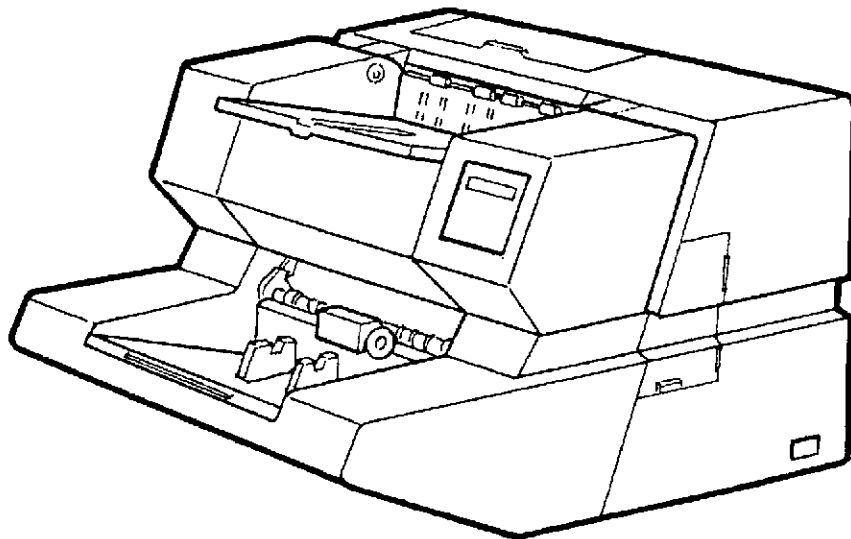


FUJITSU

**M3099A/G IMAGE SCANNER
OPERATOR'S GUIDE**



REVISION RECORD		
Edition	Date published	Revised contents
01	March, 1994	First edition
02	May, 1994	German warning added
03	June, 1994	Pad replacement added
04	September, 1994	Cleaning explanation and so forth revised
05	Dec, 1994	M3099G added
Specification No. C150-E005-05EN		

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 dicté par le ministère des Communications du Canada.

The contents of this manual may be revised without prior notice.

All Rights Reserved, Copyright © 1994 FUJITSU LIMITED.

Printed in Japan.

No part of this manual may be reproduced in any form without permission.

Address your comments and inquiries on this manual to:

FUJITSU COMPUTER PRODUCTS OF
AMERICA, INC.
2904 Orchard Parkway, San Jose,
California 95134-2022, U.S.A.
TEL: 1-408-432-6333
FAX: 1-408-432-3908

FUJITSU AUSTRALIA LIMITED
475 Victoria Avenue Chatswood.
N.S.W 2067, AUSTRALIA
TEL: 61-2-410-4555
FAX: 61-2-411-8603

FUJITSU CANADA, INC.
2800 Macneson Blvd. East, Mississauga.
Ontario 4X5, CANADA
TEL: 1-905-602-5454
FAX: 1-905-602-5457

FUJITSU DEUTSCHLAND GmbH.
Frankfurter Ring 211,
8000 Munchen 40, F.R, GERMANY
TEL: 49-89-32378-0
FAX: 49-89-32378-100

FUJITSU ESPANA, S.A
Edificio torre Europa
Paseo de la Castellana 95 Madrid 28046, SPAIN
TEL: 34-1-581-8400
FAX: 34-1-581-8125

FUJITSU EUROPE LTD.
2, Longwalk Road, Stockley Park, Uxbridge
Middlesex, UB11 1AB, U.K
TEL: 44-81-573-4444
FAX: 44-81-573-2643
TLX: 263871

FUJITSU FRANCE S.A.
Batiment Aristote, 17 rue Olof palme
94006 Creteil cedex, FRANCE
TEL: 33-14-513-1616
FAX: 33-14-399-0700

FUJITSU HONG KONG Limited
Room 2521, Sum Hung Kai Centre
30 Harbour Road Wanchai, Hong Kong
TEL: 852-827-5780
FAX: 852-827-4724
TLX: 62667

FUJITSU ITALIA S.p.A.
Via Melchiorre Gioia, No. 8-20124 Milano, ITALY
TEL: 39-2-63651
FAX: 39-2-6572257

FUJITSU NORDIC AB
Kung Hans vag, S-191 76 Sollentuna, SWEDEN
TEL: 46-8-626-6000
FAX: 46-8-626-6711

FUJITSU LIMITED
International Operations
Marunouchi 1-6-1, Chiyoda-ku, Tokyo 100, JAPAN
TEL: (81-3) 3216-3211
FAX: (81-3) 3213-7174
TLX: J22833
Cable: "FUJITSU LIMITED TOKYO"

Preface

This manual explains how to use the M3099A/G image scanner.

The M3099A/G is very fast and highly functional image scanner developed for volume filing, using a charge-coupled device (CCD) image sensors. This scanner, featuring duplex reading and high-quality image processing, read documents fed by an automatic document feeder (ADF).

Once you have unpackaged the device, read the manual first and use the scanner correctly.

Precaution on copyright

Since scanned documents are protected by copyrights, they may not be used for other than personal purposes without permission from their authors.

Requests

Do not reproduce this publication in any form without permission.

The contents of this publication may be subject to change without prior notice.

First edition: March 1994

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.

Contents

CHAPTER 1	COMPONENTS	1-1
	Checking the Components	1-1
	Part Names and Functions	1-2
	Exterior view of the scanner	1-2
	Explanation of each section	1-3
	Operator Panel Arrangement and Functions (M3099A)	1-4
	Operator panel arrangement	1-4
	Operator panel functions	1-4
	LCD display	1-6
CHAPTER 2	INSTALLATION AND CONNECTIONS	2-1
	Precautions	2-1
	Inspection	2-2
	Cable Connection	2-4
	Turning the power switch off	2-4
	Connecting the power cable	2-4
	Connecting the interface cable	2-4
CHAPTER 3	OPERATING INSTRUCTIONS	3-1
	Turning the Power On	3-1
	Loading Document	3-1
	Inserting Document Manually	3-4
	Opening the Upper Transport Unit	3-5
	Closing the Upper Transport Unit	3-5
	Button Specification and Reading Mode Setting (M3099A)	3-6
	Simplex (front-side) reading mode	3-7
	Duplex (front-side) reading mode	3-13
	Duplex (back-side) reading mode	3-18
	[Start]/[Stop] Button (M3099A)	3-20

CHAPTER 4	CLEANING AND REPLACEMENT OF PARTS	4-1
	Cleaning Locations and Frequencies	4-1
	Cleaning Tools	4-1
	Procedure	4-2
	Cleaning the rollers	4-2
	Cleaning the transport paths	4-3
	Cleaning the glass surface	4-4
	Cleaning the sensors	4-4
	Replacement of Parts	4-7
	Lamp replacement	4-7
	Roller ASY replacement	4-13
	Pick roller replacement	4-15
	Belt ASY and belt replacement	4-16
	Pad Replacement	4-18
CHAPTER 5	TROUBLESHOOTING	5-1
	Initial Checks	5-1
	Message List	5-3
	Device and Operator Actions for Temporary Errors	5-4
	Device and Operator Actions for Equipment Errors	5-5
	Jam Processing	5-6
CHAPTER 6	DOCUMENT SPECIFICATION	6-1
	Document Size	6-1
	Document Quality	6-2
	Document type	6-2
	Ream weight	6-2
	Precautions	6-2
APPENDIX A		
	Installation Specifications	A-1
	Consumables	A-3
	Accessories	A-3
	Options	A-4

APPENDIX B	ENDORSER	
	Specification	B-1
	Panel operation	B-2
	Print head handling	B-5
APPENDIX C	SETUP MODE	
	Activating the setup mode	C-1
	Operational transition in the setup mode	C-2
	Contents of the setup mode	C-2
APPENDIX D	OPERATOR PANEL (M3099G)	
	Operator panel	D-1
	Operator panel function	D-1
	LCD display	D-2
	Buttons	D-3
GLOSSARY OF TERMS	.....	GL-1
INDEX	.....	IN-1

Figures

1.1	Received components	1-1
1.2	M3099A parts names	1-2
1.3	Operator panel arrangement	1-4
6.1	Document size	6-1
A.1	Dimensions	A-2
D.1	Operator Panel layout	D-1

Tables

1.1	Button functions	1-5
1.2	LEDs functions	1-6
4.1	Cleaning positions and frequencies	4-1
5.1	Messages	5-2
5.2	Device and operator actions for temporary errors	5-4
5.3	Operator actions for equipment errors	5-5
A.1	Installation specifications	A-1
A.2	Consumables	A-3
A.3	Accessories	A-3
D.1	Button functions	D-1
D.2	LEDs functions	D-2

Chapter 1: Components

Chapter 2: Installation and Connections

Chapter 3: Operating Instructions

Chapter 4: Cleaning and Replacement of Parts

Chapter 5: Troubleshooting

Chapter 6: Document Specification

Appendix

Glossary of Terms

Index

COMPONENTS

INSTALLATION
AND
CONNECTIONS

OPERATING
INSTRUCTIONS

CLEANING AND
REPLACEMENT
OF PARTS

TROUBLE-
SHOOTING

DOCUMENT
SPECIFICATION

APPENDIX

GLOSSARY OF
TERMS

INDEX

COMPONENTS

After unpacking the scanner, confirm that all the components have been received. This section describes the components of the scanner, part names, and operator panel arrangement and their functions.

Checking the Components

These high precision components must be handled with care. Confirm that all the components shown in Figure 1.1 have been received. If any component is missing, please contact your sales agent.

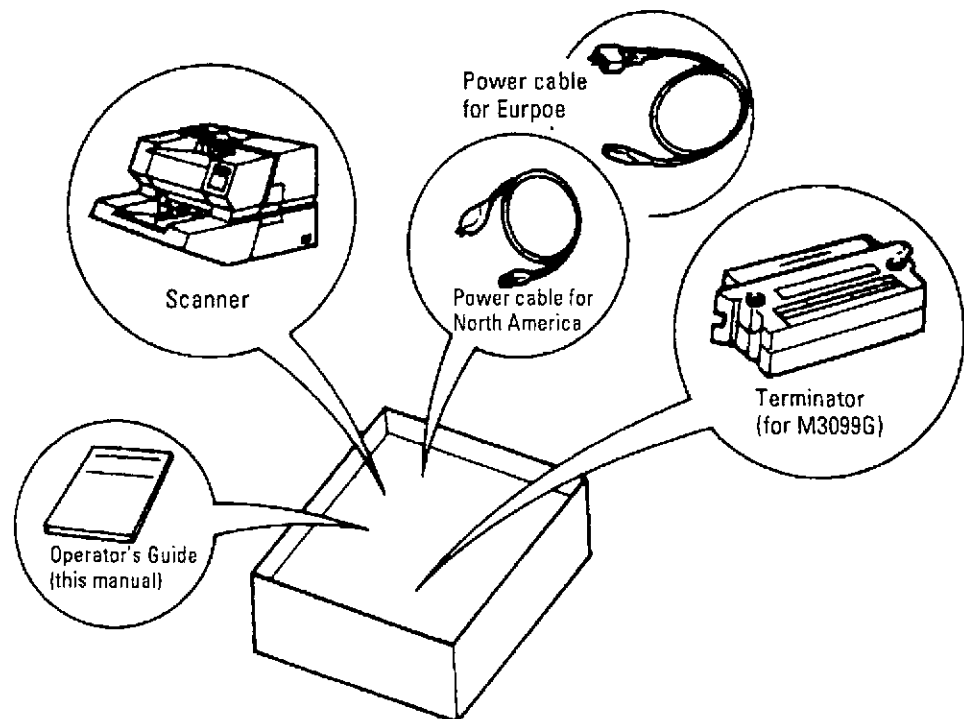


Figure 1.1 Received components

Part Names and Functions

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

Exterior view of the scanner

The scanner can read a document of A3 or double-letter size at maximum.

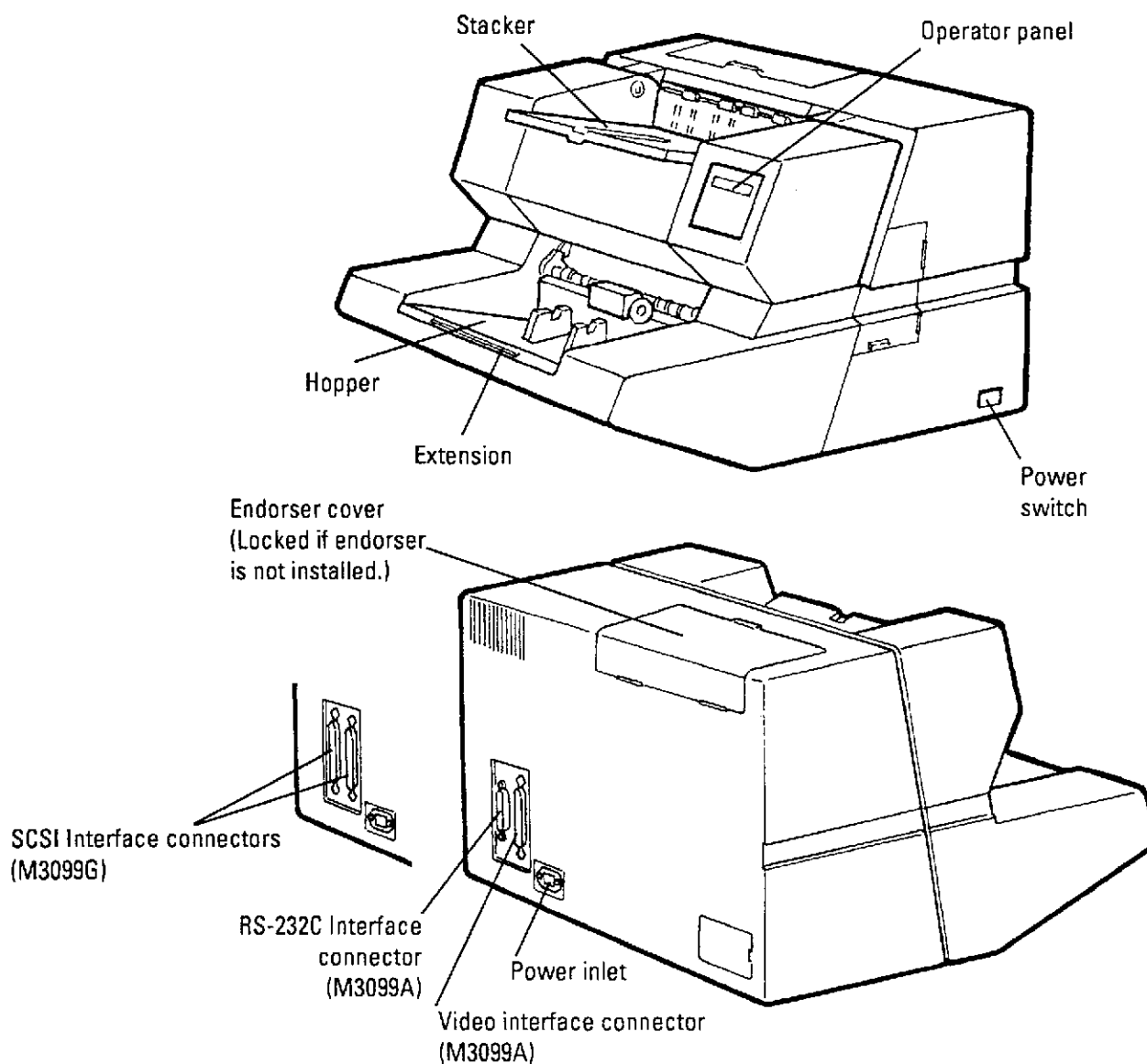


Figure 1.2 M3099A/G parts names

Explanation of each section

- Power switch: Use this switch to turn the power on or off.
- Operator panel: Use this panel to operate the scanner.
The panel functions are explained in detail in the next section.
- Power inlet: Connect the power cable from an AC power outlet here.
- Video interface connector: Connect the video interface cable from (M3099A) the host computer here.
- RS-232C interface connector: Connect the RS-232C interface cable (M3099A) from the host computer here.
- Hopper: Load documents here.
- Stacker: Stacks read documents.
- Extension: Prevents documents from hanging down.
- SCSI interface connectors: Connect the SCSI interface cables from the host computer here.

Operator Panel Arrangement and Functions (M3099A)

Operator panel arrangement

The operator panel is located at the upper right hand side of the scanner. The panel consists of an LCD display (24 characters x 2 lines), LEDs and buttons.

Figure 1.3 shows arrangement of the operator panel.

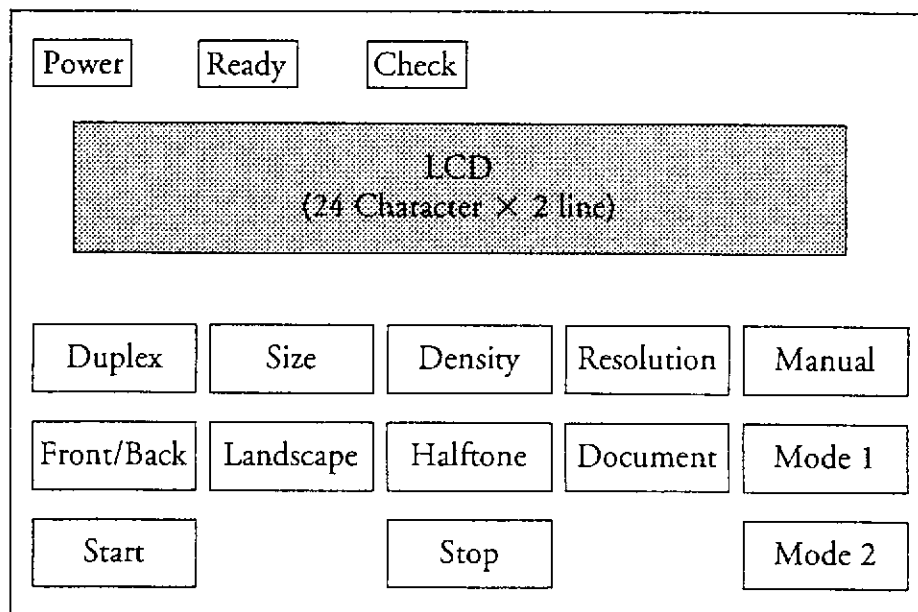


Figure 1.3 Operator panel arrangement

Operator panel functions

The operator panel has 13 buttons and 3 LEDs.

Table 1.1 lists button functions, and Table 1.2 lists LED functions.

NOTICE: In case of M3099G, see Appendix D.

Table 1.1 Button functions

Button name	Function
Start	When the Ready lamp is lit in the manual start mode, pressing this button starts a reading operation.
Stop	<p>Pressed during reading The reading operation immediately stops and the document under transport is ejected to the stacker. The hopper table is lowered to the bottom.</p> <p>Pressed before reading A picked document if any is ejected to the stacker. This button works only when a document is picked. The hopper table is lowered to the bottom.</p> <p>Pressed during setting of the reading mode The display returns to the initial screen.</p>
Duplex	Toggles the LCD screen between simplex and duplex reading.
Front/Back	Toggles the LCD screen between front-side and back-side for reading.
Size	Sets the document size.
Density	Sets the scanning density.
Resolution	Sets the scanning resolution.
Manual	<p>Sets the manual mode.</p> <p>Pressing this button lifts the hopper table to the level for manual mode. Pressing the button again releases the mode and lowers the hopper table to the bottom.</p>
Landscape	Sets the document scan direction to the portrait or landscape mode.
Halftone	Sets whether to execute halftone processing (dither or error diffusion) and also automatic separation processing (dither or error diffusion if the image processing option is installed).

Table 1.1 Button functions (Continued)

Button name	Function
Document	Sets the document type (photograph linedrawing).
Mode 1	Activates the setup mode. (*1)
Mode 2	Activates the maintenance mode. (*1)

*1: See maintenance manual for details.

Table 1.2 LEDs functions

Indicator	Color	Function
Power	Green	Lights to indicate the power is on.
Ready	Green	Lights when the image scanner becomes ready to read a document in the manual mode and manual start mode. This indicator turns off when the Start button is pressed to read a document.
Check	Yellow	Lights if a equipment error occurs. An error message is displayed on the LCD screen. This indicator blinks if a document is jammed in the ADF. This indicator turns off when the jammed documents are removed from the ADF and the upper transport unit is closed.

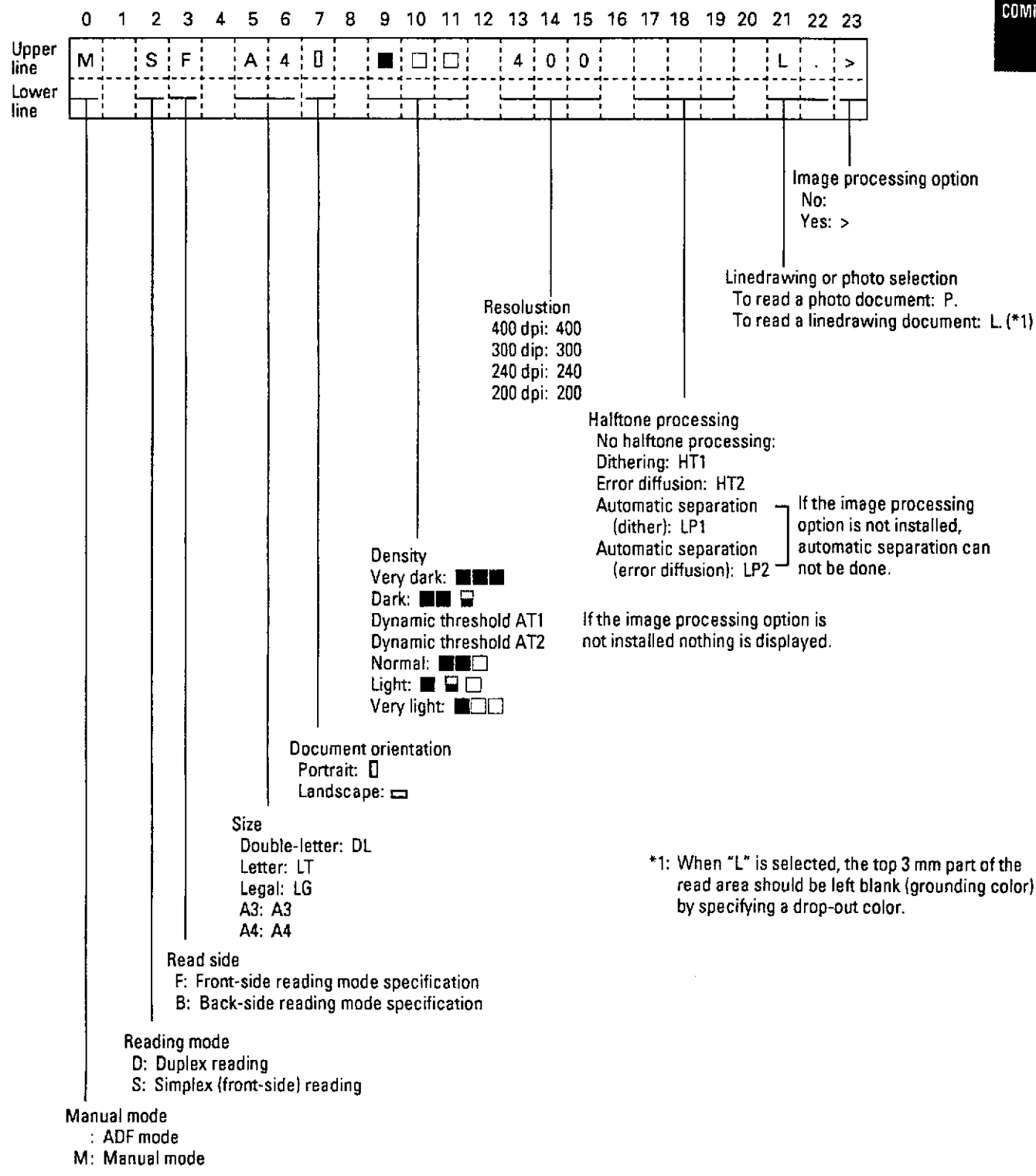
LCD display

The scanner is provided with simplex and duplex reading modes.

Simplex reading mode

The upper line (line 1) displays the current read mode for simplex reading.

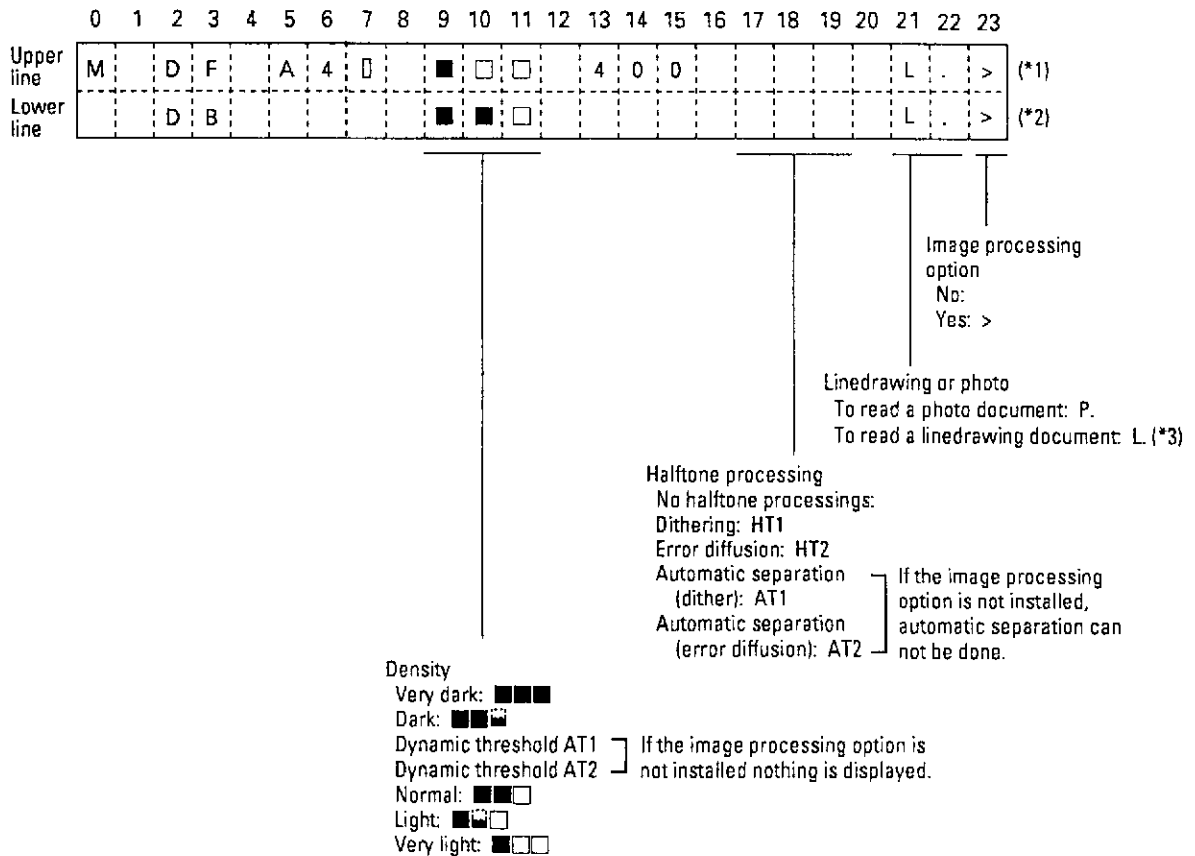
The lower line (line 2) displays the mode set and messages when the buttons are pressed.



Duplex reading mode

The upper line (line 1) displays the current read mode for front-side reading.

The lower line (line 2) displays the current read mode for back-side reading.



- *1: The upper line display messages are the same as those in the simplex reading mode.
- *2: For back-side reading, only the density, halftone processing, document selection, and image processing options can be specified. The other mode is the same as that for front-side reading.
- *3: When "L" is selected, the top 3-mm part of the read area should be left blank (grounding color) by specifying a drop-out color.

Operation status

Operation status is indicated by the following message:

<Power-on>

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
				W	a	r	m	i	n	g	-	u	p		N	o	w	!	!					

Waiting until the lamps are ready to read.

If it is ready, the screen changes to the initial screen of the simplex or duplex reading mode.

<Warning>

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
		X	X		X	X	X		X	X	X										X	X	X
									I	N	K		E	M	P	T	Y						

The upper line displays the current read mode for front-side reading. The lower line is blinking and displays the ink empty of print head whenever scanner reads the document.

This warning display will be reset, when the covers are opened, or [STOP] is pressed, or Start command is issued. The operator must change the print head and reset the life counter. (See Appendix B)



INSTALLATION AND CONNECTIONS

This chapter explains how to install and connect the scanner.

Precautions

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

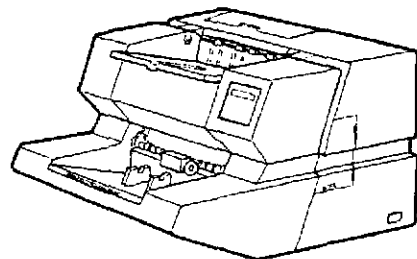
- Place the scanner away from electrical noise sources, strong magnetic fields and air flow. If the scanner is used near an air conditioner, copying machine, or TV set, the scanner may operate incorrectly.
- Keep the scanner out of the sun and away from heaters. These environments may shorten scanner 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.
- 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 scanner where liquid spills may occur.
- 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.

WARNING

Place the machine with no portion of the scanner hang over the desktop. Never attempt to move or relocate the machine without help. And hold the horizontal plane of the scanner bottom. (Not inclined plane)

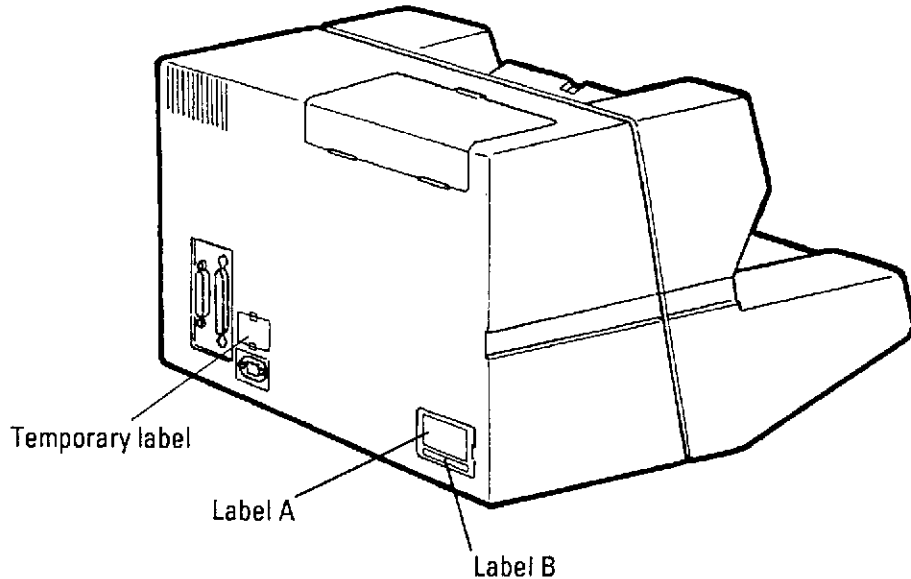
ACHTUNG

Stellen Sie den Scanner sicher auf eine waagerechte, ebene Fläche. Bewegen Sie den Scanner nicht ohne Hilfe.





Precautions

Make sure that the input voltage and frequency indicated on the label agree your power source. And see the attachment sheet.



After checking the power voltage rating of the scanner with the temporary label, connect the correct power supply to the scanner.

Label A

この装置は、商工業地域で使用されるべき第一種情報装置です。住宅地域、又はその隣接した地域で使用するとラジオ、テレビジョン受信機等に受信障害を与えることがあります。 VCCI-1	
This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: ① This device may not cause harmful interference, and ② this device must accept any interference received including interference that may cause a radio operation:	
 LR53350 SEIWA	
電源を接続する前に必ず設置説明書をご覧ください。 See installation instructions before connecting to the supply. Voir la notice d'installation avant de raccorder au réseau. Bitte lesen sie die bedienungs anleitung bevor sie das garaet in betrieb setzen.	

Label B

MODEL	M3099A	IMAGE SCANNER
PART NO.	CA01023-B003	AC100-120/200-240 V
SER. NO.		1 phase 50/60 Hz
DATE	1993-11	2.5/1.25 A 55 kgf

FUJITSU LIMITED

MADE IN JAPAN

**INSTALLATION
AND
CONNECTIONS**

Temporary label

この装置は AC100-120V に設定されています。
電源の電圧を変更する場合は保守説明書をご覧ください。

This machine is wired for AC100-120V.
To change the Voltage setting, call the service personal.

CAUTION

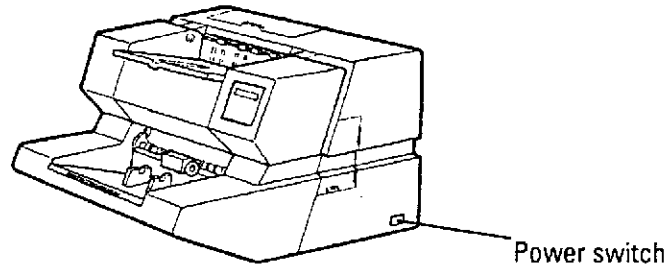
If the power voltage rating of the scanner is different from your power source, please contact manufacturer's authorized service center.

Cable Connection

Connect the cables as follows:

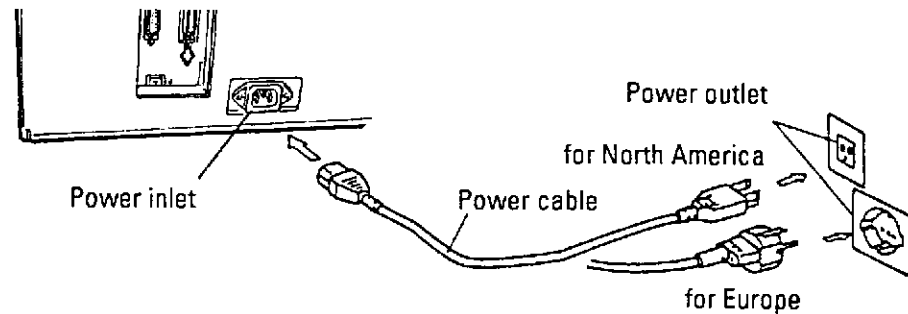
Turning the power switch off

Press the power switch until it comes out.



Connecting the power cable

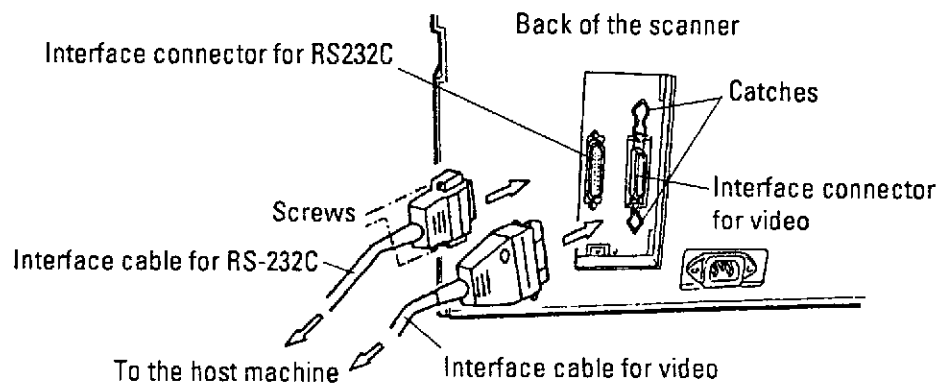
Connect the power cable to the power inlet of the device and a power outlet.



Connecting the interface cable

Connect the video interface and RS-232C interface cables and secure them with hooks and screws.

Connect their other connectors to the host machine.

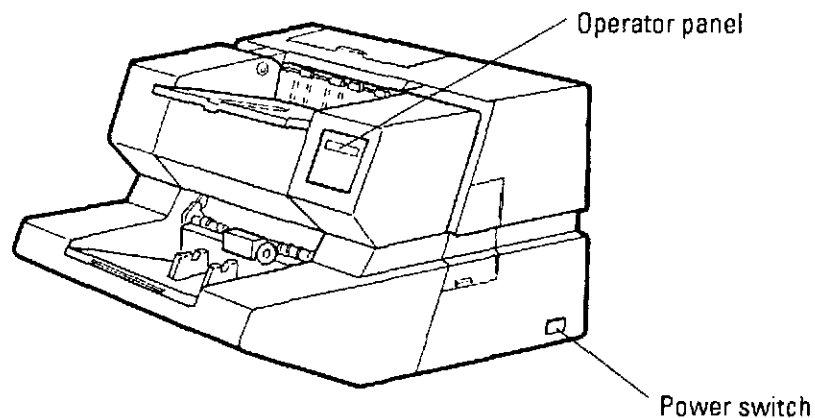


OPERATING INSTRUCTIONS

This chapter explains how to turn the power on, loading document inserting document manually, opening/closing the upper transport unit, and button specification and reading mode setting.

Turning the Power On

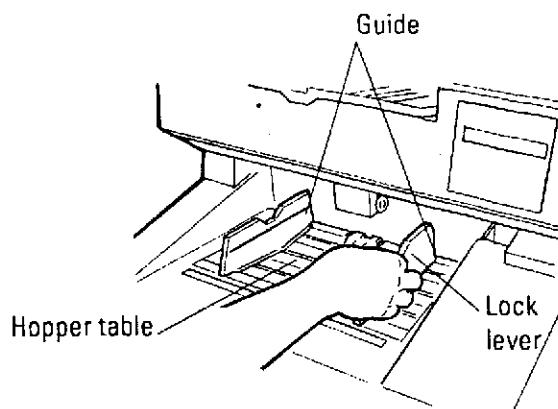
Press the power switch. The power goes on and the green Power lamp at the operator panel lights.



Loading Document

When the LCD displays "Hopper Empty", supply documents as follows:

- ① Check the documents as follows:
 - Remove clips and staples from the documents.
 - Dry any wet ink.
 - Line up the documents to avoid skewing.

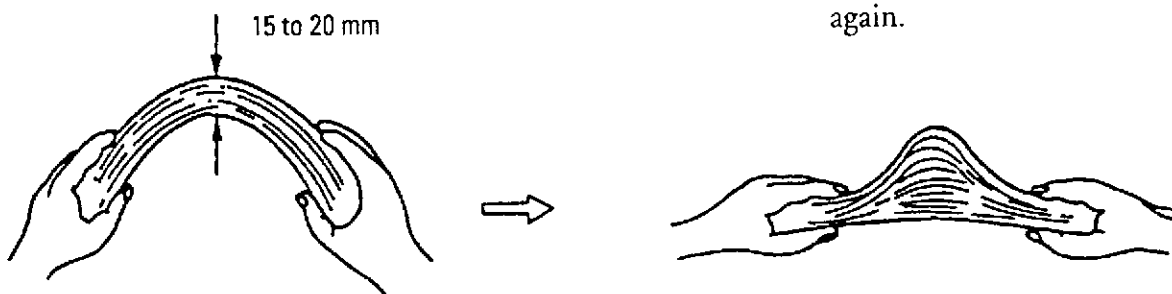


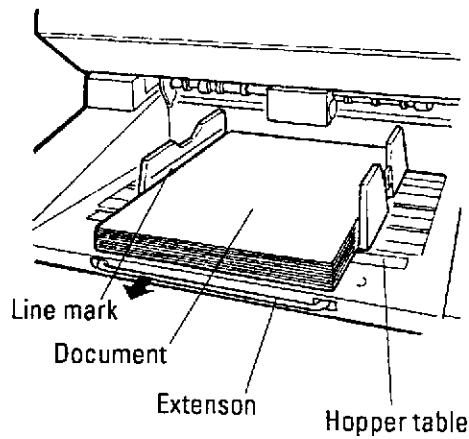
- ② Set the specified document width.

Hold the lock lever at the guide center on the right of the hopper table and move it horizontal to set the document width.

- ③ 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.

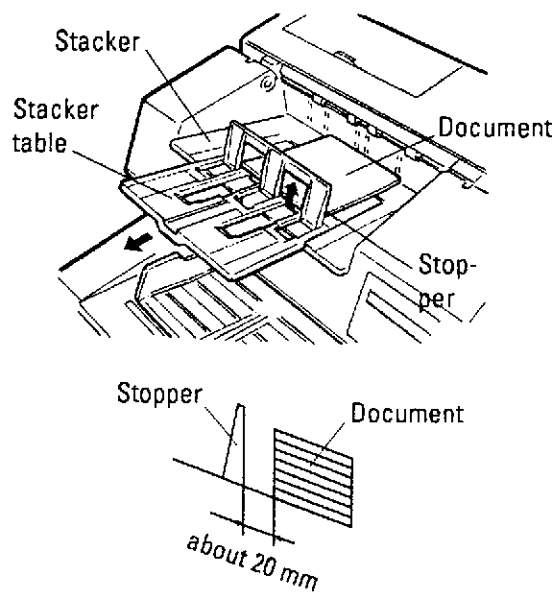




④ Load a document front side face-up on the hopper table.

Note:

1. Be sure not to load documents higher than the line marked inside the guide on each side of the hopper table.
2. If the documents are too long, pull out the extension at the front of the hopper gently.
3. Depending on the document (especially thin and small document), the maximum sheets of document which can be layed on the stacker may be less than that of normal document. At that case, load the document lower than the line marked inside the guide on each side of the hopper table.



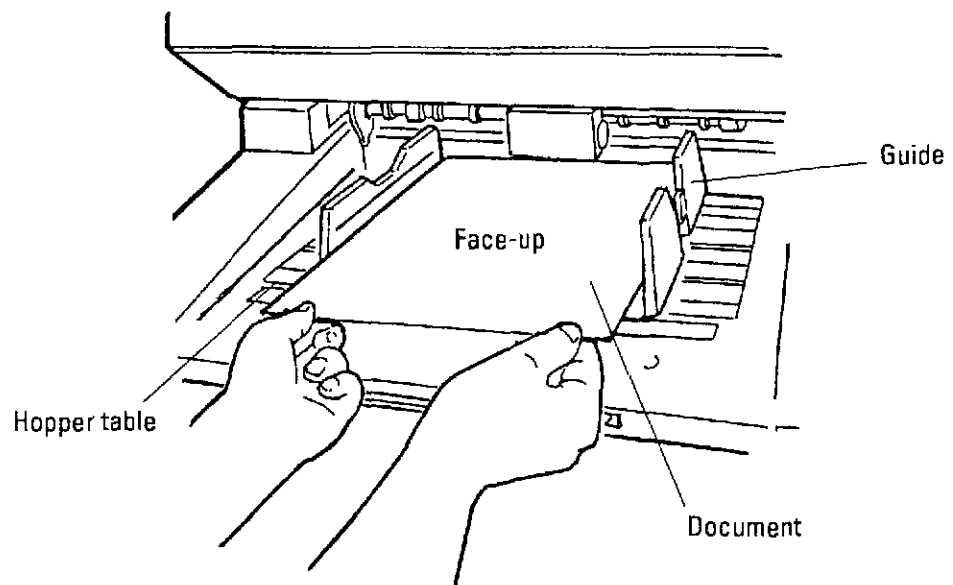
⑤ Adjust the stacker table to the document size.

Note:

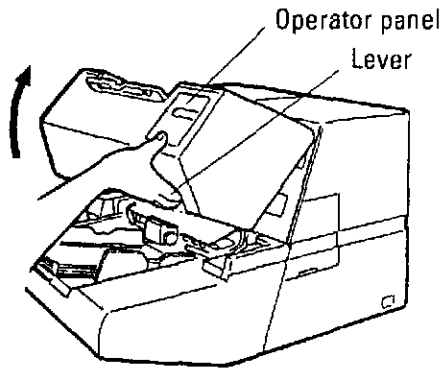
Extend the stacker table for a long document.
Use stopper for a small document.
Load a document about 20 mm a part from the stopper.

Inserting Document Manually

Place documents face up at the center of the hopper table. Press the front ends against the internal wall of the hopper table.



Opening the Upper Transport Unit



- ① Lift the lever below the operator panel to open the upper transport unit from under.

OPERATING INSTRUCTIONS

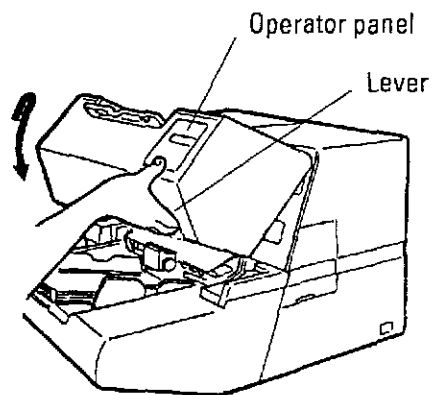
WARNING

Make sure that the upper transport unit is engaged in the "LIFT-up" position on the "LIFT-up" latch.

ACHTUNG

überzeugen Sie sich, daß die obere Einheit eingerastet ist.

Closing the Upper Transport Unit



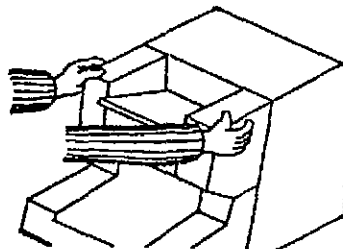
- ① Lift-up the upper transport unit with both of your hands to release the "LIFT-up" latch and then to lower down the upper transport unit with your hands.

WARNING

Before lowering down the unit, make sure that the area between the main machine and the upper transport unit is clear of all objects and fingers.

ACHTUNG

Bevor Sie die obere Einheit absenken, überzeugen Sie sich, daß keine Gegenstände oder Finger eingeklemmt werden.



NOTICE

Press the upper transport unit with both hands to secure the lock.

Button Specification and Reading Mode Setting (M3099A)

The button specifications and setup details are explained for each of the simplex (front-side), duplex (front-side) and duplex (back-side) reading modes. The three modes are switched over with the Duplex and Front/Back buttons as follows:

[Duplex] button

This button is used to select simplex or duplex document reading. Pressing the button toggles the display between the initial screens of the simplex and duplex reading modes.

<Initial screen of the simplex reading mode>

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	S	F		A	4	□		■	□	□		4	0	0						L	.	.	>



Duplex button pressed

<Initial screen of the duplex reading mode>

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	D	F		A	4	□		■	□	□		4	0	0						L	.	.	>
	D	B							■	□	□									L	.	.	>

[Front/Back] button

This button is valid only in the duplex reading mode and to toggle the read side front or back.

“F” and “B” alternately blink for the setting of front or back-side.

NOTICE: In case of M3099G, see Appendix D.

<Initial screen of the duplex reading mode>

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	D	F	A	4	□				■	□	□		4	0	0					L	.	.	>
	D	B							■	□	□									L	.	.	>

↓ Front/Back button pressed

<Screen 1>

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	D	F	A	4	□				■	□	□		4	0	0					L	.	.	>
	D	B							■	□	□									L	.	.	>

(Blinking)

↑ ↓ Front/Back button pressed

<Screen 2>

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	D	F	A	4	□				■	□	□		4	0	0					L	.	.	>
	D	B							■	□	□									L	.	.	>

(Blinking)

Simplex (front-side) reading mode

<Initial screen of the simplex reading mode>

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	S	F	A	4	□				■	□	□		4	0	0					L	.	.	>

[Size] button

Select a document size. When this button is pressed the lower line is displayed as shown in Screen 3. Each time this button is pressed, "DLT", "LT", "LG", "A3", or "A4" starts blinking in turn, and the size displayed on the upper line changes accordingly.

<Screen 3>

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	S	F		A	4	□		■	□	□		4	0	0						L	.	>	
	S	i	z	e	:	D	L	T		L	T		L	G		A	3		A	4		□	

(Blinking)

If the direction indicated on the upper line is "□" only "LT" or "A4" can be selected.

[Density] button











Selects a density for the read operation. When this button is pressed, the lower line is displayed as shown in Screen 4. Each time this button is pressed, the blinking part in the lower line changes, and the density indicated on the upper line changes according to the blinking part.

<Screen 4>

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	S	F		A	4	□		■	■	□		4	0	0						L	.	>	
		D	e	n	:	■	■	■	□	□		A	T	(	A	u	t	o	)	2			

(Blinking)

The lower line is displayed as shown below. (See the beginning of this selection for the upper line.)

Lower line display		Description
Without image processing option	With image processing option	
 	 	Very dark
	Auto 1	Dark
	Auto 2	Dynamic threshold
  	  	Simplified dynamic threshold
		Normal
		Light
		Very light

Blinking order
↓

OPERATING INSTRUCTIONS

[Resolution] button

Selects a resolution for the read operation. When this button is pressed, the lower line is displayed as shown in Screen 5. Each time this button is pressed, "400", "300", "240", or "200" starts blinking in turn, and the resolution indicated on the upper line changes accordingly.

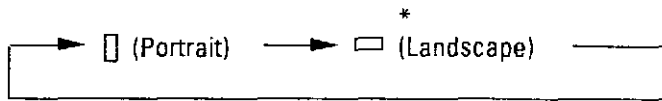
<Screen 5>

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	S	F	A	4	□				■	□	□		4	0	0						L	.	>
			R	e	s	.	:	4	0	0		3	0	0		2	4	0		2	0	0	

(Blinking)

[Landscape] button

Specified whether reading is done in landscape or portrait mode. When this button is pressed, the lower line is displayed as shown in Screen 6. Each time this button is pressed, the blinking part changes in turn, and the mode indicated on the upper line changes accordingly.



*Note:

The landscape mode can be selected only when the document size is LT or A4.

<Screen 6>

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	S	F		A	4	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					4	0	0					L	.	>	
	S	i	z	e	:	D	L	T		L	T		L	G		A	3		A	4		<input type="checkbox"/>	

(Blinking)

[Half-tone] button

Specified whether to perform halftone processing (dither or error diffusion). When this button is pressed, the lower line is displayed as shown in Screen 7. Each time this button is pressed, the blinking part changes in turn, and the halftone indicated on the upper line changes accordingly.

<Screen 7>

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
	S	F	A	4	□	■	□	□	4	0	0	4	0	0	H	T	1	L
H a l f t o n e : O F F										H T 1			L P 1											

① ② ③
(Blinking)

Not displayed unless the image processing option is installed.

OPERATING INSTRUCTIONS

Blinking order	Display			Explanation
	①	②	③	
1	OFF blinking	HT1	LP1	Line Art (Halftone processing off)
2	OFF	HT1 blinking	LP1	Halftone processing (dither)
3	OFF	HT2 blinking	LP2	Halftone processing (error diffusion)
4	OFF	HT1	LP1 blinking	Automatic separation (dither)
5	OFF	HT2	LP2 blinking	Automatic separation (error diffusion)

Without option

With option

(*1)
(*2)

Not displayed unless the image processing option installed.

- *1: Select one of these settings to read data such as photographs, illustration, or colored maps.
- *2: If photographs and characters are mixed in a document, the characters are read clearly and the photographs are read in halftone.
This setting is only available if the image processing option is installed.

[Document] button

Selects the type of document. When this button is pressed, the lower line is displayed as shown in Screen 8. Each time this button is pressed, "LINE" or "PHOTO" starts blinking in turns, and the document selection indication displayed on the upper line changes accordingly.

<Screen 8>

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	S	F	A	4	□	■	□	□	4	0	0	H	T	1	P	.	>						
D O C . ; L . (L i n e) P . (P h o t o)																							

(Blinking)

Display	Explanation
P. (Photo)	For light adjustment or when there is a dark background color on the document select P. (Photo)
L. (Line)	Select this setting to read linedrawing. (*1)

*1: Top 3 mm part of the read area should be left blank (grounding color) by specifying a drop-out color.

[Manual] button

This button is used to set or release the manual mode.

Pressing this button displays <Screen 9>. The manual mode is set and the hopper goes up. Pressing the button again releases the manual mode and lowers the hopper to the bottom.

<Screen 9>

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
M	S	F	A	4	□	■	□	□	4	0	0	H	T	1	L	.	>						

(Manual mode set)



Manual button pressed

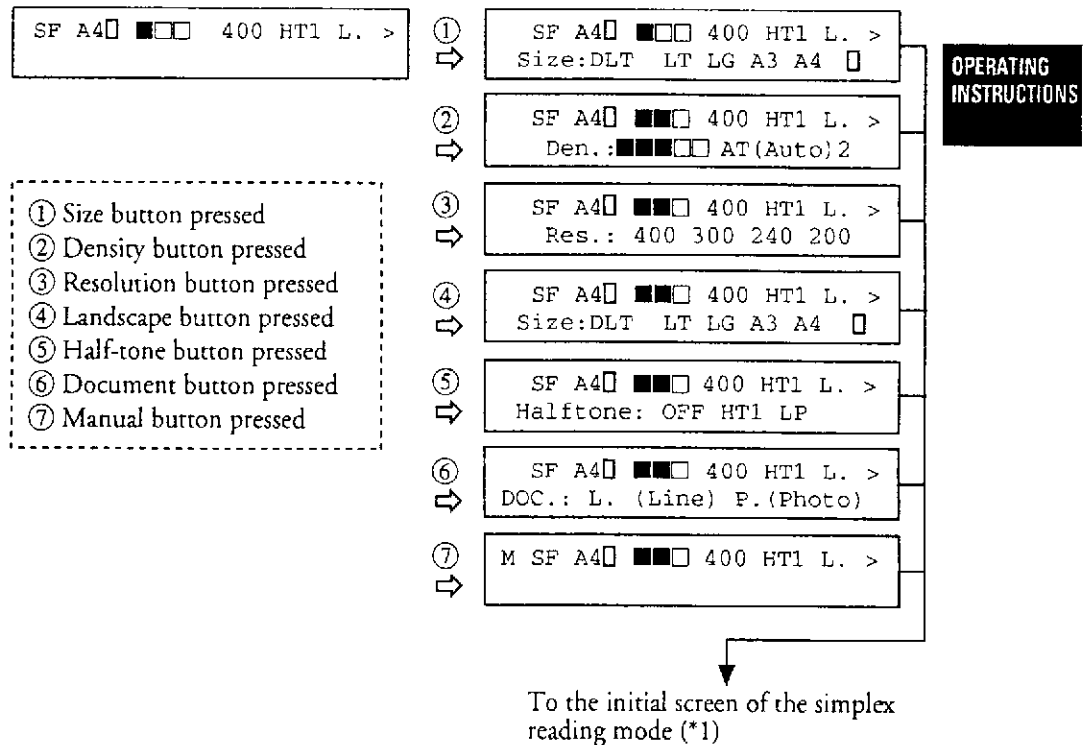
<Initial screen of the simplex reading mode>

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	S	F	A	4	□	■	□	□	4	0	0	H	T	1	L	.	>						

(Manual mode released)

Screen transition

<Initial screen of the simplex reading mode>



*1: Pressing the Stop button during reading mode setting returns the display to the initial screen of the simplex reading mode. The display returns to the initial screen of the simplex reading mode too if no button is pressed for one minute or longer. Press the stop button then start the scan from the initial screen.

Duplex (front-side) reading mode

<Initial screen of the duplex reading mode>

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	D	F		A	4	[]	■	[]	[]			4	0	0							L	.	>
	D	B					■	[]	[]												L	.	>

[Size] button

This button is used to select a document size.

For details, see the explanation of <Screen 3>.

<Screen 10>

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	D	F		A	4				■	□	□		4	0	0					L	.	>	
	S	i	z	e	:	D	L	T		L	T		L	G		A	3		A	4		□	

(Blinking)

[Density] button

This button is used to select a scanning density.

For details, see the explanation of <Screen 4>.

<Screen 11>

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	D	F		A	4				■	■	□		4	0	0					L	.	>	
		D	e	n	.	:	■	■	■	□	□		A	T	(	A	u	t	o	)	2		

(Blinking)

[Resolution] button

This button is used to select a scanning resolution.

For details, see the explanation of <Screen 5>.

<Screen 12>

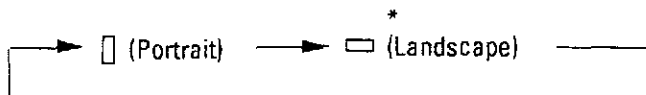
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	D	F		A	4				■	□	□		4	0	0					L	.	>	
		R	e	s	.	:		4	0	0		3	0	0		2	4	0		2	0	0	

(Blinking)

[Landscape] button

This button is used to select document reading operation in the portrait or landscape mode.

For details, see the explanation of <Screen 6>.



Note:

The landscape mode can be selected only when the document size is LT or A4.

<Screen 13>

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	S	F		A	4	□	■	□	□		4	0	0						L	.	>		
	S	i	z	e	:	D	L	T		L	T		L	G		A	3		A	4		□	

(Blinking)

[Half-tone] button

This button is used to select whether or not to perform halftone (dither or error diffusion) processing.

For details, see the explanation of <Screen 7>.

<Screen 14>

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	D	F		A	4	□	■	□	□		4	0	0				H	T	T		L	.	>
	H	a	l	f	t	o	n	e	:	O	F	F		H	T	1		L	P				

①
②
③
(Blinking)

Not displayed unless the image processing option is installed.

[Document] button

This button is used to select a line drawing or photograph reading document.

For details, see the explanation of <Screen 8>.

<Screen 15>

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
	D	F	A	4					■	□	□		4	0	0		H	T	1		■	P	.	>
D	O	C	.	:		L	.	(	L	i	n	e	)		P	.	(	P	h	o	t	o)	

(Blinking)

[Manual] button

This button is used to set or release the manual mode.

For details, see the explanation of <Screen 9>.

<Screen 16>

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		
M		D	F	A	4				■	□	□		4	0	0		H	T	1			L	.	>	
		D	B						■	□	□												L	.	>

(Manual mode set)



Manual button pressed

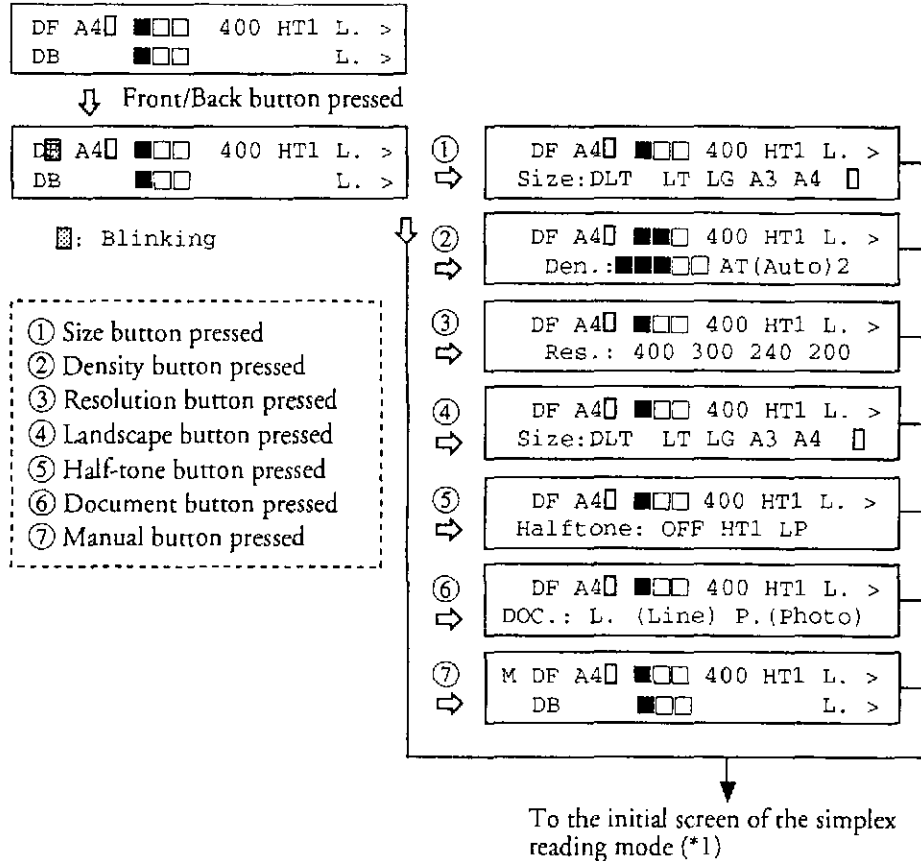
<Initial screen of the duplex reading mode>

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		
	D	F	A	4					■	□	□		4	0	0								L	.	>
	D	B							■	□	□												L	.	>

(Manual mode released)

Screen transition

<Initial screen of the duplex reading mode>



OPERATING INSTRUCTIONS

*1: Pressing the Stop button during reading mode setting returns the display to the initial screen of the duplex reading mode. The display returns to the initial screen of the duplex reading mode too if no button is pressed for one minute or longer. Press the stop button then start the scan from the initial screen.

Duplex (back-side) reading mode

<Initial screen of the duplex reading mode>

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
		D	F	A	4	D		■	□	□			4	0	0					L	.	.	>
		D	B					■	□	□										L	.	.	>

In this mode, the Density, Half-tone, and Document buttons are effective.

[Density] button

This button is used to select a reading density.

For details, see the explanation of <Screen 4>.

<Screen 17>

(Blinking)

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
		D	e	n	.	:	:	■	■	■	□	□		A	T	(	A	u	t	o	)	2	
		D	B					■	■	■	□	□								L	.	.	>

[Half-tone] button

This button is used to select whether or not to perform the half-tone (dither or error diffusion) processing.

For details, see the explanation of <Screen 7>.

<Screen 18>

Not displayed unless the image processing option is installed.

(Blinking)

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
		H	a	l	f	t	o	n	e	:	O	F	F		H	T	1		L	P				
		D	B					■	□	□										H	T	1	.	>

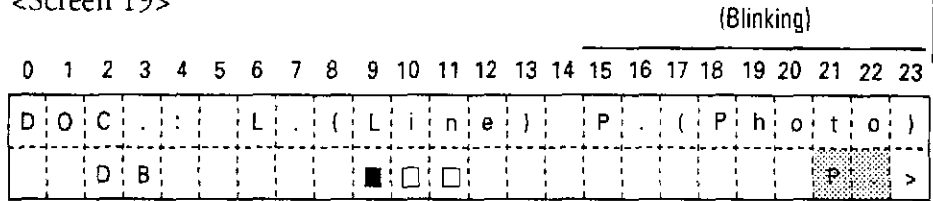
① points to column 10 (O), ② points to column 15 (H), and ③ points to column 20 (H).

[Document] button

This button is used to select a line images or photograph reading document.

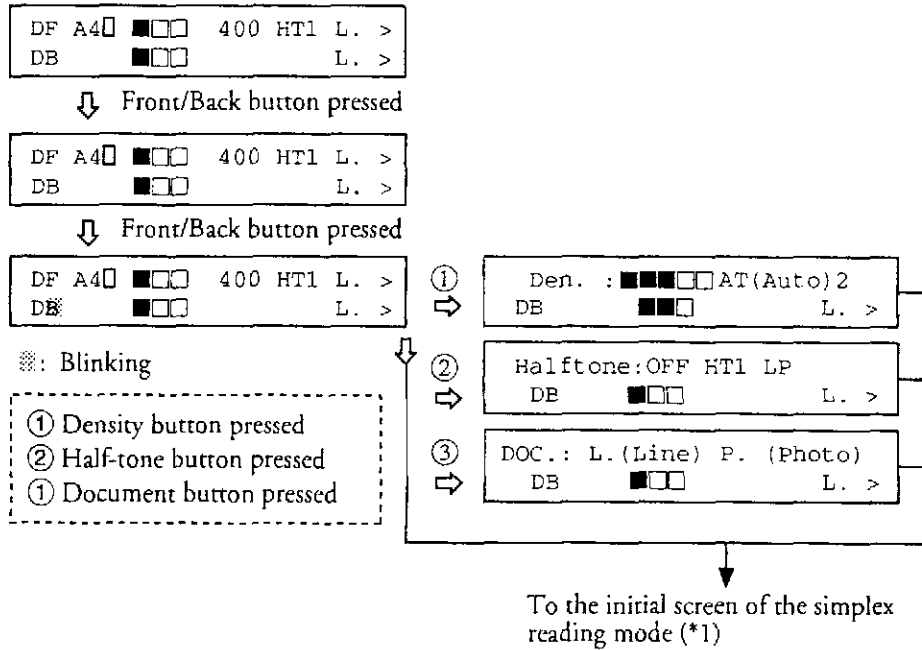
For details, see the explanation of <Screen 8>.

<Screen 19>



Screen transition

<Initial screen of the simplex reading mode>



*1: Pressing the Stop button during reading mode setting returns the display to the initial screen of duplex reading mode. The display returns to the initial screen of the duplex reading mode too if no button is pressed for one minute or longer. Press the stop button then start the scan from the initial screen.

**[Start]/[Stop]
Button
(M3099A)**

Reading is started or stopped using the Start and Stop buttons as follows:

[Start] button

Read operation can be started in either manual or automatic start mode. To start reading in manual start mode, press this button while the ready indicator is lit. (*1)

*1: Make sure that the LCD is initial screen of simplex or duplex reading mode, if not press STOP button once, the press START button.

Manual start mode: Reading is started by the Start button.

Automatic start mode: Reading is started by a command from the host machine.

[Stop] button

This button is effective regardless of whether the scanner is in manual or automatic mode. Press this button to stop the read operation.

During reading: Reading immediately stops and the document being fed are ejected to the stacker.
The hopper table is lowered to the bottom.

Before reading: A picked document if any is ejected to the stacker.
The button works only when a document is picked.
The hopper table is lowered to the bottom.

Note:

If a document which is not picked remain in front of ADF, please set the document on the hopper again.

NOTICE: In case of M3099G, see Appendix D.

CLEANING AND REPLACEMENT OF PARTS

This chapter explains cleaning and how to replace parts of the scanner.

Cleaning Locations and Frequencies

Table 4.1 lists cleaning locations and frequencies of the scanner. By referencing this table, clean the scanner as instructed in next Section.

CLEANING AND
REPLACEMENT
OF PARTS

Table 4.1 *Cleaning locations and frequencies*

Locations		Tools	Frequencies
Roller		Cleaning sheet	Every 50,000 sheets
		Cleaner F2	Every 200,000 sheets
		Dry cloth and isopropyl alcohol	
Transport path		Dry cloth and isopropyl alcohol	Every 200,000 sheets
Glass surface			
Sensor tops	Document width-detection		
	Document detection		
	Front-side reading timing detection		
	Ejection detection		

Note: Depending on use, it may be necessary to clean more frequently.

Cleaning Tools

The tools required for cleaning are as follows:

- Cleaning cloth (dry cloth, lint free)
- Cleaner F2
- Isopropyl alcohol (cleaner F1)
- Cleaning sheet

NOTICE: Cleaner F2 should be used only for steel rollers.

Procedure

This section provides instructions on how to clean each section of the scanner.

WARNING

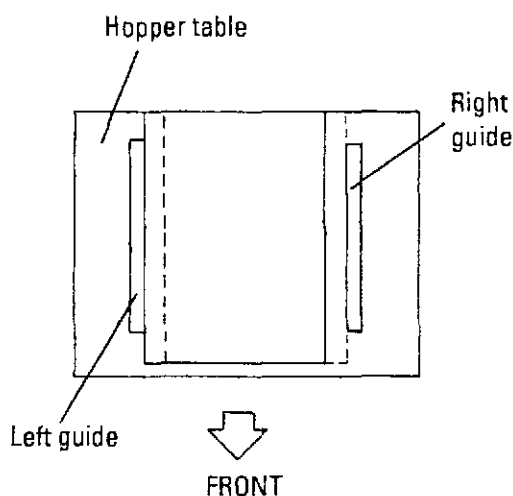
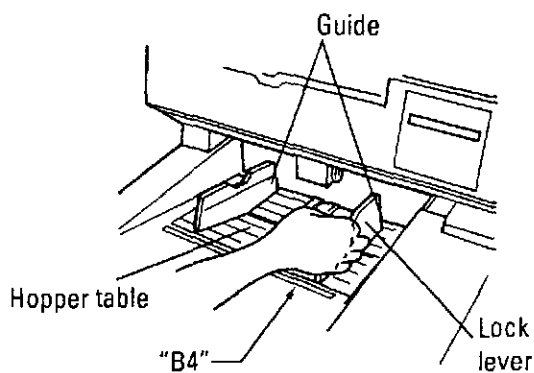
Wait at least 3 minutes after turning off the power before cleaning.

ACHTUNG

Warten Sie nach dem Reinigen mindestens 3 Minuten bevor Sie den Scanner wieder anschalten.

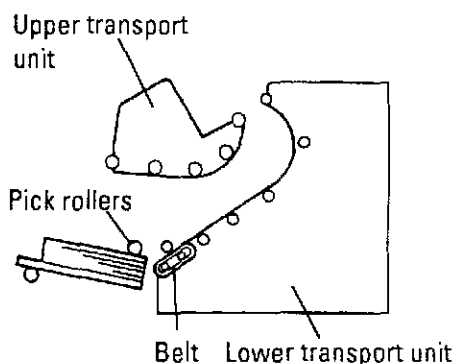
Cleaning the rollers with Cleaning Sheet

Cleaning the rollers with Cleaning Sheet:



- ① Set the hopper table guides to the B4 width.
- ② Remove protective paper from the cleaning sheet. With the adhesive side up, place the cleaning sheet on the hopper table by aligning it with the left guide.
- ③ Press [MODE2] twice, [MODE1] once, then [START]. (The hopper table goes up and the cleaning sheet is transported.)
- ④ By aligning with the right guide, place the same cleaning sheet on the hopper table with the adhesive side up.
- ⑤ Transport the cleaning sheet by the switch operations of ③.
- ⑥ Place a new cleaning sheet on the hopper table with the adhesive side down, and repeat steps ② to ⑤.

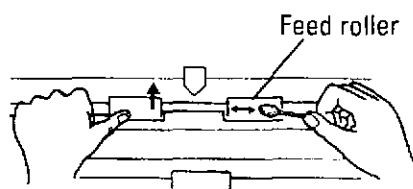
Cleaning the rollers with dry cloth and alcohol (Cleaner F1)



- ① Open the upper transport unit. (See page 3-5)
- ② Wipe the pick rollers, belt and the upper and lower transport unit rollers (11 rollers total) with a dry cloth.
- ③ Close the upper transport unit. (See page 3-5)

Cleaning the steel rollers with cleaner F2

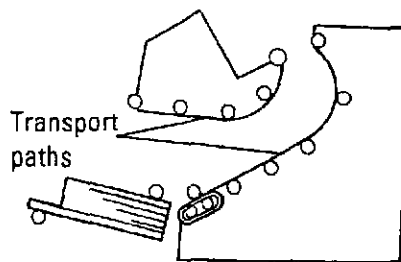
This cleaning is required when the toner stick to the roller.



- ① Open the upper transport unit. (See page 3-5)
- ② Apply a small amount of cleaner F2 to a Q-Tips. While turning the roller slowly, wipe its surface with Q-Tips.

Cleaning the transport paths

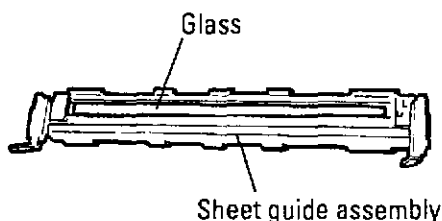
Clean the transport paths as follows



- ① Open the upper transport unit. (See page 3-5)
- ② Wipe the transport paths with a dry cloth. Use a vacuum cleaner when removing paper dust from the paths.
- ③ Close the upper transport unit. (See page 3-5)

Cleaning the glass surface

Clean the glass surface of the sheet guide assembly as follows:

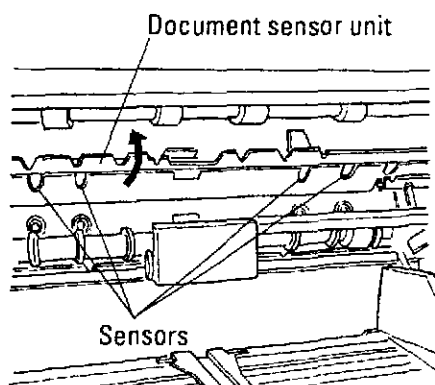


- ① Open the upper transport unit. (See page 3-5)
- ② Lift the sheet guide assembly by holding the handles on both ends and pull it out of the machine.
- ③ Wipe the glass surface (on both sides) with a dry cloth.
- ④ Re-install the sheet guide assembly.
- ⑤ Close the upper transport unit. (See page 3-5)

Cleaning the sensors

Document width detection sensor

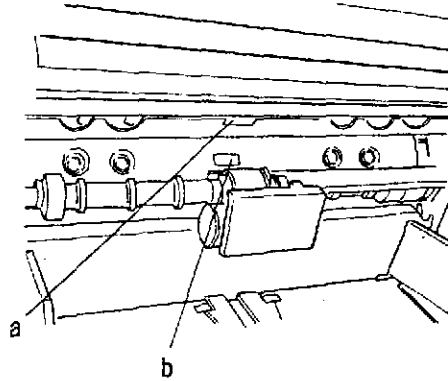
Clean the four document width detection sensors as follows:



- ① Open the upper transport unit. (See page 3-5)
- ② Hold the handles of the document sensor unit and keep the unit open.
- ③ Wipe the top of the four sensors with a dry cloth.
- ④ Close the document sensor unit.
- ⑤ Close the upper transport unit. (See page 3-5)

Document detection sensor

Clean the document detection sensor as follows:

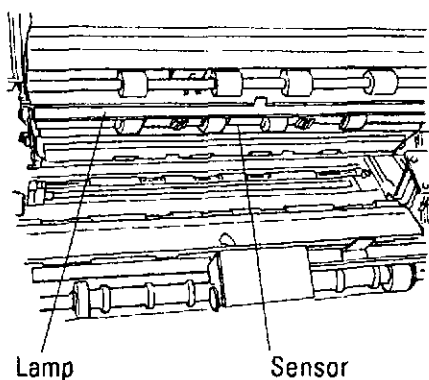


- ① Open the upper transport unit. (See page 3-5)
- ② Hold the handles of the document sensor unit and keep the unit open.
- ③ Wipe the two sensor windows (a and b) with a dry cloth.
- ④ Close the document sensor unit.
- ⑤ Close the upper transport unit. (See page 3-5)

**CLEANING AND
REPLACEMENT
OF PARTS**

Reading timing sensor

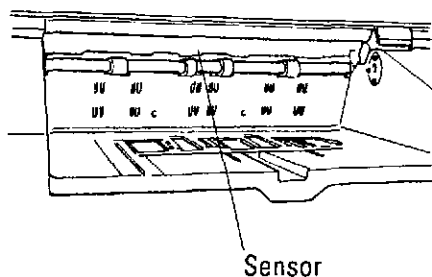
Clean the reading timing sensor as follows:



- ① Open the upper transport unit. (See page 3-5)
- ② Wipe the top of sensor at the transport path of the lower transport unit with a dry cloth.
- ③ Close the upper transport unit. (See page 3-5)

Ejection sensor

Clean the ejection sensor as follows:



- ① Open the upper transport unit. (See page 3-5)
- ② Wipe the top of sensor at the rear center of the device with a dry cloth.
- ③ Close the upper transport unit. (See page 3-5)

Replacement of Parts

This section provides how to replace parts.

Lamp replacement

The scanner has two lamps, one for front-side reading and other for back-side reading. Replace the lamps as follows:

WARNING

Never replace lamp without turning off the power.

ACHTUNG

Wechseln Sie niemals die Lampe ohne den Scanner auszuschalten.

WARNING

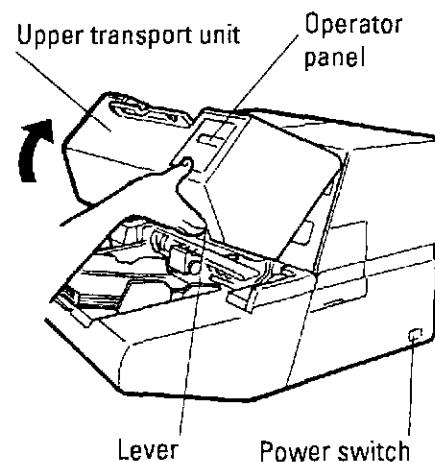
Wait at least 3 minutes after turning off the power before touching the lamp

ACHTUNG

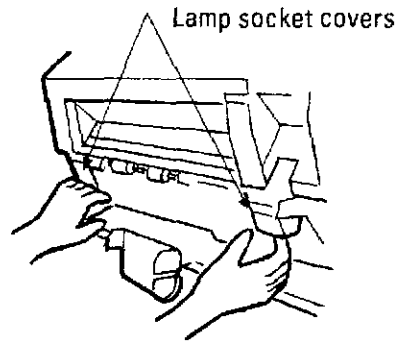
Warten Sie mindestens 3 Minuten nach Ausschalten, bevor Sie die Lampe anfassen.

CLEANING AND
REPLACEMENT
OF PARTS

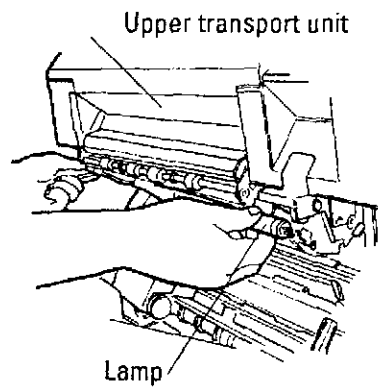
Replacing the front-side lamp



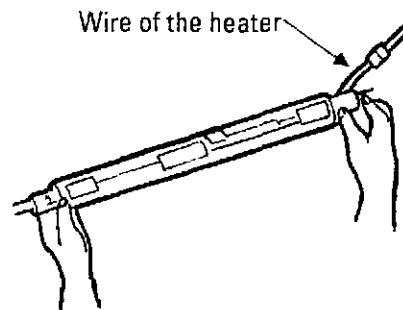
- ① Turn off the power switch.
- ② Open the upper transport unit. (See page 3-5)



- ③ Remove the two lamp socket covers (U-shaped spring clips) by pulling them out of their positions.



- ④ Rotate the lamp so that the two terminals on each end align with the exit slot on the lamp socket. Maintain the alignment and remove the lamp from the lamp sockets.



CAUTION

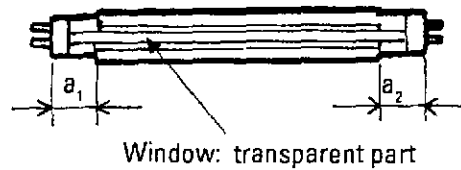
Be careful not to pull the wire of the heater hard.

-
- ⑤ Separate the C-shaped heater assembly from the lamp body gently.

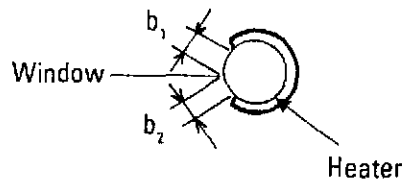
CAUTION

- Be careful not to peel the tape on the heater.
- If any visible damage on the heater is observed, please contact manufacturer's authorized service center for proper repair service.

CLEANING AND
REPLACEMENT
OF PARTS



- ⑥ Re-attach a new lamp to the C-shaped heater.



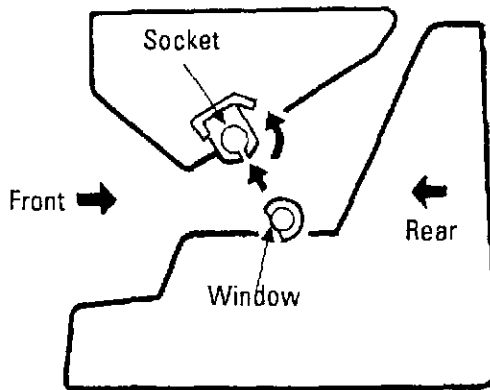
Cross-sectional view of lamp and heater

Note:

Position the lamp so that the following lengths are the same:

$$a_1 = a_2$$

$$b_1 = b_2$$



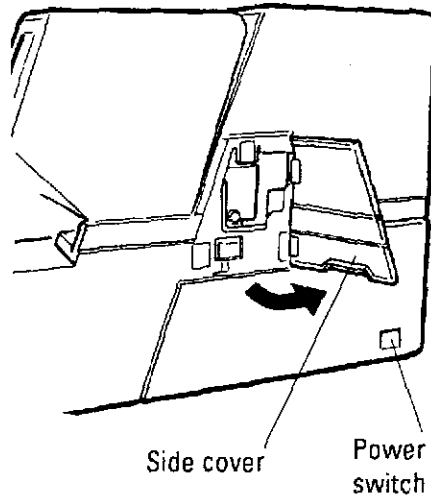
- ⑦ To re-install lamp/heater, reverse procedures in item ④ above.

Note:

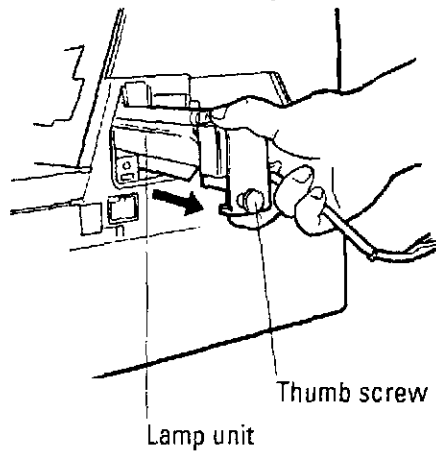
When re-stalling the lamp, make sure to rotate the lamp in the direction as shown in the left figure.

- ⑧ Close the upper transport unit. (See page 3-5)

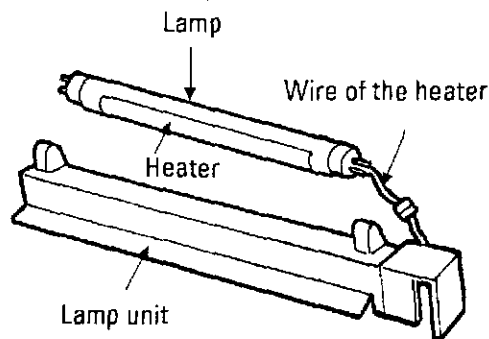
Replacing the back-side lamp



- ① Turn off the power switch.
- ② Open the side cover (small cover on the center of the right cover).



- ③ Turn the thumb screw to unlock the lamp unit and pull the unit out of the machine.



- ④ Rotate the lamp so that the two terminals on each end align with the exit slot on the lamp socket.

Maintain the alignment and remove the lamp from the lamp sockets.

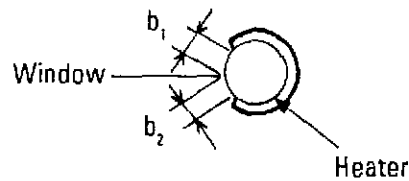
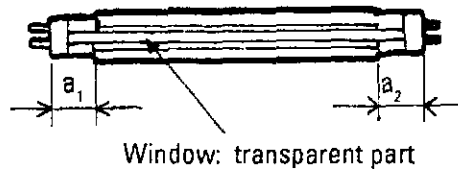
CAUTION

Be careful not to pull the wire of the heater hard.

-
- ⑤ Separate the C-shaped heater from the lamp body gently.

CAUTION

- Be careful not to peel the tape on the heater.
- If any visible damage on the heater is observed, please contact manufacturer's authorized service center for proper repair service.



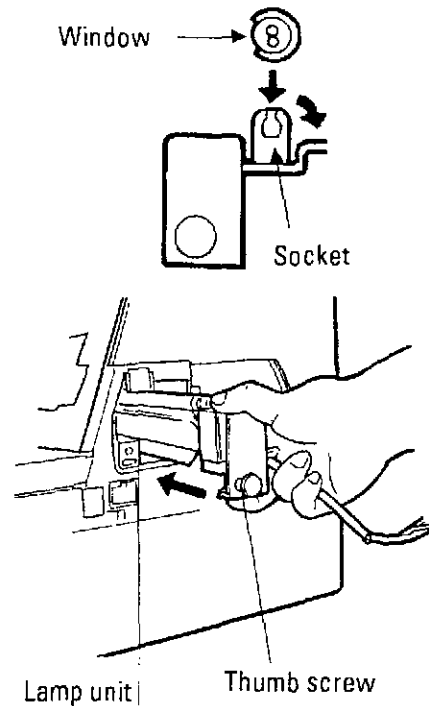
Cross-sectional view of lamp and heater

- ⑥ Re-attach a new lamp to the C-shaped heater.

Note:

Position the lamp so that the following lengths are the same:

$$a_1 = a_2$$
$$b_1 = b_2$$



- ⑦ To re-install lamp/heater, reverse procedures in item ④ above.

Note:

Make sure to rotate lamp in the direction as shown in the left figure.

- ⑧ Align the lamp unit with the grooves on the machine and insert the lamp unit completely. Then, turn the thumb screw to lock the lamp unit.

- ⑨ Close the side cover.

CLEANING AND
REPLACEMENT
OF PARTS

Roller ASY replacement

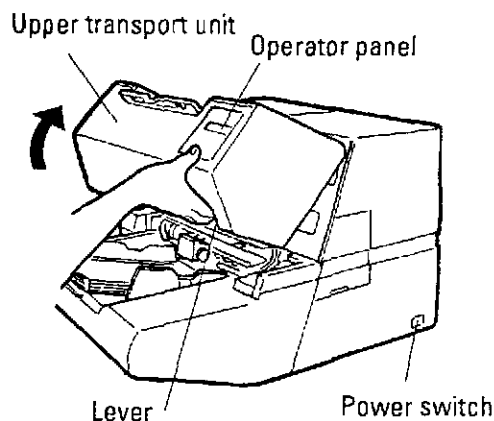
Replace the roller ASY as follows:

WARNING

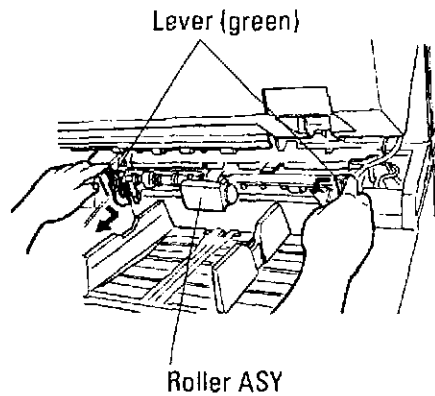
Wait at least 3 minutes after turning off the power before replacement.

ACHTUNG

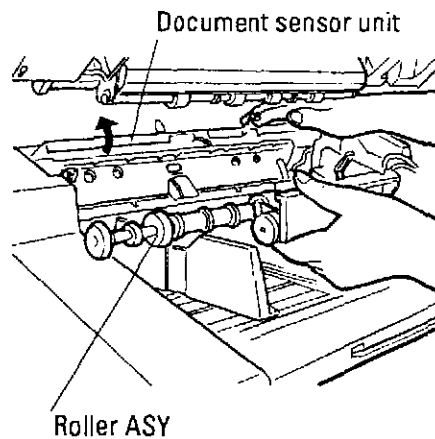
Warten Sie mindestens 3 Minuten nach Ausschalten, bevor Sie mit dem Austausch beginnen.



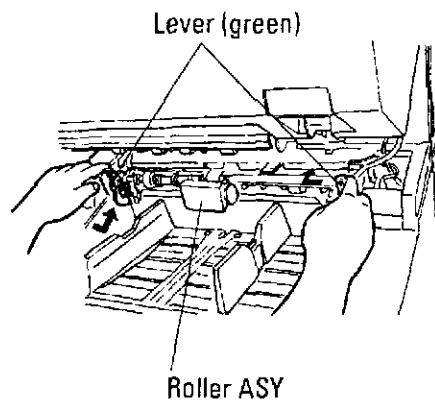
- ① Turn off the power switch.
- ② Open the upper transport unit. (See page 3-5)



- ③ Disconnect the two relay connectors on the roller ASY. (front: 3 pin, back: 2pin)
- ④ Push the two levers (green) towards each other to disengage with the upper locking holes and lower down the two levers until they engage with the two levers locking holes.



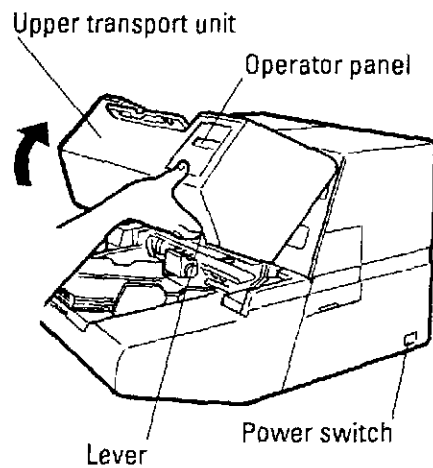
- ⑤ Lift the document sensor unit and keep it at the upper position with one hand and pull the roller ASY out with the other hand.
- ⑥ Install a new roller ASY and return the document sensor unit to its original position.



- ⑦ Push the two levers (green) towards each other to disengage with the lower locking holes and lift them up until they engage with the two upper locking holes.
- ⑧ Connect the two relay connectors on the roller ASY. (front: 3 pin, back: 2 pin)
- ⑨ Close the upper transport unit. (See page 3-5)

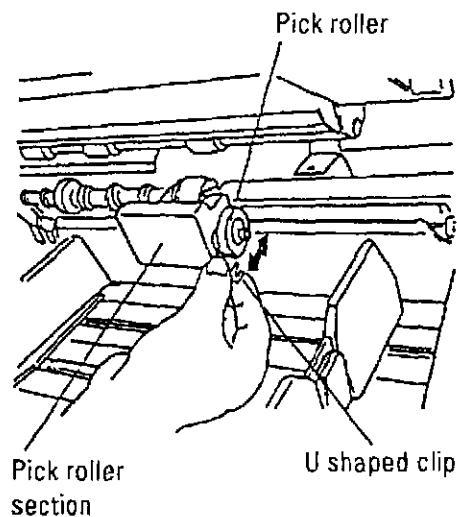
Pick roller replacement

Replace the pick roller as follows:

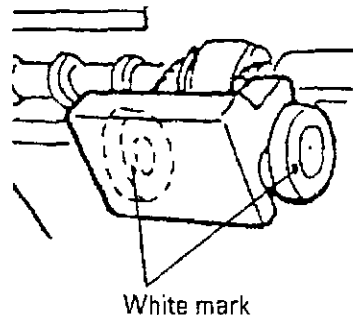


- ① Turn off the power switch.
- ② Open the upper transport unit. (See page 3-5)

CLEANING AND
REPLACEMENT
OF PARTS



- ③ Put off U shaped clips on both ends of the pick roller shaft. Pull the pick rollers outward each other to remove.
- ④ Install a new pick rollers and put the U shaped clips on the pick roller shaft.
- ⑤ Close the upper transport unit. (See page 3-5)



NOTICE

When you install pick rollers, make sure that the white marks on the side of the both pick rollers be in the right-hand side of the scanner.

Belt ASY and belt replacement

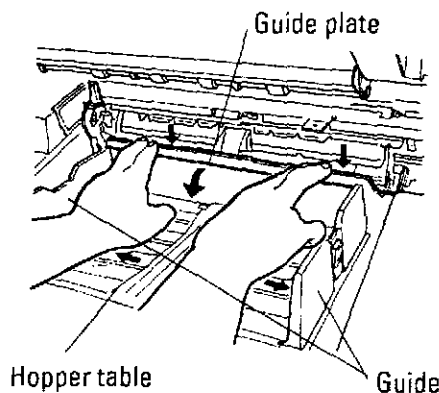
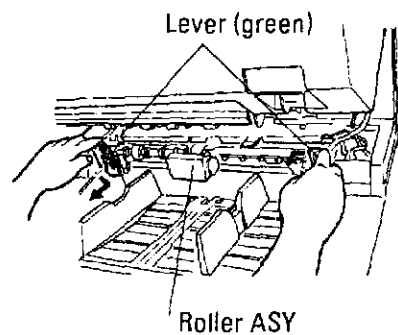
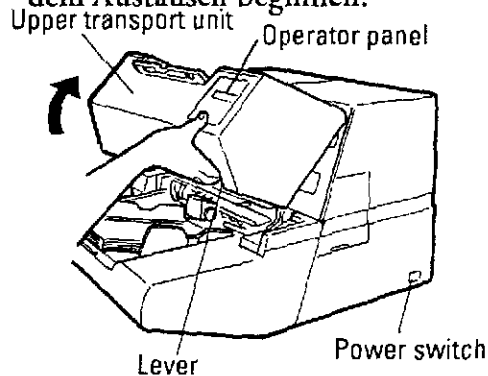
Replace the belt ASY and belt as follows:

WARNING

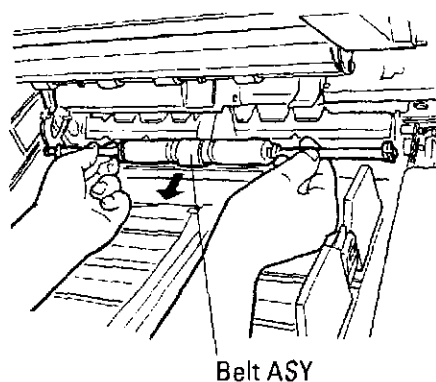
Wait at least 3 minutes after turning off the power before replacement.

ACHTUNG

Warten Sie mindestens 3 Minuten nach Ausschalten, bevor Sie mit dem Austausch beginnen.

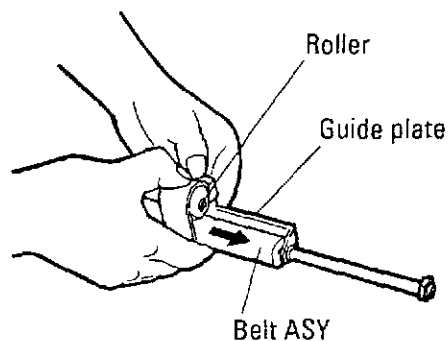


- ① Turn off the power switch. Make sure that the hopper table is at the bottom.
- ② Open the upper transport unit. (See page 3-5)
- ③ Disconnect the two relay connectors on the roller ASY.
- ④ Push the two levers (green) towards each other to disengage with the upper locking holes and lower down the two levers until they engage with the two levers locking holes.
- ⑤ Lift the document sensor unit and keep it at the upper position with one hand and pull the roller ASY out with the other hand.
- ⑥ Move the guide on the hopper table completely to the end.



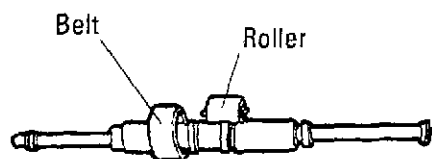
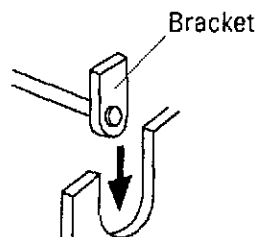
Belt ASY

- ⑦ Hold both ends of the guide plate and press them down to remove the guide.
- ⑧ Pull out the belt ASY.



Belt ASY

- ⑨ Warp the guide plate of the belt ASY to remove the roller.
- ⑩ Detach the belt from the roller.



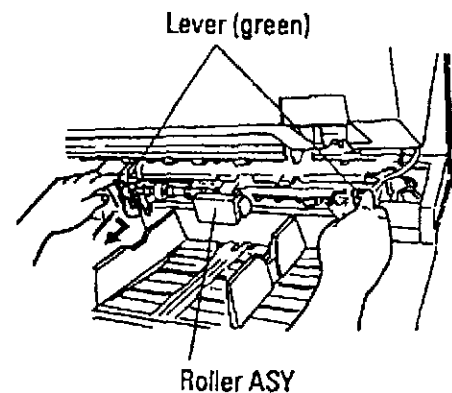
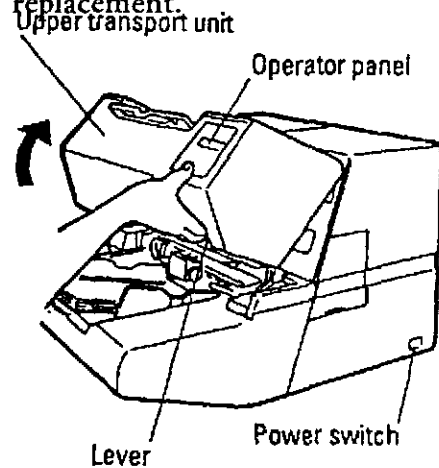
- ⑪ Mount a new belt by following step ⑦ to ⑩ in reverse. Align the bracket on the shaft as shown in the figure.
- ⑫ Lift the document sensor unit and keep it at the upper position with one hand and pull the roller ASY out with the other hand.
- ⑬ Close the document sensor unit downward.

Pad Replacement

Replace the pad as follows:

WARNING

Wait at least 3 minutes after turning off the power before replacement.



⑭ Push the two levers (green) towards each other to disengage with the lower locking holes and lift them up until they engage with the two upper locking holes.

⑮ Connect the two relay connectors on the roller ASY.

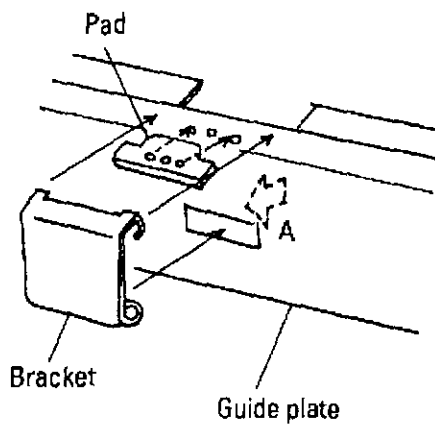
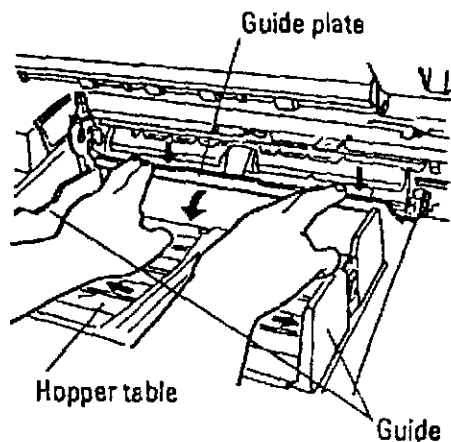
⑯ Close the upper transport unit. (See page 3-4)

① Turn off the power switch. Make sure that the hopper table is at the bottom.

② Open the upper transport unit. (See page 3-5)

③ Disconnect the two relay connectors on the roller ASY.

④ Push the two levers (green) towards each other to disengage with the upper locking holes and lower down the two levers until they engage with the two levers locking holes.



- ⑤ Lift the document sensor unit and keep it at the upper position with one hand and pull the roller ASY out with the other hand.
- ⑥ Move the guide on the hopper table completely to the end.
- ⑦ Hold both ends of the guide plate and press them down to remove the guide.
- ⑧ Press the bracket in the direction A, and detach the bracket and pad.

Note:

When assembling the pad, align the holes on the pad with the projection of the guide plate.

**CLEANING AND
REPLACEMENT
OF PARTS**

TROUBLESHOOTING

This chapter explains the initial checks of abnormalities, with messages displayed on the operator panel and the corrective actions against temporary errors and equipment errors.

Initial Checks

If a problem occurs, check the following items before contacting manufacturer's authorized service center:

TROUBLE-
SHOOTING

Symptom	Probable cause	Action
The power does not go on.	Is the power switch on?	Press the power switch.
	Is the power cable connected correctly?	Connect the power cable correctly.
	Is the terminator connected? (M3099G)	Connect the terminator.
Read processing does not start.	Is the Ready lamp lit?	If the Ready lamp is lit, press the Start button.
	Are the documents loaded correctly?	Load the documents correctly.
	Is the interface cable connected correctly?	Connect the interface cable correctly.
	Heater malfunction	Wait several minutes if "HEATER ALARM 1 or 2" occurs.
Line drawing or photographs cannot be read well.	Is halftone processing enabled?	Select a desired halftone processing with the Halftone button.
	Paper dust or something exists around the transport paths.	Clean the rollers, transport paths, glass.
	Lamp or heater is not attached well.	Re-attach the lamp or heater according to the replacement method.

Symptom	Probable cause	Action
Characters or linedrawing cannot be read well.	Is halftone processing disabled?	Select binarization with the Halftone button.
	Paper dust or something exists around the transport paths.	Clean the rollers, transport paths glass.
	Lamp or heater is not attached well.	Re-attach the lamp or heater according to the replacement method.
The Check lamp lights.	—————	Turn the power off once and on again. If the Check lamp still goes on, contact the manufacturer's authorized service center.
The Check lamp blinks.	A part of document remain in the ADF.	Take a part of document in the ADF, and clean the sensors according to the cleaning method.
Pick miss or paper jam frequently occurs.	Roller is worn out.	Replace the roller unit or replace the pick rollers.
	Separation belt is worn out.	Replace separation belt.
	A part of document remain in the ADF.	Take a part of document in the ADF, and clean the sensors according to the cleaning method.

Message List

Table 5.1 lists the messages indicating scanner statuses, temporary errors, and equipment errors.

Table 5.1 Messages

Classification	LCD display
Operation display	Warming-up Now!!
Warning	INK EMPTY (*1)
Temporary errors	PAPER JAM
	HOPPER EMPTY
	COVER OPEN
	MISS PICK
	ROLLER UNIT NOT SET
	HOPPER OVERLOAD
	PRINT HEAD NOT SET
Equipment errors	PRINT HEAD ALARM
	HOPPER ALARM
	TRANSPORT ALARM
	LAMP ALARM 1
	HEATER ALARM 1
	LAMP ALARM 2
	HEATER ALARM 2
	CCD UNIT ALARM 1
	CCD UNIT ALARM 2
	TEMP. ALARM
	FUSE ALARM PRINT
RAM ALARM PRINT	
TIME-OUT ALARM PRINT	
HARDWARE ALARM	

**TROUBLE-
SHOOTING**

*1 This message is blinked only when the endorser option is connected.

Device and Operator Actions for Temporary Errors

If a temporary errors are detected in the scanner, the Check lamp at the operator panel blinks.

Table 5.2 lists the scanner and operator actions for temporary errors.

Table 5.2 Device and operator actions for temporary errors

LCD display	Action to recover
PAPER JAM	<ul style="list-style-type: none"> - Open the upper transport unit and remove the document on the transport path. Then, close the unit. - Return the jammed document to the hopper and read it again.
HOPPER EMPTY	<ul style="list-style-type: none"> - The error is recovered by pressing the stop button or issuing the start command. Load documents on the hopper and start reading them.
COVER OPEN	<ul style="list-style-type: none"> - Close the upper transport unit.
MISS PICK	<ul style="list-style-type: none"> - Open the upper transport unit and remove the document on the transport path. Then, close the unit. - Return the jammed document on the hopper and read it again.
ROLLER UNIT NOT SET	<ul style="list-style-type: none"> - Open the upper transport unit and correct the roller unit setting, then close the upper transport unit. See chapter 4, "Roller ASY Replacement."
HOPPER OVERLOAD	<ul style="list-style-type: none"> - Remove the document to the specified number of sheets.
PRINT HEAD NOT SET	<ul style="list-style-type: none"> - Press "STOP" to reset the error and set print head.
PRINT HEAD ALARM	<ul style="list-style-type: none"> - Press "STOP" to reset the error and change the print head.

Device and Operator Actions for Equipment Errors

If a equipment errors are detected in the scanner, the Check lamp at the operator panel lights.

Table 5.3 lists the operator actions for equipment errors.

Table 5.3 Operator actions for equipment errors

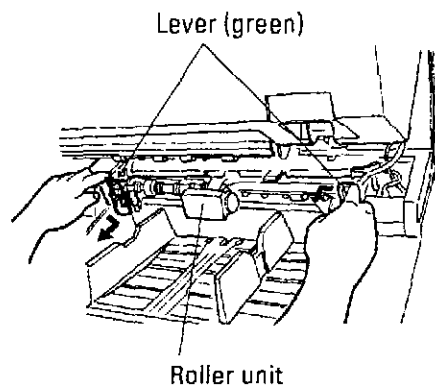
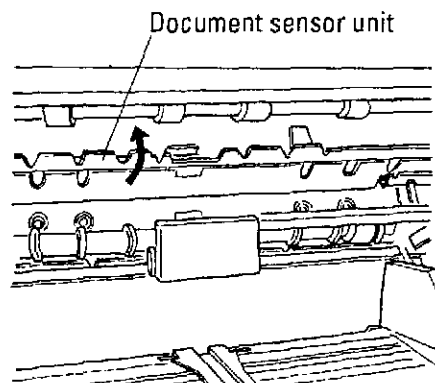
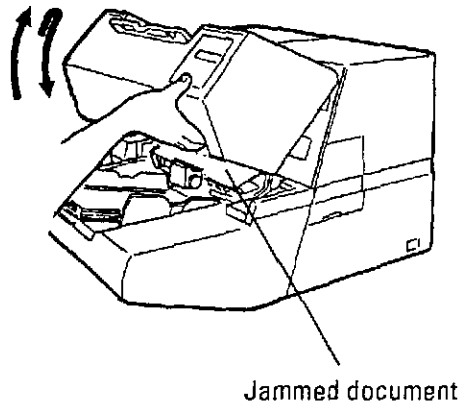
LCD display	Action to recover
HOPPER ALARM	<ul style="list-style-type: none"> - Check if the lamp or heater is attached correctly. Replace lamp according to the replacement method. - If turning the power on again does not recover the scanner, contact the maintenance personal.
TRANSPORT ALARM	
LAMP ALARM 1	
LAMP ALARM 2	
HEATER ALARM 1	
HEATER ALARM 2	
CCD UNIT ALARM 1	
CCD UNIT ALARM 2	
TEMP. ALARM	<ul style="list-style-type: none"> - If turning the power on again does not recover the scanner, contact the maintenance personal.
FUSE ALARM PRINT *	
RAM ALARM PRINT *	
TIME-OUT ALARM PRINT *	
HARDWARE ALARM	

* Endorser option only

TROUBLE-SHOOTING

Jam Processing

If a document jams in the document path, remove it as follows:



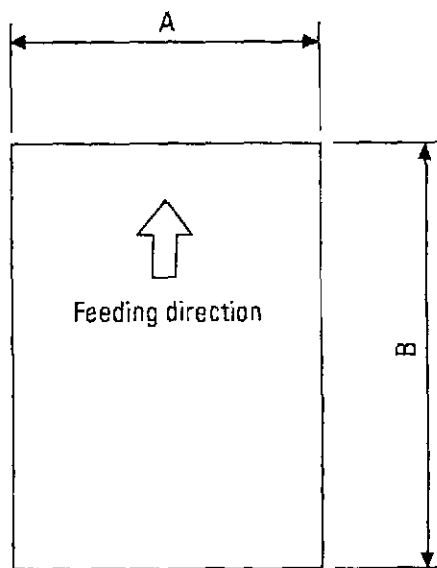
- ① Lift the lever below the operator panel to open the upper transport unit from under.
- ② If the jammed paper is under the document sensor unit, open the document sensor unit.
If the jammed paper is under the roller unit, push the two levers (green) towards each other to disengage with the upper locking holes and lower down the two levers until they engage with the two levers locking holes. Remove the jammed document from the document path.
If the levers (green) is lowered down, put the levers upper position by the reverse procedure as state above.
- ③ Lift-up the upper transport unit to release the lock and then unit to close.

DOCUMENT SPECIFICATION

This chapter provides document size and document quality of the scanner.

Figure 6.1 shows document sizes of the scanner.

Document Size



DOCUMENT SPECIFICATION

Maximum		Minimum	
A	B	A	B
297	432	76	63

(Unit: mm)

Figure 6.1 Document size

Document Quality

This section provides document types and weights available of the scanner, with precautions.

Document type

The recommended paper type for document is as follows:

NOTICE

Use specified paper only. (In rare occasion, double feeding may occur or document damage may occur.)

- Fine paper
- Plain paper (For example the paper specified for XEROX 4024)
- OCR paper

When using all other type paper, check that it is successfully fed by ADF before performing a reading operation.

Ream weight

The ream weight is as follows:

- 45 to 110 kg (13.9 lb to 34 lb)

Note:

Ream weight is a weight of 1000 sets of paper whose size is 788 mm x 1091 mm.

Precautions

Following document cannot be fed by ADF.

- Paper has clip
- Paper has ink, etc. is not dry.
- Paper thickness is not constant. (like envelope)
- Paper has large rumples or curl. (See Note in next page)

- Paper has folds or tears.
- Tracing paper
- Coating paper
- Carbon paper
- Carbonless paper
- Paper size; smaller than 76 mm x 63 mm size, or larger than A3 width.
- Other than paper; clothes, metal foil, or OHP film.
- Photographic paper
- Paper has notches on its side.
- Shape is other than square.

NOTICE

Do not feed important original document so as not damage it in rare case.

DOCUMENT SPECIFICATION

When scanning a translucent document, set the density to light mode.

To prevent roller smudging, avoid scanning a document filled out in pencil. Clean the roller as often as possible when scanning many document. Once every 1000 pages is recommended.

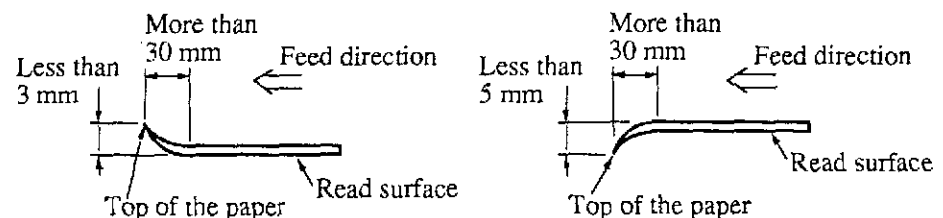
The chemical composition of some carbonless papers reacts with the roller rubber and damages the rubber. Check the carbonless papers before use.

The carbonless papers may be used if:

1. Ream weight is 44 kg (12 lb) or more
2. Hopper load is 500 sheets or fewer

Note:

- If carbonless papers are used, clean the roller twice as often as usual.
- Paper should be straightend to fit the condition below.





Installation Specifications

Table A.1 lists installation specifications of the scanner.

Table A.1 Installation specifications

Item		Specification	
Dimensions (mm)		Width	Depth
		590 (23.2 in)	660 (26 in)
Height		410 (16.1 in)	
Weight (kg)		55 (121 lb.)	
Input power	Voltage	100 to 120 VAC, 220 to 240 VAC \pm 10%	
	Phases	Single-phase	
	Frequency	50/60 +2% -4% Hz	
Power consumption		250 VA or less	
Ambient condition	Device status	Operating	Not operating
	Temperature	5 to 35°C (41 to 95°F)	-20 to 60°C (-4 to 140°F)
	Humidity	20 to 80%	8 to 95%
Heat capacity		110 kcal/H (440 BTU/H)	

Dimensions

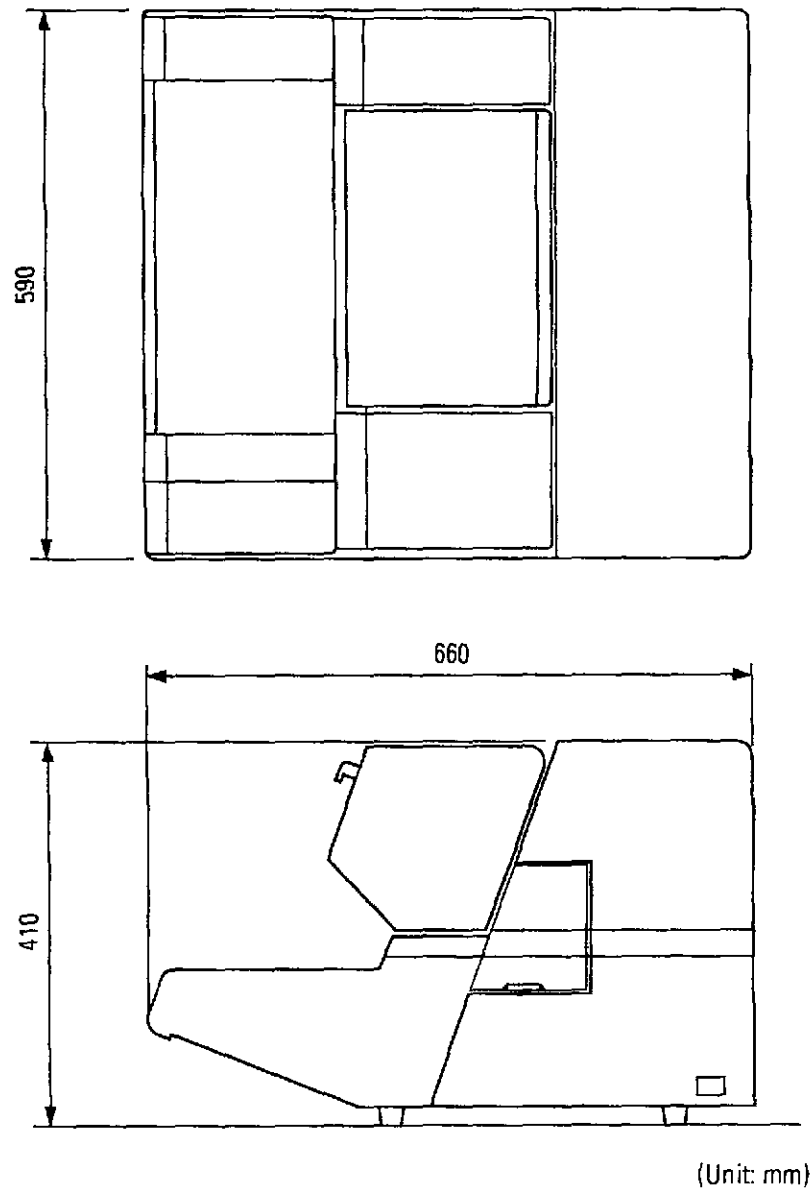


Figure A.1 Dimensions

Consumables

Table A.2 lists consumables used for the scanner. Be sure to keep some consumables in stock. Customer is responsible to change these items periodically.

Table A.2 Consumables

Name	Specification	Remark
Lamp	CA02950-0548	Up to 500 hours or more. Two lamps per scanner
Pick roller	CA01023-F242	Up to 300,000 sheets or one year. Requires two per scanner.
Roller ASY	CA01023-F230	Up to 600,000 sheets or one year. This part contains Pick Roller but the life of the Roller Units does not include the life of the Pick Roller.
Belt	CA01023-Z223	Up to 300,000 sheets or one year.
Belt ASY	CA01023-F220	Up to 600,000 sheets or one year. This part includes Separation Belt but the life of the Belt Assembly does not include the life of the Separation Belt.
Pad	CA01023-G290	Up to 300,000 sheets or more.
Print head	CA01023-0701	Black ink for endorser option. Ten print heads are packed. Each print head has the life of 20,000 sheets at 10 characters per sheet.

APPENDIX

Accessories

Table A.3 lists accessories of the scanner.

Table A.3 Accessories

Name	Quantity	Remark
Power cable (100 V or 200 V)	1	
Operator's guide	1	
Terminator	1	(M3099G)

Options

Table A.4 lists of the scanner.

Table A.4 Options

Name	Specification	Remark
IPC II	—	Image processing • Automatic separation • Image emphasis • Outline extraction • Mirror image • Inversion • Dynamic threshold • Noise removing • Smoothing
Endorser	—	Ink-jet back-side print max. 20 chaacters (See Appendix)

Contact your Fujitsu sales agent for more information.

ENDORSER

B1. Specifications Table 1.1 lists the endorser specifications.

Table 1.1 Endorser specifications

Item	Specification
Printing method	Ink jet printing method
Characters	Alphabet: A to Z, a to z Number: 0, 1, to , 9 Symbol: ! " # \$ % & ' ( ) * + , - . / : ; < = > ? @ [ ¥ ] ^ _ { | } (blank)
Maximum number of characters	20
Character size	2.9 × 1.5 mm (0.11" × 0.06") (height × width)
Character pitch	Approx. 2.54 mm (0.1")
Print area	Back-side of the document A ≥ 5 mm (0.2") B ≥ 28 mm (1.1") C ≥ 20 mm (0.79") D ≥ 5 mm (0.2")

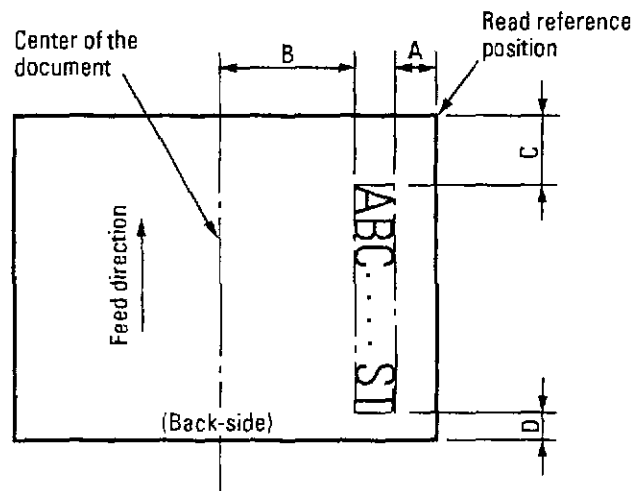


Figure B.1 Print area

B2. Panel operation

By the operator panel you can set following conditions. Other conditions such as print offset, print characters can be set by the host machine.

B2.1 How to set the endorser ON (or OFF)

When you use the endorser, you must set the endorser ON as follows.

<< SETUP MODE >>

Screen 1

<< SETUP MODE >>

ENDORSER INITIAL

Screen 2

ENDORSER	VALUE
* ON	0 0 0 0 1

Screen 3

- ① While pressing the [Mode 1], turn on the power of the scanner. Then the LCD displays the SETUP MODE initial screen. (Screen 1)
- ② Press [Mode 1] six times (seven times in case of M3099G) to go to the ENDORSER INITIAL screen. (Screen 2) Then press [Mode 2]. If "ON" is displayed, the endorser is already on. (Screen 3)
- ③ If "OFF" is displayed, press [Mode 1], until "OFF" blinks. Then press [Mode 2] to turn the endorser ON. (Screen 3)

If you want to set the status in EEPROM, go to

- ⑤. Then if you want to close the job, go to ⑥ and ⑦.

NOTICE: Set the endorser ON only when you use endorser, or the characters may be printed on every scanned document.

B2.2 How to set the initial number

Initial number is the number which the scanner starts printing or returns after the reset of print number.

ENDORSER	VALUE
* ON	0 0 0 0 5

Screen 4

EEPROM WRITE?

(Mode 2 Write)

Screen 5

- ④ At Screen 3, press the [Mode 1] until the digit you want to changes as you want. (Screen 4: In this case the initial number is five.)
- ⑤ To set the status in EEPROM, press [Mode 1] until * blinks. Then press [Mode 2] to change the LCD display into Screen 5. If you want to set, press [Mode 2]. And the LCD displays Screen 6 about three seconds.

```

-----
EEPROM Writing!!
-----

```

Screen 6

⑥ If you want to return to the ENDORSER INITIAL screen (Screen 2), press [Mode 1] and [Mode 2] at a time.

⑦ If you want to return to the initial status to read, press [STOP].

B2.3 How to set the print number reset condition

You can choose whether to reset or not when HOPPER EMPTY is detected.

```

<< SETUP MODE >>
-----
ENDORSER RESET METHOD
-----

```

Screen 7

⑧ At Screen 1 press [Mode 1] seven times (eight times in case of M3099G) to go to the ENDORSER RESET METHOD screen. (Screen 7)

⑨ Press [Mode 2] to see Screen 8. If "ON" is displayed, the print number will be reset when HOPPER EMPTY is detected. If "OFF" is displayed, it wouldn't. The "ON" or "OFF" status flips each time you press [Mode 1]. The status will be set in EEPROM automatically.

```

HOP-EMPTY RESET
-----
ON
-----

```

Screen 8

⑩ If you want to return to Screen 7, press [Mode 2].

If you want to close the job, go to ⑦.

APPENDIX

B2.4 How to reset the print number manually

You can reset the print number to the initial number by operator panel as follows.

```

<< SETUP MODE >>
-----
ENDORSER RESET
-----

```

Screen 9

⑪ At Screen 1 press [Mode 1] eight times (nine times in case of M3099G) to go to the ENDORSER RESET screen. (Screen 9)

```

ENDORSER   VALUE
-----
OFF        0 0 0 1
-----

```

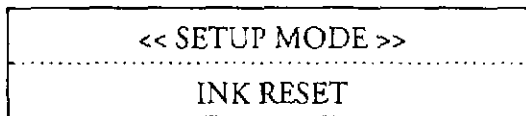
Screen 10

⑫ Press [Mode 2] to see Screen 10. You may see "OFF" and current print number. If you want to reset the number, press [Mode 1]. If you don't want it, press [Mode 2] to go to Screen 9. Any time you press [Mode 2], you can go to Screen 9.

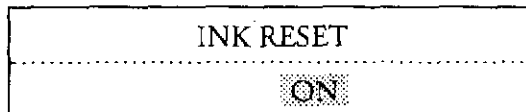
If you want to close the job, go to ⑦.

B2.5 How to reset the print head life counter

You must reset the print head life counter, when you replace the print head.



Screen 11



Screen 12

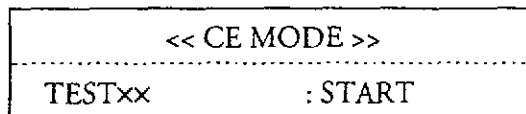
⑬ At Screen 1 press [Mode 1] nine times (ten times in case of M3099G) to go to INK RESET screen. (Screen 11)

⑭ Press [Mode 2] to see Screen 12. You may see "OFF" blinking. If you want to reset the counter, press [Mode 1]. If you don't want it, press [Mode 2]. Any time you press [Mode 2], you can go to Screen 11.

If you want to close the job, go to ⑦.

B2.6 How to test the printing by the operator panel operation

You can check the print result by the following procedures.



Screen 13

⑮ Set the endorser ON by the procedure of the section 2.1.

⑯ While pressing the [Mode 2], turn the power of the scanner on. Then the LCD displays the MAINTENANCE MODE initial screen. (Screen 13)

⑰ Press [Mode 2] once and press [Mode 1] once. Place the document on the stacker. Then press [START].

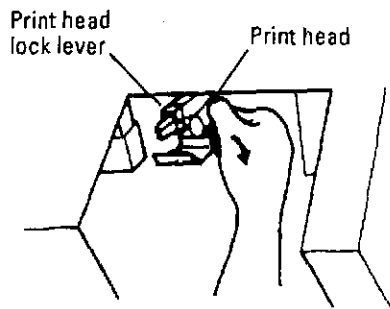
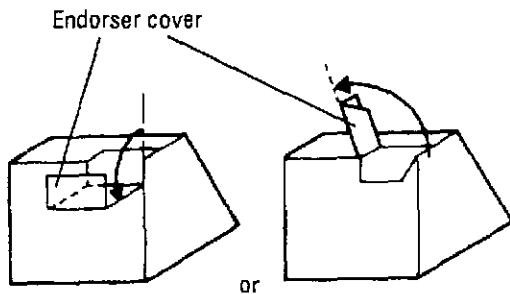
NOTICE: The scanner prints the five digit numbers from the initial number by the increment of one.

NOTICE: Before pressing [START], you can set document size, resolution and so on. (See Chapter 3)

B3. Print head handling

B3.1 Replacing the print head

When "INK EMPTY" is displayed in LCD display, the operator is responsible to change the print head as follows.



- ① Open the endorser cover at the rear top corner of the scanner. Power of the scanner will turn off, if the power is on at cover open.
- ② Turn the print head lock lever up, then replace the print head.
- ③ Attach the new print head in the endorser and turn the print head lock lever back.
- ④ Close the endorser cover back.
- ⑤ Reset the print head life counter by the procedure stated in section 2.5. (See NOTICE)

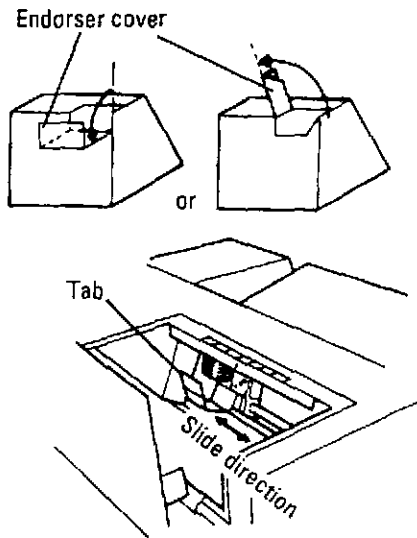
APPENDIX

You can test the printing by the procedure in section 2.6

NOTICE: The reset of the print head life counter is important to correctly detect the life of the new print head.

B3.2 Print head position adjustment

You can adjust the print position in mainscanning direction manually. The position you can set is limited as stated in section 1.



- ① Open the endorser cover at the rear top corner of the scanner. Power of the scanner will turn off, if the power is on at the cover open.
- ② Pinch the tab near the print head and slide it to the position you want to print. The print position is indicated by the indicator behind the tab and the label attached on the rear cover.
- ③ Close the endorser cover.

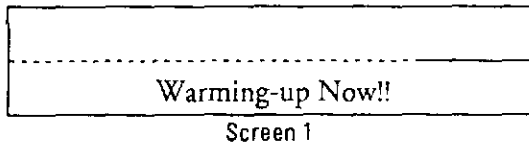
You can test the printing by the procedure in section B2.6.

SETUP MODE

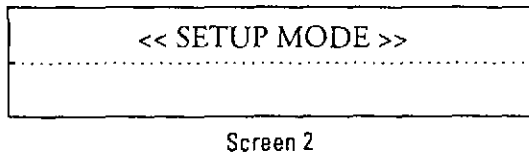
This chapter explains the setup mode of the scanner.

1. Activating the setup mode

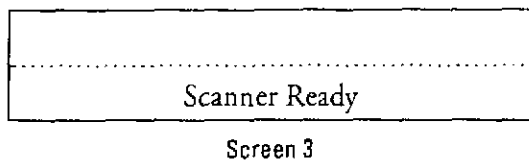
When you activate the setup mode, you must set as follows.



- ① While pressing the [Mode 1], turn on the power of the scanner. Then the LCD displays Screen 1.

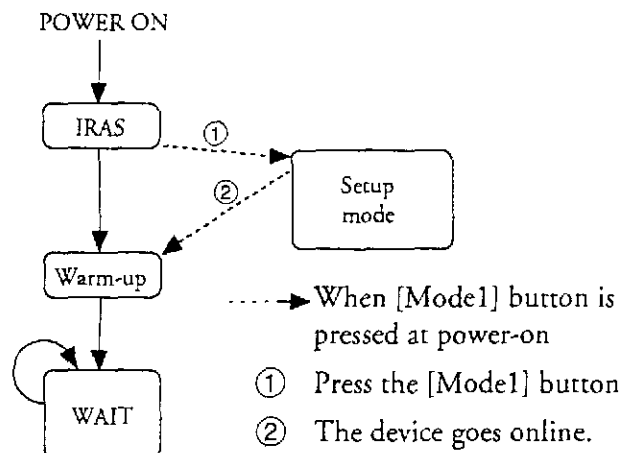


- ② After a while the LCD displays the SETUP MODE initial screen. (Screen 2) (In case of M3099A, after turning on the power, press [Mode 1] at readable status then the LCD displays Screen 2.)



- ③ Press the [Mode 1] to go to the SETUP MODE menu screen. Press the [Stop] to go to the readable status. (In case of M3099G, screen 3 is the readable status.)

2. Operational transition in the setup mode



3. Contents of the setup mode

The setup mode can be classified into nine (M3099A) or ten (M3099G):

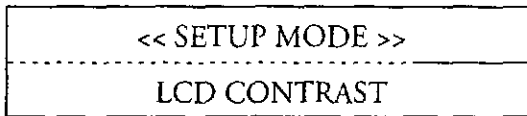
Mode	Setup type	Contents
1	Adjusting LCD contrast	Set in EEPROM the LCD contrast.
2	Setting RS232C transfer rate* ¹	Set in EEPROM the transfer rate. (1200/2400/4800/9600)
3	Setting picking start time	Set in EEPROM the time from when the hopper empty sensor is blocked in manual mode until picking begins.
4	Setting picking time	Set the time from when picking begins until the SF1 sensor is blocked by paper.
5	Setting time-out limit	Set the time from when a command is issued in manual mode until paper is actually detected.
6	Setting SCSI-ID* ²	Set the SCSI-ID (0-7).
7	Setting Product-ID* ²	Set the Product-ID. (M3099A/M3096G)
8	Setting initial value of endorser number	Set the using of endorser and the initial number. The set value is able to be stored in EEPROM.
9	Setting method of endorser reset	Set in EEPROM whether the number is reset by hopper empty detection.
10	Reset of endorser number	Reset the number to initial value.
11	Reset of ink counter	Reset the ink counter after the print head has be replaced.

*1 Available for only M3099A.

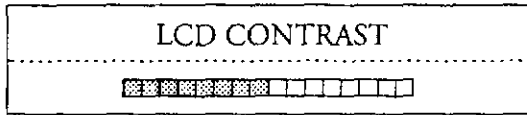
*2 Available for only M3099G.

3-1 Adjusting LCD contrast

When you adjust the LCD contrast, you must set as follows.



Screen 4



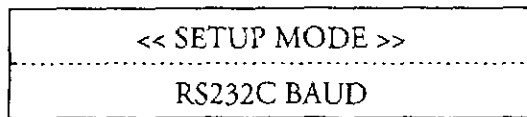
Screen 5

- ④ At Screen 2, press [Mode 1] once to go to the LCD CONTRAST screen. (Screen 4)
- ⑤ Press [Mode 2] to see Screen 5. The number of '■' is increased and the LCD contrast is getting darker. (The default setting is the darkest contrast.)
- ⑥ At Screen 5, the LCD contrast is set in 16 steps each time you press [Mode 1]. When all fields are filled by '■', next pressing [Mode 1] starts from all '□' (The lightest contrast).
- ⑦ Press [Mode 2] to see Screen 4. The settings are stored to EEPROM.
- ⑧ When you close the setup mode, press [Stop]. Then the readable screen is displayed.

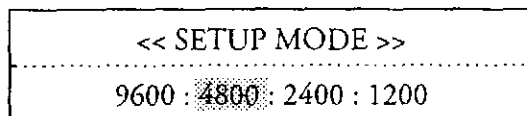
APPENDIX

3.2 Setting RS232C transfer rate (3099A)

When you set the RS232C transfer rate, you must set as follows.



Screen 6



Screen 7

- ⑨ At Screen 2, press [Mode 1] twice to go to the RS232C BAUD screen. (Screen 6)
- ⑩ Press [Mode 2] to see Screen 7. (The default setting is 4800 bps)
- ⑪ At Screen 7, press [Mode 1] until the value you want to change blinks.
- ⑫ Press [Mode 2] to see Screen 6. The settings are stored to EEPROM.
- ⑬ When you close the setup mode, go to ⑧.

3.3 Setting picking start time

When you set the picking start time, you must set as follows.

<< SETUP MODE >>
PICK START TIMER

Screen 8

PICK START TIMER
X.X S

Screen 9

- ⑭ At Screen 2, press [Mode 1] three times (twice in case of M3099G) to go to the PICK START TIME screen. (Screen 8)
- ⑮ Press [Mode 2] to see Screen 9. (The default setting is 1 sec.)
- ⑯ At Screen 9, press [Mode 1] until the digit you want to change blinks. Then press [Mode 2] until the digit changes as you want. (The specifiable range is from 0.2 to 29.8 sec. in 0.2 sec. step.)
- ⑰ Press [Mode 1] and [Mode 2] at a time to see Screen 8. The settings are stored to EEPROM.
- ⑱ When you close the setup mode, go to ⑧.

3.4 Setting picking time

When you set the picking time, you must set as follows.

<< SETUP MODE >>
PICK TIMER

Screen 10

<< SETUP MODE >>
X.XX S

Screen 11

- ⑲ At Screen 2, press [Mode 1] four times (three times in case of M3099G) to go to the PICK TIMER screen. (Screen 10)
- ⑳ Press [Mode 2] to see Screen 11. (The default setting is 2 sec.)
- ㉑ At Screen 11, press [Mode 1] until the digit you want to change blinks. Then press [Mode 2] until the digit changes as you want. (The specifiable range is from 0.5 to 99.5 sec. in 0.5 sec. step.)
- ㉒ Press [Mode 1] and [Mode 2] at a time to see Screen 10. The settings are stored to EEPROM.
- ㉓ When you close the setup mode, go to ⑧.

3.5 Setting time-out limit

When you set the time-out limit, you must set as follows.

<< SETUP MODE >>

TIME-OUT SET

Screen 12

TIME-OUT SET

XXXX S

Screen 13

⑳ At Screen 2, press [Mode 1] five times (four times in case of M3099G) to go to the TIME-OUT SET screen. (Screen 12)

㉑ Press [Mode 2] to see Screen 13. (The default setting is 30 sec.)

㉒ At Screen 13, press [Mode 1] until the digit you want to change blinks. Then press [Mode 2] until the digit changes as you want. (The specifiable range is from 1 to 1999 sec. in 1 sec. step.)

㉓ Press [Mode 1] and [Mode 2] at a time to see Screen 12. The settings are stored to EEPROM.

㉔ When you close the setup mode, go to ⑧.

APPENDIX

3.6 Setting SCSI-ID (M3099G)

When you set the SCSI-ID, you must set as follows.

<< SETUP MODE >>

SCSI-ID SET

Screen 14

SCSI-ID SET

5

Screen 15

㉕ At Screen 2, press [Mode 1] five times to go to the SCSI-ID SET screen. (Screen 14)

㉖ Press [Mode 2] to see Screen 15. (The default setting is "5".)

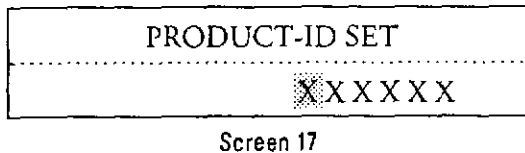
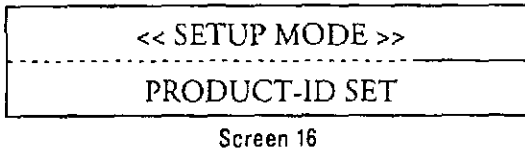
㉗ At Screen 15, the SCSI-ID is from 0 to 7 each time you press [Mode 1].

㉘ Press [Mode 2] to see Screen 14. The settings are stored to EEPROM.

㉙ When you close the setup mode, go to ⑧.

3.7 Setting Product-ID (M3099G)

When you set the Product-ID, you must set as follows.



- ⑳ At Screen 2, press [Mode 1] six times to go to the PRODUCT-ID SET screen. (Screen 16)
- ㉑ Press [Mode 2] to see Screen 17. (The default setting is "M3099G".)
- ㉒ At Screen 17, the Product-ID is M3099G or M3096G each time you press [Mode 1].
- ㉓ Press [Mode 2] to see Screen 16. The setting are stored to EEPROM.
- ㉔ When you close the setup mode, go to ㉑.

3.8 Setting initial value of endorser

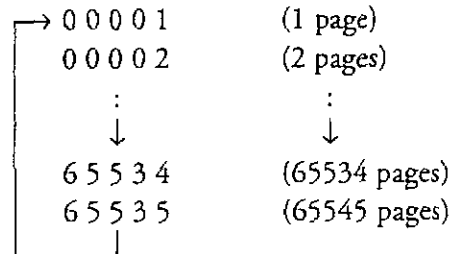
When you set the using of endorser and the initial number, you must see Chapter 2.1 and 2.2 of Appendix B. The details is as follows.

- The using of Endorser (ON/OFF)
The default setting is "OFF" (Endorser is not used.)
- The initial number
The default setting is "00000". The specifiable range is from 00000 to 65535.

NOTICE: If the specified value exceeds acceptable range, returning to SETUP menu is failed.

<Method of Increment>

In case of the initial value is "00001".



NOTICE: When it is not set “depending on operator panel” by host, no blinking. (You can not change the setting.)

When the setting is set “ON” depending on operator panel the direction of printing is 20 mm from read reference position.

3.9 Setting reset method of endorser

When you set the reset method of endorser, you must see chapter 2.3 of Appendix B.

The default setting is “ON” (The print number will be reset when HOPPER EMPTY is detected.).

3.10 Reset of endorser

When you reset the number to the initial number, you must see chapter 2.4 of Appendix B.

3.11 Reset of ink counter

When you reset the ink counter, you must see chapter 2.5 of Appendix B.

APPENDIX

OPERATOR PANEL (M3099G)

The operator panel is located at right side in front view of this device. The operator panel consists of an LCD display (24 columns x 2 lines), 3 LEDs and 5 buttons.

Figure D.1 shows layout of operator panel.

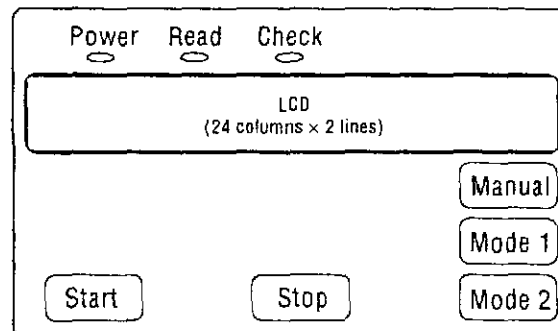


Figure D.1 shows layout of operator panel.

Operator panel function

Table D.1 lists button functions, and Table D.2 lists LED functions.

Table D.1 Button functions

Button name	Function
Start	This button is used to indicate 'Start' to scanner in TEST mode or SETUP mode at Off-line. This button is disabled while scanner operates in On-line.
Stop	This button is used to indicate 'Start' to scanner in TEST mode or SETUP mode at Off-line. This key is used to cancel temporary error while operating at On-line.
Manual	This button is used to select manual feeding mode. By pressing this key, setting is switched between manual feeding and ADF mode.
Mode 1	This button is used to start Off-line SETUP mode with Power switch. This button is used to select item in Off-line SETUP mode.
Mode 2	This button is used to start Off-line TEST mode with Power switch. This button is used to select item in Off-line SETUP mode.

Table D.2 LEDs functions

LED	Color	Function
Power	Green	When Power switch is turned on, this LED is turned on.
Read	Green	While scanning, this LED is turned on.
Check	Umber	The scanner malfunction is detected, this LED is turned on. When temporary error (Paper Jam, and so on) is detected, this LED is blinked. Temporary error is cleared and Stop button is pressed, this LED will be turned off.

LCD display

When the Power switch is turned on following messages are displayed on LCD at On-line.

Power-On to Ready

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	

Operation Ready

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	

Operation Ready in Manual Feed mode

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	

Warning

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	

The lower line is blinking and displays the ink empty of print head whenever scanner reads the document. This warning display will be reset, when the covers are opened, or [STOP] is pressed, or Start command is issued. The operator must change the print head and reset the ink counter.

Buttons

[Manual] button

This button is used to select manual feed mode. By pressing this button, setting is switched between Manual mode and ADF mode.

By pressing this button, scanner goes to manual feed mode and the hopper elevates. The next pressing this button, scanner exit from manual feed mode and the hopper down.

[Start]/[Stop] button

This buttons are used in Off-line mode. By pressing Start button in Off-line mode, the scanner starts documents feeding. By pressing Stop button in Off-line mode, the scanner stops document feeding.

The Stop button is also used in On-line mode to cancel temporary error condition.

[Mode 1] button

This button is used to transit to Off-line SETUP mode when Power-on. By pressing Mode 1 button and turn on the Power switch, this scanner starts up in SETUP mode.

[Mode 2] button

This button is used to transit to Off-line TEST mode when Power-on. By pressing Mode 2 button and turn on the Power switch, this scanner starts up in TEST mode. The TEST mode is used for maintenance/diagnostic purpose. Functions are described in M3099G IMAGE SCANNER CE MANUAL.

APPENDIX



8011

Glossary of Terms

A4 size

A standard paper size used in Japan and other countries. Paper is 210 x 297 mm (8.25 x 11.6 inches).

ASCII

The acronym for American Standard Code for Information Interchange. ASCII is a set of 256 codes (numbered 0 to 255) used to communicate information between a computer and another device such as a scanner.

Automatic separation

The image processing method to detect the difference between text and photos and choose the thresholding accordingly. Automatic separation allows the scanner to switch between line mode and half tone mode in one pass.

Bit

The smallest unit of information in computer memory. A bit is a single digit, either a 1 or a 0, in the binary numbering system. Eight bits equal one byte.

Dither

Technique for producing halftone images representing the entire grayscale using two pixel levels black and white.

Endorser

The unit for printing characters before or after scanning. These characters may be used for collation of the documents and the image data. (See appendix B)

GLOSSARY OF
TERMS

Error diffusion

High-quality halftone (pseudo-grayscale) image production based on black-and-white pixel binarization. A pixel's optical density and that of adjacent pixels are summed, with black pixels relocated in their order of density as they relate to adjacent pixels.

The purpose of this technique is to minimize the average error between readed and printed densities. Density data for adjacent pixels is modified by diffusing errors on the objective pixel into several pixels, which are then binarized. This maintains high grayscale levels and resolution during reading, while suppressing moire patterns by dotted halftone images such as newspaper photographs.

dpi

Dots per inch.

Filtering

The quality of images written in pencil or ballpoint pen and readed depends on the reflective light characteristics of the ink or lead. Dropped pixels may produce out lines, gaps, or thin, barely connected lines due to even optical density. Filtering detects areas lighter than their surroundings and increases their density to improve image clarity.

Hexadecimal

A base-16 numbering system (also commonly referred to as hex numbers). Since a base-16 system requires 16 system requires 16 digits, numbers 0 through 9 and letters A through F are used. It is convenient to express binary numbers in hexadecimal because fewer digits are required.

Image emphasis

Density is decreased for lighter but not completely white areas adjacent to black areas. Weakening this emphasis eliminates spot noise or produces softened images.

IPC II

Image processing option of this scanner. (See page A-4)

Interface

The connection that allows communication from one part of a system to another. For example, electrical signals are transferred between the computer and scanner over an interface cable.

Inversion (Reverse-image reading)

In reverse-image reading, data is changed from black to white and vice versa.

Letter size

A standard paper size used in the U.S.A. and other countries. Paper is 8-1/2 x 11 inches (215.9 x 279.4 mm).

Linedrawing mode

Selecting linedrawing mode makes threshold and contrast settings effective but prevents brightness from being set. The specified threshold value determines whether black or white pixels are scanned. Linedrawing mode is therefore appropriate for scanning text and lineart images.

Mirror image

The readed image is symmetrically flipped to produce a mirror image of the original detected in the main scanning direction.

Noise removal

Isolated noise from an image appearing as black spots in white areas and voids in black areas is removed to improve image quality.

Operator panel

A panel containing the scanner indicators and buttons. The operator panel is used to control scanner operations such as loading document selecting features, and changing setup options.

Outline extraction

The boundary between black and white areas is traced and the outline extracted for closed areas.

Photograph mode

Selecting photograph mode makes brightness and contrast settings effective but prevents the threshold from being set. With photograph mode, the darkness of an image corresponds to the black-pixel density, making it suitable in scanning images such as photographs having gradations.

RS-232C interface

A type of serial interface. See Serial interface.

Serial interface

A standard computer interface. Information is transferred between devices over a single wire (although other wires are used for control). With a serial interface, an interface cable greater than 3 meters (10 feet) can be used. This is often necessary in networking environments, where the scanner may be shared.

Smoothing

Smoothing eliminates jaggies from slanted lines and curves. Irregular convexities are deleted and irregular concavities filled in. This is useful in OCR applications, for example.

Index

A

Accessories A-3
automatic document feeder (ADF) i

B

Belt replacement 4-15
Botton Specification and Reading Mode
Setting 3-6

C

Cable Connection 2-4
charge-coupled device (CCD) i
Checking the Components 1-1
CLEANING AND REPLACEMENT OF
PARTS 4-1
Cleaning Locations and Frequencies 4-1
Cleaning Tools 4-1
Cleaning the glass surface 4-3
Cleaning the rollers 4-2
Cleaning the sensors 4-3
Cleaning the transport paths 4-2
Closing the upper transport unit 3-5
COMPONENTS 1-1
Connecting the interface cable 2-4
Connecting the power cable 2-4
Consumables A-3

D

Dimentions A-2

Device and Operator Actions for Equipment
Errors 5-5

Device and Operator Actions for Temporary
Errors 5-4

Document detection sensor 4-4

Document Quality 6-2

Document Size 6-1

DOCUMENT SPECIFICATION 6-1

Document type 6-2

Document width detection sensor 4-3

Duplex (back-side) reading mode 3-18

Duplex (front-side) reading mode 3-13

Duplex reading mode 1-8

E

Ejection sensor 4-5

Endorser B-1

Explanation of each section 1-3

Extension 1-3

Exterior view of the scanner 1-2

H

Hopper 1-3

I

Initial Checks 5-1

Ink empty 1-9

Inserting Document Manually 3-4

Inspection 2-2

INSTALLATION AND CONNECTIONS 2-1

Installation Specifications A-1

INDEX

J

Jam Processing 5-6

L

Lamp replacement 4-6
LCD display 1-6
Loading Document 3-1

M

Message List 5-3

O

Opening the upper transport unit 3-5
OPERATING INSTRUCTIONS 3-1
Operator panel 1-3
Operator panel arrangement 1-4
Operator Panel Arrangement and Functions 1-4
Operator panel functions 1-4

P

Part Names and Functions 1-2
Pick roller replacement 4-14
Power inlet 1-3
Power switch 1-3
Precautions 2-1, 6-2
Procedure 4-2

R

Reading timing sensor 4-5
Ream weight 6-2
Replacement of Parts 4-6
Replacing the back-side lamp 4-10
Replacing the front-side lamp 4-6
Roller ASY replacement 4-12
RS-232C interface connector 1-3

S

Screen transition 3-13, 3-17, 3-19
Simplex (front-side) reading mode 3-7
Simplex reading mode 1-6
Status display 1-9
Stacker 1-3

T

TROUBLESHOOTING 5-1
Turning the Power On 3-1
Turning the power switch off 2-4

V

Video interface connector 1-3

■

[Density] button 3-8, 3-14, 3-18
[Document] button 3-11, 3-16, 3-19
[Duplex] button 3-6
[Front/Back] button 3-6
[Half-tone] button 3-10, 3-15, 3-18
[Landscape] button 3-9, 3-15, 3-16
[Manual] button 3-12
[Resolution] button 3-9, 3-14
[Size] button 3-8, 3-14
[Start] button 3-20
[Start]/[Stop] Button 3-20
[Stop] button 3-20