages or annually(*1)

*1: These replacement cycle may vary by the paper quality and cleaning result. When PPC paper is used, replacement cycle may be 300,000 sheets or more by good cleaning. Before you start the large quantity reading, evaluate the replacement cycle and prepare pads and pickrollers.

*2: This part may not be provided in some countries due to the conformability of safety regulation. Before the order of the pick roller, contact your sales agent or Fujitsu service representative.

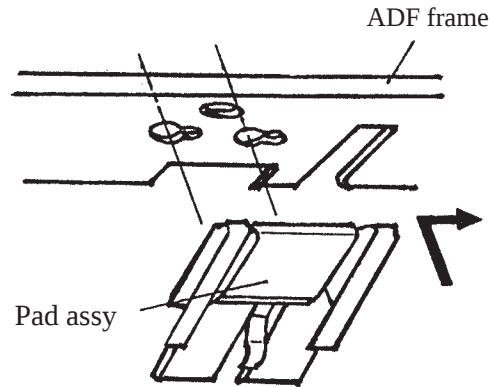
5.4.2 Replacing pad ASY

- ① Lift up the ADF lever and open the ADF.
- ② Insert a coin in the slot or hold the both sides of the pad ASY, then slide it to the direction of the arrow to remove the pad.

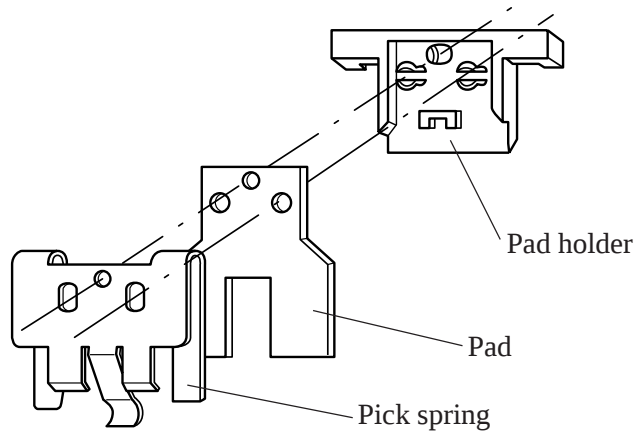


NOTICE: Set the paper select lever to “N”, before removing pad ASY. (See Section 4.3)

- ③ Insert the pad assembly into the ADF frame hole (the bigger one), slide the assembly to the direction of the arrow until it clicks.



NOTICE: Pad can be replaced by aligning the holes of the pad with the pins of the Pad holder.



5.4.3 Replacing pick roller

Replace the pickroller as follows.

- Pull the cap up to open the ADF unit.
- Remove two thumb screws shown in Figure 5.4. And remove the Guide A.

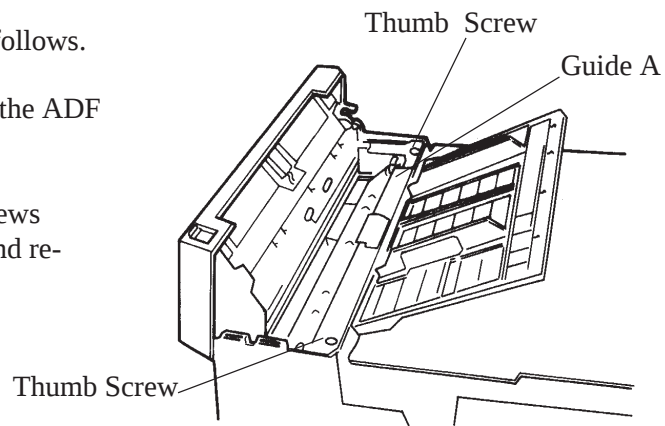


Figure 5.4 Pick Roller replacement

- c. Pinch the retaining spring and slide it toward the roller. Free bearing A from the bracket by sliding it toward the roller.

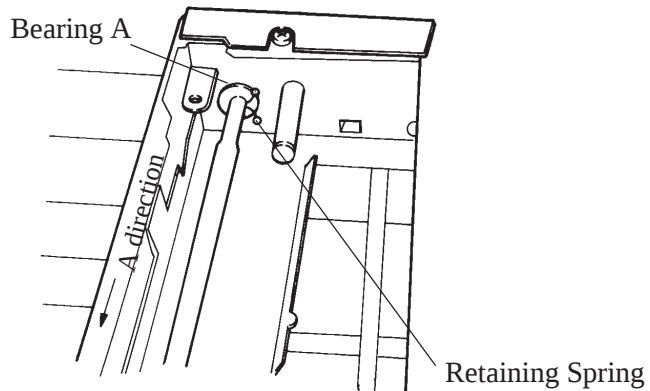


Figure 5.5 Move the Retaining spring

- d. Slide the pick roller shaft in the direction of arrow B and remove the shaft from bearing B. The roller shaft can then be lifted and removed as shown in Figure 5.6.
- e. Remove the bearing B.
- f. Mount the new pick roller in reverse order of removal.

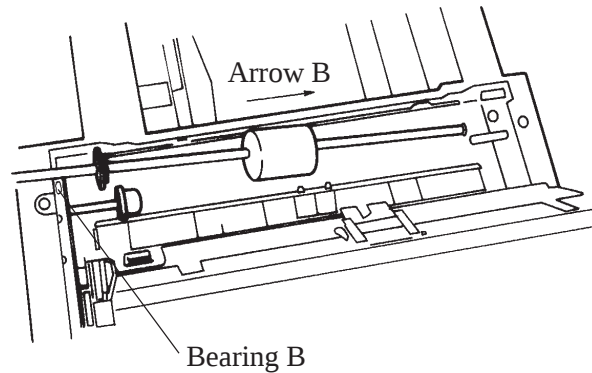
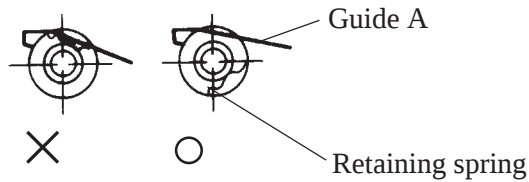


Figure 5.6 Slide the Pick Roller

NOTICE: When mounting the Guide A, note that the hooks of the retaining spring are not pressed by the Guide A. (See figure below)



CHAPTER 6 TROUBLESHOOTING

If a problem occurs, use Table 6.1 to resolve the problem.

Table 6.1 Check items

Problem	Possible cause	Response
No power	The power switch was not turned on.	Press the power switch.
	The power cable was not connected correctly.	Connect the power cable correctly.
	_____	Turn off the power once and make an attempt to turn on the power again. If the power is not turned on, contact your Fujitsu service representative.*
Read operation does not start.	The documents were not placed on the ADF correctly.	Insert the first a few pages into the slot.
	The ADF was not closed completely.	Make sure that the ADF is closed completely.
	The interface cables were not connected correctly.	Connect the interface cables correctly.
	RS-232C baud rate setting is not proper. (M3093DE)	Call your Fujitsu service representative.
	SCSI-ID setting is not proper. (M3093DG)	Set correct SCSI ID as explained in Section 3.5.
	Terminator was not connected. (M3093DG).	Connect the terminator.
Pictures and photographs are not read correctly.	Halftone processing was not selected.	Select a halftone mode from the host system.
	The document bed, document holding pad, or inside ADF is dirty.	Clean the dirty parts as explained in Section 5.3, "Cleaning."
Characters and lines are not read correctly.	Simple binarization was not done.	Select a binarization mode from the host computer.
	Is the top end of the document displayed with the drop-out color or white?	Read the document in Photo mode or turn off the white level follower.
	The document bed, document holding pad, or the inside of the ADF is dirty.	Clean the dirty parts as explained in Section 5.3, "Cleaning."

Table 6.1 Check items (continued)

Problem	Possible cause	Response
Image is distorted or unclear.	The document was moved during the read operation.	Keep the document cover closed during reading so that the document will not be moved.
	The document was not in contact with the glass.	Adjust the document so that it is in contact with the glass.
The check indicator is on.	The carrier fixing bracket was not removed.	Remove the carrier fixing bracket as explained in Section 3.2, "Removing the Carrier Fixing Bracket."
	_____	Turn the power off then on again. If the check indicator turns on again, contact the sales person in charge or a Fujitsu service representative.*
"Check" lamp blinks at 4 seconds period.	The pick roller is dirty.	When the power is turned off, the message is cleared. Even if the message is displayed, the read operation can be continued. Clean the pick roller after the read operation. (See Section 5.3.2.)
	The unallowable document was read in the automatic document feeder. (See Section 4.3.)	If a document not meeting the scanner specifications is read in the automatic document feeder, the document is not fed smoothly and an error message may be displayed. Read the document in the flat bed station.
Paper double feed.	Pad is dirty.	Clean the Pad. (See Section 5.3.2)
	Pad is worn out.	Replace the Pad. (See Section 5.4.2)
Miss pick.	Pick roller is dirty.	Clean the Pick roller. (See Section 5.3.2)
	Pick roller is worn out.	Replace the Pick roller. (See Section 5.4.3)
Paper jam.	Some foreign particles are in ADF.	Clean the ADF (See Section 5.3.2) or remove any foreign particles.

* Please check the test mode in appendix B, if possible, before calling the service representative and inform status of the indicators.

APPENDIX A

A.1 Installation Specifications

Table A.1 Installation specifications

Item		Specification		
External dimensions (mm)		Width	Depth	Height
		530	376	198
Weight (kg)		12		
Input power	Voltage	100 to 120 VAC, 200 to 240 VAC		
	Number of phases	Single-phase		
	Frequency	50/60 Hz		
Power		110 VA		
Temperature and humidity allowed ranges		Operation	Idle	
	Temperature	5 to 35°C	−20 to 60°C	
	Humidity	20 to 80%	8 to 95%	

A.2 External Dimensions

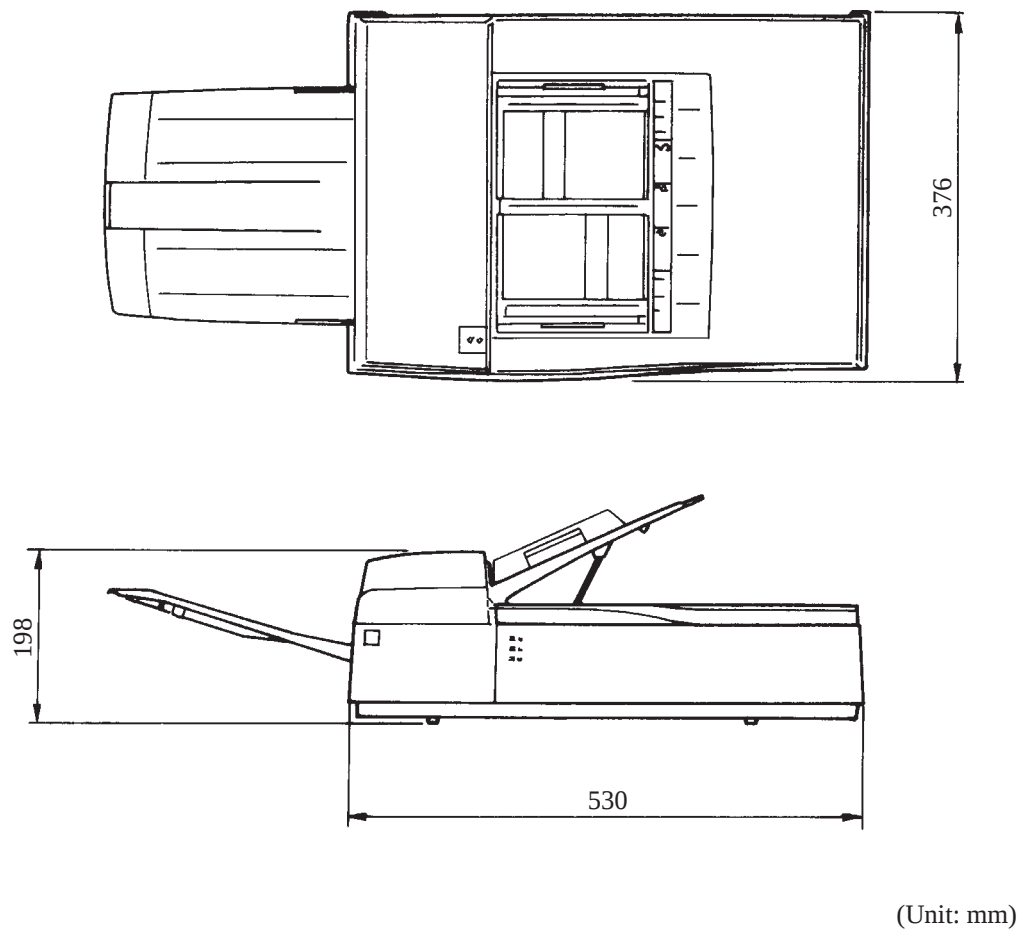


Figure A.1 External dimensions

APPENDIX B

B.1 Test mode for maintenance

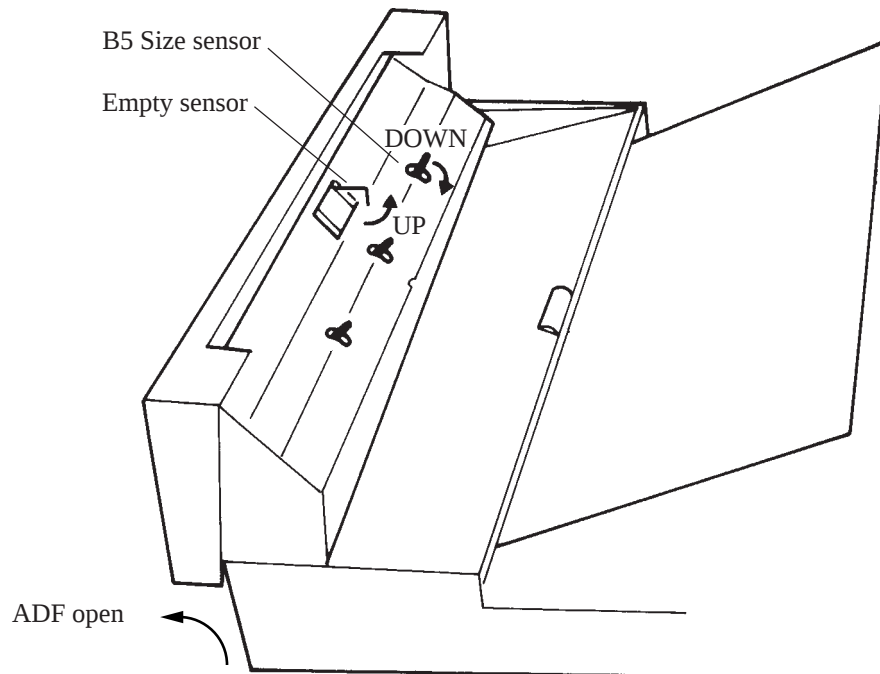
CAUTION: Please follow the procedure here or the offset data may be changed incorrectly. If the scanner does not react as the procedure below, turn off the scanner and start from the beginning.

(1) Activating a test mode

Make sure the scanner is off. Open the ADF cover completely and gently pull the ADF's empty sensor so that it is activated and push the B5 sensor so that it is also activated. The other sensors will be in the correct state as long as the cover is completely open. Turn the scanner on. When the POWER lamp begins to blink, release the sensors and close the ADF cover. Now please observe the following sequence.

1. POWER lamp turns on
2. POWER and READ lamp flash together
3. POWER and READ lamp turn on momentarily to indicate the read write test to memory has passed.

If the CHECK lamp turns on, the memory test did not complete successfully. This memory test is always executed after the test mode is activated and the ADF is closed for the first time.



(2) Activating the continuous operation test

Open the ADF and close it again. If no document is loaded on the ADF within five seconds after closing the ADF, the image scanner runs in flatbed mode. If documents are loaded on the ADF within five seconds after closing the ADF, the image scanner continuously feeds the document from ADF. Once the image scanner start reading documents in the flatbed mode, it does not feed documents from ADF even if documents are loaded on the ADF.

(3) Ending the test in flatbed mode

To stop the carrier movement in flatbed mode, open the ADF cover. If the ADF cover is opened, the POWER lamp starts blinking immediately after the carrier returns to the home position.

(4) Ending the test in ADF mode

If the ADF document hopper is empty, feeding documents from the ADF ends. To restart feeding, open the ADF cover and close it again. Then load documents on the ADF document hopper within five seconds after closing the ADF cover.

(5) LED status on error

If an error occurs during the test, the LED indicates as shown in table B.1.

If paper is jammed in the ADF, remove the jam and close the ADF cover. The CHECK lamp stops blinking about three seconds after closing the ADF cover. To feed the document from ADF, open and close the ADF cover.

Table B.1 LED at an error

Errors	POWER lamp	READ lamp	CHECK lamp
Paper jam	On	Off	Blink
Carrier unit error	Blink	Off	On
Front optical system error	Blink	Off	Blink
Back optical system error	Blink	Blink	On
Motor fuse failure	Blink	On	On
Lamp fuse failure	Blink	On	Blink

APPENDIX C

C.1 Memory option specification

Name	Specification	Scanner	Feature
Memory	CA02939-B182	M3093DE M3093DG	• 8 Mbyte memory • 72pin, 70ns

Contact your Fujitsu sales agent for more information.

CAUTION: Only use genuine Fujitsu memory products. Any scanner malfunctions or failures caused by the use of nonFujitsu memory products are not covered from the warranty.

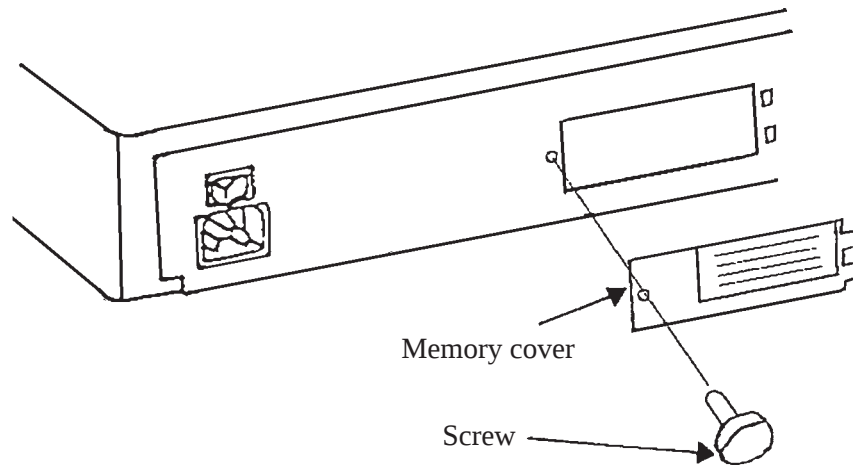
C.2 Memory option installation

WARNING: 1. Before installing the memory, turn off the power of this scanner and the power of devices connected to it and disconnect the power cable(s) of all of such devices from the outlet.

2. Memory option is adversely affected by static electricity generated by the human body. Before touching the memory, let your hands come into contact with any metallic object to discharge any static electricity that may be present in your body.

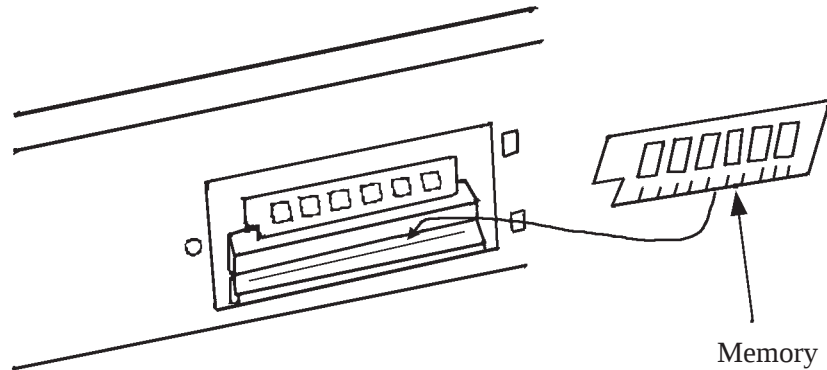
- (1) Turn off the power of devices connected to this scanner and disconnect the power cables from the outlet.
- (2) Remove the screw on the memory cover on the rear of this scanner and remove the memory cover.

WARNING: Turn off the power before removing the memory cover. Do not turn on the power while the memory cover remains disengaged from the device.



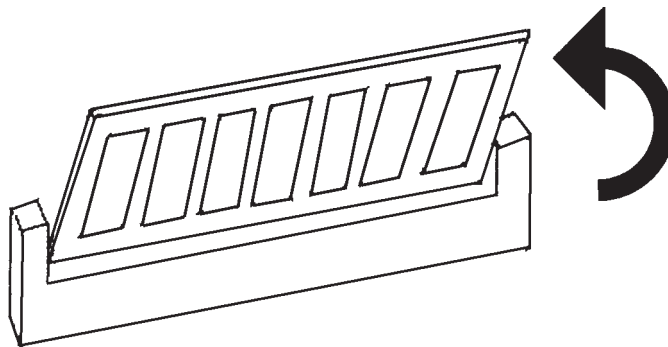
- (3) Insert the memory in the slot.

As shown below (the notched corner positioned at the lower left), insert the memory at an inclined angle in the forward slot.



- (4) Raise the installed memory up.

As shown below, raise the memory in the direction of the arrow until it clicks.

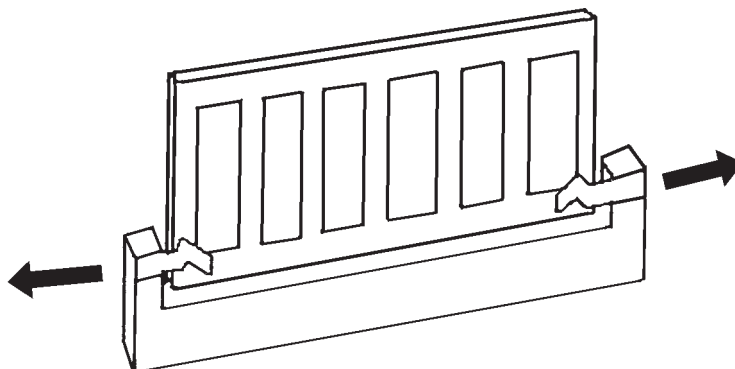


Note:

Remove the memory in the manner described below:

Using a sharp-pointed tool such as a screwdriver, slide the fittings on both sides of the slot outward.

The memory, unlocked, slants forward.



- (5) Attach the memory cover to the device and tighten the cover with the screw.
- (6) Connect the power cable to the device.

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