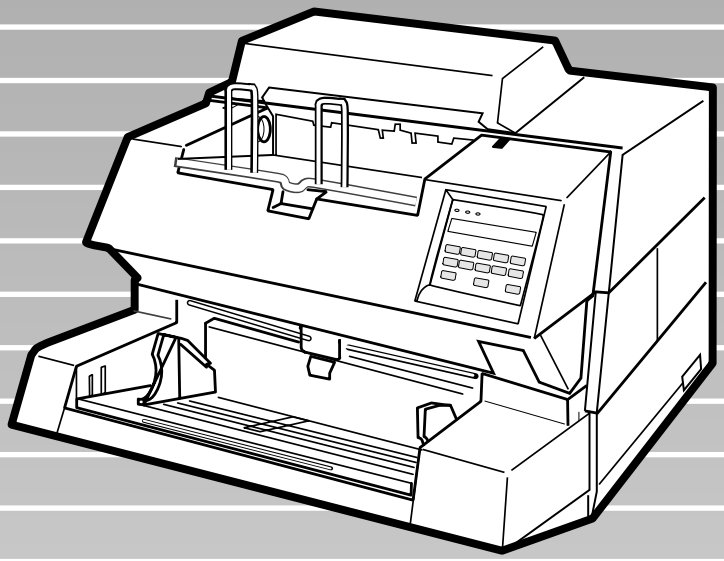
C150-E045-03EN

M3099EX/GX/EH/GH Image Scanner

Operator's Guide



FUJITSU

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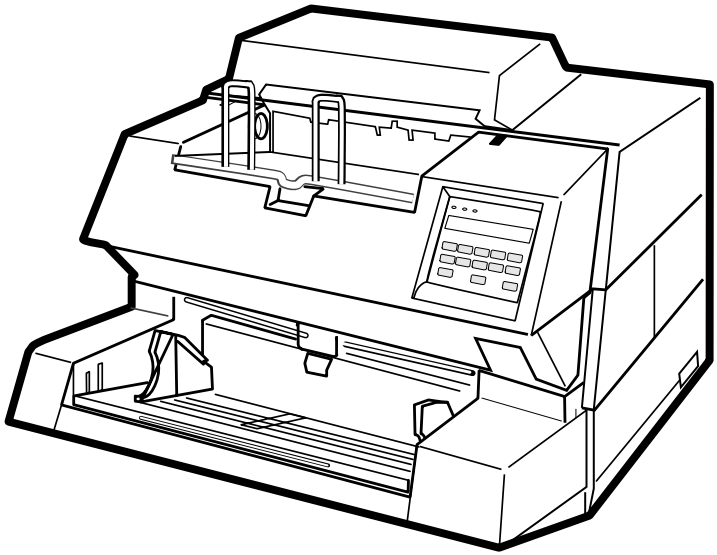

M3099EX/GX/EH/GH Image Scanner Operator's Guide

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

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 pésent appareil numérique n'ément pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la classe A prescridtes dans le Réglesment sur le brouillage radioélectrique dicté par le ministere des Communications du Canada.

MaschinenlärmInformationsverordnung 3. GSGV, 18-01. 1991: Der arbeisplatzbezogene Schalldruckpegel beträgt 70 dB (A) oder weniger gemäß ISO7779.

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IMPORTANT NOTE TO USERS

READ CAREFULLY ALL OF THIS MANUAL BEFORE USING THIS PRODUCT. IF NOT USED CORRECTLY, UNEXPECTED DAMAGES MAY BE CAUSED TO THE USERS OR THE BYSTANDERS.

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Preface

This manual explains how to use the M3099EX/GX/EH/GH image scanner.

This manual contains COMPONENTS, INSTALLATION AND CONNECTION, OPERATING INSTRUCTION,DOCUMENT SPECIFICATION, SPECFICATIONS, ENDORSER and SETUP MODE.

Refer to Reference Guide for the information about the routine operation of the M3099EX/GX/EH/GH.

Reference Guide contains OPERATING INSTRUCTION, CLEANING, REPLACEMENT OF PARTS, ADJUSTMENT and TROUBLESHOOTING.

The M3099EX/GX/EH/GH is very fast and highly functional image scanner developed for volume filing, using charge-coupled device (CCD) image sensors. This scanner features duplex scanning and high quality image, processing with an automatic document feeder (ADF).

Conventions

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

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

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

The following symbols are used in this manual.

Used for general WARNING and CAUTION.

Be careful not to pinch your fingers or hands.

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CHAPTER

1

COMPONENTS

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

Checking the Components

Units and Assemblies

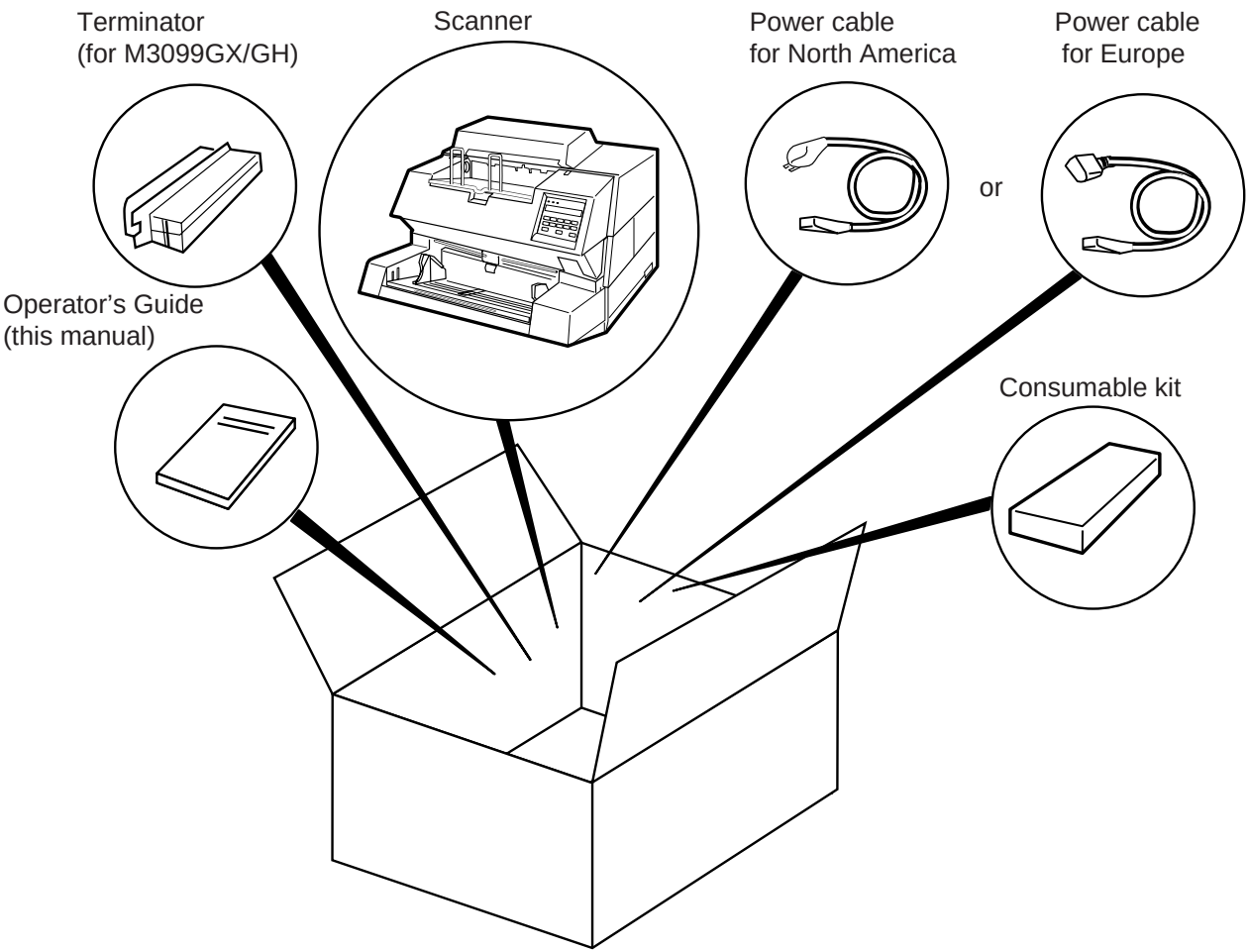
Operator Panel (M3099EX/EH)

Operator Panel (M3099GX/GH)

Buzzer Functions

Cheking the Components

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



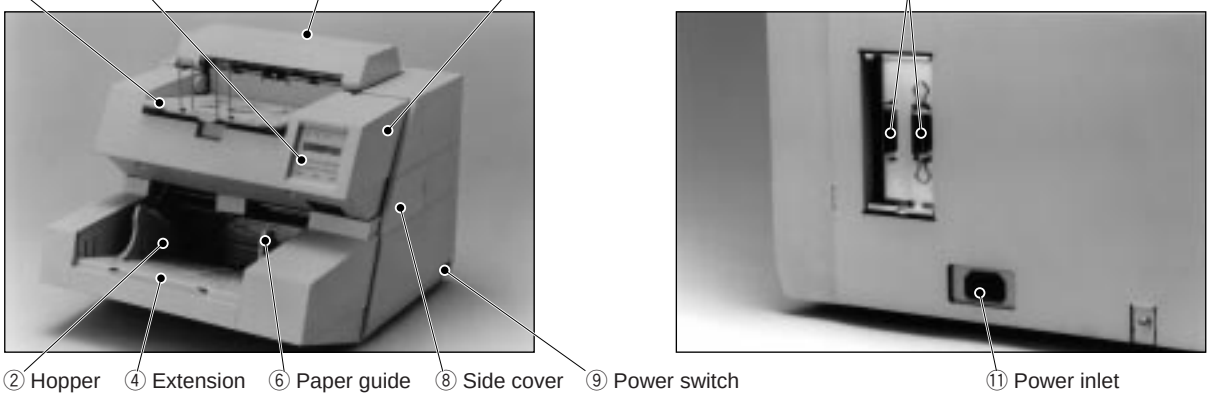
Units and Assemblies

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

Types

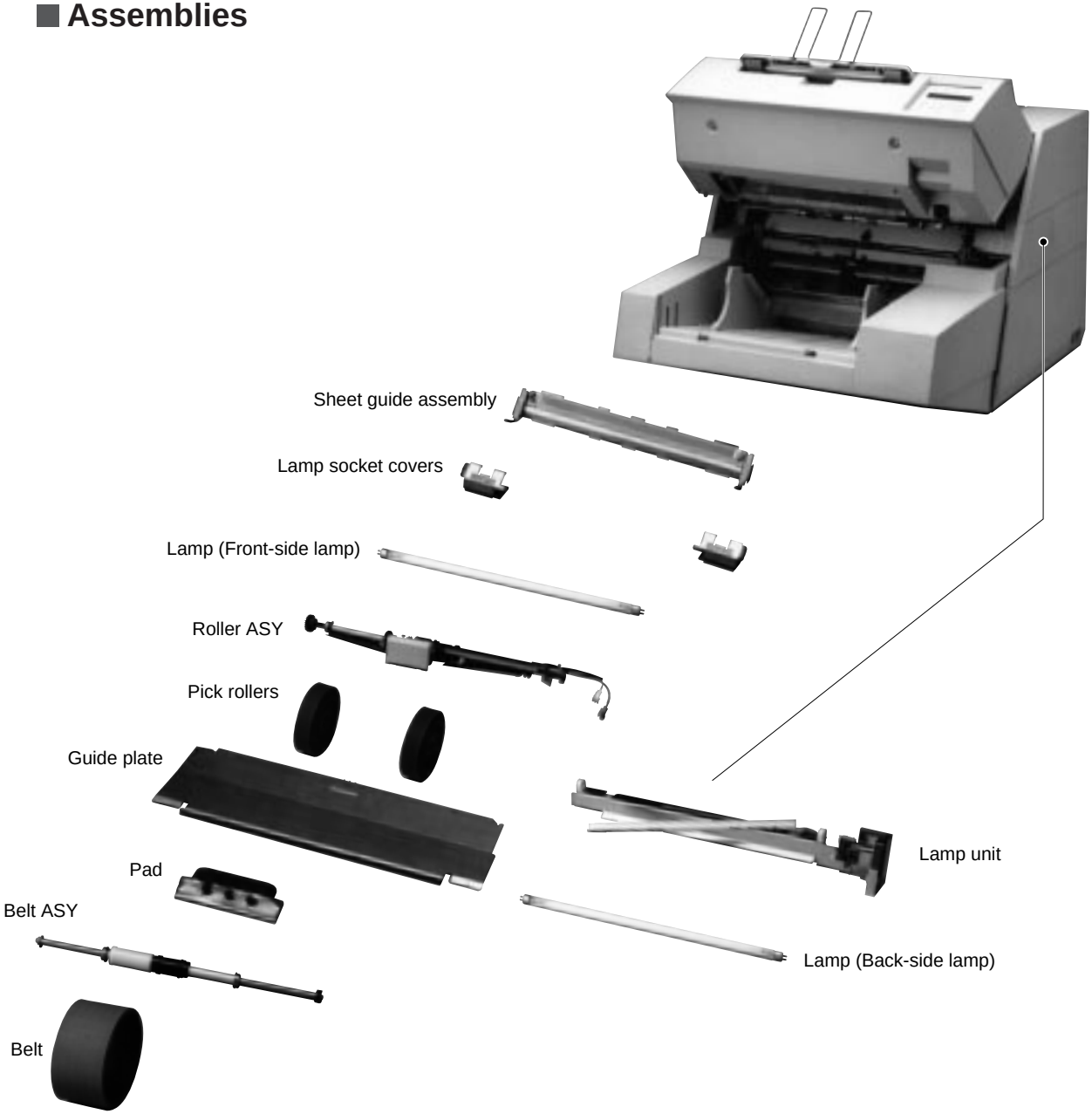
Both M3099EH and M3099GH have two types, 1000 sheets hopper type and 500 sheets hopper type. The 1000 sheets type has an extrusion endorser cover on the top of the unit and the 500 sheets type does not. Therefore it is easy to tell one from another. Be aware that there may be a little difference in handling between them.

Units



No.	Function
①	Stacker.
②	Hopper.
③	Used to operate the scanner.
④	Used to prevent documents from hanging down.
⑤	Open here when adjusting the print head position or when replacing the print head.
⑥	Used to adjust the document size.
⑦	Scans while feeding documents.
⑧	Open here when replacing the back-side lamp.
⑨	Turns on or off the power.
⑩	Video and RS-232C (M3099EX/EH) or SCSI (M3099GX/GH) interface connectors.
⑪	Connect the power cable from an AC power outlet here.

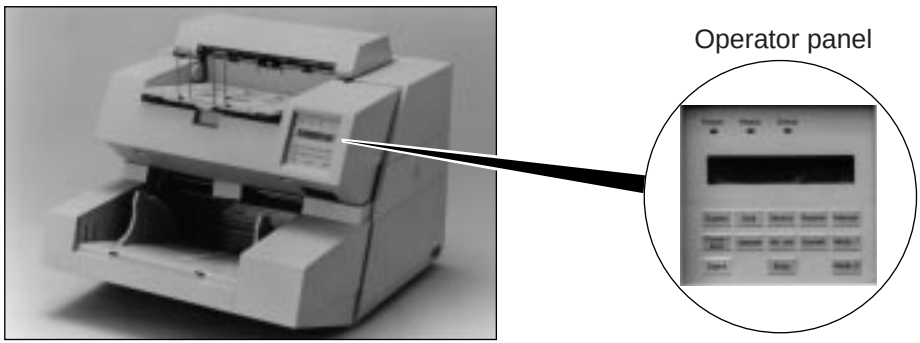
Assemblies

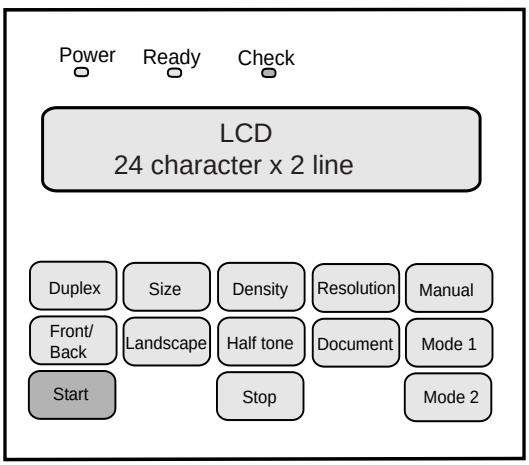

Sheet guide assembly
Lamp socket covers
Lamp (Front-side lamp)
Roller ASY
Pick rollers
Guide plate
Pad
Belt ASY
Belt
Lamp unit
Lamp (Back-side lamp)

Operator Panel(M3099EX/EH)

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

Arrangement





Button/LED Function

Button name	Function
Start	When the Ready lamp is lit in the manual start mode, pressing this button starts a scanning operation.
Stop	When pressed during scanning: The scanning operation immediately stops and the document under transport is ejected to the stacker. A picked document, if any, is ejected to the stacker. The hopper table is lowered to the bottom. When pressed while waiting for Hopper-timer: The hopper table is lowered to the bottom. When pressed displaying the initial screen: The abrasion counter is displayed. When pressed occuring the temporary error: The temporary error is recovered. When pressed while setting the scanning mode: The display returns to the initial screen.
Duplex	Toggles the LCD screen between simplex and duplex reading mode.
Size	Sets the document size.
Density	Sets the scanning density.
Resolution	Sets the scanning resolution.
Manual	Sets the manual mode. 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.
Front/Back	Toggles the LCD screen between front-side and back-side reading mode.
Landscape	Toggles the document scanning direction between the portrait and landscape mode.
Half tone	Sets whether to execute halftone processing (dither or error diffusion) and also sets automatic separation processing (dither or error diffusion if the image processing option is installed).
Document	Toggles the document scanning mode between the photo and linedrawing mode.
Mode 1	Activates the setup mode. (See Chapter7)
Mode 2	Activates the maintenance mode.

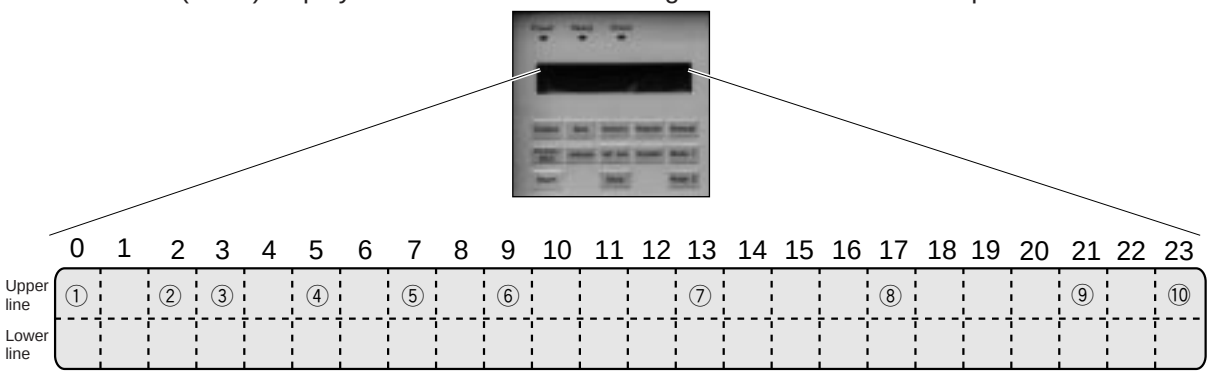
LED	Function
Power	Lights to indicate the power is on.
Ready	Lights when the image scanner becomes ready to read a document in the manual mode and manual start mode. This indicator turns off when the Start button is pressed to read a document.
Check	Lights when an equipment error occurs. An error messages is displayed on the LCD screen. This indicator blinks when 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.

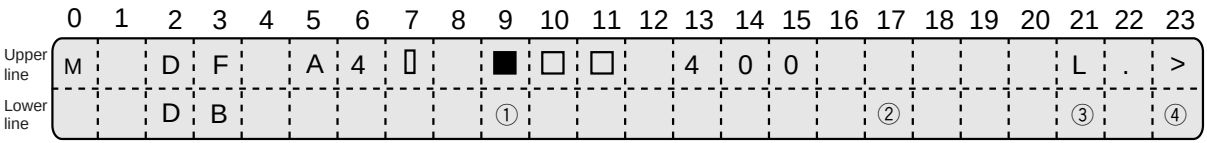


No.	Function	Description
①	Manual mode	:ADF mode M :Manual mode
②	Reading mode	D :Duplex reading S :Simplex (front-side) reading
③	Read side	F :Front-side reading mode B :Back-side reading mode
④	Size	DL :Double-letter(only for M3099EX) LT :Letter LG :Legal A3 :A3(only for M3099EX) A4 :A4
⑤	Document orientation	▯ :Portrait ▭ :Landscape
⑥	Density	■■■ :Very dark ■■▬ :Dark AT1 :Dynamic threshold AT1* AT2 :Dynamic threshold AT2* ■■□ :Normal ■▬□ :Light ■□□ :Very light *Only when the image processing option is available.

No.	Function	Description
⑦	Resolution	400 :400dpi 300 :300dpi 240 :240dpi 200 :200dpi
⑧	Halftone processing	:No halftone processing HT1 :Dithering HT2 :Error diffusion LP1 :Automatic separation(dither)* LP2 :Automatic separation(error diffusion)* When the image processing option is not installed, automatic separation is not available.
⑨	Photo/linedrawing mode	P. :Photo mode L. :Linedrawing mode* *When linedrawing mode is selected,check that the 3 mm margin of the read area is specified as a drop-out color.
⑩	Image processing option	:No > :Yes

Duplex reading mode

The upper line (line 1) displays the current read mode for front-side reading.
The displayed messages are the same as those in the simplex reading mode.
The lower line (line 2) displays the current read mode for back-side reading.
Only the density, halftone processing, photo/linedrawing mode and image processing option can be specified independently.
The other mode is the same as that for front-side reading.



No.	Function	Description
①	Density	■■■:Very dark ■■◪:Dark AT1 :Dynamic threshold AT1* AT2 :Dynamic threshold AT2* ■■□:Normal ■◪□:Light ■□□:Very light *Only when the image processing option is available.
②	Halftone processing	:No halftone processing HT1:Dithering HT2:Error diffusion AT1:Automatic separation (dither)* AT2:Automatic separation (errordiffusion)* *Only when the image processing option is available.
③	Photo/linedrawing mode	P. :Photo mode L. :Linedrawing mode* *When linedrawing mode is selected, check that the 3 mm margin of the read area is specified as if a drop-out color.
④	Image processing option	:No > :Yes

Operation status

Operation status is indicated by the following message:

<Power-on>

When the lamps are ready to read, the screen changes to the initial screen of the simplex or duplex reading mode.

```
W a r m i n g   –   u p   N o w ! !
```

<Warning>

```
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 after the scanning operation.
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 Chapter 6 ENDORSER.)

<Reading counter>

Example of simplex reading:

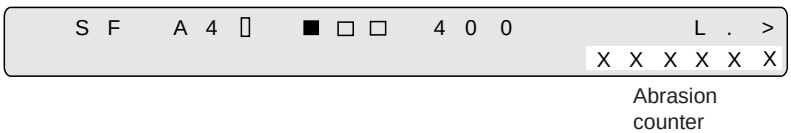
```
S F   A 4 ▯   ■ □ □   4 0 0          L . >
                                      X X X
```

Reading counter

The reading counter is displayed after a read operation starts.

The reading counter disappears when:
• The next scanning starts.
• The valid switches are pressed.
• The error is cleared.

<Abrasion counter>



The abrasion counter is displayed when Stop is pressed in the initial screen.

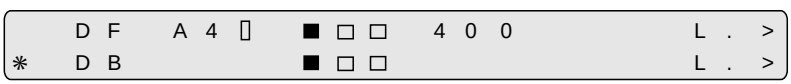
The abrasion counter disappears when:
• The next scanning starts.
• The valid switches are pressed.
• The error is cleared.

The abrasion counter is not displayed if Stop is pressed during blinking.
The abrasion counter displays the accumulative number of read document.
This counter can be reset to zero by following the procedure shown in Chapter 7 (page 7-7).

<IPC-2 pre-set mode>

Simplex reading mode

Duplex reading mode

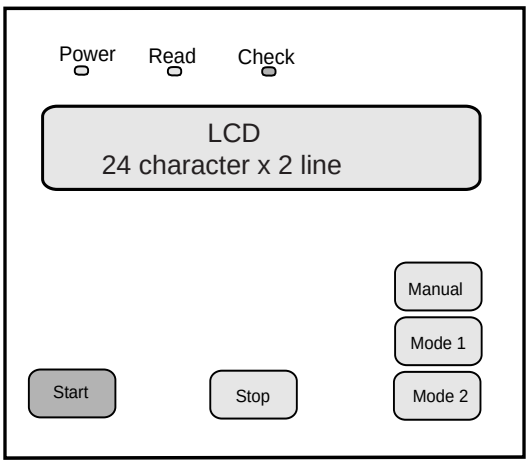


When IPC-2 pre-set mode is set, an asterisk (✳) is displayed.
The method of IPC-2 pre-set mode is shown in setup mode.

Operator Panel(M3099GX/GH)

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

Operator panel



Button/LED Function

Button name	Function
Start	This button is used to indicate Start to scanner in maintenance mode or SETUP mode at Off-line. This button is disabled while scanner operates in On-line.
Stop	This button is used to indicate Stop to scanner in maintenance mode or SETUP mode at Off-Line. This button is used to cancel temporary error while operating at On-line.
Manual	This button is used to select manual feeding mode. By pressing this button, setting is switched between manual feeding and ADF mode.
Mode 1	Activates the setup mode. (See Chapter 7)
Mode 2	Activates the maintenance mode.

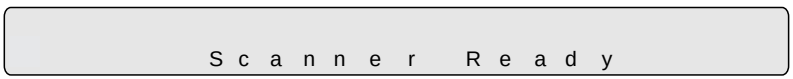
LED	Function
Power	When the Power switch is turned on, this LED is turned on.
Ready	While scanning,this LED is turned on.
Check	When a scanner malfunction is detected, this LED is turned on. When temporary error (Paper Jam, and so on) is detected, this LED is blinked. When temporary error is cleared and Stop button is pressd, this LED will be turned off.

■ LCD Display

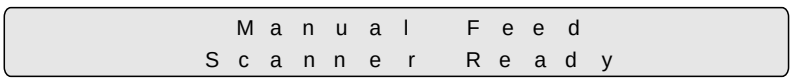
When the Power switch is turned on, the following messages appear on LCD at On-line.

<Power-On to Ready>

<Operation Ready>



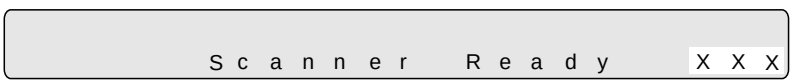
<Operation Ready in Manual Feed mode>



<Warning>

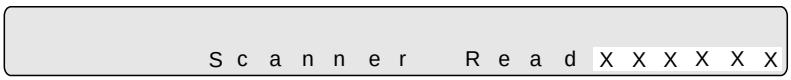
The lower line is blinking and displays the ink empty of print head after the scanning operation.
This warning display will be reset, when the covers are opened, or Stop is pressd, or Start command is issued. The operator must change the print head and reset the ink counter.

<Reading counter and Abrasion counter>



Reading counter

The reading counter is displayed after a read operation starts.

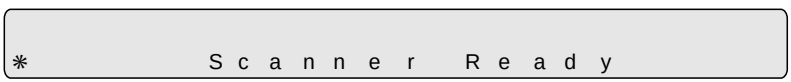


Abrasion counter

The abrasion counter is displayed when Stop is pressed in the Ready screen.
The abrasion counter displays the accumulative number of read document.
This counter can be reset to zero by following the procedure shown in Chapter 7 (page 7-7).

The reading counter or abrasion counter disappears when:
- The next start commnad is issued.
- The valid switches are pressed.
- The error is cleared.

<IPC-2 pre-set mode>



When IPC-2 pre-set mode is set, an asterisk (✳) is displayed.
The method of IPC-2 pre-set mode is shown in setup mode.

Buzzer Functions

The scanner has a buzzer to indicate that an error has occurred.

Error	Function
Equipment error	Sounds for 3 seconds. The buzzer turns off when any button is pressed or the power is turned off. Even when a button is pressed, the scanner continues to display the error.
Temporary error	Sounds during 3 seconds with 0.5 second interval. The buzzer turns off when any button is pressed or power is turned off. Even when a button is pressed, the scanner continues to display the error.

The buzzer function can be set on or off by following the procedure in Chapter7 SETUP MODE.

CHAPTER

2

INSTALLATION AND CONNECTIONS

The chapter describes how to install and connect the scanner.

Precautions

Inspection

Cable Connection

Precautions

WARNING

Place the machine with no portion of the scanner hangs 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 Flache. Bewegen Sie den Scanner nicht ohne Hilfe.

This section describes precautions when installing the scanner.

Do not install the scanner in the following places and environments.

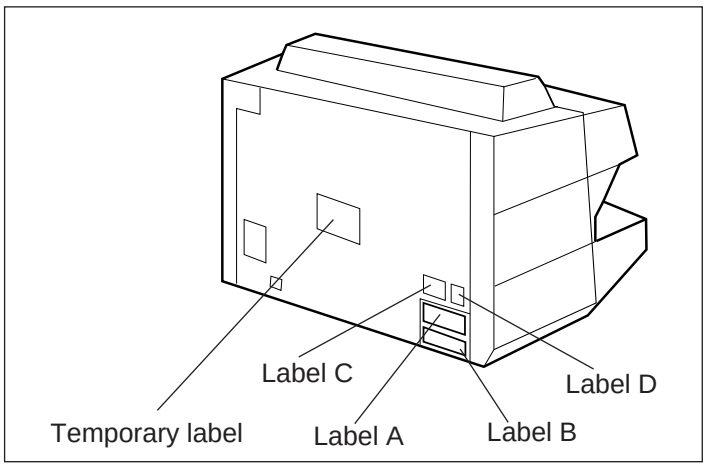
- Place the scanner away from electrical noise sources, strong magnetic fields and air flow. If the scanner is used near an air conditioner, copying machine, or TV set, the scanner may operate incorrectly.
- Keep the scanner out of the sun and away from heaters. These environments may shorten the scanner 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 the scanner life or cause hardware failures. Do not place the scanner where liquid spills may occur.
- Be aware of the static electricity. Be sure that the flooring and the desk are made of materials that do not generate the static electricity.

See Chapter 5 SPECIFICATIONS for the informantion such as the size of the installation space.

Inspection

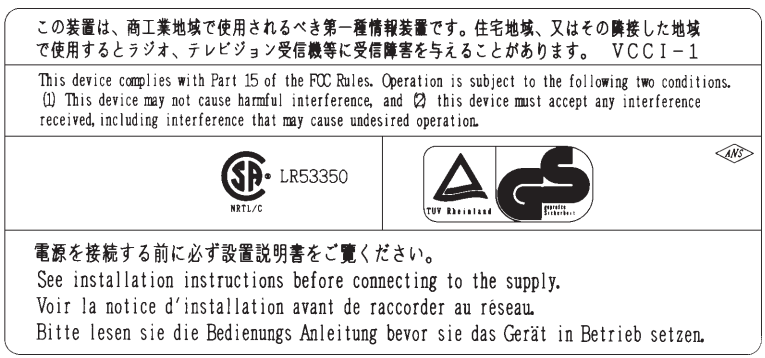
This section describes how to check the labels.

Make sure that the input voltage indicated on the temporary label agree with your power source.



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

Label A (An example)



Label B (An example)

MODEL M3099EH IMAGE SCANNER	
PART NO. CA02869-B202	AC100-120/200-240V
SER. NO.	1 phase 50/60Hz
DATE 1993-11	2.5/1.25A 65 kgf
FUJITSU LIMITED	MADE IN JAPAN

Label C (An example)

```
MODEL NAME HLS-001E
PART  NO.  CA02869-B001
MODEL      - 0 1 2 3 4 5 6 7 8 9
 REV.      - 0 1 2 3 4 5 6 7 8 9
           - 0 1 2 3 4 5 6 7 8 9
```

Label D (An example)

CE

Temporary Label (An example)

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 personel.

⚠ CAUTION

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

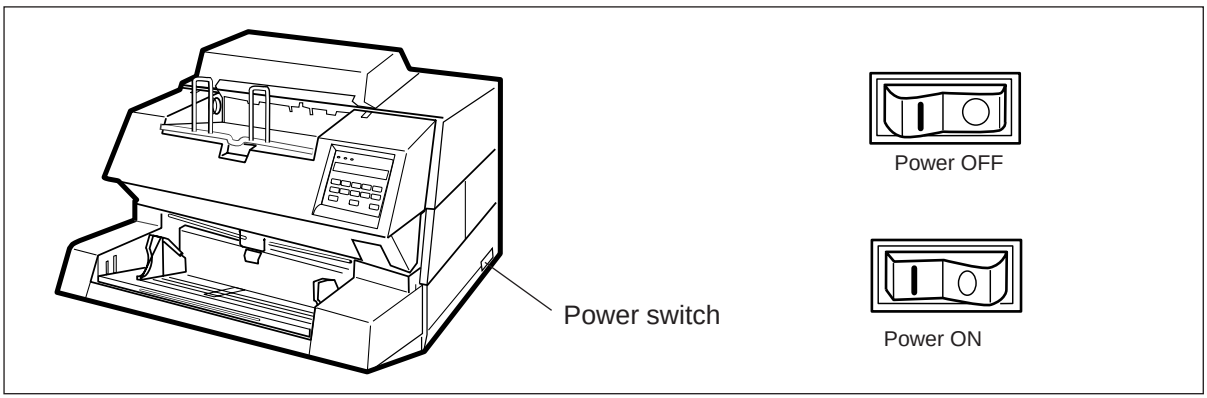
Cable Connection

This section describes how to connect the cables.

Connect the cables as follows:

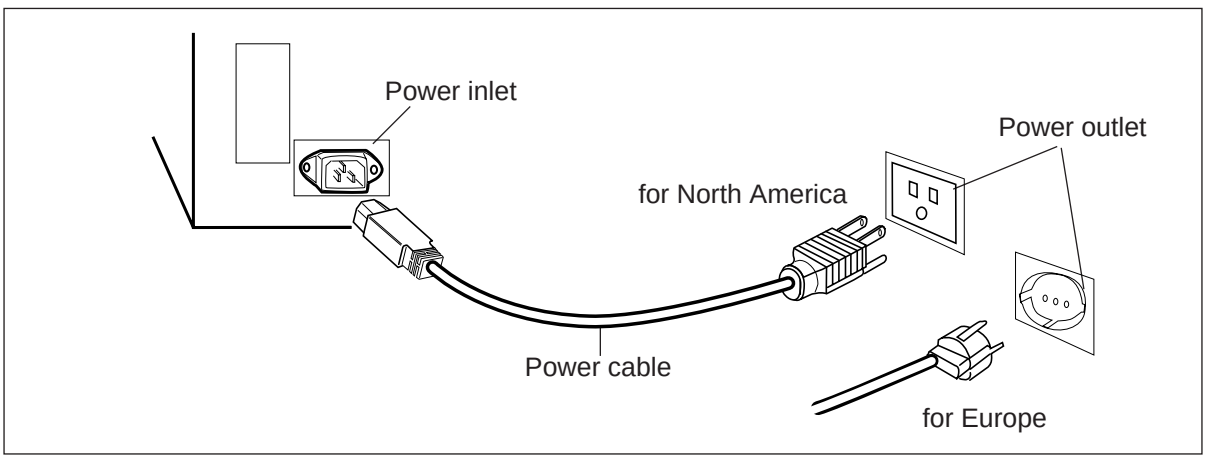
■ Turning the power switch off

Press “O” side of the power switch to turn the power off.



■ Connecting the power cable

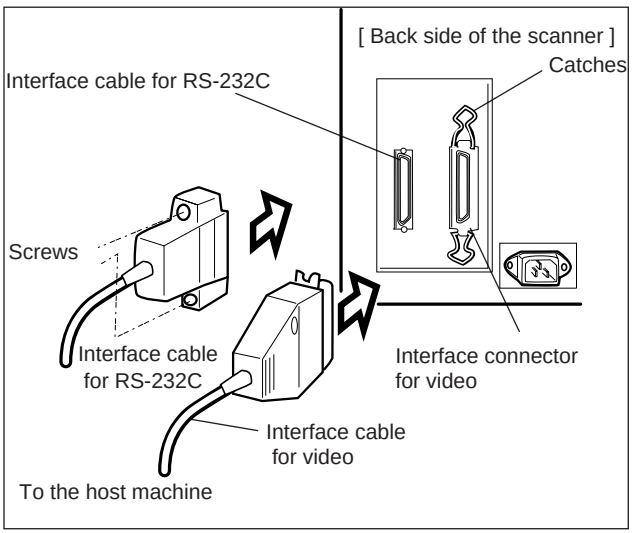
Connect the power cable to the power inlet of the device and a power outlet.



■ Connecting the interface cable

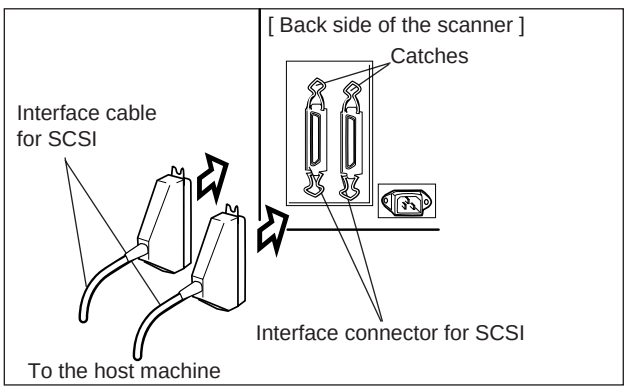
(M3099EX/EH)

Connect the video interface and RS-232C interface cables and secure them with hooks and screws. Connect the other ends to the host machine.



(M3099GX/GH)

Connect the SCSI interface cables and secure them with hooks and connect the other ends to the host machine. When the scanner is at the terminal side, connect the terminator to the connector to which an interface cable is not connected.



NOTE

SCSI-ID is set to No. 5. Refer to Chapter 7 when changing the setting.

CHAPTER

3

OPERATING INSTRUCTION

This chapter describes how to turn the power on, and also describes button specification and reading mode setting.
Refer to Reference Guide about information on loading document and opening/closing the upper transport unit.

Turning the Power On

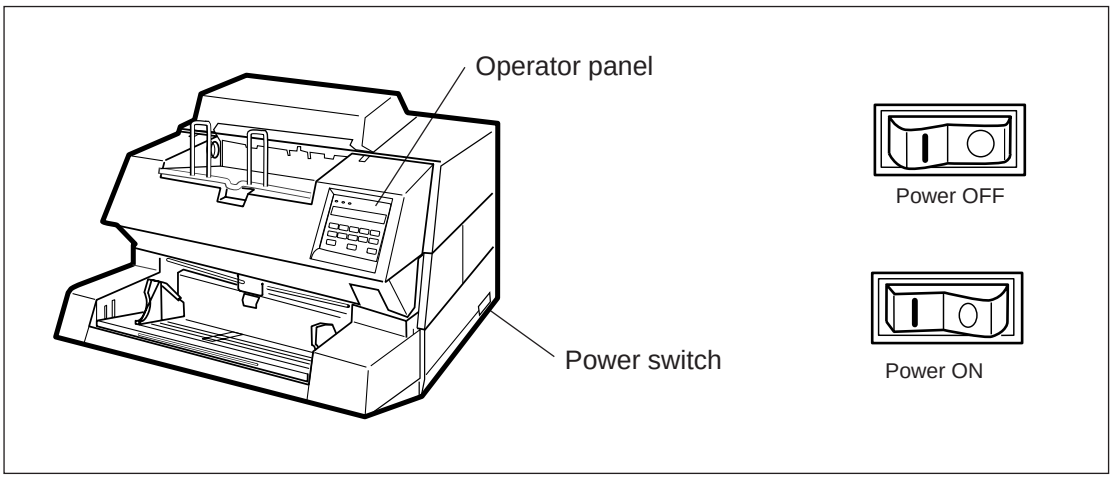
Button Specification and Reading Mode Setting (M3099EX/EH)

Button Specification (M3099GX/GH)

Turning the Power On

This section describes how to turn the power on.

Press “I” side of the power switch. The power goes on and the green Power lamp at the operator panel lights.



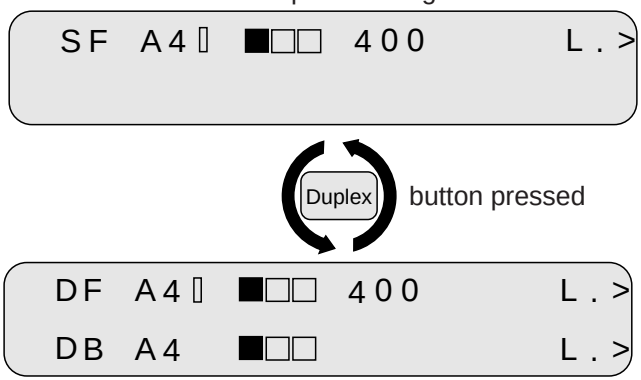
Button Specification and Reading Mode Setting (M3099EX/EH)

This section describes the button specifications and setup details for each of the simplex (front-side), duplex (front-side) and duplex (back-side) reading modes.
When reading mode is set by the command from the host computer, the following button operation is not required.

Duplex button

This button is used to select simplex or duplex document reading mode. Press this button to toggle the display between the initial screens of the simplex and duplex reading modes.

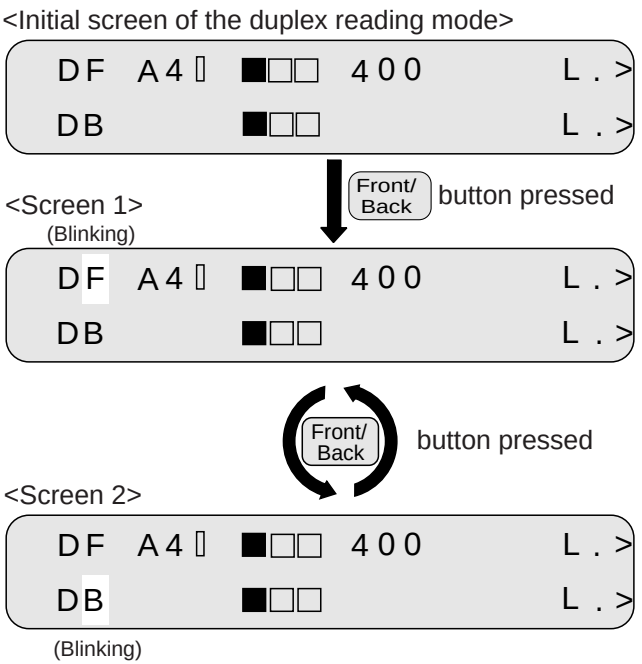
<Initial screen of the simplex reading mode>



Front/ Back button

This button is valid only in the duplex reading mode. Press this button to toggle the read side between front and back.
"F" and "B" blink alternately for the setting of front or back-side.

<Initial screen of the duplex reading mode>



Simplex (front-side) reading mode setting

<Initial screen of the simplex reading mode>

■ Size button

Selects a document size. When this button is pressed the lower line is displayed as shown in Screen 3.

<Screen 3>

(Blinking)

(M3099EX)
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. If the direction indicated on the upper line is "▭", only "LT" or "A4" can be selected.

(M3099EH)
Each time this button is pressed, "LT", "LG", or "A4" starts blinking in turn and the size displayed on the upper line changes accordingly.

(Blinking)

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>

(Blinking)

The lower line is displayed as shown below.

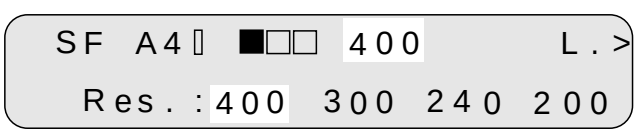
Blinking order ↓

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

Resolution button

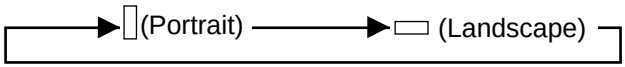
Selects a resolution for the read operation. When this button is pressed, the lower line is displayed as shown in Screen 5. Each time this button is pressed, “400”, “300”, “240” or “200” starts blinking in turn and the resolution indicated on the upper line changes accordingly.

<Screen 5>



(Blinking)

Landscape button (*1)



*1; This button is available only for M3099EX.

Specifies landscape or portrait mode for reading. 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.

5.5

NOTE

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

(M3099EX)

<Screen 6>

```
SF A4▯ ■□□ 400      L.>
Size:DLT LT LG A3 A4 ▯
```

(Blinking)

(M3099EH)

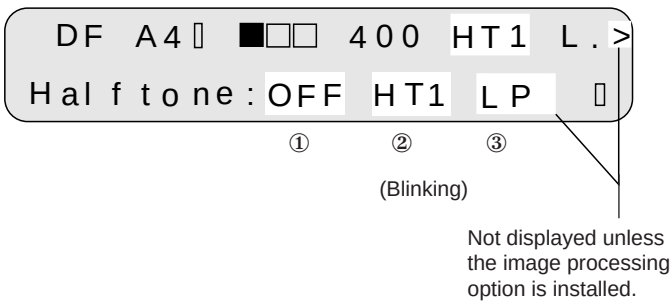
```
SF A4▯ ■□□ 400      L.>
Size:    LT LG A4    ▯
```

(Blinking)

Half tone button

Specifies the 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>



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

Without option

With option

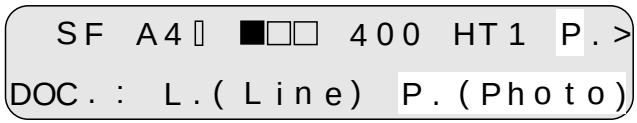
*1: Select one of these settings to read data such as photographs, illustration, or colored maps.

*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 when 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 turn and the document selection indication displayed on the upper line changes accordingly.

<Screen 8>



(Blinking)

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

*1; Top 3mm 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 this button again releases the manual mode and lowers the hopper to the bottom position.

<Screen 9>

(Manual mode set)

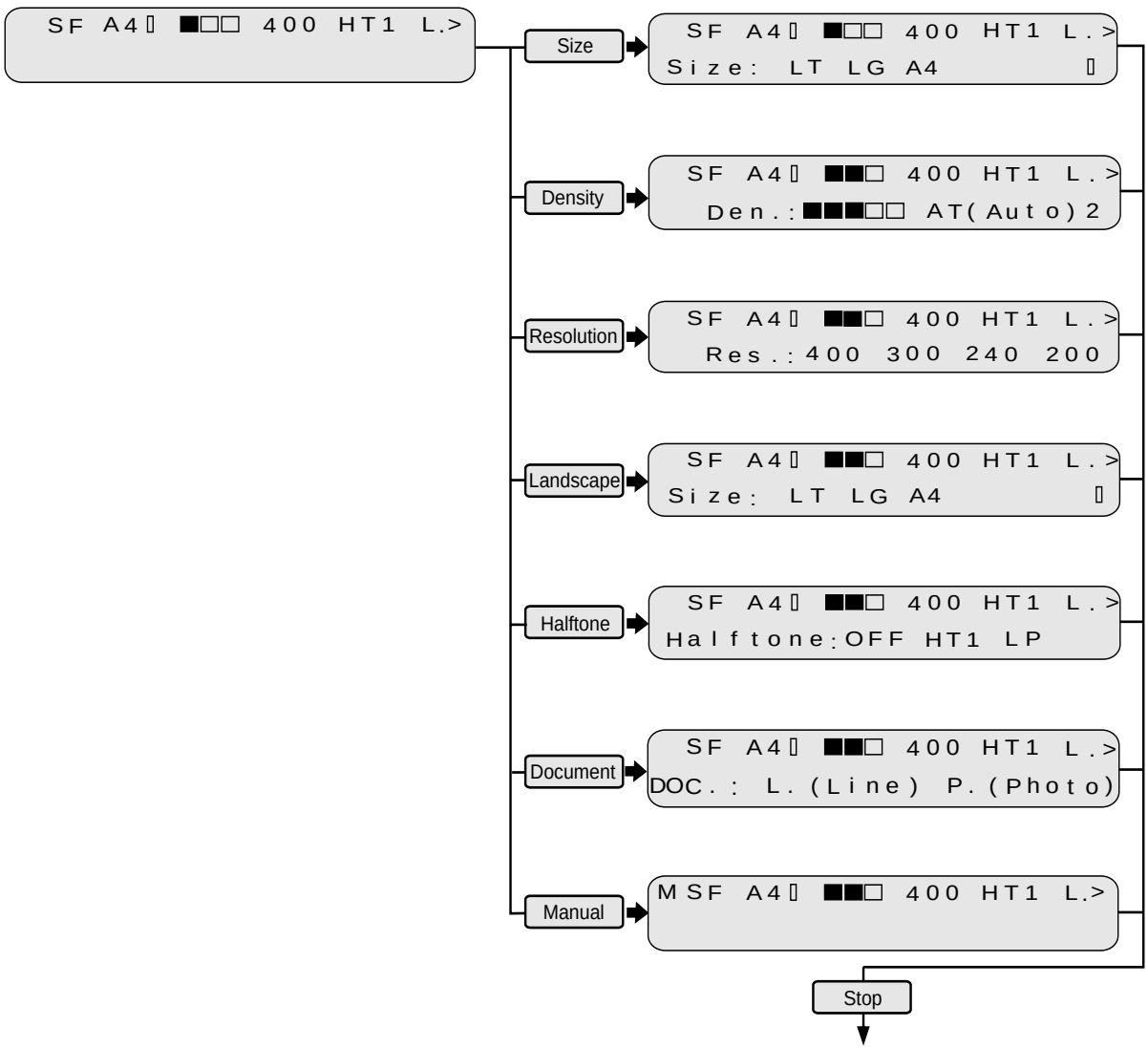
button pressed

<Initial screen of the simplex reading mode>

(Manual mode released)

■ Screen transition

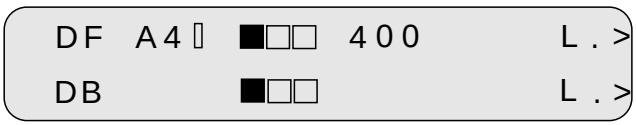
<Initial screen of the simplex reading mode>



*1: Pressing the Stop button during reading mode returns the display to the initial screen of the simplex reading mode.

Duplex (front-side) reading mode setting

<Initial screen of the duplex reading mode>



Use the following buttons to set the scanner when it reads the front-side of a document in duplex mode. This description applies to the case when reading the back-side except Density, Halftone and Document buttons.

■ Size button

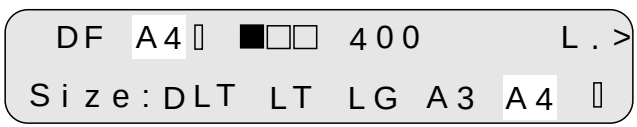
This button is used to select a document size.
For details, see the explanation of <Screen 3>.

(M3099EH)

<Screen 10>

(Blinking)

(M3099EX)



(Blinking)

■ Density button

This button is used to select a scanning density.
For details, see the explanation of <Screen 4>.

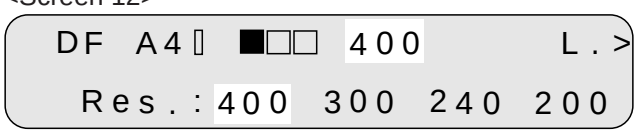
<Screen 11>

(Blinking)

■ Resolution button

This button is used to select a scanning resolution.
For details, see the explanation of <Screen 5>.

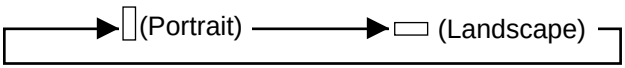
<Screen 12>



(Blinking)

■ Landscape button

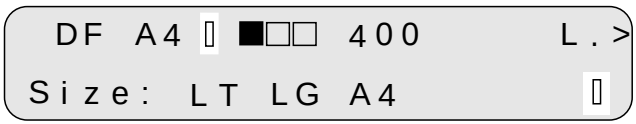
This button is used to select document reading direction in portrait or landscape mode.
For details, see the explanation of <Screen 6>.



NOTE

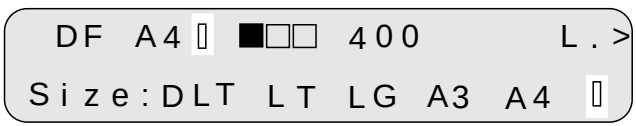
The landscape mode can be selected only when the document size is LT or A4.
(M3099EH)

<Screen 13>



(Blinking)

(M3099EX)

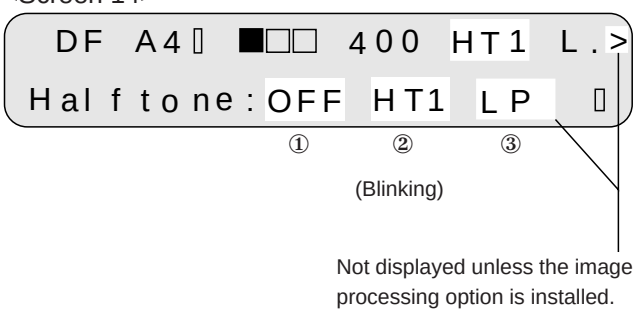


(Blinking)

■ Half tone button

This button is used to select whether or not to perform halftone (dither or diffusion) processing.
For details, see the explanation of <Screen 7>.

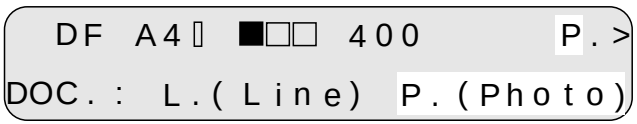
<Screen 14>



Document button

This button is used to select linedrawing mode or photo mode.
For details, see the explanation of <Screen 8>.

<Screen 15>



(Blinking)

Manual button

This button is used to set or release the manual mode.
For details, see the explanation of <Screen 9>.

<Screen 16>

(Manual mode set)

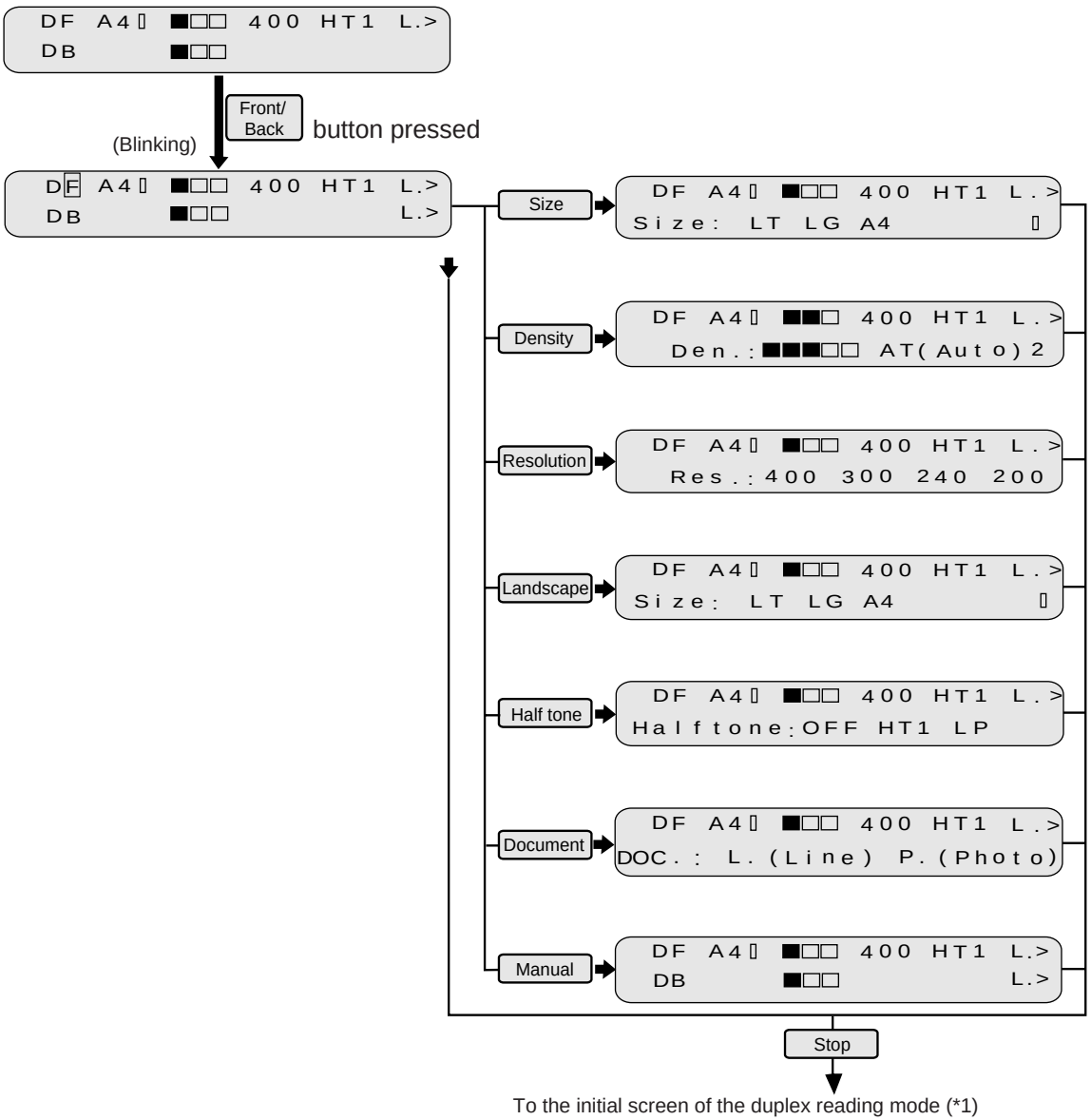
button pressed

<Initial screen of the duplex reading mode>

(Manual mode released)

Screen transition

<Initial screen of the duplex reading mode>

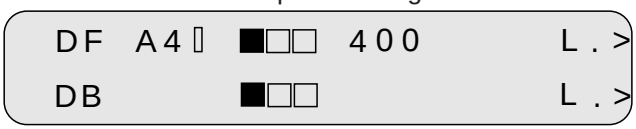


*1: Pressing the Stop button during reading mode returns the display to the initial screen of the duplex reading mode.

Duplex (back-side) reading mode setting

Density, Halftone and Document buttons are available when reading the back-side.

<Initial screen of the duplex reading mode>



■ Density button

This button is used to select a reading density. For details, see the explanation of <Screen 4>.

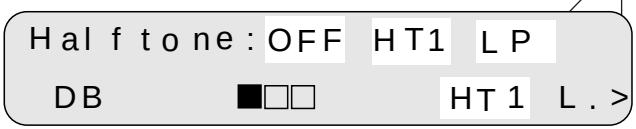
<Screen 17> (Blinking)

■ Half tone button

This button is used to select whether or not to perform the halftone (dither or error diffusion) processing. For details, see the explanation of <Screen 7>.

Not displayed unless the image processing option is installed.

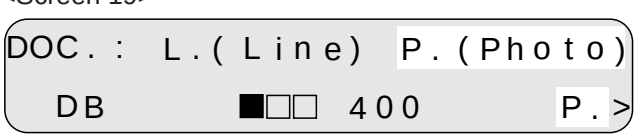
<Screen 18> (Blinking) ① ② ③



■ Document button

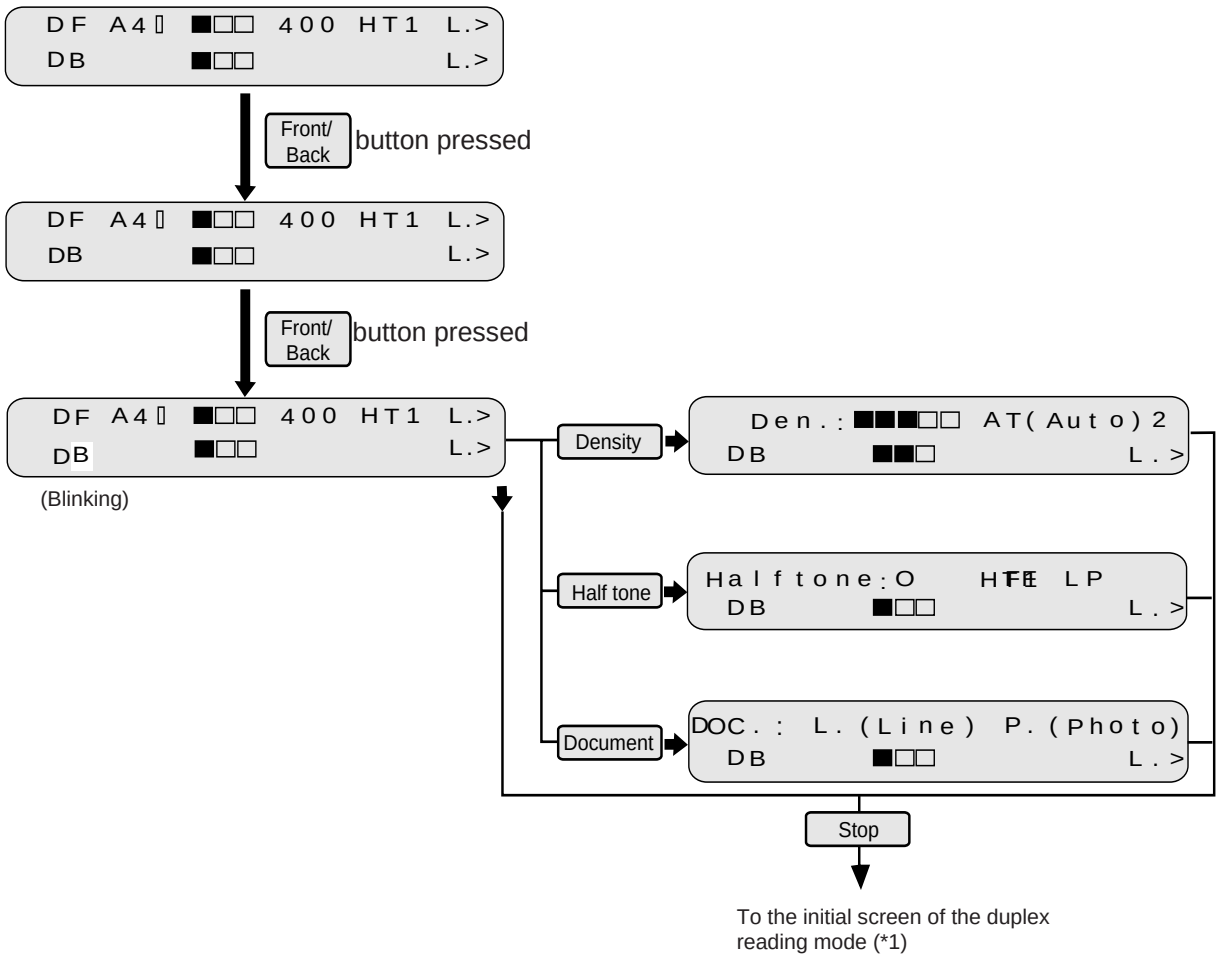
This button is used to select line drawing mode or photo mode. For details, see the explanation of <Screen 8>.

<Screen 19> (Blinking)



Screen transition

<Initial screen of the duplex reading mode>



*1: Pressing the Stop button during reading mode returns the display to the initial screen of the duplex reading mode.

Start / Stop button

Press each button to start or stop reading.

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 the initial screen of simplex or duplex reading mode. If not, press Stop button once, then press Start button.

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

Stop button

This button is effective regardless of mode: manual or automatic mode.
Press this button to stop read operation.

When Stop button is pressed:
During reading: Reading immediately stops and the document being fed is 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 remains in front of ADF, set the document on the hopper again.

Button Specification(M3099GX/GH)

This section describes the button specifications.

Manual button

This button is used to select manual feed mode. Pressing this button switches the setting between Manual mode and ADF mode.
When this button is pressed, the scanner enters manual feed mode and the hopper goes up. If the button is pressed again, the scanner exits manual feed mode and the hopper goes down.

Start / Stop button

These buttons are usedd in Off-line mode. When Start button is pressed in Off-line mode, the scanner starts document feeding. When Stop button is pressed in Off-line mode, the scanner stops document feeding.

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

Mode 1 button

This button is used to transit to SETUP mode when the power is on. When Mode 1 button is pressed and power is turned on, the scanner enters SETUP mode.

Mode 2 button

This button is used to transit to maintenance mode when the power is on. When Mode 2 button is pressed and power switch is turned on, the scanner enters maintenance mode. Maintenance mode is used for maintenance/diagnostic purpose. See M3099EX/GX/EH/GH IMAGE SCANNER CE MANUAL.

CHAPTER

4

DOCUMENT SPECIFICATION

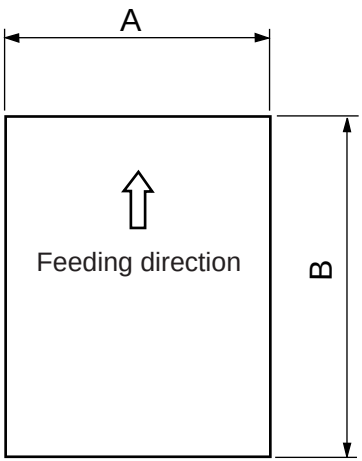
This capter describes the document size and document guality of the scanner.

Document Size

Document Quality

Document Size

The following figure shows document sizes that the scanner can read.



Scanner	Maximum		Minimum	
	A	B	A	B
M3099EX/GX	297 (11.7 in)	432 (17 in)	76 (3 in)	63 (2.5 in)
M3099EH/GH*	216 (8.5 in)	356 (14 in)	76 (3 in)	63 (2.5 in)

(Unit : mm)

* The size that M3099EH/GH can read is shown in the table above. However, a document of up to A3 size can be fed.

Document Quality

This section describes document types and weights available for the scanner, and precautions.

■ Document type

The recommended paper type for document is as follows:

NOTE

Use the 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 XEROX4024)
- OCR paper

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

■ Paper weight

The paper weight is as follows :

- 52 to 127 g/m^2 3.9 to 34 lb)

■ Precautions

Be careful not to scan the following document. Preliminary document feed test may be necessary to avoid the unexpected errors. If the document slips in ADF (JAM error) or double feed occurs frequently, separation pressure adjustment in Reference Guide may be effective.

- Paper with clips
- Paper with wet ink
- Paper of which thickness is not constantly equal. (like envelope)
- Paper with large rumples or curl. (See NOTE on the next page.)
- Paper with folds or tears
- Tracing paper
- Coating paper
- Carbon paper
- Carbonless paper
- Paper smaller than 76 mm x 63 mm size, or larger than A3
- Other than paper ; clothes, metal foil, or OHP film
- Photographic paper
- Paper with notches on its side
- Other than rectangle paper

CAUTION

Do not feed an important original document to prevent damage to it in rare case.

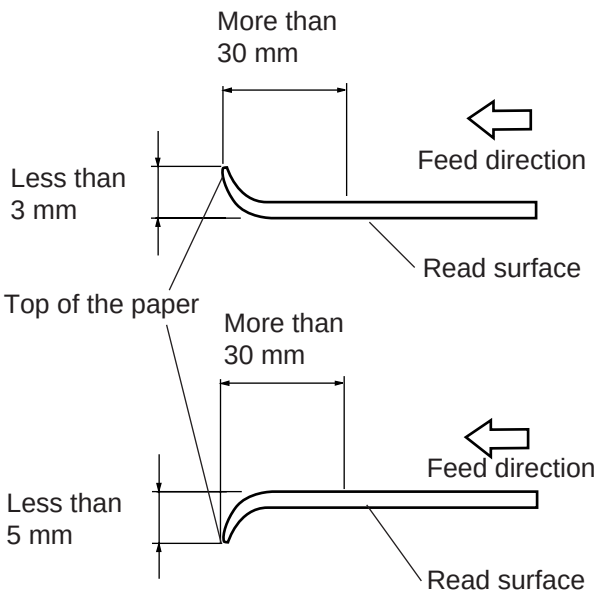
When scanning a translucent document, set the density to light mode.

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 sheets is recommended.

The chemical composition of some carbonless papers may react with the roller rubber and damage the rubber. Check the carbonless papers before use.

The carbonless papers may be used if:
- Paper weight is 52 g/m^2 (13.9 lb) or more.
- Hopper load is 500 sheets or fewer.

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



- Some papers might have a curl on the stack when you use curled paper having some fold wrinkle.

CHAPTER

5

SPECIFICATIONS

This chapter describes the installation specifications, dimensions, consumables, option.

Installation Specifications

Dimensions

Consumables

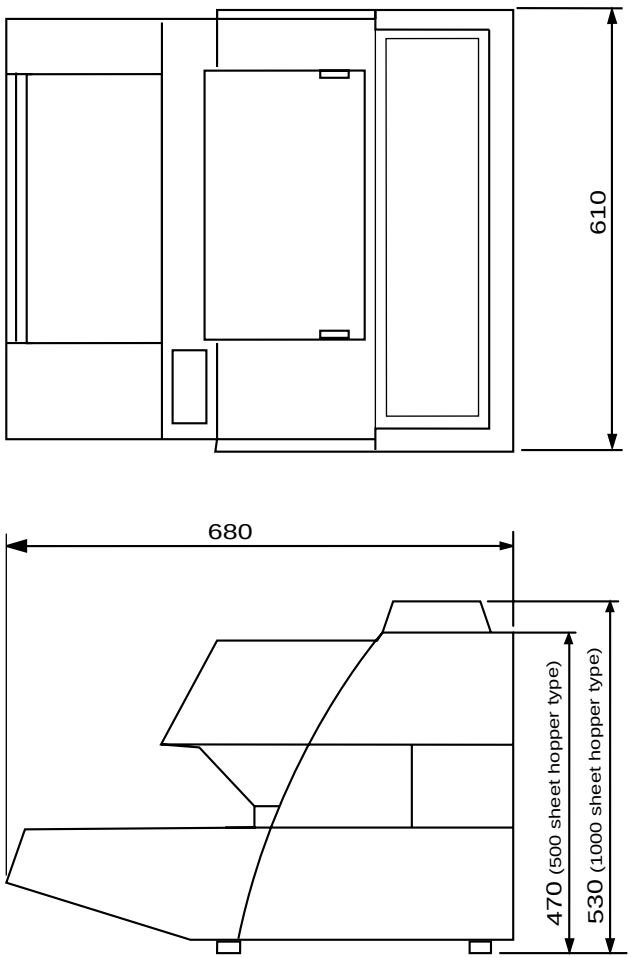
Option

Installation Specifications

The following table lists the installation specifications of the scanner.

Item		Specification		
Dimensions (mm)		Width	Depth	Height
	500 sheet hopper type	610 (24 in)	680 (26.8 in)	470 (18.5 in)
	1000 sheet hopper type	610 (24 in)	680 (26.8 in)	530 (20.9 in)
Weight (kg)		55 (121 lb.) for 500 sheet hopper type 65 (143 lb.) for 1000 sheet hopper type		
Input power	Voltage	100 to 120 VAC, 220 to 240 VAC ±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



(unit: mm)

Consumables

The following table lists consumables used for the scanner. Be sure to keep some consumables in stock. Customer is responsible to change these items periodically. The abrasion counter can be used to check the number of scanned documents. (See page 1-9 for M3099EX/EH or page 1-12 for M3099GX/GH.)

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	CA02869-F230	Up to 600,000 sheets or one year. This part contains Pick Roller but the life of the Pick Units does not include the life of the Pick Roller.
Belt	CA02869-Y223	Up to 300,000 sheets or one year.
Belt ASY	CA02869-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	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.

Option

The following table lists options of the scannera.

Name	Specification	Remark
Endorser	CA01023-D004	Ink-jet back-side print max. 20 characters (See Chapter 6 ENDORSER.)

Contact your Fujitsu sales agent for more information.

CHAPTER

6

ENDORSER

This chapter describes the specifications of the endorser and panel operation.

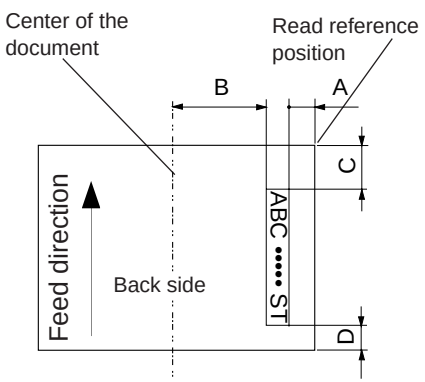
Specifications

Panel Operation

Specifications

This section describes the specifications of the endorser.
Refer to Reference Guide about information on adjusting the print head position and replacing the print head.

The following table lists the 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 x 1.5mm (0.11 in x 0.06 in)(height x width)
Character pitch	Approx. 2.54 mm (0.1 in)
Print area	Back-side of the document A ≥ 5 mm (0.2 in) B ≥ 28 mm (1.1 in) C ≥ 20 mm (0.79 in) D ≥ 5 mm (0.2 in) 

Panel Operation

You can set the following conditions using the operator panel. Other conditions such as print offset or print characters can be set by the host machine.

How to set the endorser ON (or OFF)

When you use the endorser, you must set the endorser on as follows:

1 While pressing Mode 1, turn on the power of the scanner. Then the LCD displays SETUP MODE initial screen. <Screen 1>

2 Press Mode 1 8 times to display ENDORSER INITIAL screen. <Screen 2> Then press Mode 2. If "ON" is displayed, the endorser is already turned 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>
Go to **5** to store the settings in EEPROM.
Go to **6** and **7** to close the job.

<Screen 1>

```
<<SETUP MODE>>
```

<Screen 2>

```
<<SETUP MODE>>
ENDORSER INITIAL
```

<Screen 3>

```
 ENDORSER VALUE
*ON          00001
```

(Blinking)

NOTE

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

How to set the initial number

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

4 In Screen 3, press Mode 1 until the number you want to display appears.
(Ex. The initial number is **5** in Screen 4.)

5 To store the settings in EEPROM, press Mode 1 until ✳ blinks. Then press Mode 2 to change the LCD display into Screen 5. Press Mode 2 to store the settings. Screen 6 appears for about 3 seconds.

6 Press Mode 1 and Mode 2 at the same time to return to ENDORSER INITIAL screen.
<Screen 2>

7 Press Stop to return to the initial setting to read.

<Screen 4>

```
  ENDORSER  VALUE
✳ ON          00005
```

(Blinking)

<Screen 5>

```
      EEPROM WRITE?
       (Mode2 Write)
```

<Screen 6>

```
      EEPROM Writing!!
```

How to select the print number reset method

You can choose whether to reset or not the print number when “HOPPER EMPTY” is detected.

8 In Screen 1, press Mode 1 9 times to display ENDORSER RESET METHOD screen. <Screen 7>

9 Press Mode 2 to display Screen 8. Press Mode 1 to display “ON” or “OFF”. Each time you press Mode 1, “ON” and “OFF” appear alternately. Select “ON” to reset the print number when “HOPPER EMPTY” appears and select “OFF” not to reset. The setting is automatically stored in EEPROM.

10 Press Mode 2 to return to Screen 7. Go to **7** to close the job.

<Screen 7>

```
<<SETUP MODE>>
ENDORSER RESET METHOD
```

<Screen 8>

```
HOP-EMPTY RESET
ON
```

How to reset the print number manually

You can reset the print number to the initial number using the operator panel.

11 In Screen 1, press Mode 1 10 times to display ENDORSER RESET screen. <Screen 9>

12 Press Mode 2 to display Screen 10 where “OFF” and the current print number are displayed.
If you want to reset the number, press Mode 2. And you can see Screen 11 for 3 seconds. If you do not want it, press Mode 1 to go Screen 9.
Go to **7** to close the job.

<Screen 9>

```
<<SETUP MODE>>
ENDORSER RESET
```

<Screen 10>

```
RESET      VALUE   00001
No-Mode1  Yes-Mode2
```

<Screen 11>

```
RESET Finish!!   00001
```

How to reset the print head life counter

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

13 In Screen 1, press Mode 1 11 times to display INK RESET screen. <Screen 12>

14 Press Mode 2 to display Screen 13. If you want to reset the counter, press Mode 2. And you can see Screen 14 for 3 seconds. If you do not want it, press Mode 1 to go Screen 12.
Go to **7** to close the job.

<Screen 12>

```
<<SETUP MODE>>
INK RESET
```

<Screen 13>

```
INK RESET
No-Mode1 Yes-Mode2
```

<Screen 14>

```
RESET Finish!!
```

How to test the printing using the operator panel

You can check the print result as follows:

15 Turn the endorser on by following the procedure of “page 6-2, How to set the endorser ON (or OFF)”.

16 Turn the power of the scanner on while pressing Mode 2. The LCD displays MAINTENANCE MODE initial screen.
<Screen 15>

17 Press Mode 2 once, then press Mode 1 once. Place a document on the stacker, then press Start.

<Screen 15>

```
<<CE MODE>>
TESTxx      :START
```

NOTE

- The scanner prints 5-digit numbers counting in increment of one from the initial number.
- Before pressing Start you can set the document size, resolution and so on (See Chapter 3).

CHAPTER

7

SETUP MODE

This chapter describes the setup mode of the scanner.

Activating the Setup Mode

Contents of the Setup Mode

Activating the Setup Mode

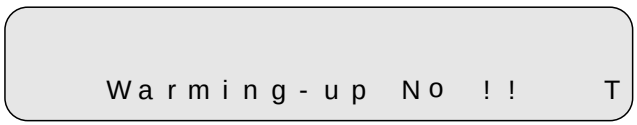
This section describes how to activate the setup mode.

1 Turn the power of the scanner on while pressing [Mode 1]. The LCD displays Screen 1.

2 After a while, LCD displays SETUP MODE initial screen. <Screen 2>
(In case of M3099EX/EH, pressing [Mode 1] after turning power on displays Screen 2.)

3 Press [Mode 1] to select the menu of SETUP MODE. Press [Stop] to go to the readable status.
(In case of M3099GX/GH, Screen 3 indicates the readable status.)

<Screen 1>



<Screen 2>

<Screen 3>

Contents of the Setup Mode

This section describes the contents of the setup mode.
The setup mode can be classified into 17 (M3099EX/EH) or 18 (M3099GX/GH) types.

Mode	Setup type	Contents
1	Setting double feed detection	Set in EEPROM whether double feed detection is done or not.
2	Setting IPC-2 pre-set	Set in EEPROM the pattern No.of IPC-2 pre-set mode.
3	Reset of abrasion counter	Reset the abrasion counter after Belt/Roller are exchanged.
4	Setting buzzer	Set in EEPROM whether the buzzer function is on or off.
5	Setting pre-pick	Set in EEPROM whether pre-picking is done for fast reading or not.
6	Adjusting LCD contrast	Set in EEPROM the LCD contrast.
7	Setting pick speed	Set in EEPROM whether pick speed is fast or slow.
8	Setting initial value of endorser	Set the initial number. The set value can be stored in EEPROM.
9	Setting reset method of endorser reset	Set in EEPROM whether the number is reset by hopper empty detection.
10	Reseting of endorser	Reset the number to the initial value.
11	Reseting of ink counter	Reset the ink counter after the print head is replaced.
12	Setting RS-232C transfer rate *1	Set the transfer rate in EEPROM. (1200/2400/4800/9600).
13	Setting SCSI-ID *2	Set the SCSI-ID. (0-7)
14	Setting Product-ID *2	Set the Product-ID. (M3096G/M3099G/M3099GH)
15	Setting picking start time	Set in EEPROM the time from when the hopper empty sensor is blocked in manual mode until picking begins.
16	Setting picking time	Set the time from when picking begins until the SF1 sensor is blocked by paper.
17	Setting time-out limit	Set the time from when a command is issued in manual mode until paper is actually detected.
18	Setting hopper time	Set the time from when Start Command Time-out limits until hopper table is lowered.
19	Setting heater control	Set in EEPROM whether heater control is on or off.

*1 Available for only M3099EX/EH.
*2 Available for only M3099GX/GH.

■ Setting double feed detection

When you set the using of double feed detection, you must set as follows:

4 In Screen 2, press [Mode 1] once to display DOUBLE FEEDCHECK screen <Screen 4>.

<Screen 4>

5 Press [Mode 2] to display Screen 5. Select “ON” to set the error detection when the double feed occurs. Each time [Mode 2] is pressed, “ON” and “OFF” appear alternately.

<Screen 5>

(Blinking)

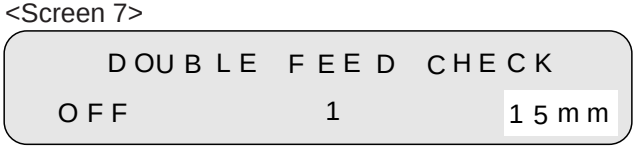
6 Press [Mode 1] to display Screen 6. This screen detemines how to detect the double feed.
“1” means the method by comparing with the length of the first paper.
“2” means the method by the output of document detection sensor in addition to “1”.
In Screen 6, press the [Mode 2] until the nurmber you select appears.

<Screen 6>

(Blinking)

7 Press [Mode 1] to display Screen 7. This screen detemines the length to compare with the paper based on.
If you choose “1” or “2” set “15 mm”,the double feed is detected when the scanned paper length is 15 mm longer than the first paper.
In Screen 7, press the [Mode 2] until the number you want to select appears. (You can choose 10,15, or 20 mm. The default is 15 mm.)

<Screen 7>



(Blinking)

8 Press [Mode 1] and [Mode 2] at the same time to display Screen 4. The settings are stored in EEPROM.
When you close, press [Stop].

Mode	Details
ON/OFF	"OFF" is default setting.
1	"1" is default setting. This mode is used when a batch of documents whose length are same is scanned. When a document with tears and wrinkles is scanned, the scanner may also fail to detect the double-feed.
2	This mode is used when a batch of documents whose length and thickness are same is scanned. However, when a thin document is scanned, the scanner may fail to detect the double-feed rarely. \In this case, please test scanning of a thin document in advance.

■ Setting IPC-2 pre-set mode

When you set the using of IPC-2 pre-set mode, you must set as follows:

1 AT Screen 2, press [Mode 1] twice to go to the IPC-2 SET screen. <Screen 8>

2 Press [Mode 2] to see Screen 9 or 10.
If "No" is displayed, IPC-2 pre-set mode is not used.
If pettrn number ("1"-"5") is displayed, IPC-2 pre-set mode is used.
"No" or number status flips each time you press [Mode 1].
(The default setting is "No".)

<Screen 8>

```
<<SETUP MODE>>
IPC-2 SET
```

<Screen 9>

```
IPC-2 SET
No
```

3 If you press the [Mode 2] at Sccreen 9, you return to screen 8.
The setting is stored to EEPROM.
If you press the [Mode 2] at screen 10, you go to screen 11. (Screen 12 in case of M3099GH/GX)

<Screen 10>

```
IPC-2 SET
X
```

4 If you press the [Mode 1] at screen 11/12, IPC-2 pre-set mode can be not used. Also the setting is changed to “No” obligatory and stored to EEPROM. If you press the [Mode 2] at screen 11/12, IPC-2 pre-set mode can be used and the setting number is stored to EEPROM. When you close the setup mode, press [Stop].

<Screen 11>

```
Panel/Host Set Ignore
No-Mode 1        Yes-Mode 2
```

<Screen 12>

```
Host Set Ignore
No-Mode 1        Yes-Mode 2
```

<Classification of user’s paper>
User’s paper are classified in line-art scanning as follows:
The horizontal axis shows the background density/color of paper.
The vertical axis shows the density of charcter/ line.

		Background density		Background color		
		Normal←	→Dark	Red	Green	Blue
Character density	Normal ↑	①: Normal background and character.	③: Dark background and normal-density character.			
	↓ Light	②: Normal background and light character.		④: Light character on red paper.	⑤: Light character on green paper.	

① - ⑤ are the pattern number set in setup mode.

NOTE

- For patterns “1” to “5” when the power is turned on
  Scanner checks that IPC-2 for front/back sides are installed during initialization.
  If IPC-2 for either the font or back side is not installed, the scanner regards as no setting obligatory and changes the memory of EEPROM.

- When IPC-2 pre-set is executed in setup mode
  Scanner checks that IPC-2 for front/back sides are installed when the scanner enters in IPC-2 pre-set.
  If IPC-2 for either the front or back side is not installed, the scanner does not enter in IPC-2 pre-set.

- When IPC-2 pre-set mode is executed
  When IPC-2 pre-set mode is executed in online mode, the reading parameter is valid or invalid (Host setting is invalid) as follows:

	Reading parameter							
	Reading mode	Tranfer mode	Transfer rate	Resdution	Start of reading	Density	Line-art / Photo	Halftone
Valid	○	○	○	○	○			
Invalid						○	○	○

	Reading parameter							
	DTC	Size	Portrait/ Landscape	Picking	Document selection	r patterns	Contrast	Automatic separation
Valid		○	○	○	○			
Invalid	○					○	○	○

	Reading parameter					
	Conversion	Sharpness	Outline extraction	Overlay	Simplified DTC	Zooming
Valid	○					○
Invalid		○	○	○	○	

Reset of abrasion counter

When you reset the abrasion counter, you must set as follows:

1 In Screen 2, press [Mode 1] 3 times to display PAPER COUNT RESET screen. <Screen 13>

2 Press [Mode 2] to display Screen 14. You may see current paper count. If you want to reset the count,press [Mode 2]. And you can see Screen 15 for 3 seconds. If you do not want it, press [Mode 1] to go to Screen13.

3 When you close the setup mode, press [Stop].

<Screen 13>

```
<<SETUP MODE>>
PAPER COUNT RESET
```

<Screen 14>

```
RESET COUNT 123456
No-Mode 1 Yes-Mode 2
```

<Screen 15>

```
RESET Finish!!  00000
```

Setting buzzer

When you set the using of buzzer, you must set as follows:

1 In Screen 2, press [Mode 1] 4 times to display BUZZER SET screen. <Screen 16>

2 Press [Mode 2] to display Screen 17. Select “ON” to ring the buzzer when an error occurs. Each time [Mode 1] is pressed, “ON” and “OFF” appear alternately. The setting is stored in EEPROM automatically.

3 Press [Mode 2] to return to Screen 16. When you close the setup mode, press [Stop].

<Screen 16>

```
<<SETUP MODE>>
PREPICK SET
```

<Screen 17>

```
BUZZER SET
   ON
```

Setting pre-pick

When you set the using of buzzer, you must set as follows:

1 In Screen 2, press Mode 1 5 times to display PREPICK SET screen. <Screen 18>

2 Press Mode 2 to display Screen 19. Select "ON" to set the pre-picking when the document is fed. Each time Mode 1 is pressed, "ON" and "OFF" appear alternately. The setting is stored in EEPROM automatically.

3 Press Mode 2 to return to Screen 18. When you close the setup mode press Stop.

<Screen 18>

```
<<SETUP MODE>>
PREPICK SET
```

<Screen 19>

```
PREPICK SET
    ON
```

Adjusting LCD contrast

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

1 In Screen 2, press Mode 1 6 times to display LCD CONTRAST screen. <Screen 20>

2 Press Mode 2 to display Screen 21. As the number of "■" increases, the LCD contrast gets darker.

3 In Screen 21, the LCD contrast is set to one of the 16 steps. Each time Mode 1 is pressed, the number of "■" increases. When all fields are filled by "■", next pressing Mode 1 starts from all "□" (The lightest contrast).

4 Press Mode 2 to display Screen 20. The settings are stored in EEPROM.

5 When you close the setup mode, press Stop.

<Screen 20>

```
<<SETUP MODE>>
 LCD CONTRAST
```

<Screen 21>

```
 LCD CONTRAST
■■■■■■■■■■■□□□□□
```

■ Setting pick speed

When you set the pick speed, you must set as follows:

1 In Screen 2, press [Mode 1] 7 times to display PICK SPEED SET screen.
<Screen 22>

2 Press [Mode 2] to display Screen 23. (The default setting is “FAST”.)
If “FAST” is displayed, the pick speed is fast. If “SLOW” is displayed, the pick speed is slow.
Each time [Mode 1] is pressed, “FAST” and “SLOW” appear alternately. The setting is stored in EEPROM automatically.

3 Press [Mode 2] to return to Screen 22.
When you close the setup mode, press [Stop].

<Screen 22>

```
<<SETUP MODE>>
PICK SPEED SET
```

<Screen 23>

```
PICK SPEED SET
FAST      SLOW
```

(Blinking)

■ Setting initial value of endorser

Before setting, see page 6-2, “Chapter 6 ENDORSER, Panel Operation”.

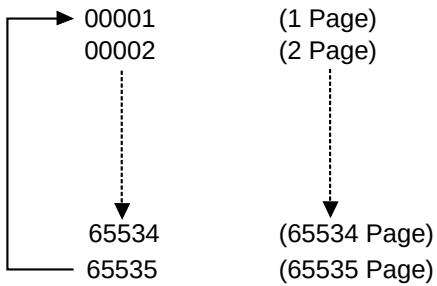
• The use of Endorser (ON/OFF)
The default setting is “OFF” (Endorser is not used.)

• The initial number
The default setting is “00000”.
The selectable range is from 00000 to 65535.

NOTE

If the specified value is equal or grater than 65536, returning to SETUP menu will be failed.

<Method of Increment >
When the initial value is “00001”.



NOTE

- If “depending on operator panel” is not set by host machine, you can not change the setting.
- When “depending on operator panel” is selected, printing starts at the position 20 mm back from the top end of the back side.

Setting reset method of endorser

Before setting, see page 6-2, “Chapter 6 ENDORSER, Panel Operation”.

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

Resetting of endorser

Before setting, see page 6-2, “Chapter 6 ENDORSER, Panel Operation”.

Resetting of ink counter

Before setting, see page 6-2, “Chapter 6 ENDORSER, Panel Operation”.

Setting RS-232C transfer rate (M3099EX/EH)

When you set RS-232C transfer rate, you must set as follows:

1 In Screen 2, press [Mode 1] 12 times to display RS-232C BAUD screen.
<Screen 24>

2 Press [Mode 2] to display Screen 25.
(The default setting is 4800 bps.)

3 In Screen 25, press [Mode 1] until the rate you want to select blinks.

4 Press [Mode 2] to display Screen 24.
The settings are stored in EEPROM.

5 When you close the setup mode, press [Stop].

<Screen 24>

```
<<SETUP MODE>>
RS232C BAUD
```

<Screen 25>

```
<<SETUP MODE>>
9600:4800:2400:1200
```

(Blinking)

Setting SCSI-ID (M3099GX/GH)

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

1 In Screen 2, press [Mode 1] 12 times to display SCSI-ID SET screen.
<Screen 26 >

2 Press [Mode 2] to display Screen 27.
(The default setting is “5”.)

3 In Screen 27, press [Mode 1] to change SCSI-ID. Each time [Mode 1] is pressed, SCSI-ID changed from 0 to 7.

4 Press [Mode 2] to display Screen 26.
The settings are stored in EEPROM.

5 When you close the setup mode, press [Stop].

<Screen 26>

```
<<SETUP MODE>>
SCSI-ID SET
```

<Screen 27>

```
SCSI-ID SET
5
```

■ Setting Product-ID (M3099GX/GH)

When you set Product-ID, you must set as follows:

1 In Screen 2, press [Mode 1] 13 times to display PRODUCT-ID SET screen. <Screen 28>

2 Press [Mode 2] to display Screen 29. (The default setting is “M3099GH” in case of M3099GH and “M3099G”in case of M3099GX.)

3 In Screen 29, press [Mode 1] to select Product-ID. Each time [Mode 1] is pressed, M3099G, M3099GH or M3096G apear in case of M3099GH, and M3099G or M3096G at each time you press [Mode 1] in case of M3099GX.

4 Press [Mode 2] to display Screen 28. The settings are stored in EEPROM.

5 When you close the setup mode, press [Stop].

<Screen 28>

```
<<SETUP MODE>>
PRODUCT-ID SET
```

<Screen 29>

```
PRODUCT-ID SET
      XXXXXX
```

■ Setting picking start time

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

1 In Screen 2, press [Mode 1] 13 times (14 times for M3099GX/GH) to display PICK START TIMER screen. <Screen 30 >

2 Press [Mode 2] to display Screen 31. (The default setting is 1 second.)

3 In Screen 31, press [Mode 1] until the digit you want to change blinks. Then press [Mode 2] until the value you want to select appears. (The selectable range is from 0.2 to 29.8 seconds in steps of 0.2 seconds.)

4 Press [Mode 1] and [Mode 2] at the same time to display Screen 30. The settings are stored in EEPROM.

5 When you close the setup mode, press [Stop].

<Screen 30>

```
<<SETUP MODE>>
PICK START TIMER
```

<Screen 31>

```
PICK START TIMER
    XX.X S
```

(Blinking)

Setting picking time

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

1 In Screen 2, press Mode 1 14 times (15 times for M3099GX/GH) to display PICK TIMER screen. <Screen 32>

2 Press Mode 2 to display Screen 33. (The default setting is 2 seconds.)

3 In Screen 33, press Mode 1 until the digit you want to change blinks. Then press Mode 2 until the value you want to select appears. (The selectable range is from 0.5 to 99.5 seconds in steps of 0.5 seconds.)

4 Press Mode 1 and Mode 2 at the same time to display Screen 32. The settings are stored in EEPROM.

5 When you close the setup mode, press Stop.

<Screen 32>

```
<<SETUP MODE>>
PICK TIMER
```

<Screen 33>

```
<<SETUP MODE>>
XX.X  S
```

(Blinking)

Setting time-out limit

1 In Screen 2, press Mode 1 15 times (16 times for M3099GX/GH) to display TIME-OUT SET screen. <Screen 34>

2 Press Mode 2 to display Screen 35. (The default setting is 30 seconds.)

3 In Screen 35, press Mode 1 until the digit you want to change blinks. Then press Mode 2 until the value you want to select appears. (The selectable range is from 1 to 1999 seconds in steps of 1 second.)

4 Press Mode 1 and Mode 2 at the same time to display Screen 34. The settings are stored in EEPROM.

5 When you close the setup mode, press Stop.

<Screen 34>

```
<<SETUP MODE>>
TIME-OUT SET
```

<Screen 35>

```
TIME-OUT SET
XXXX S
```

(Blinking)

Setting hopper time

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

1 In Screen 2, press Mode 1 16 times (17 times for M3099GX/GH) to display HOPPER TIMER screen. <Screen 36>

2 Press Mode 2 to display Screen 37. (The default setting is 7 seconds.)

3 In Screen 37, press Mode 1 until the digit you want to change blinks. Then press Mode 2 until the value you want to select appears. (The selectable range is from 0 to 30 seconds in steps of 1 second.)

4 Press Mode 1 and Mode 2 at the same time to display Screen 36. The settings are stored in EEPROM.

5 When you close the setup mode, press Stop.

<Screen 36>

<< SETUP MODE >>
HOPPER TIMER

<Screen 37>

HOPPER TIMER
XX S

(Blinking)

Setting heater control

When you set the heater control, you must set as follows:

1 In Screen 2, press Mode 1 17 times (18 times for M3099GX/GH) to go to the HEATER CONTROL screen. <Screen 38>

2 Press Mode 2 to display Screen 39. If "ON" is displayed, the heater control will be done. If "OFF" is displayed, warming-up will finish within 30 seconds, if necessary. When the heater is broken, please set "OFF". Each time Mode 1 is pressed, "ON" and "OFF" appear alternately. The setting is stored in EEPROM automatically.

3 Press Mode 2 to display Screen 38. When you close the setup mode, press Stop.

<Screen 38>

<< SETUP MODE >>
HEATER CONTROL

<Screen 39>

HEATER CONTROL
ON

GLOSSARY OF TERMS

A4 size
A standard paper size used in Japan and other countries. Paper size is 210 x 297 mm (8.25 x 11.6 inches).

Abrasion counter
Indicates when belts/rollers should be replaced. The number of read document accumulates until an operator resets the counter. It should be reset when consumables are replaced.

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 scanner.

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

Automatic start mode (<–> manual start mode)
In this mode the reading operation is activated only by START command.

Back-side reading = Back-side scanning
Refers to reading the back-side of the document, specifically in Duplex reading mode.

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.

Density
Refers to a measurement of the depth of the display in this manual.

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

Double feed detection
A function which detects the status when multiple sheets are fed in the transport unit.

dpi
Dots per inch.

Drop-out color
A color which is used to the document but does not appear in the read image.

Duplex reading mode
Both sides of the document are read in this mode.

Endorser
The unit for printing characters before or after scanning. These character may be used for collation of the documents and the image data. (See Chapter 6 ENDORSER.)

Endorser value
The number printed by the endorser.

Equipment Error
An error that is not recoverable by operator. Call CE.

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 read 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 more patterns by dotted halftone images such as newspaper photo graphs.

Filtering
The quality of images written in pencil or ball-pointed pen and read depends on the reflective light characteristics of the ink or lead.
Dropped pixel's 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.

Front-side reading = Front-side scanning

Refers to reading the front-side of the document, specifically in Duplex reading mode.

Halftone processing

Used to reproduce a photograph which includes a shade as an image composed of dots, namely a binary image. Dithering and error diffusion processing are examples of the halftone processing.

Heater control

The heater is set to ON or OFF to keep the lamp at a constant temperature and stabilize the intensity of the lamp.

Hexadecimal

A base-16 numbering system(also commonly referred to as hex numbers). Since a base-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.

Image processing

An image is read with specified parameters.

Initial screen

A screen displayed when the power is turned on or when reading is activated by the command from the host computer.

INK EMPTY

A warning issued when the number of dots printed by the print head exceeds a specified value. It indicates that the life of the print head is near to the end and the replacement of the print head is soon necessary.

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.

IPC-2 pre-set mode
While reading binary images, it is necessary to set the scanner according to the quality of the sheet to be read. In this mode these settings can be performed in advance by corresponding each setting to a pattern number.

IPC II
Image processing option of this scanner.

IRAS
Initialization of the hardware.

Landscape
A document is transported and read with the long side vertical to the moving direction.

Letter size
A standard paper size used in the U.S.A. and other countries. Paper size 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. Line-drawing mode is therefore appropriate for scanning text and line art images.

Manual Feed mode = Manual Mode
Requires the operator to feed each document manually to the hopper table.

Manual start mode (<–> automatic start mode)
The reading operation is activated by pressing the START button in this mode.

Mirror image
The read 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.

PAPER JAM
A warning informing the user that document is jammed in the transport unit, or that transportation is disabled because the transport unit is slippery. This warning also appears when a double fed is detected.

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

Photo mode = photograph mode
A photograph is read properly in this mode.

Picking start time
The period from the manual insertion of the document until picking starts after the document passes the hopper empty sensor.

Picking time
The period from the start of picking until the document reaches SF1 sensor. Specify a little longer picking time for the document with a large friction factor.

Pick speed
A speed when a document is picked. Set the pick speed to SLOW to prevent JAM or MISS PICK.

Portrait
A document is transported and read with the long side parallel to the moving direction.

Pre-picking
A setting in which a document to be read next is placed at the front of the reading unit while the previous document is read. Setting the pre-picking makes the process speedier.

Print head
A cartridge located in the endorser (optional). It contains the ink reservoirs and creates the ink droplets. It is replaceable by operator.

Print head life counter = ink counter
A counter which accumulates the number of the printed dots. When the accumulated number exceeds a specified value, “INK EMPTY” appears.

Print number reset method
Determines whether or not to reset the number printed by the endorser to zero. This scanner can be set so that the number is reset when the hopper empty is detected.

Readable status
A status when the power is turned on or when reading is activated by the command from the host computer.

Reading counter
Indicates the total number of read document from reading start until the hopper becomes empty.

Read operation
Refers to the reading operation including Simplex reading and Duplex reading.

Reset method of endorser
Refer to “Print number reset method”.

RS-232C interface
A type of serial interface. See Serial interface.

SCSI-ID
Used to specify a particular SCSI device when the initiator selects a target or the target re-connects to the initiator.

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.

SETUP mode

In this mode, users can view or set a variety of function in Off-line.

SFI sensor

The document detection sensor. It detects the light that transmits the paper. It also detects the double feed error.

Simplex reading mode

Only the front side of the document is read in this mode. Place the documents face-up at the center of the hopper table.

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.

Start command time-out

Occurs if START command does not arrive before the specified time after reading the previous document is complete. In this case the hopper table is lowered.

Temporary Error

An error that is recoverable by operator.

Terminator

Devices with SCSI interface are daisy-chained. A resistor that includes terminal circuits needs to be placed at both ends of a cable when devices are daisy-chained.

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FUJITSU

DECLARATION OF CONFORMITY

(according to EN45014)

according to Electromagnetic Compatibility Directive 89/336/EEC and Low Voltage Directive 73/23/EEC, Annex III B.

FUJITSU LIMITED, 1-1, Kamikodanaka 4-Chome, Nakahara-Ku, Kawasaki 211-88, Japan

declares, in sole responsibility, that the following product, including the options or accessories

Product Type : IMAGE SCANNER
Model Number : M3099EH, M3099EX
Approval ID Number : S9451194

referred to in this declaration, conforms with the following directives and standards ;

Electromagnetic Compatibility Directive 89/336/EEC, 92/31/EEC, 93/68/EEC
Low Voltage Directive 73/23/EEC, 93/68/EEC

EN55022 1994 Class B
EN50082-1 1992 (IEC801-2 1984/ IEC801-3 1984/ IEC801-4 1988)
EN60950 1992/A1:1993/A2:1993

The product on safety has been evaluated to EN60950 and has been confirmed to comply with all related requirements of EN60950.

Importer / Distributor in EU :

Fujitsu Europe Ltd.,
2, Longwalk Road, Stockley Park, Uxbridge, Middlesex UB11 1AB, England, U.K.

Japan, June 04 1996

Reference No. : DOC-1184-101-96

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FUJITSU

DECLARATION OF CONFORMITY

(according to EN45014)

according to Electromagnetic Compatibility Directive 89/336/EEC and Low Voltage Directive 73/23/EEC, Annex III B.

FUJITSU LIMITED, 1-1, Kamikodanaka 4-Chome, Nakahara-Ku, Kawasaki 211-88, Japan

declares, in sole responsibility, that the following product, including the options or accessories

Product Type : IMAGE SCANNER
Model Number : M3099GH, M3099GX
Approval ID Number : S9451194

referred to in this declaration, conforms with the following directives and standards :

Electromagnetic Compatibility Directive 89/336/EEC, 92/31/EEC, 93/68/EEC
Low Voltage Directive 73/23/EEC, 93/68/EEC

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