# fi-5750C
# Image Scanner
# Maintenance Manual

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 09 | May 19, 2009 | T.Yoshimoto | A.Miyoshi | I.Fujioka | See page 2. | TITLE | fi-5750C IMAGE SCANNER MAINTENANCE MANUAL | |
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The contents of this manual are subject to change without prior notice.

# Preface

This manual provides the technical information such as maintenance, troubleshooting procedure and parts replacement procedure for field Engineers on fi-5750C image scanner.
This manual is not responsible if used for other than maintenance.

For information that is not contained in this manual, refer to the following manuals:

| Item | Manuals | P/N * |
|---|---|---|
| 1 | fi-5750C Image Scanner Operator's Guide | P3PC-E747-xxEN |
| 2 | fi-5750C Image Scanner Getting Started | P3PC-E737-xxEN |
| 3 | fi-5750C Illustrated Parts Catalog | P4PA03338-B00X/6 |

* xx represents revision number of the manuals.

# Convention

Special information, such as warnings, cautions, is 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.

**NOTICE**

NOTICE provides 'how-to" tips or suggestions to help you perform a procedure correctly.

## General note:

Be careful not to power off the scanner while communicating with the host computer. In case that the scanner is accidentally powered off during communication with the host, follow the procedure below:

1. Power off the host computer.
2. Power on the scanner.
3. Power on the host computer.

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# How Trademarks are Indicated in This Manual

References to operating systems (OS) are indicated as follows:

Windows 95: Microsoft® Windows® 95 operating system.

Windows 98: Microsoft® Windows® 98 operating system.

Windows Me: Microsoft® Windows® Millennium Edition operating system.

Windows 2000: Microsoft® Windows® 2000 Professional operating system.

Windows XP: Microsoft® Windows® XP Professional operating system,
Microsoft® Windows® XP Home Edition operating system.

Windows NT 4.0: Microsoft® Windows NT® Server operating system Version 4.0
Microsoft® Windows NT® Workstation operating system Version 4.0

Where there is no distinction between the different versions of the above operating system, the general term “Windows” is used.

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# Chapter 1 Overview

## 1.1 Scanner Overview

### 1.1.1 Features

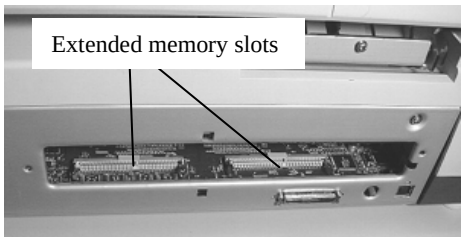
The fi-5750C, image scanner offers color/monochrome scanning of up to A3 size for ADF scanning and 12" x 18" for FB scanning. It provides faster color document scanning speed than the preceding model (fi-4750C) and has the following features:

- Selectable position and direction on the ADF
- Direct start of scanning from the scanner with "Send to" or "Scan " button
- Ultra SCSI or USB 2.0 interfaces
- Wide range of paper weight
- Ultrasonic double-feed detection
- Selectable background color (black or white) in the ADF. White background in the FB (Black – optional)

### 1.1.2 Scanner Specification

| No. | Items | | Specifications | Remarks |
|---|---|---|---|---|
| 1 | Operating method | | Automatic Document Feeder (ADF) + Flatbed (FB) | |
| 2 | Optical resolution | | 600 dpi | |
| 3 | Output resolution | | Binary: 50 - 600dpi<br>Grayscale: 50 - 600 dpi<br>Color: 50 - 600 dpi | Note 1 |
| 4 | Bit depth | | Color 24bit, Grayscale 8bit, Binary 1bit | |
| 5 | ADF Specification | Scanning speed | Binary / Grayscale / Color,<br>Simplex: 55 ppm @200/300 dpi, A4 Portrait<br>Duplex: 110 ipm @200/300 dpi, A4 Portrait | |
| 6 | | Document size | Maximum. A3 (Portrait)<br>Minimum. A8 (~~53~~ 52x74mm) (Portrait) 08 | Note 1 |
| 7 | | Document thickness 02 | A4 / Letter or smaller: 41 to 203 g/m$^2$ (11 to 54 lb.)<br>Larger than A4 / ~~Legal~~ Letter: 52 to 203 g/m$^2$ (13.9 to 54 lb.) | |
| 8 | | Chute unit loading capacity | Maximum: 200 sheets (A4, 80g/m$^2$ or 20lb.) | Refer to 1.2.3 |
| 9 | | Stacker capacity | Maximum: 300 sheets (A4, 80g/m$^2$ or 20lb.) | |
| 10 | | Paper loading | Front facing up | |
| 11 | | Background | Selectable (black or white)<br>The same color must be chosen on both sides. | |
| 12 | | Double-feed detection | Yes (Ultra sonic sensor, document length detection) | Refer to 5.2.1 |
| 13 | | ADF placement | Left or center (Insertion from left or right is selectable) | Refer to 3.1.2 |
| 14 | FB | Document size | Maximum. A3 or 11" x18" (Portrait) | |
| 15 | | Background | White<br>Black can be installed as an option | |
| 16 | Optical system | | Minification optical system | |
| 17 | Light source | | White cold cathode discharge lamp, with heater | |
| 18 | Interface | | Ultra SCSI (High density 50 pin) x1<br>USB 2.0 x 1 (Type B)<br>Third party slot (Type 3) x1 | Also works with USB 1.1. |
| 19 | Attached driver | | FJ TWAIN, ISIS | |
| 20 | Operator panel | | Switch: Scan, Send to, Function<br>Lamp: Power, Scanner status (Function No. Display) | |
| 21 | Option | | Item / Specification / Function | |
| | | | Black document pad / PA03338-D960 / Black document pad (FB background) | |
| | | | Image processing software option / PA43400-D72201 / Image processing (Threshold) | Processing speed is deteriorated a bit. Software IPC |

Note 1) Depending on system configurations or PC status, document feeding may stop intermittently during scanning of large document or high resolution as described below, and processing speed is deteriorated. To avoid temporary suspension of scan or jitter, 2 extended memory slots are located in the slots at the rear of the scanner (photo on the right). Memory specification is listed in the table below. Be sure to fill both slots with the same memory type. If memories with different capacity are mounted, "E15" (Extended memories option alarm, section 5.2.2) is displayed on the Operator panel immediately after power-on. Then, scan is performed according to the memory with smaller capacity.




Scan mode: Color simplex / duplex
Document size: B4, A3, Double-Letter
Output resolution: 401 dpi or more

Processing speed example) A4, Portrait, 600dpi, duplex scanning: 60ipm (with extended memories installed)
50ipm (without extended memories)

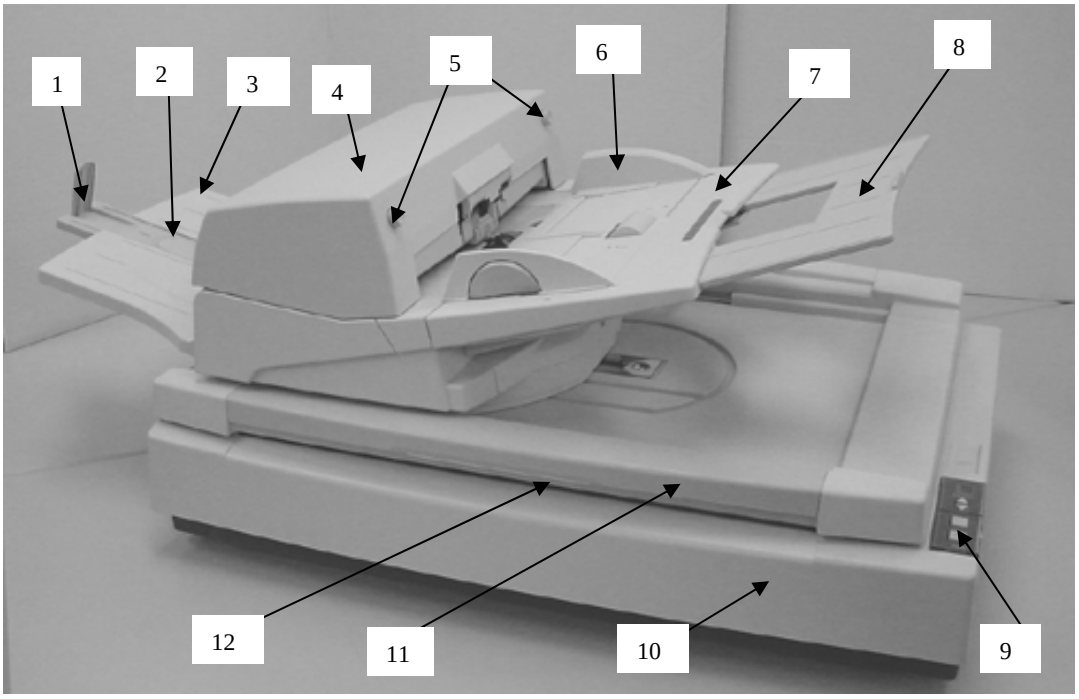
| Name | Specifications | Recommended model type |
|---|---|---|
| Extended memories | 128M Byte SO-DIMM<br>256M Byte SO-DIMM<br>(2 memories are required for a scanner.) | CA46210-0053<br>CA46210-0048 |

### 1.1.3 Environmental Specification

| No. | Items | | Specifications |
|---|---|---|---|
| 1 | Input power | | AC100V to 240V ± 10%, 50/60Hz ± 3% |
| 2 | Power consumption | | Max. 216 W or less (Rated power) |
| 3 | Noise | | 50 dB or less |
| 4 | Outer dimensions 03 | | 690 (W) x 500 (D) x 342 (H) mm, 27.2 (W) x 19.7 (D) x 13.5 (H) in<br>(excluding Chute, Stacker Unit, and ADF cable) |
| 5 | Weight (kg) | | 35 kg or less |
| 6 | Environmental condition | Temperature 03 | In operation: 5 to 35 C°, 41 to 95 °F<br>Not used: -20 to 60 C°, -4 to 140 °F |
| | | Humidity | In operation: 20 to 80 %<br>Not used: 8 to 95 % |

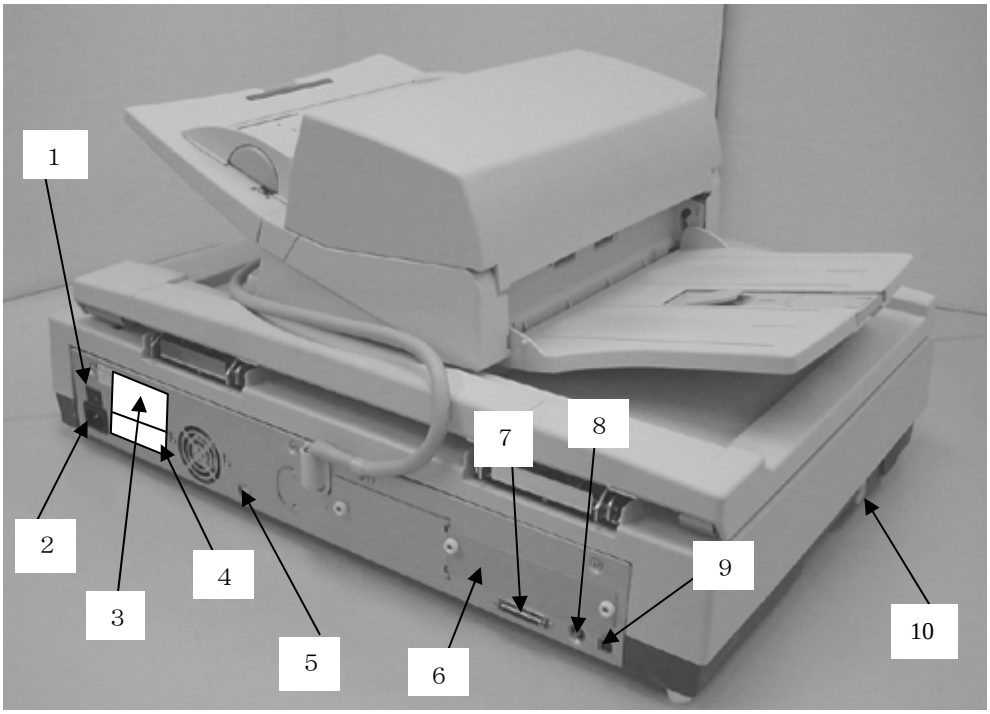
### 1.1.4 Appearance

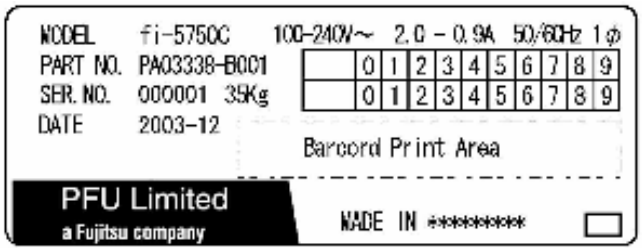
(1) Front



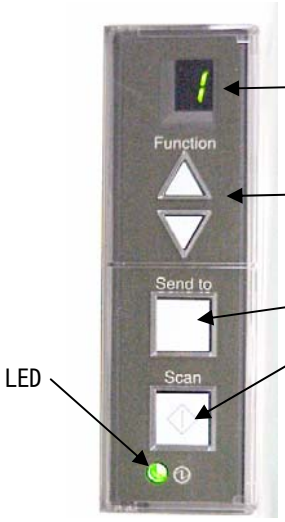

| No. | Parts name | Function |
|---|---|---|
| 1 | Stopper | Open this to prevent the document from falling from the stacker. |
| 2 | Stacker extension | Stopper position movable depending on the document length. |
| 3 | Stacker | Documents are stacked here after they are scanned. |
| 4 | ADF (Automatic Document Feeder) | Automatically feeds documents into the scanner. |
| 5 | ADF buttons | Press these buttons to open the ADF cover, for example, to remove jammed documents in the ADF. |
| 6 | Sheet Guide | Used to adjust the paper width, to prevent the sheets from skewing. |
| 7 | Chute unit | Used when scanning documents on the ADF. |
| 8 | Chute extension | Used when long paper is scanned. |
| 9 | Operator panel | Used for operating the scanner. The scanner status is indicated on the Function No. Display Panel. |
| 10 | Flatbed | Used when scanning pages from a book or paper that is outside the ADF paper spec. |
| 11 | Document cover | Used to keep paper in place when scanning from the flatbed. |
| 12 | FB open/close lever (not shown) | Press this handle when opening the document cover |

(2) Rear




| No. | Parts name | Function |
|---|---|---|
| 1 | Power switch | Turns the scanner ON and OFF. |
| 2 | AC inlet | Connects the AC power cable. |
| 3 | Manufacturing label |  |
| 4 | Certification label |  |
| 5 | EXT connector | (Reserved) |
| 6 | Third party slot | Used when driving the scanner with a special interface. |
| 7 | SCSI interface connector | Connects the SCSI interface cable from the host PC. |
| 8 | SCSI ID switch | Sets the SCSI-ID. (Default SCSI ID is “5”.) |
| 9 | USB interface connector | Connects the USB interface cable from the host PC. |
| 10 | Shipping lock | Prevents the flatbed optical unit from moving during shipment. |

(3) Operator Panel

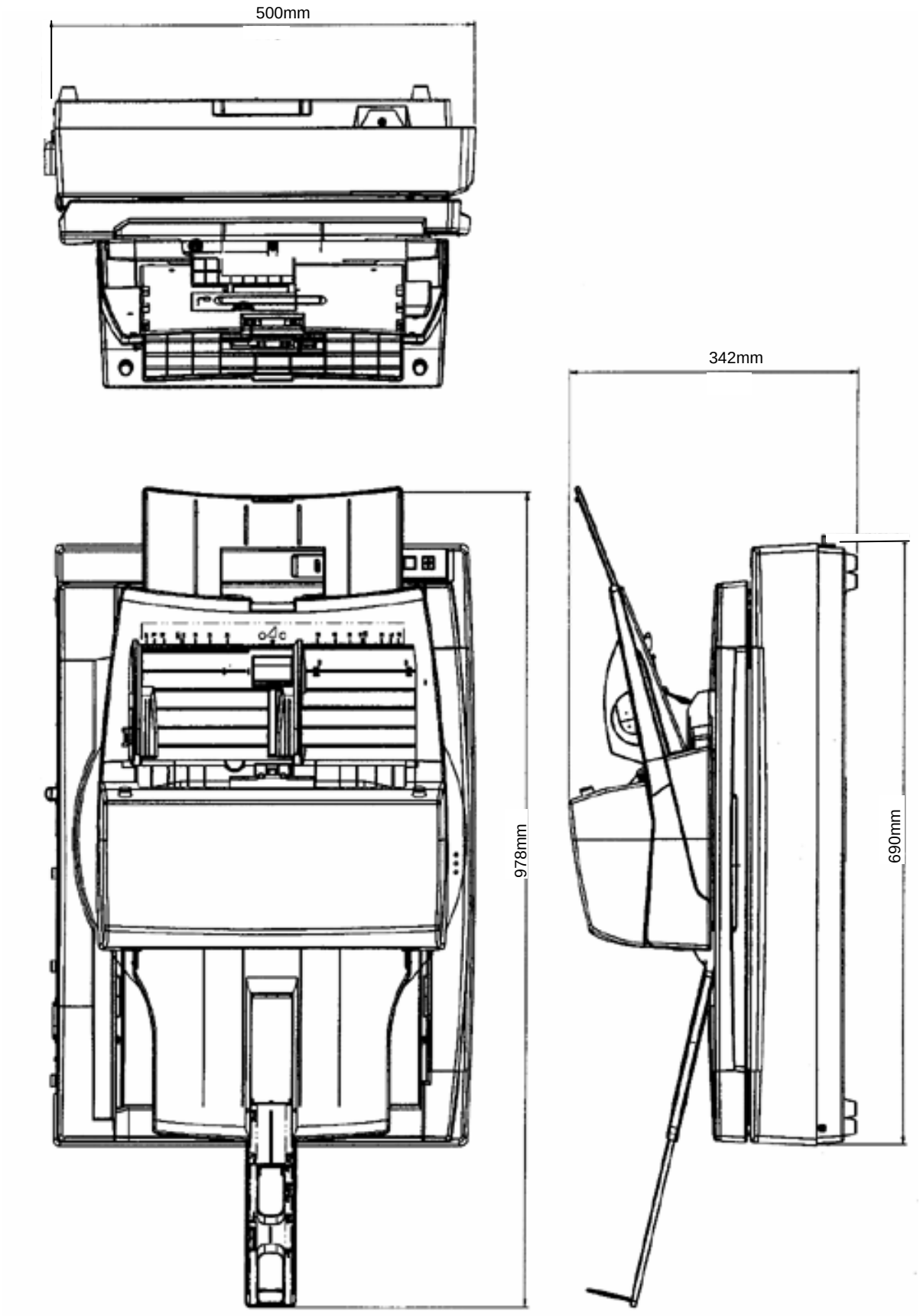



Ref) Open the cover of the operator panel, and you can change the descriptions on the panel by mounting the sheet with holes on the buttons and LED.


| Name | | Function |
|---|---|---|
| Function No. Display | | Indicates the function No, Scan mode and Error status (alarm). |
| Button | Function | Selects the Function No.(*) (△: Increments, ▽=: Decrements)<br>Cancels the error status (initializing the Function No. display). |
| | Send to | Starts the application corresponding to the Function No.<br>(Software operating panel is activated when the Function No. is “C”.<br>(You need to keep pressing it for approx. 1second until the operation starts.) |
| | Scan | Starts scanning.<br>Starts the application.<br>(Button link function with driver (You need to keep pressing it for approx. 1 second until the operation starts.) |
| LED | ○ | Lights when the scanner is turned ON. |

* For information on detailed settings for the launcher, refer to the Scanner Utility for Microsoft® Windows® User’s Guide on the scanner driver CD-ROM.

### 1.1.5 Outer Dimensions




| | | | | | | | | | | | |
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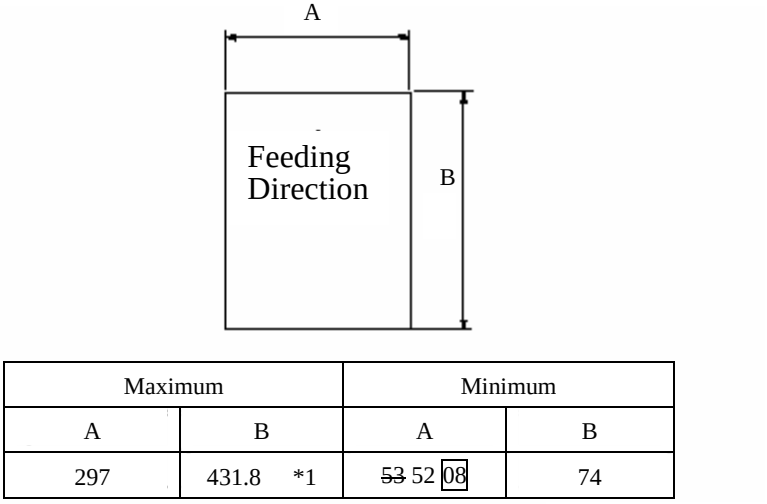
## 1.2 Document Specification

The following is the ADF document specification for the fi-5750C. Following these guidelines will improve the feeding reliability of the ADF.

### 1.2.1 Document Size

The following is the document size range for the fi-5750C scanner.




| Maximum | | Minimum | |
|---|---|---|---|
| A | B | A | B |
| 297 | 431.8 *1 | ~~53~~ 52 08 | 74 |

Unit: mm

*1 Page with a length of up to 863mm can be scanned if long page scanning is set. Paper jams will not be detected.

## 1.2.2 Document Quality and Thickness (Weight)

**- Recommended Document Type**

- Woodfree paper
- Paper containing wood

**- Paper thicknesst**

Paper thickness is expressed by the “Paper weight” specification. The following paper weights are within spec for ADF scanning.

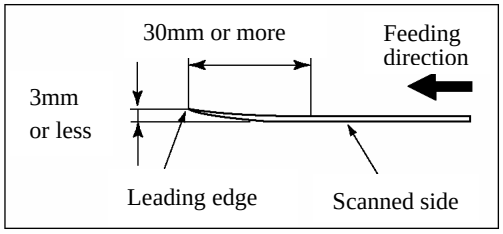
| Paper size | Paper weight | Remarks |
|---|---|---|
| A4 / Letter or smaller | 41 to 203 g/m$^2$ (11 to 54 lb.) | A4 : 210 x 297 mm |
| Over A4 / Letter | 52 to 203 g/m$^2$ (13.9 to 54 lb.) | |

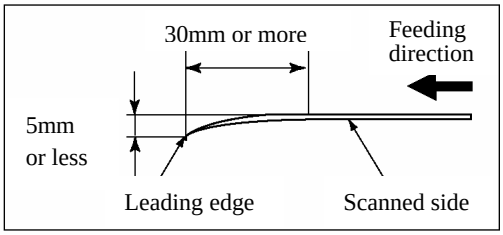
When scanning paper other than the type or weight listed above, perform a test-scan with a few sheets before executing the actual task in order to check whether or not the document can be scanned, if this test fails, scan from the flatbed.

**- Precautions**

Scanning the following documents through the ADF is not recommended

- Document of non-uniform thickness (e.g. envelopes)
- Wrinkled or curled documents (See right figure)
- Folded or torn documents
- Tracing paper
- Coated paper
- Carbon paper
- Carbonless paper
- Photosensitive paper
- Perforated or punched documents
- Documents that are not square or rectangular
- Very thin documents



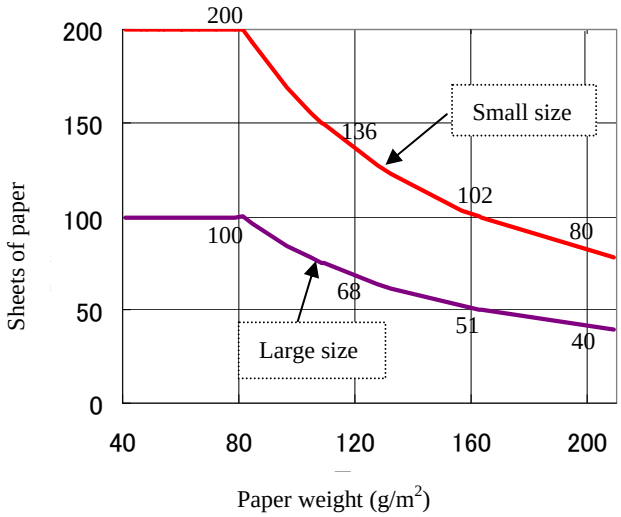




Do not scan the following documents through the ADF:

- Paper-clipped or stapled documents
- Documents where the ink is still wet
- Documents smaller than A8 (Portrait) in size
- Documents larger than A3 or 11 in. x 17 in. size
- Documents other than paper such as fabric, metal foil or transparencies

### 1.2.3 ADF Capacity

The maximum number of sheets that can be loaded on the ADF Chute unit (Capacity of ADF) changes depending on the paper size and weight. The following graph shows the capacity of ADF with respect to paper weight.

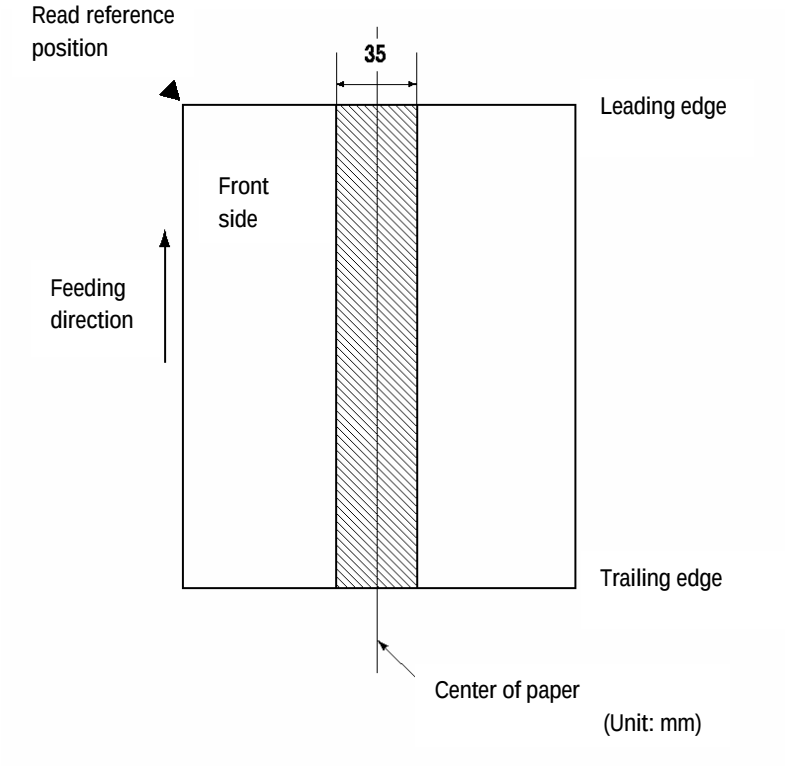



Small Document Size:
The documents of A4/Letter or smaller size

Large Document Size:
The documents over A4/Letter size

### 1.2.4 Areas not to be Perforated

Document feeding problems may occur if there are any punched holes in the shaded area in the figure below.



### 1.2.5 Double-feed Detection Conditions

One of the following 3 methods of double-feed detection is available in the scanner.

- Check overlapping
- Check length
- Check overlapping and length

The following conditions are required for each selection:

**1) Check overlapping**

- Paper weight: Refer to section 1.2.2.
- Punched holes are not allowed within 35 mm (1.4 in.) of the vertical centerline of the document
- Other paper shall not be glued within 35 mm (1.4 in.) of the vertical centerline of the document

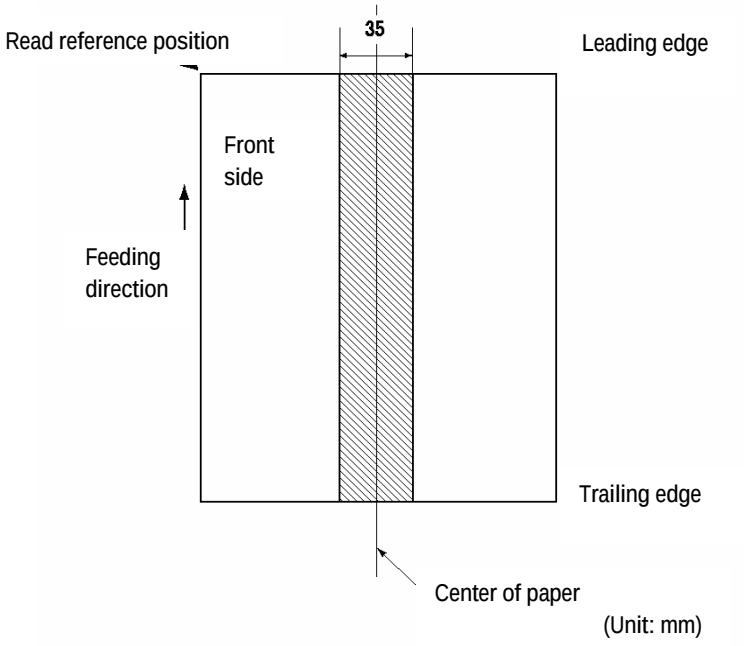
**2) Check length**

- Document length deviation: 1 % or less
- Punched holes are not allowed within 35 mm (1.4 in.) of the vertical centerline of the document

**3) Check overlapping and length**

- Paper weight: Refer to section 1.2.2.
- Document length deviation: 1 % or less
- Punched holes are not allowed within 35 mm (1.4 in.) of the vertical centerline of the document
- Other paper shall not be glued within 35 mm (1.4 in.) of the vertical centerline of the document

When overlapping check is specified and glued paper or electro-statically charged paper is fed, a false double-feed may occur. Double-feed may be miss-detected depending on the condition of documents.



### 1.2.6 Condition for De-skew and Automatic Document Size Detection (Automatic Cropping)

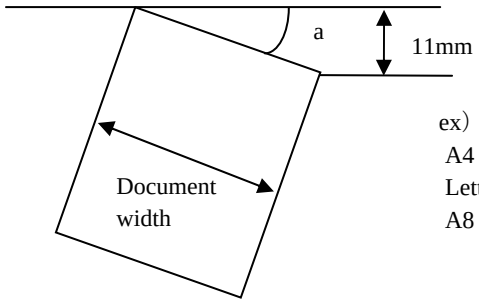
Available scanning mode:

1) ADF front / Back: Binary / Grayscale / Color
2) FB: In case of white background (standard), this function is NOT available.
   If background is black (optional), this function is available for Binary / Grayscale / Color mode

Following condition is required for correct De-skew and Auto-cropping.

1) Paper weight: 41 to 203 g/m$^2$ (11 to 54lb)
2) Shape of document: Rectangular
3) Documents cannot have a black border with 5mm of the page.
4) Skew angle (a) must be less than the following angles.

<ADF>




ex)

| | |
|---|---|
| A4 size: | a=Less than 6.0 degrees |
| Letter size: | a=Less than 5.0 degrees |
| A8 size: | a=Less than 24.0 degrees |

<FB>

If black background option is installed, the skew angle (a) must be less than 30 degrees.

**NOTICE**

This function may fail due to the noise of image. Cleaning of the ADF may be effective to reduce this error rate.

# Chapter 2 Installation

## 2.1 Unpacking the Scanner

**⚠CAUTION**

**Injury:** This scanner weighs 35kg. Carrying it by one person is dangerous because he/she may drop it.

Follow the procedure below to unpack the scanner. Make sure that all the accessories are included in the package.

1. Remove the upper package box.
2. Remove the accessory box.
3. Remove the cushions TF and TR, then remove the scanner from the box.
4. Remove the scanner from the polyethylene bag.
5. Remove all the accessories and remove the tape protecting the scanner.

The following table lists the packaging configuration.

| No. | Items | Quantity |
|---|---|---|
| 1 | Upper package box | 1 |
| 2 | Accessory box (Attachment includes ADF paper chute, stacker, CD-ROM, Manual, etc.) | 1 |
| 3 | Cushion TR | 1 |
| 4 | Cushion TF | 1 |
| 5 | Scanner in Polyethylene bag | 1 |
| 6 | Cushion BR | 1 |
| 7 | Cushion BL | 1 |
| 8 | Lower package box | 1 |

Table 2.1 Packaging configuration

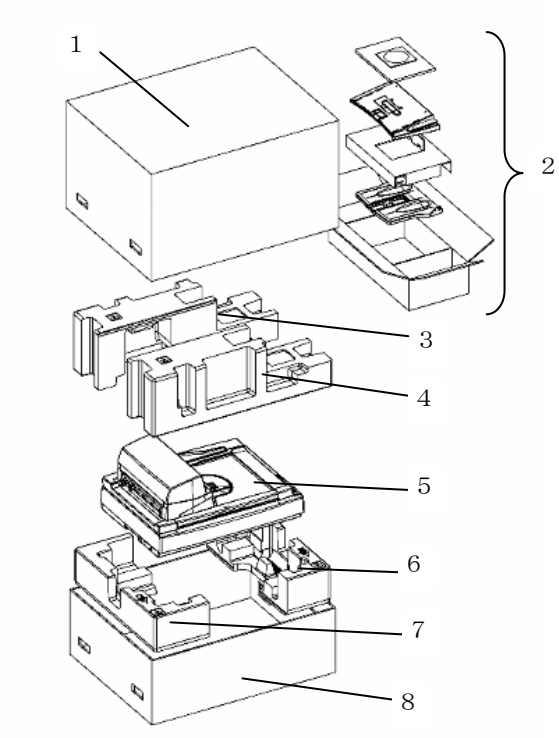



Figure 2.1

## 2.2 Installing the Scanner

### 2.2.1 For Safety Installation

Before installing the scanner, read the following precautions carefully to avoid scanner trouble.
Refer to section 1.1.3 “Environmental Specification” for information on input power and section 1.1.5 for scanner dimensions.

- Install the scanner away from strong magnetic fields and other sources of noise.
- Do not install the scanner near heating apparatus or in the direct sunlight.
- Install the scanner in a location which is level and subject to minimal vibration.
- Do not install the scanner in locations subject to humidity and dust.
- Do not block the ventilation ports.
- Protect the scanner from static electricity.
- Use proper AC voltage.

**NOTICE**

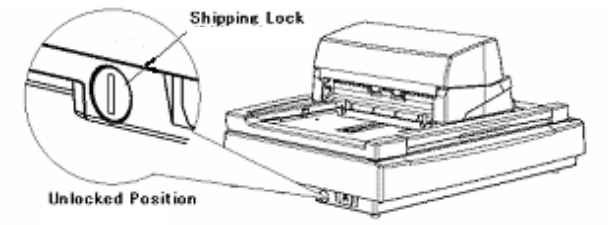
Make sure the rubber pads on the bottom of the scanner are level on the table or desk.

### 2.2.2 Installation

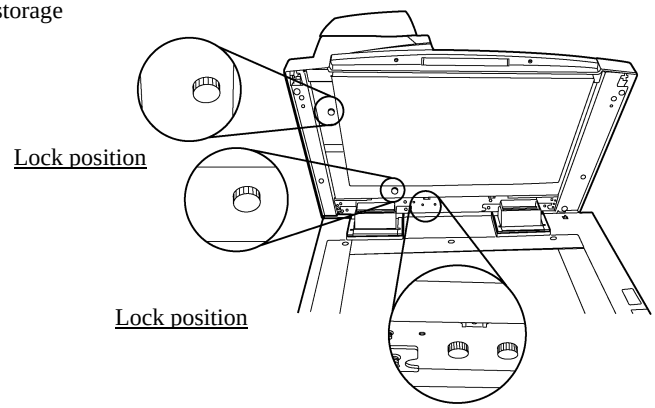
Install the scanner following the procedures below.

1) Place the scanner in a horizontal position.

2) With a coin or a flat screwdriver, turn the transportation lock screw at the left side of the scanner (see section 1.1.4 (2)) to the “Unlock (vertical) position”.


3) Open the document cover and move the ADF transportation lock screws from the lock positions to the screw storage holes.



4) Install the ADF paper chute and the stacker on the ADF (see section 6.6.1, 6.6.3).

5) Connect the AC cable to the scanner.

6) Connect the interface cable to the scanner and PC. Refer to section 1.1.4 (2) for the positions of the connection ports.

Note 1 Use either USB interface or SCSI interface.
For users of Windows 95 and/or Windows NT 4.0, use SCSI connection. USB interface is not supported.
As for users of Windows 98, Windows Me, Windows 2000 and/or Windows XP, either SCSI or USB can be used.

Note 2 When using the USB interface, use the USB cable provided with the scanner. Scanner performance cannot be guaranteed with other untested cables.
As for a connection with USB HUB, use the nearest HUB connection port (in the first line).

Note 3 When using the SCSI interface, a SCSI host adapter and cable must be purchased separately.
**- SCSI cable**
When selecting the SCSI cable, be aware the scanner has a 50 pin high density SCSI connector. The other side of the cable is dependent on the host adapter chosen.
**- SCSI card**
Refer to the following web site for recommended SCSI host adapters:
http://imagescanner.fujitsu.com/
When using the SCSI interface, make sure the scanner is the last device on the bus.

7) Press the "I" area of the power switch to turn the scanner ON. Power ON the PC.

8) If the SCSI interface is used, set the SCSI ID in the following procedure.
a. Power OFF the scanner.
b. Turn the SCSI switch at the rear of the scanner (see section 1.1.4 (2) for the position) to set the SCSI ID.

| ID No. | Contents |
|---|---|
| 0 to 7 | Available ID's |
| 8,9 | The scanner is default to ID 5. |

c. Power ON the scanner. The specified SCSI ID will be enabled.

Note 4 The SCSI ID has been set to No.5 at the factory. If other equipment is set to the same ID, change the ID of the scanner or the other equipment.

### 2.2.3 Installation of Software

The following scanner drivers and application software are included with the scanner.

- FUJITSU TWAIN 32 Scanner driver
- FUJITSU ISIS Scanner driver

- ScandAll 21 (for FUJITSU TWAIN 32 scanner driver)
- QuickScan Pro Demo (for FUJITSU ISIS scanner driver)

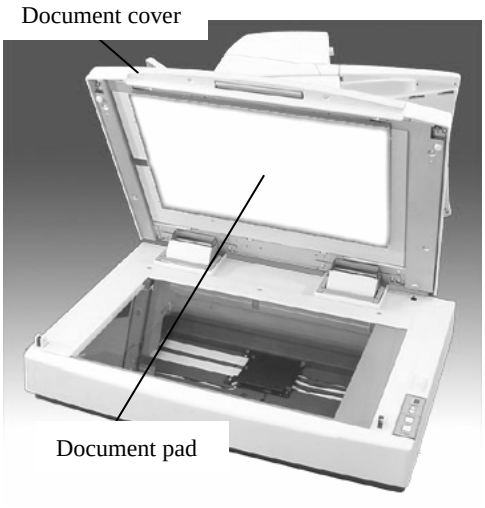
- Error Recovery Guide (When a scanner error occurs, a guide to resolve the error can be displayed on the screen.)

For the installation procedure, refer to the “fi-5750C Image Scanner Getting Started” attached to the scanner.

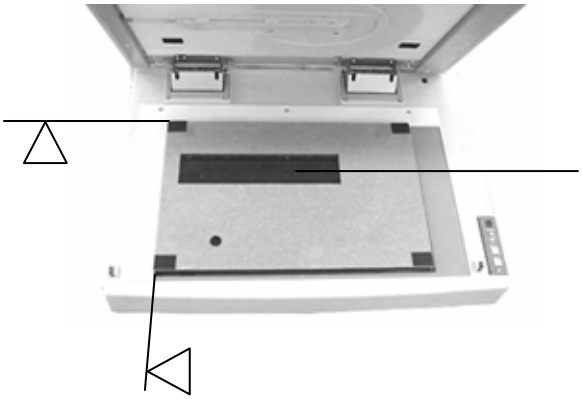
Note that a program to set “Scanner and Camera Properties” is automatically installed when you install TWAIN driver included in the attached CD. Please refer to Appendix A for operation.

### 2.2.4 Installation of Black Document Pad (option)

1) Open the Document cover and peel off the white document pad under the cover.

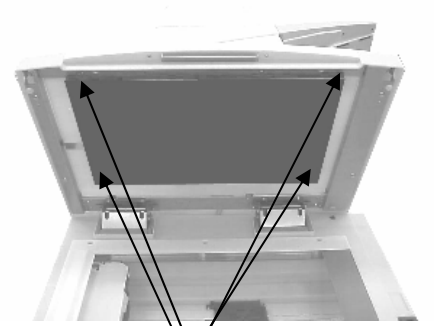



2) Place the black document pad aligning its top left corner to the top left corner of the glass as shown in the photo. (Notice the square hole position)




3) Close the Document cover. The document pad is adhered to it.

4) Open the Document cover and push the 4 corners of the document pad where the Velcro fasteners are adhered on the back to insure proper adhesion.



Velcro on the back (4 corners)

# Chapter 3 Operation and Daily Maintenance

## 3.1 Basic Operation

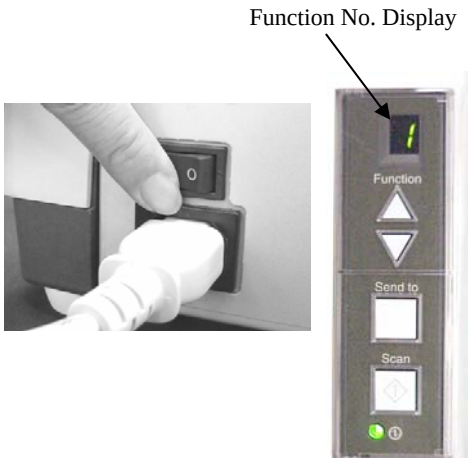
### 3.1.1 Power ON/OFF

(1) Turning ON the power

Press the “I” area of the power switch to turn the power ON. The green LED on the operator panel lights. The Function No. display on the operator panel will be changed as shown below during initial processing.

“8” → “P” → “0” → “1”

When the Function No. display shows “1”, the scanner is READY.




(2) Turning OFF the power

Press “O” area of the power switch to turn the power OFF.

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 09 | May 19, 2009 | T.Yoshimoto | A.Miyoshi | I.Fujioka | See page 2. | | | TITLE | fi-5750C IMAGE SCANNER MAINTENANCE MANUAL | | |
| 08 | Jan. 7, 2009 | K.Okada | T.Anzai | I.Fujioka | See page 2. | | | | | | |
| | | | | | | | | DRAW. No. | P1PA03338-B00X/6 | | CUST. |
| 10 | July 13, 2009 | K.Okada | A.Miyoshi | I.Fujioka | See page 2. | | | | | | |
| Rev | DATE | DESIG. | CHECK | APPR. | DESCRIPTION | | | PFU LIMITED | | PAGE | 26/200 |
| DESIG | Dec. 15, 03 | T.Anzai | CHECK | T.Anzai | Y.Takashima | APPR. | H.Hasegawa | | | | |

### 3.1.2 ADF Position and Direction Setting

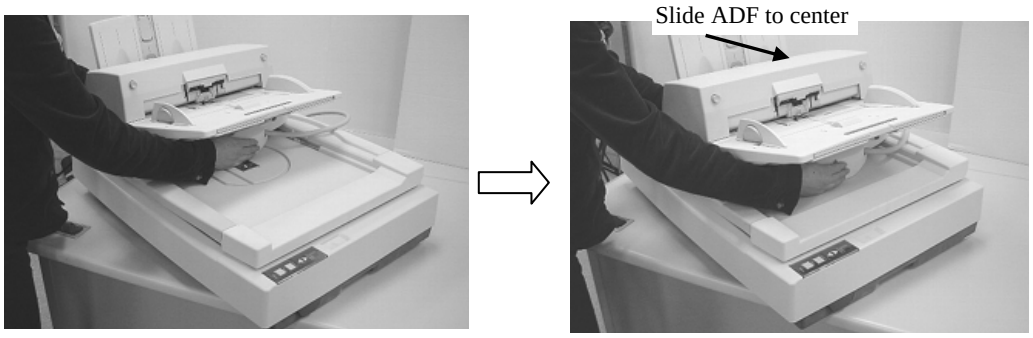
Users can select ADF positions and directions. The following is setting procedure of positions and directions.

**NOTICE**

1) To change the ADF position, make sure that the ADF transportation lock screws are not located in the lock positions before moving the ADF. (See section 2.2.2 (3).)
2) Be careful not to pinch your finger by the protrusion of the ADF and the document pad when moving the ADF.

(1) Moving the ADF from left to the center of the scanner:

Slide the ADF to the center until a “click” is felt.

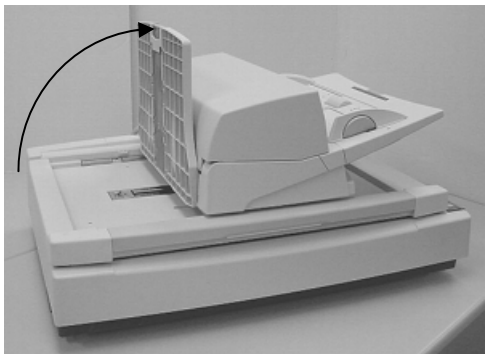



(2) Rotating the ADF paper chute from the right to the left of the scanner

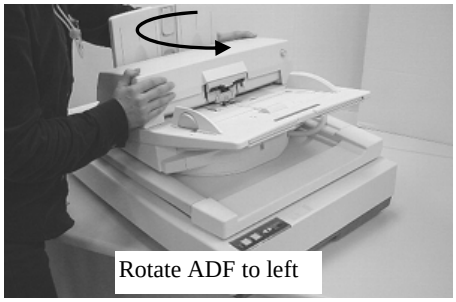
**NOTICE**

Place the ADF at the center of the scanner before attempting.

a. Move the ADF paper chute to the lower position (see section 6.6.3), and lift the stacker to the vertical position. If not, the stacker may interfere with the document pad and damage may occur.



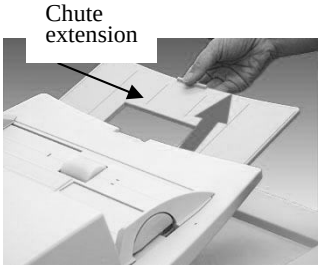
b. Rotate the ADF paper chute 180° counterclockwise. When it faces to the left, a “click” is felt and it will not rotate any farther.



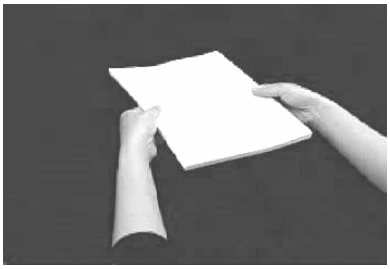
### 3.1.3 ADF Scanning Operation

ADF scanning is operated as follows:

1) According to the length of the document, extend the Chute extension.




2) Handle the document as follows:
   - Hold both edges of document lightly with your hands and fan the document.
   - Repeat this a few times.
   - Turn the document 90 degrees, and repeat.
   - Align the tops of the documents.



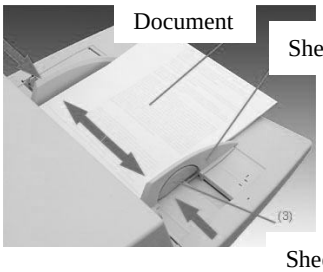
3) Place the documents face down on the ADF paper chute.

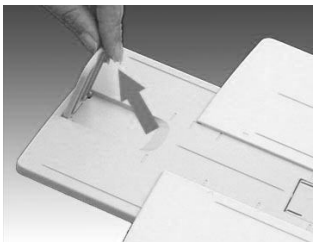
**NOTICE**

(1) Remove clip and/or staples. Flatten the staple holes. If double-feeds or miss picking occur, reduce the quantity of documents in the paper chute.
(2) Make sure that the document satisfies the specification in section 1.2.

4) According to the width of the document, slide the sheet guides against the edge of the paper.
   Make sure there is a small gap between each edge of the documents and the sheet guides.

5) Adjust the stacker extension according to the document length and lift the stopper.



6) Start the ADF scanning using the application software.
   1. Start ScandAll 21,
      Select [Program] – [Scanner Utility for Microsoft Windows] – [ScanedAll 21] from the [Start] menu.
   2. Select [Scan] – [Select Source…].
   3. Select fi-5750C.
   4. Click [Scan] button on the tool bar, then [To view…] to display [TWAIN driver] dialog box.
   5. Select "ADF [Duplex]" (one example) at [Scan Type].
   6. Click [Scan] button.

When scanning of the documents is completed, an image is displayed on the ScandAll 21 screen. Refer to [ScandAll 21 Help] for the functions and operations of ScandAll 21.

### 3.1.4 FB Scanning Operation

FB scanning is operated as follows:

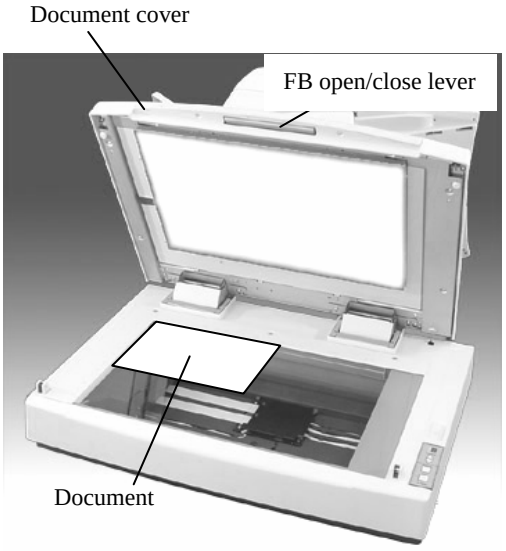
1) Press the FB open/close lever, then open the document cover.

2) Place a sheet of paper, face down on the document bed, with its top left corner at the same corner of the glass as shown in the photo on the right.

3) Close the document cover.

4) Begin a Flatbed scan from the application software.

Refer to section 3.1.3 (6) for starting up ScandAll.



## 3.2 Set up Mode (Software Operation panel)

### 3.2.1 Setting Item List

| No. | Item | Description | Selectable Parameter | Initial Value |
|---|---|---|---|---|
| 1 | Double-feed<br><br>(See section 3.2.3) | Enables double-feed detection.<br>Double–feed is detected by confirming length or overlap of document, or both. | None / Check Overlapping / Check Length / Length and Overlapping<br>When checking length, select among 10/15/20mm | None |
| 2 | Page Edge Filler (ADF)<br><br>(See section 3.2.4) | Enables frame deletion area on images scanned through the ADF. | Left and right edges: 0 to 15mm by 1mm<br>Top: 0 to 15mm by 1mm<br>Bottom: –7 to7 mm by 1mm | Left and right edges: 0mm<br>Top edge: 0mm<br>Bottom edge: 0mm |
| 3 | Page Edge filler (FB)<br><br>(See section 3.2.5) | Enables frame deletion area on images scanned through the Flatbed. | Left and right edges: 0 to 15mm by 1mm<br>Top: 0 to 15mm by 1mm<br>Bottom 0 to 15mm by 1mm | Left and right edges: 0mm<br>Top edge: 0mm<br>Bottom edge: 0mm |
| 4 | Dropout Color<br><br>(See section 3.2.6) | Selects Dropout color when scanning in black & white mode. | ADF front / ADF back / FB:<br>Red, Green, Blue, White (No dropout) | Green |
| 5 | Pre-pick<br><br>(See section 3.2.7) | Enables Pre-pick. To increase speed, turn Pre-pick ON. To eliminate double-feed, turn Pre-pick OFF. | Yes/No | Yes |
| 6 | Consumable Counter/ Reset<br>(See section 3.2.8) | Internal counter which counts how many pages have been fed by each consumable. Should be reset when consumables are replaced. | To reset:<br>Brake roller<br>Pick roller | - |
| 7 | Offset Adjustment<br>(See section 3.2.9) | Adjusts the horizontal and vertical offsets of target image, scanned from the ADF or Flatbed.<br>(This setting is for adjusting image position. Offset value in section 7.1.4 is not affected.) | ADF front / ADF back / FB<br>Right/Left: -2 to 3mm by 0.5mm<br>Top/Bottom: -2 to 3mm by 0.5mm | Right/Left: 0mm<br>Top/Bottom: 0mm |
| 8 | Magnification Adjustment<br>(See section 3.2.10) | Adjusts the vertical magnification of target image scanned from the document.<br>(This setting is for image size adjustment. Magnification value in section 7.1.3 is not affected.) | ADF / FB: -6.3 to 6.3% by 0.1% | 0% |
| 9 | Sleep Mode<br>(See section 3.2.11) | Sets the amount time of inactivity before the scanner enters sleep mode. | 15 to 55 minutes by 5 minutes | 15 minutes |

For the items #1 to #4 and #9, the settings in this mode will be ignored if specified from the scanner driver.

### 3.2.2 Accessing the Software Operation Panel

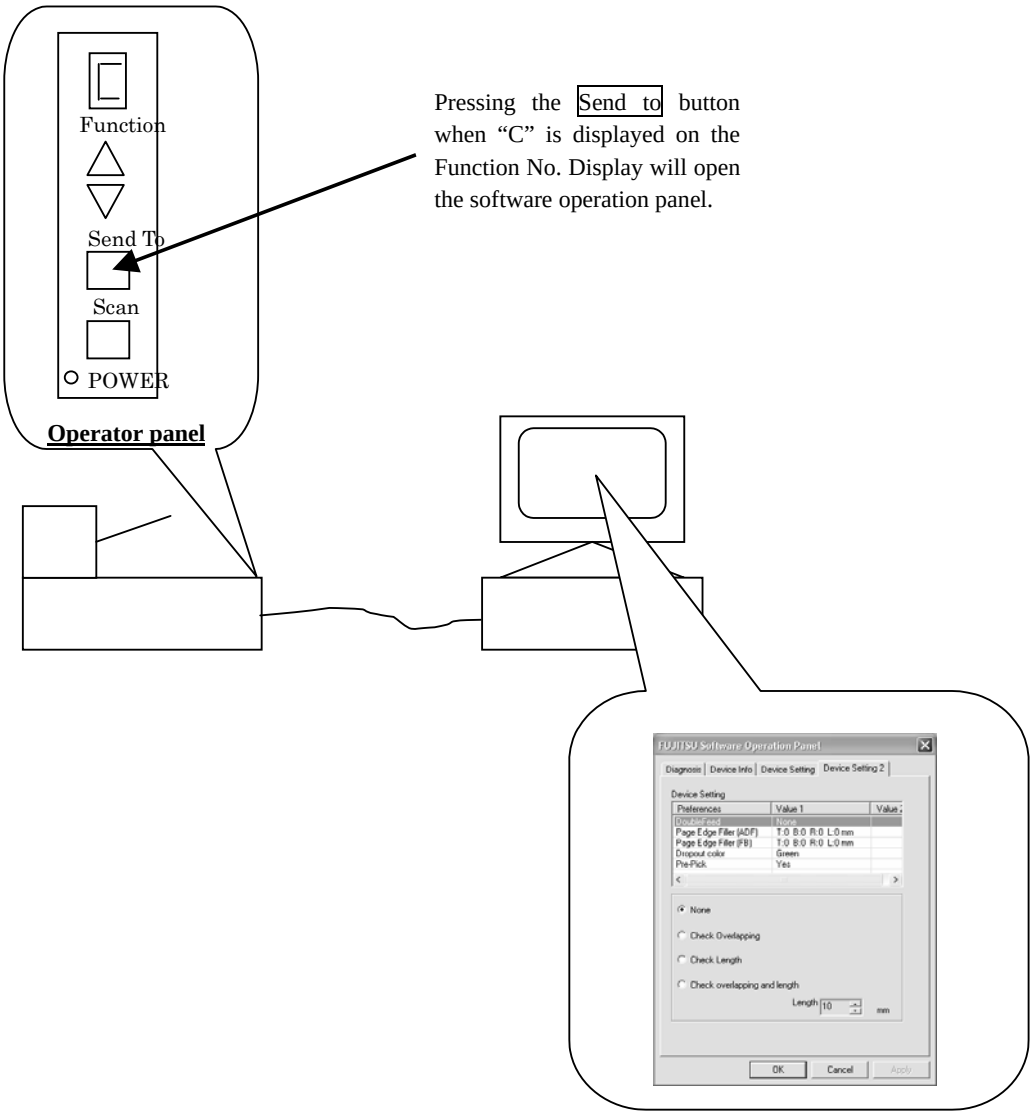
To start the set up mode, follow the procedures below.

**NOTICE**

Connect the scanner and the PC, and make sure the scanner driver and the software operation panel are installed. (Refer to the "Getting Started" attached.)

(1) Press the Function (△ or ▽) button on the operator panel of the scanner until "C" is displayed.

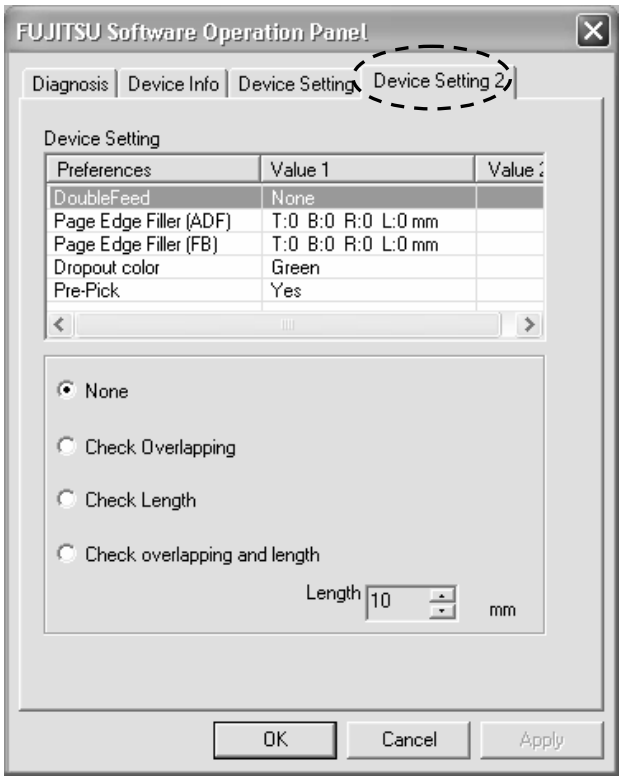
(2) Press the Send to button on the operator panel. The "FUJITSU Software Operation Panel" is displayed on the PC screen.



### 3.2.3 Double-feed Detection Setting

There are three methods of double-feed detection, overlapping detection using the Ultra sonic sensor, detection of document length difference using the TOP sensor, and a combination of these two methods. (Refer to item No.4 in the table in section 5.2.1 for detail.) After activating the Set up mode in the procedure in section 3.2.2, enable double-feed detection by following procedure below.

(1) Select the [DoubleFeed] option on the [Device Setting 2] tab.




(2) Select the button next to the desired detection method. Select 10, 15, or 20mm if you select “Check length” or “Length and Overlapping”.

- None: Does not detect double-feed.

- Check Overlapping: Checks the overlapping of paper using the Ultra sonic (US) sensor.

- Check Length: Checks the length of each paper using the TOP sensor. Detects double-feed when the difference of the lengths is larger than the allowable difference specified at the bottom of the screen..
  Length for the error detection can be selected among 10, 15, and 20 mm.
  If the length difference is within the value specified in the right bottom of the screen, the double-feed is not detected.

- Check overlapping and length: Detects double-feed in combination of the two methods above.

(3) Click the [OK] button. The following message appears

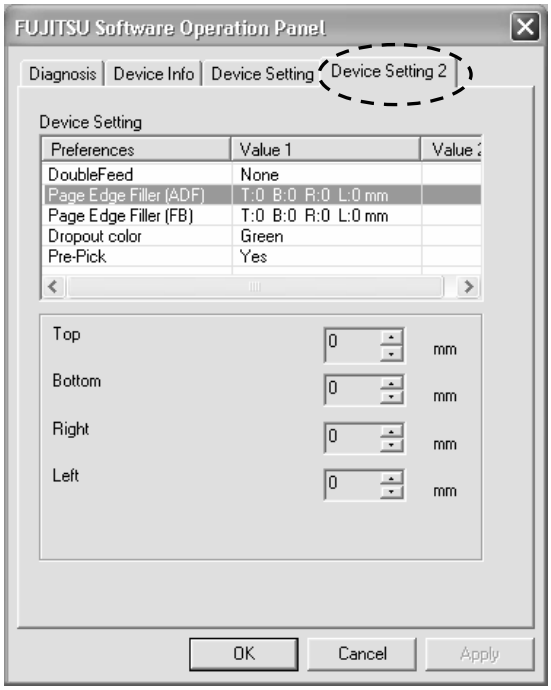

(4) Click the [OK] button.

Note: Setting of the double-feed detection on the application software driver is recommended since it is prioritized.

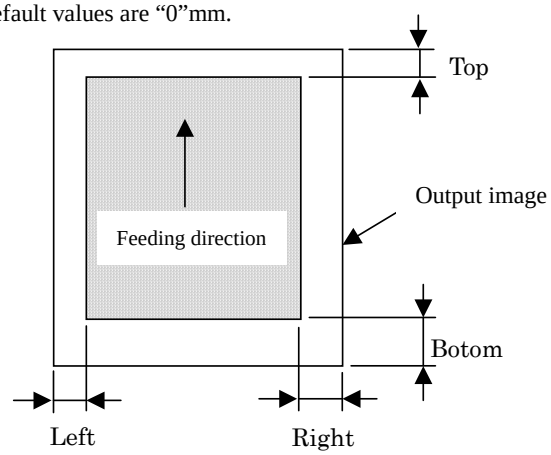
### 3.2.4 Page Edge Filler (ADF) Setting

After activating the Set up mode in the procedure in section 3.2.2, enable the frame deletion of images scanned through the ADF by following the procedure below.
"Page edge filler" is the function of overwriting a white background of the specified width of the frame around the images that are scanned.

(1) Select the [Page Edge Filler (ADF)] option on the [Device Setting 2] tab.




(2) Using the UP/DOWN (△ or ▽) button, input the values of the frame deletion width for top, bottom, right and left. The default values are "0"mm.



(3) Click the [OK] button. The following message appears.

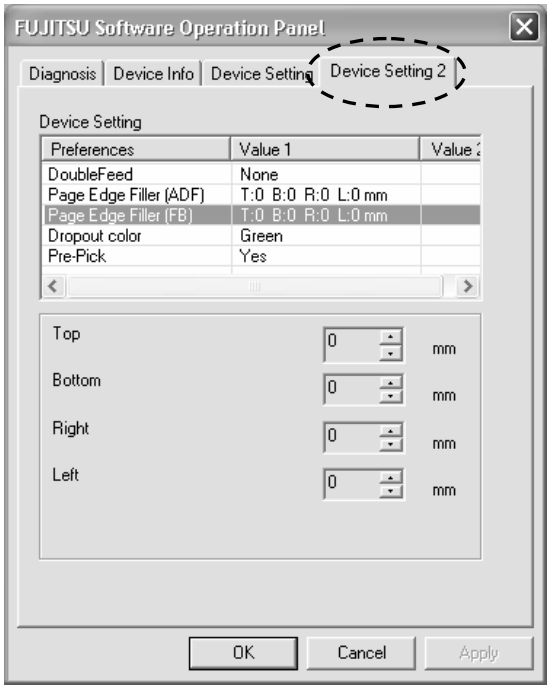

(4) Click the [OK] button.

Note: Setting of the Page edge filler (ADF) on the application software driver is recommended since it is prioritized.

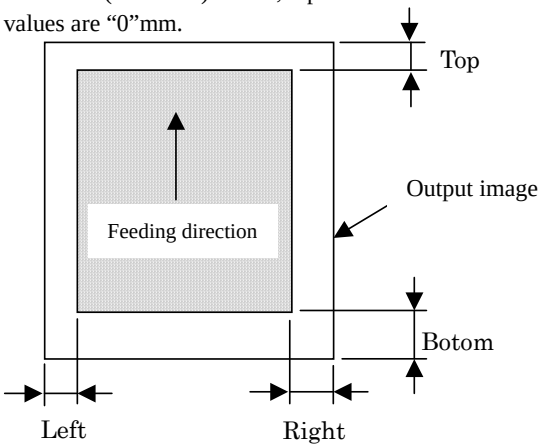
### 3.2.5 Page Edge Filler (FB) Setting

After activating the Set up mode in the procedure in section 3.2.2, enable the frame deletion of images scanned by the Flatbed by following the procedure below.
"Page edge filler" is the function of overwriting a white background of the specified width of the frame around the images that are scanned.

(1) Select the [Page Edge Filler (FB)] option on the [Device Setting 2] tab.




(2) Using the UP/DOWN (△ or ▽) button, input the values of the frame deletion width for top, bottom, right and left. The default values are "0"mm.



(3) Click the [OK] button. The following message appears.

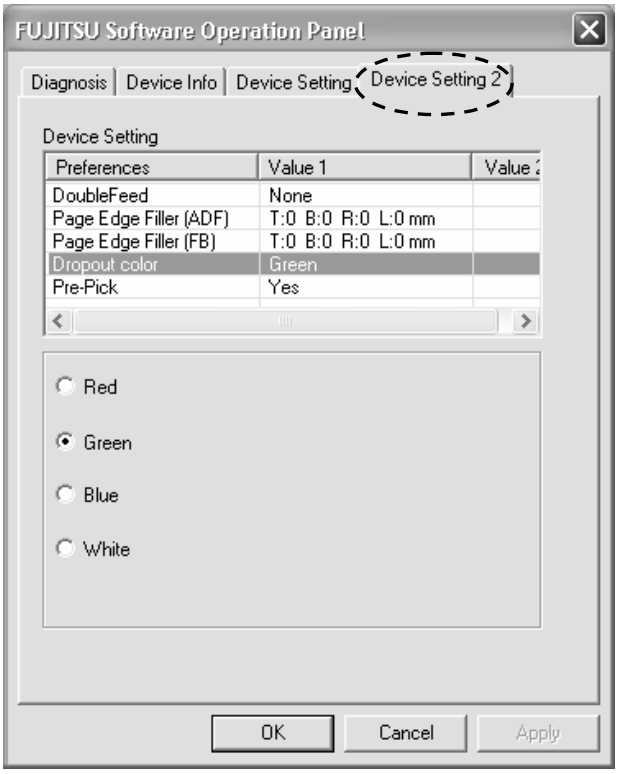

(4) Click the [OK] button.

Note: Setting of the Page edge filler (FB) on the application software driver is recommended since it is prioritized.

### 3.2.6 Dropout Color Setting

After activating the Set up mode in the procedure in section 3.2.2, select the dropout color in the procedure below.

(1) Select the [Dropout color] option on the [Device Setting 2] tab.




(2) Select the button of the dropout color from Red, Green, Blue and White.
Red: Drops out reds.
Green: Drops out greens (default).
Blue Drops out blues
White: No colors are dropped out.

(3) Click the [OK] button. The following message appears.


(4) Click the [OK] button.

Note: Setting of the Dropout color on the application software driver is recommended since it is prioritized.

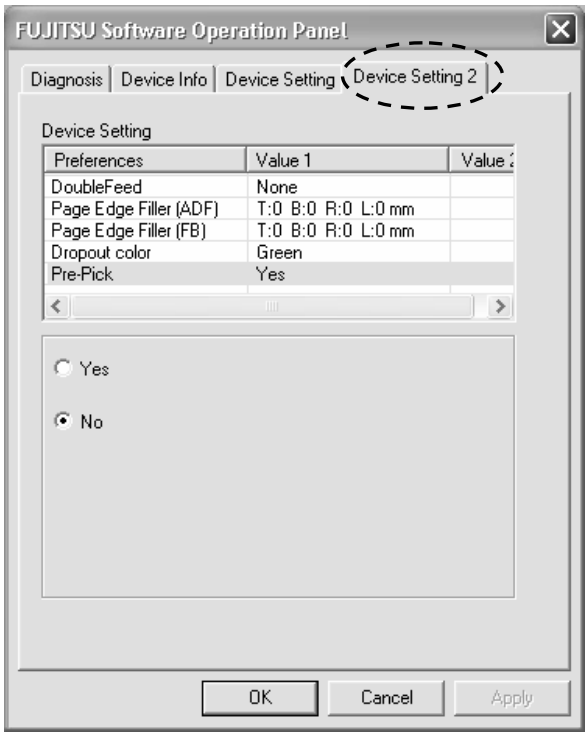
**NOTICE**

Call FUJITSU technical support for a listing of the Pantone specifications for each drop out color.

### 3.2.7 Pre-Pick Setting

After activating the Set up mode in the procedure in section 3.2.2, enable/disable Pre-pick by following the procedure below.

(1) Select the [Pre-Pick] option on the [Device Setting 2] tab.




(2) Select the “Yes” or “No” button.
Yes: Prioritizes the scanning speed, automatically sending the next document to the Pick roller. (Default)
No: The next document will not be fed to the Pick roller until the next scan command is received.

(3) Click the [OK] button. The following message appears.

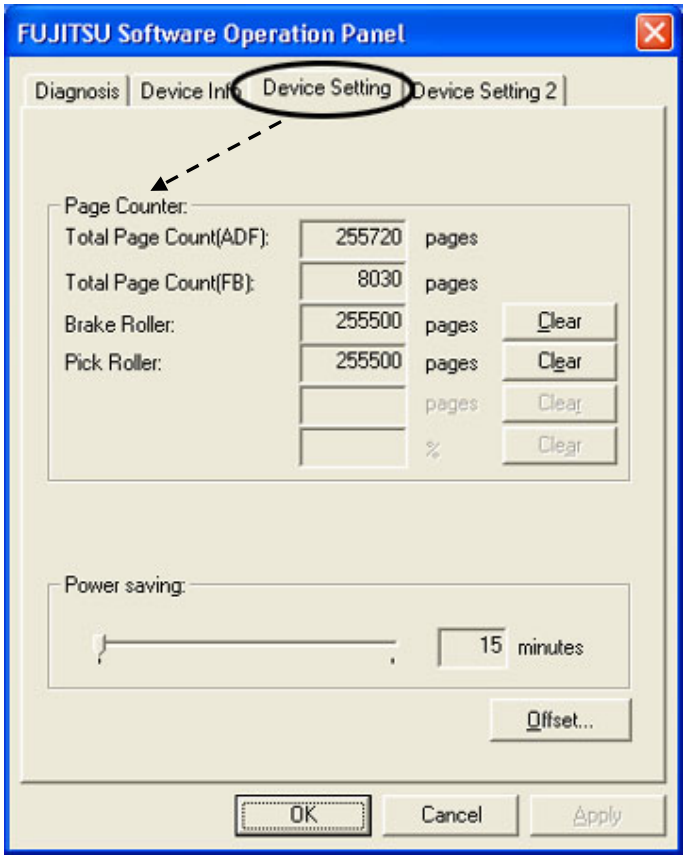

(4) Click the [OK] button.

Note: Setting of the Pre-Pick on the application software driver is recommended since it is prioritized.

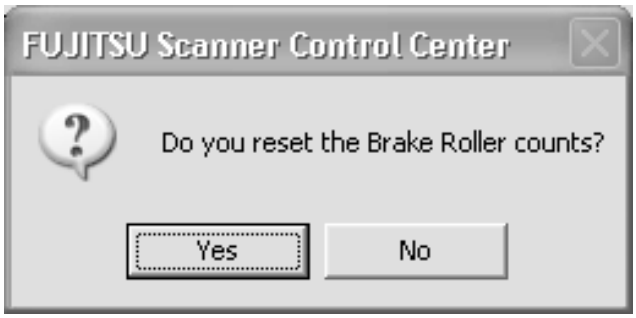
### 3.2.8 Confirmation and Reset of Consumable Counters

After activating the Set up mode in the procedure in section 3.2.2, confirm and reset the consumable counters by following the procedure below.

(1) Select the [Device Setting] tab.
The number of pages fed by each consumable is displayed.




(2) If any of the consumables are replaced, press the [Clear] button of the replaced consumable to reset the counter.



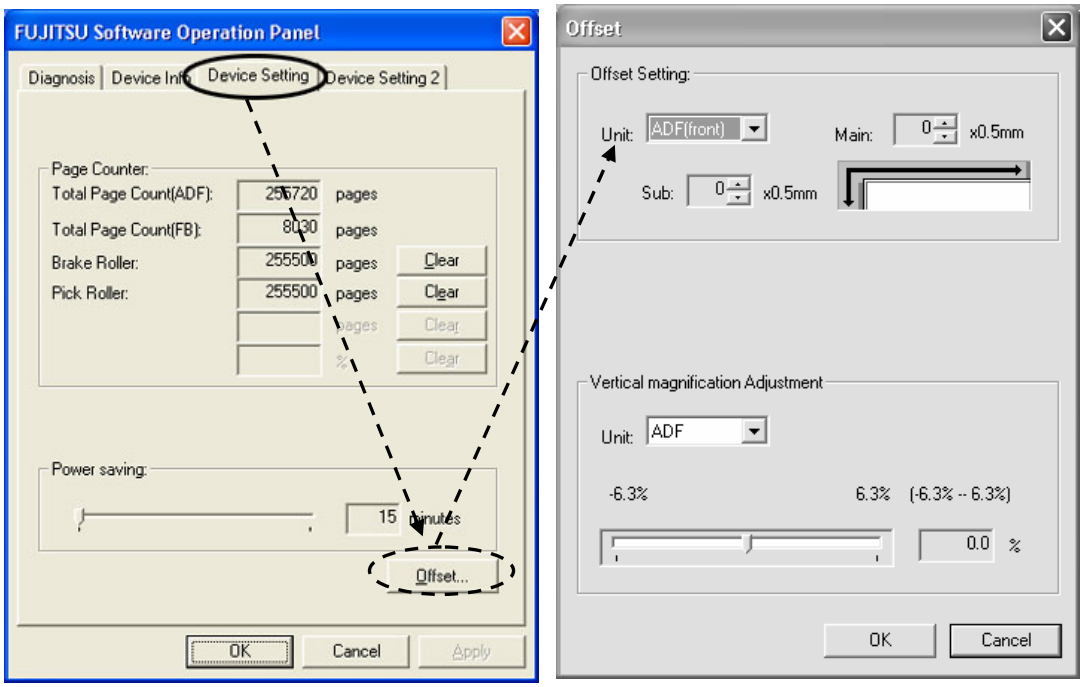

(3) Press the [Yes] button to reset the counter to “0”.

Note: These page counters are counted up every 10 sheets.

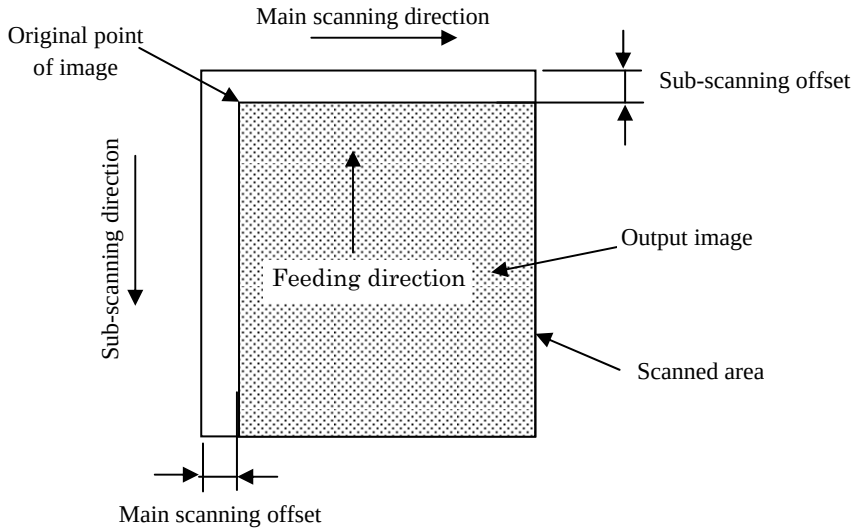
### 3.2.9 Offset Adjustment

After activating the Set up mode in the procedure in section 3.2.2, perform the offset adjustment by following the procedure below.

(1) Select the [Device Setting] tab, then press the [Offset…] button.




(2) From the [Unit] pull down menu, select ADF (front), ADF (back) or FB.
Set the offset value using the UP/DOWN (△ or ▽) button for the Main scanning and Sub-scanning.
Offset values are 0mm as default.




Main scanning= Horizontal
Sub scanning = Vertical

**NOTICE**

Making the offset more positive moves the image to the right.
Making the offset more negative moves the image to down direction.

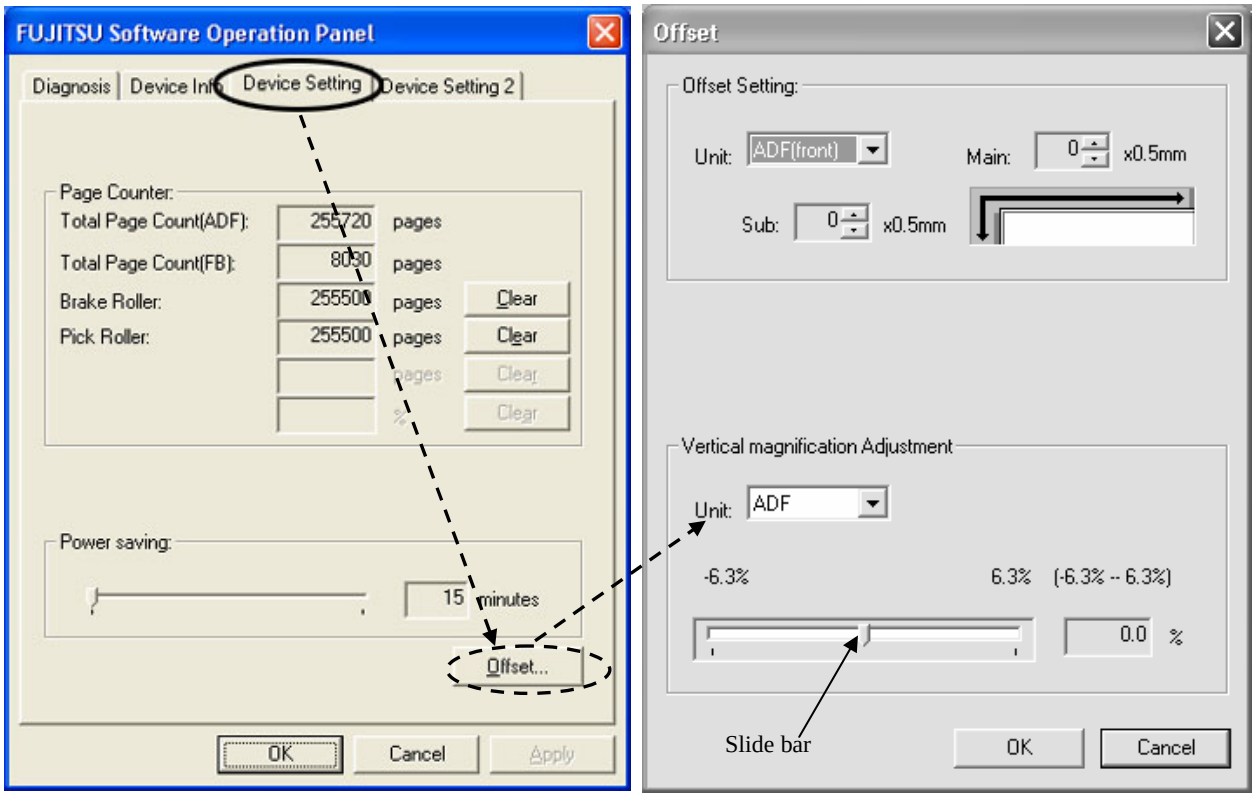
(3) Click the [OK] button. The following message appears.


(4) Click the [OK] button.

### 3.2.10 Magnification Adjustment

After activating the Set up mode in the procedure in section 3.2.2, perform the magnification adjustment by following the procedure below.

(1) Select the [Device Setting] tab, then press the [Offset…] button.




(2) From the [Unit] pull down menu, select ADF or FB.
Set the magnification value with the slide bar.
Magnification value is 0mm as default.

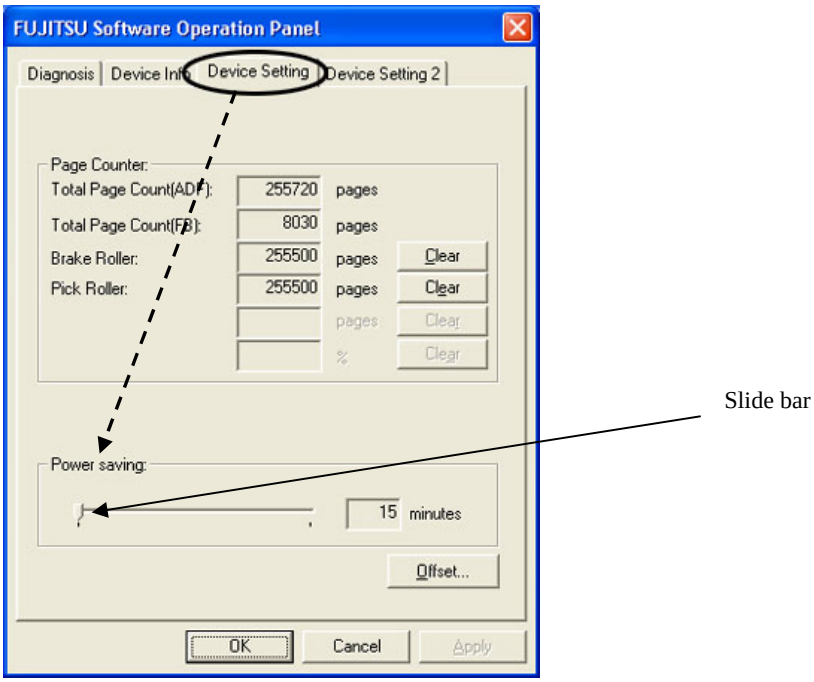
(3) Click the [OK] button. The following message appears.


(4) Click the [OK] button.

### 3.2.11 Sleep Mode Setting

After activating the Set up mode in the procedure in section 3.2.2, set the Sleep mode by following the procedure below.

(1) Select the [Device Setting] tab.




(2) Set the period of time until the scanner goes into the Sleep mode (Power Saving) with the slide bar. Default time is 15 minutes.

(3) Click the [OK] button.


(4) Click the [OK] button.

## 3.3 (Reserved)

## 3.4 Cleaning

### 3.4.1 Cleaning the ADF

**⚠ CAUTION**

**Injury:** The glass in the ADF is very hot after scanning.

**NOTICE**

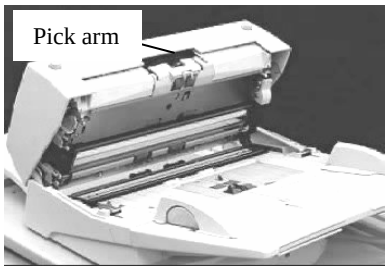
(1) The Feed rollers can be cleaned with the scanner ON.
(2) Cleaning should be done approximately every 10,000 sheets scanned, though it may differ depending on types of documents scanned. More frequent cleaning is necessary when the following types of documents are scanned:
- Smooth surface such as coated paper
- Documents printed on almost entire surface
- Documents processed with chemical materials such as carbonless paper
- Paper with high calcium content
- Pages with pencil lead
- Document where toner is not fused properly

(3) Be careful not to pinch your fingers when the ADF cover is being closed.

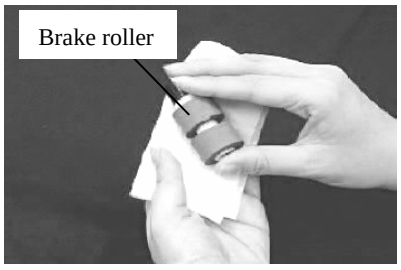
Clean the ADF by following the procedure below.

1) Press the ADF button to unlock (see section 1.1.4 (1), then open the ADF.

2) Clean the Pick arm with a dry, lint free cloth or a cloth moistened with isopropyl alcohol (F1 cleaner).

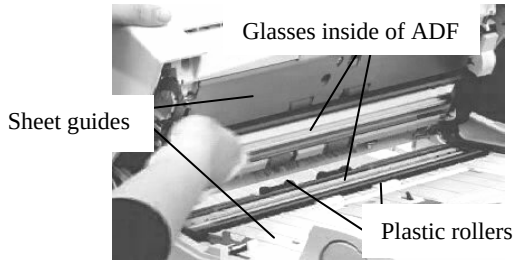



3) Open the Brake roller cover, and remove the Brake roller (see section 3.5.2). Wipe the surface of the Brake roller with a dry, lint free cloth or a cloth moistened with isopropyl alcohol (F1 cleaner). After cleaning, reinstall the Brake roller and close the Brake roller cover.

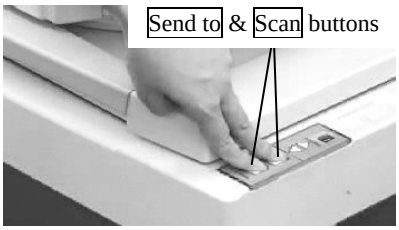


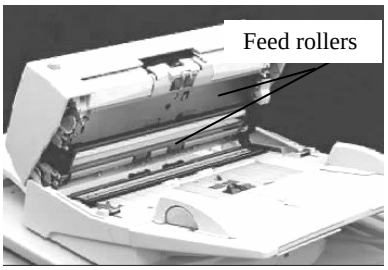

4) Open the Pick roller cover and remove the Pick rollers (2 rollers) (see section 3.5.3). Wipe the surfaces of the Pick rollers with a dry, lint free cloth or a cloth moistened with isopropyl alcohol (F1 cleaner). After cleaning, reinstall the Pick rollers.

5) Wipe 2 glass areas (upper and lower), 2 sheet guides and 2 sets of plastic rollers inside the ADF with a dry, lint free cloth, or a cloth moistened with isopropyl alcohol (F1 cleaner).




6) Press the Send to and the Scan buttons simultaneously to rotate the Feed rollers (photo on the right above) approximately 45 degrees. Clean the surfaces of these rollers with a dry, lint free cloth, or a cloth moistened with isopropyl alcohol (F1 cleaner). Rotate the rollers by the above method and clean the next surface. Repeat until the complete surfaces of the rollers are cleaned.



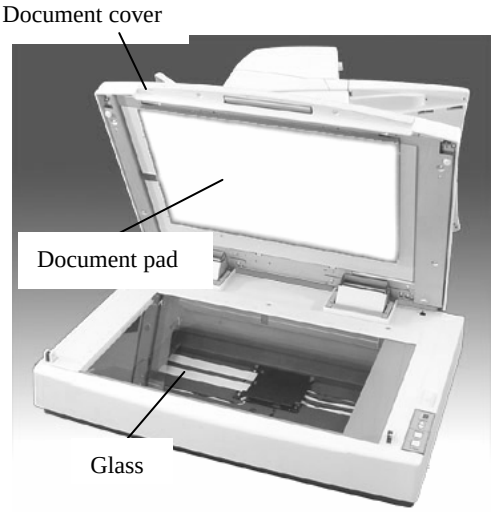




7) Close the ADF after cleaning.

8) Referring to section 6.6.2, remove the Chute roller. Clean the surface of the roller with a dry, lint free cloth, or a cloth moistened with isopropyl alcohol (F1 cleaner). After cleaning, reinstall the Chute roller.

### 3.4.2 Cleaning the Flatbed

Clean the Flatbed by following the procedure below.




1) Press the FB open/close lever, and open the document cover.

2) Clean the glass and document pad of the Flatbed with a dry, lint free cloth, or a cloth moistened with isopropyl alcohol (F1 cleaner).

**NOTICE**

You may use window cleaners or glass cleaners (excluding the one which are not made for plastic products) instead of the F1 cleaner, but do not use organic cleaners such as thinner.

3) Wait until the glass and document pad is dried.

4) Close the document cover after cleaning.

# 3.5 Consumables and Replacement

## 3.5.1 Consumables

The scanner has the following consumables which users need to replace at the following intervals when the screen on the right appears. To check the number of scanned documents, go to Maintenance mode (see section 7.1.6).

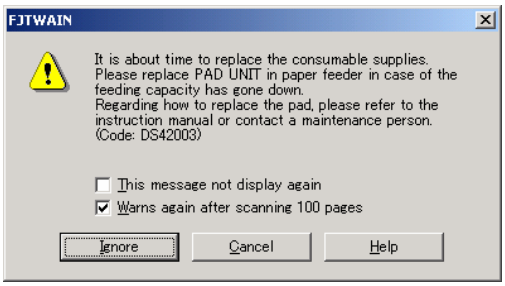



Table 3.5.1

| No. | Part name | Specifications | Standard replacement cycle *1 | How to check the number of scanned documents | How to replace |
|---|---|---|---|---|---|
| 1 | Brake roller | PA03338-K010 | 250,000 sheets or one year | See section 7.1.6. | See section 3.5.2. |
| 2 | Pick roller | PA03338-K011 | 250,000 sheets or one year | | See section 3.5.3. |

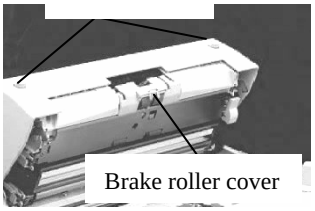
* The consumable replacement cycle is an approximation based of scanning A4 (64g/m$^2$ or 17.1lb) woodfree paper, or paper containing wood. The life of the consumables differs depending on volume or types of documents, frequency of scanner usage and frequency of scanner cleaning.

**⚠CAUTION**

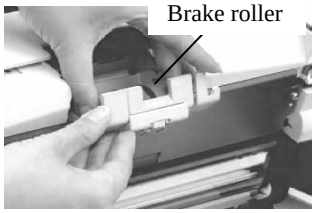
**Injury:** While the scanner is being used, the glass inside the ADF is very hot.

## 3.5.2 Brake Roller Replacement

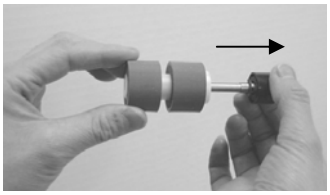
Replace the Brake roller by following the procedure below.



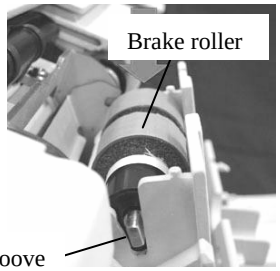

1) Remove any documents remaining in the ADF paper chute.
2) Press the ADF buttons to release the lock and open the ADF (photo on the right).
3) Open the Brake roller cover, and lift the Brake roller out of the scanner.




4) Pull the shaft out of the Brake roller.



5) Attach the new Brake roller. Be sure to set the flat area of the Brake roller axis at the guide groove of the Brake roller cover.
6) Close the ADF.
7) Referring to section 7.1.6, reset the Brake roller counter.
Brake roller counter can be reset in the procedure in section.3.5.4 as well.



### 3.5.3 Pick Roller Replacement

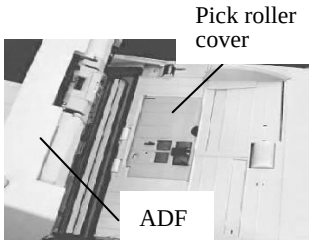
**NOTICE**

1) Be careful not to pinch your fingers when closing the ADF.
2) Do not close the ADF cover when the pick roller cover is open.

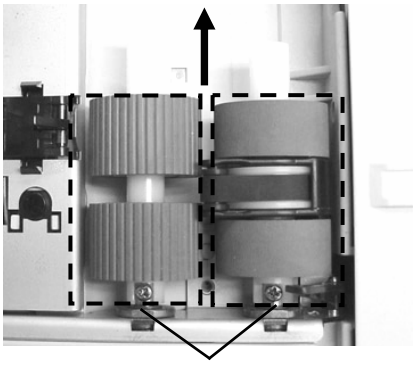
Replace the Pick rollers by following the procedure below.

1) Remove any document remaining in the ADF paper chute, and remove the ADF paper chute.

2) Press the ADF buttons to release the lock, open the ADF (see section 3.5.2 (2)), then the Pick roller cover.

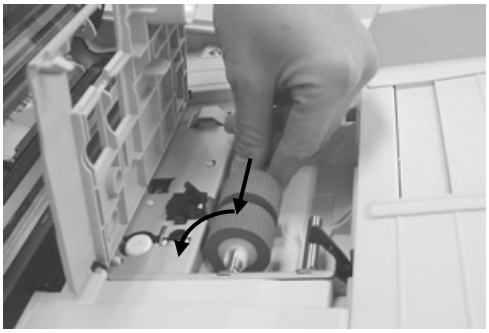



3) Slide the Pick rollers (composed of 2 rollers) outward and take them out.

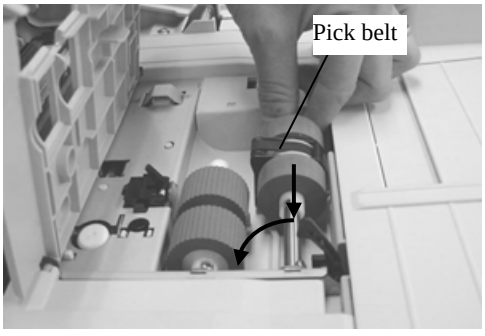


Pick rollers

4) Insert the new Separation roller into the shaft all the way. When it hits the end lightly, rotate it in the direction of the arrow (photo on the right) so that the screw on the shaft fits in the roller gap.



5) Confirm the direction of the pick belt as shown in the photo on the right, then insert the new Pick roller into the shaft all the way. When it hits the end lightly, rotate it in the direction of the arrow (photo on the right) so that the screw on the shaft fits in the roller gap.




**NOTICE**

If the Pick belt is not installed in appropriate direction, the scanner does not start operation. Refer to the photo on the right and install it correctly.

6) Close the Pick roller cover, then the ADF.

7) Referring to section 7.1.6, reset the Pick counter.
Pick roller counter can be reset in the procedure in section 3.5.4 as well.

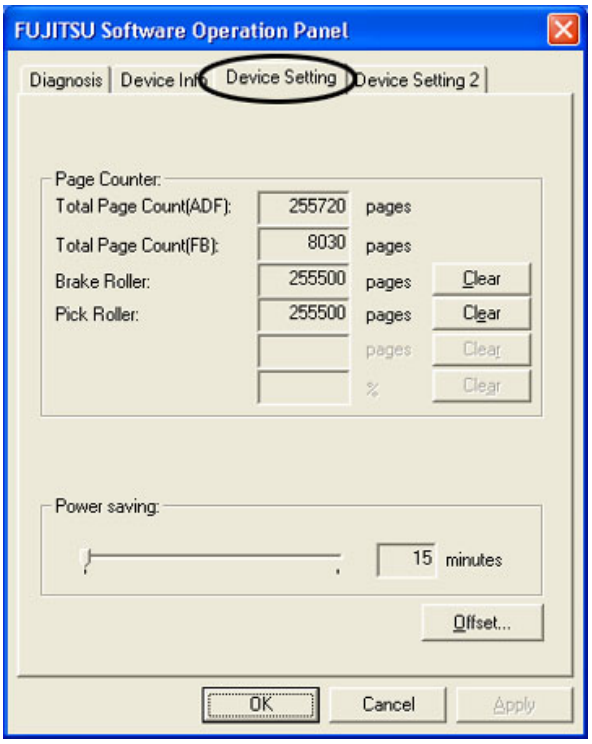
### 3.5.4 Resetting Consumable Counters

Resetting consumable counters is also available from the PC screen as explained below.

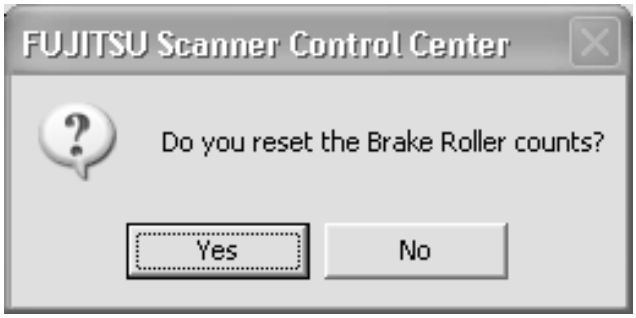
1. Confirm that the scanner and the PC are connected, and the scanner is powered ON.

2. Select [Program] – [Scanner Utility for Microsoft Windows] – [Software Operation Panel] from [Start] menu. The [FUJITSU Software Operation Panel] dialog box is displayed.

3. Press the [Device Setting] tab to display the screen below.




4. Press the [Clear] button of either the “Brake Roller” or “Pick Roller”. The screen below is displayed.

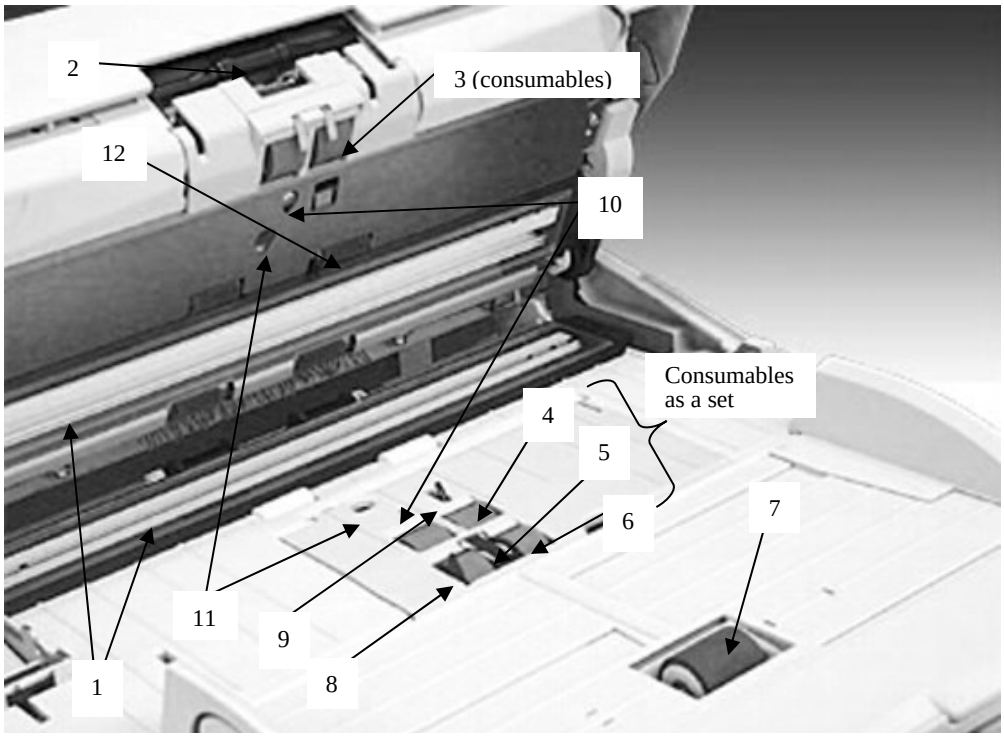



5. Press the [Yes] button to reset the counter to “0”.

# Chapter 4 Scanner Operation Description

## 4.1 ADF Unit

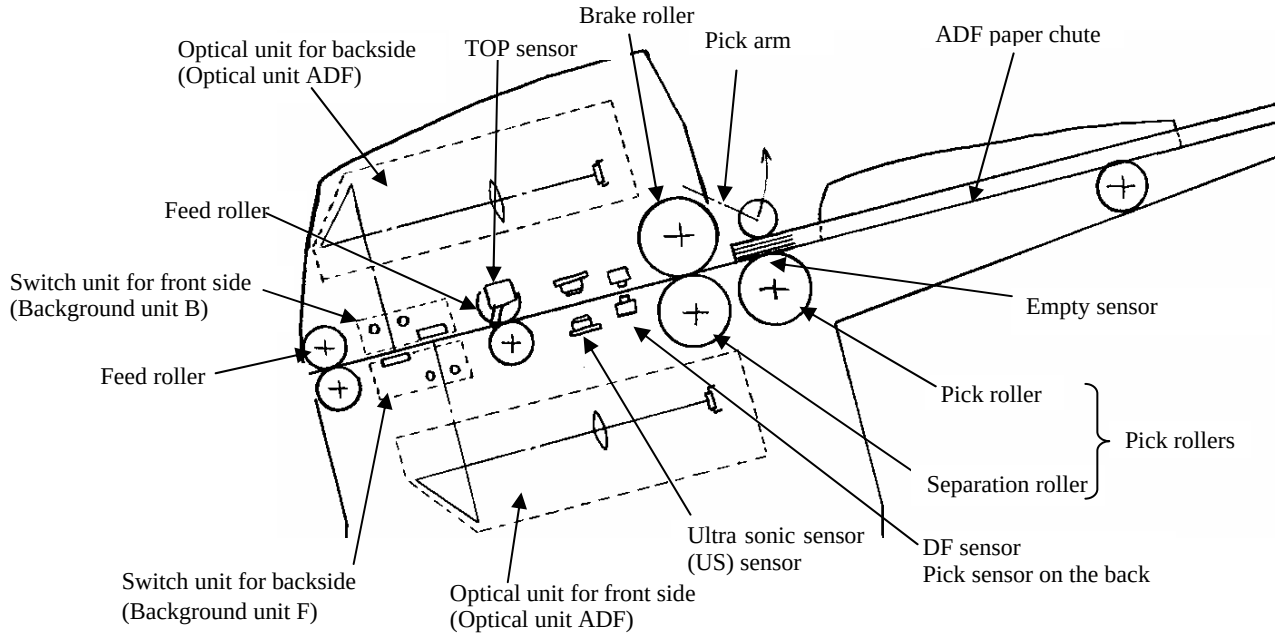
**(1) Names and Functions**




| No. | Parts name | Function |
|---|---|---|
| 1 | Glass | Prevents paper dust from entering the optical unit. The lower glass protects the front side optical unit from paper dust. The upper glass protects the backside optical unit from paper dust.. |
| 2 | Pick arm | Presses documents on the ADF paper chute onto the pick roller to insure proper picking. |
| 3 | Brake roller | Prevents documents from being double-fed. This is a consumable. |
| 4 | Separation roller | Transports documents. |
| 5 | Pick belt | These parts are included in the “Pick roller”. |
| 6 | Pick roller | This is a consumable. |
| 7 | Chute roller | Helps documents on the chute unit to be transported. |
| 8 | Empty sensor | Detects whether there are documents remaining on the chute. |
| 9 | Pick sensor | Detects document jamming. When this sensor detects trailing edge, the next sheet is picked. |
| 10 | DF sensors | Detects Job separation sheet. |
| 11 | Ultra sonic sensors (US sensors) | Measures how much ultra sonic sound waves are transmitted through documents to detect double-feeds. |
| 12 | TOP sensor | Detects the leading edge of paper and determines the timing of image scanning. Detects paper jams as well. |

**(2) Paper separation**

The Pick arm is usually raised except when scanning operation is performed. When the Empty sensor detects that documents are loaded on the Chute unit and PC starts scanning, the Pick arm presses documents onto the Pick roller to insure proper picking. The Pick roller rotates to send the lowest document to the ADF. Documents are separated respectively by the Separation roller and the Brake roller. The Pick sensor detects paper jams. The DF sensor detects whether there is notch on the leading edge of paper (Job separation sheet). The Ultra sonic sensor and the DF sensor detect when double-feed errors occur. The TOP sensor located at the Feed roller determines when to begin scanning. The front side of a document is scanned by the lower optical unit, and backside is scanned by the upper unit. The scanned documents are deposited on the stacker by the Feed rollers. When the Pick sensor detects the trailing edge of a document, the next document is picked.
The paper feeding unit also includes the Cover open sensor and Pick arm position detection sensor.

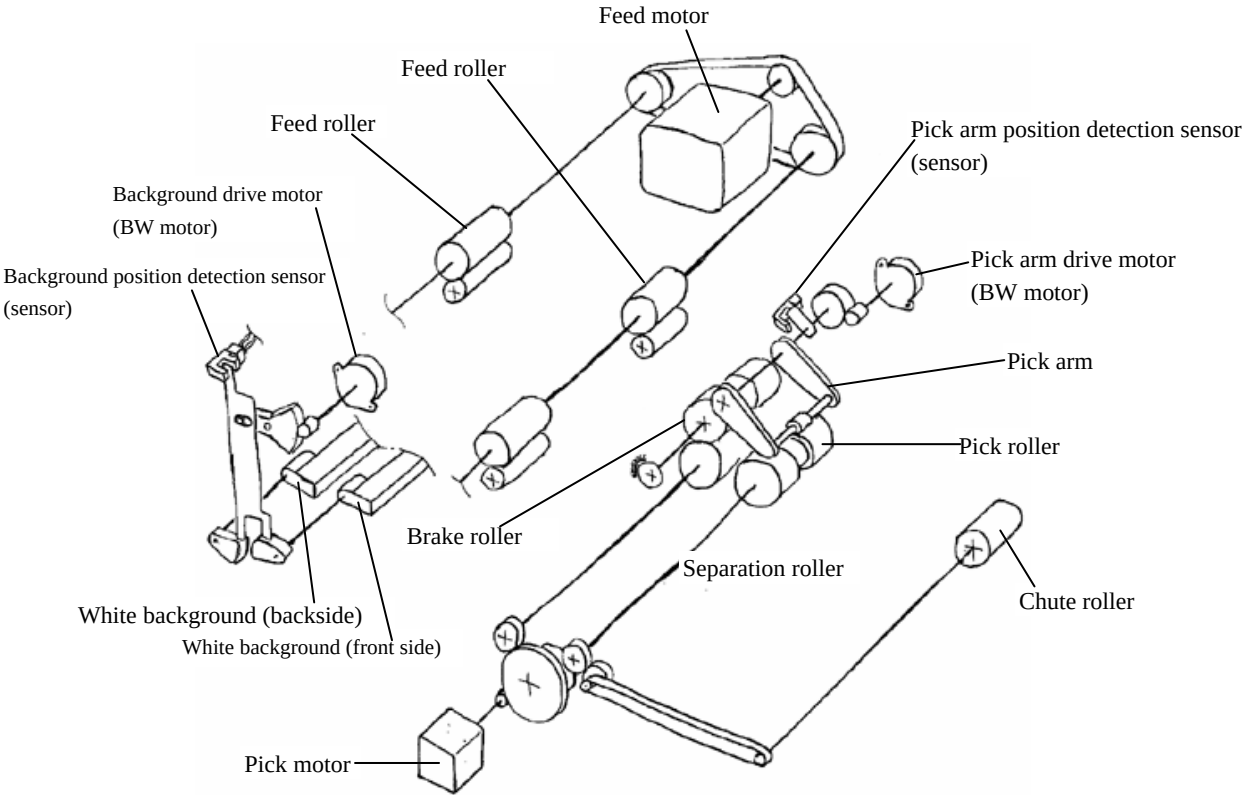



**(3) Consumables**

The Pick roller and Separation roller are included in the pick roller. The Brake roller is sold separately. These items are consumables and are the user's responsible to replace. (Refer to section 3.5.1 for details).
The scanner supports two consumable counters, the brake roller counter and the pick roller counter. These counters indicate the number of sheets scanned since each consumable has been replaced. Users can check the counters from the "Scanners and Cameras" on the PC or using scanner built-in Maintenance mode. They can also reset the counters from these locations after the consumables have been replaced. (See section 7.1.6 for details.)

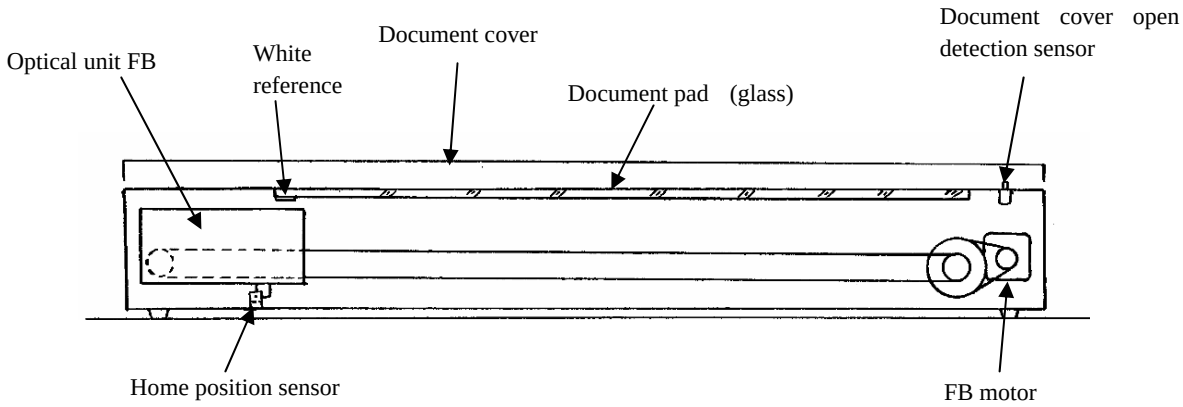
**(4) Drive unit**

The pick roller, Separation roller and Chute roller are turned by the Pick motor. The Feed rollers are turned by the Feed motor. The Pick arm and background are driven up and down by the respective BW motors. The motor drive circuit is located on the ADF junction PCA. If abnormal electric current runs through the motor drive circuit, the current is cut off by the motor fuse located in the Control PCA. The motor fuse for the ADF motor is the same as that of the FB.



## 4.2 Flatbed Section

**(1) Configuration**




**(2) FB Scanning Control**

During initial processing, immediately after power up, the FB optical unit moves to the home position sensor. If FB scanning is specified, the scanner moves the FB optical unit to scan the white reference (white area) and adjusts the gain of the CCD amplifier. At that time, if the CCD output does not reach the standard level, even after increasing the gain to the maximum level, an optical alarm is issued.

After successful gain adjustment, the scanner scans the specified length of the document while moving the FB optical unit in the sub-scanning direction at the speed that corresponds to the specified scanning resolution. If abnormally high electric current runs through the FB motor, the current is cut off by the motor fuse (which is shared with the ADF) on the Control PCA.

The FB optical unit uses a lamp to illuminate the documents, and an inverter.

**(3) Document Cover Open Detection**

The sensor OP can detect whether the document cover is open or closed.

**(4) Black Background (optional)**

Black document pad is also available as optional.

## 4.3 Reading Station

**(1) Optical system**

In case of ADF scanning, documents are set in the ADF paper chute, front side face down (see section 3.1.2). The front side of the document is scanned by the lower Optical unit in the ADF, and the backside of the document is scanned by the upper Optical unit in the ADF. These two optical units have the same parts number.

In case of FB scanning, documents are scanned by the FB optical unit.

The image on the document is projected to a color CCD through a lens and mirror system and converted to image signals that are 10 bit per pixel at 600 dpi resolution.

**(2) Light source and heater**

The scanner uses two lamps (White cold cathode discharge lamp) for ADF front / ADF back / FB respectively which lights the scanning area of front and back side in order to get sufficient CCD output. The lamp is turned ON or OFF by an inverter that is controlled by the Control PCA.
The life of lamp is approximately 10,000 hours, which means the lamps last the life of the scanner.

The lamps have heaters and thermistors attached, which are controlled to stabilize the lamp temperatures while the power is supplied. The power of the lamps and heaters are cut OFF during sleep mode.

The ADF Optical units and the FB optical unit have two lamps with heaters respectively. The two lamps with heaters in the Background unit F are replaced at a time and so are these in Background unit B Two lamps in FB are replaced as a set.

**(3) Scan controller**

Before scanning a document, the scanner scans the white background of the scanning position and adjusts the gain of the CCD amplifier. If the CCD output does not reach a reference level after the gain adjustment, an Optical alarm is issued.

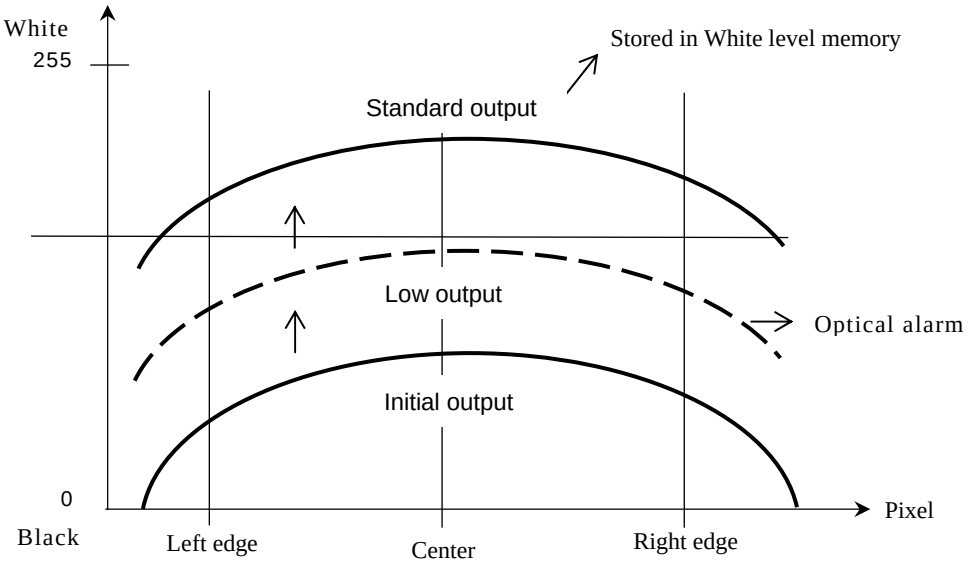



Figure 4.3 AGC (Automatic Gain Control)

When the gain adjustment is completed successfully, the scanner feeds the document to the scanning position at the speed that corresponds to the specified scanning resolution. The leading edge of the document is detected by the TOP sensor in front of the scanning position. The document is fed from the TOP sensor by some defined length for front and back side scanning (the length which determines sub-scanning offset), the scanner starts scanning the image. The scanner terminates the scan operation when the length specified from the host is scanned (Fixed size scanning) or when the TOP sensor detects the trailing edge of a document (Page end detection scanning).

## 4.4 Controller

**(1) Control PCA**

The Control PCA controls the units in the block diagram below by 2 types of software, one for interface control (SDC) and another for mechanical control (MDC). The firmware can be updated through the SCSI/USB interface using the firmware update tool. Firmware version number can be confirmed in the procedure described in section 7.1.6.

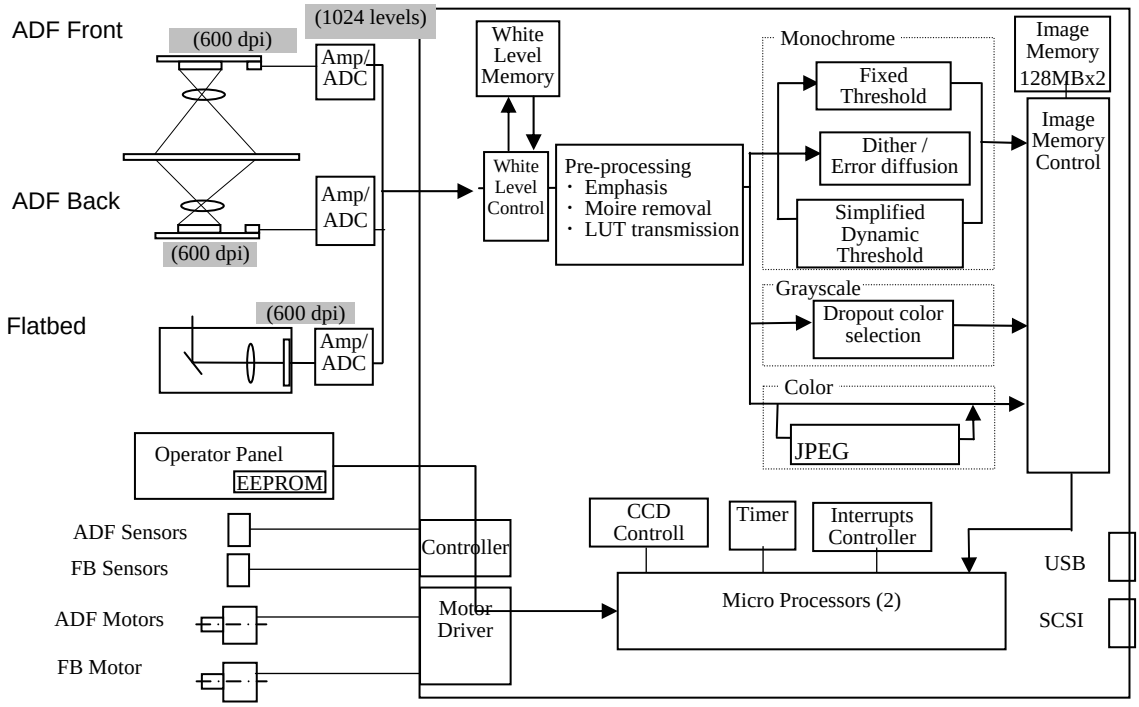



**Figure 4.4 Function Block Diagram**

The Control PCA includes the following connectors and a switch (see section 1.1.4 (2)).

- Fan connectors, Connector for ADF, Connector for FB junction PCA, Connector for DC power supply
- EXT connector (Reserved)
- SCSI connector (1)
- USB connector (1)
- SCSI ID setting rotary switch
- Connector for third party slot
- Connector for extended memories

If both the SCSI and USB cables are connected at the same time,

- SCSI is selected when selection phase is recognized first.
- USB is selected when H level VBUS signal is detected first.

**(2) Panel PCA**

The panel PCA on the operator panel includes not only the switches and lamps described in section 1.1.4 (3), but also the EEPROM that records the information below. When replacing the panel PCA with a new one, you need to copy all the data stored in the EEPROM to the Control PCA temporarily (see section 7.2), and then the data from the Control PCA to the new panel PCA (see section 7.1.8).

- Offset correction value for main/sub-scanning direction
- White level correction value
- Values of Brake roller counter and Pick roller counter
- First date of the scanner operation, the number of documents scanned by ADF, the number of documents scanned by FB

**(3) ADF junction PCA**

This is a printed circuit board in the ADF that is used for signal relay between the Control PCA and each unit (optical unit, motors and sensors) in the ADF. This printed circuit board also includes the drive circuits for the motors in the ADF (see section 4.5).

**(4) FB junction PCA**

This is a printed board in the FB that is used for signal relay between the Control PCA and each unit (carrier unit, motors and sensors) in the FB (see section 4.5).

**(5) Sleep mode**

If a scan operation is not performed for over the specified period, the scanner automatically goes into the Sleep mode. The Sleep mode is set at 15 minutes at the factory. You can change the timer for this mode in the Setup mode in section 3.2. (Refer to section 3.2.11 for detail.) During this mode, the lamp heaters turn off and the Function No. display is turned OFF, only the power LED remains ON.

Perform either of the operations below in order to return from the Sleep mode.

- Set document on the ADF paper chute.
- Press either of buttons on the operator panel.
- Execute a command from the scanner driver.

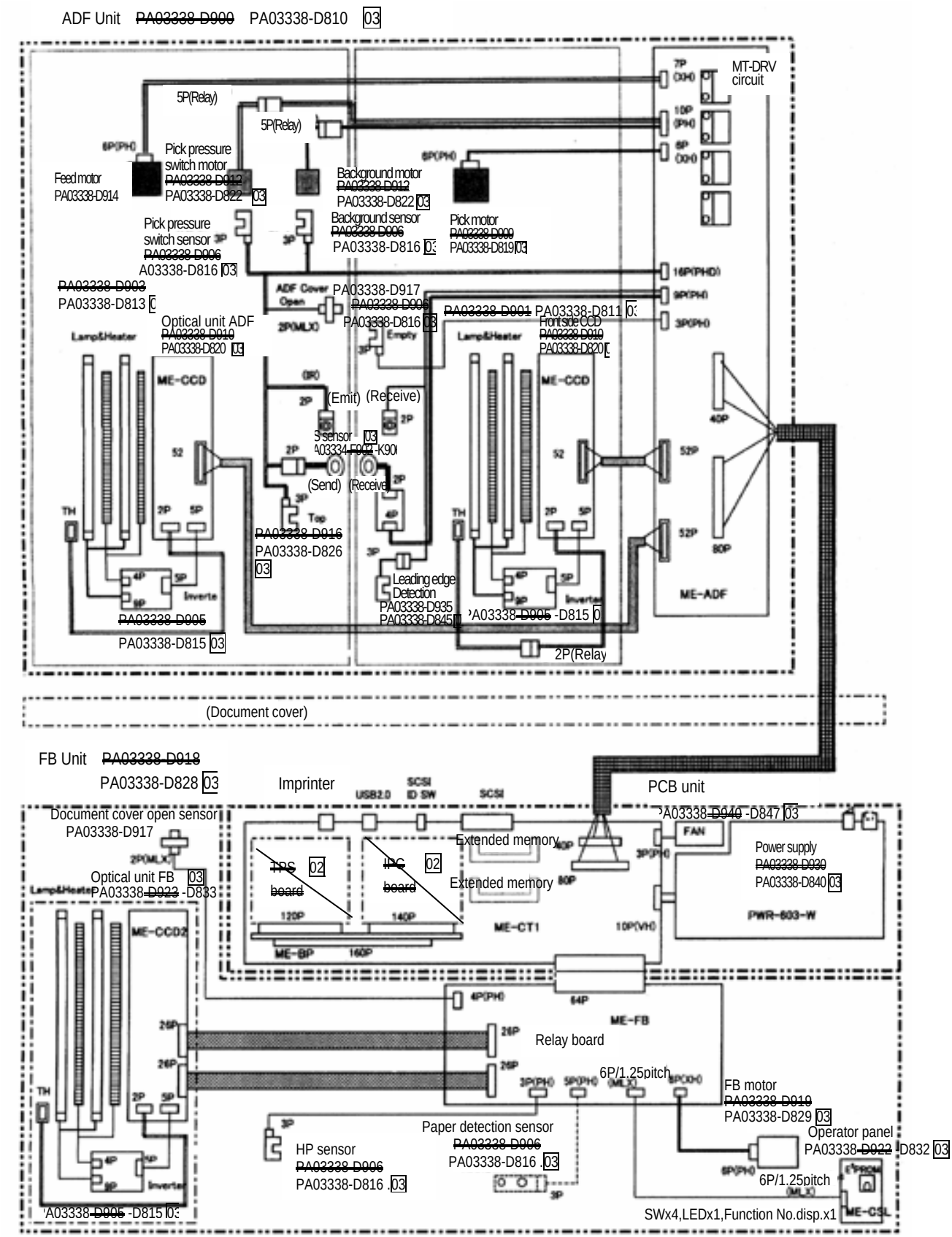
**(6) Emulations**

When the user replaces the following scanners with fi-5750C, the communication can fail because of driver incompatibly. Emulation mode can accommodate the connection for this case.

This mode is not open to user. This mode may not be used for maintenance. Refer to section 7.3 if required.

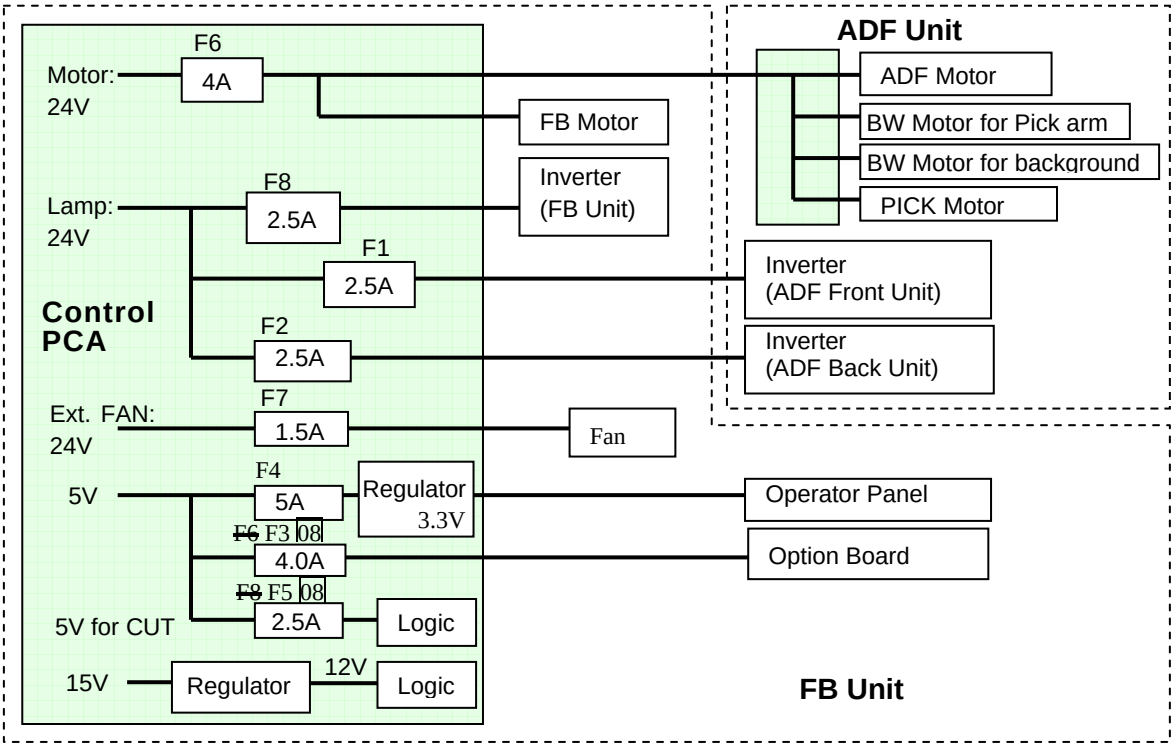
- fi-4570C
- M4097D
- fi-4640S
- fi-4750L

## 4.5 Cable Connection Diagram




| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 09 | May 19, 2009 | T.Yoshimoto | A.Miyoshi | I.Fujioka | See page 2. | TITLE | fi-5750C IMAGE SCANNER MAINTENANCE MANUAL | | |
| 08 | Jan. 7, 2009 | K.Okada | T.Anzai | I.Fujioka | See page 2. | | | | |
| | | | | | | DRAW. No. | P1PA03338-B00X/6 | | CUST. |
| 10 | July 13, 2009 | K.Okada | A.Miyoshi | I.Fujioka | See page 2. | | | | |
| Rev | DATE | DESIG. | CHECK | APPR. | DESCRIPTION | PFU LIMITED | | PAGE | 58/200 |
| DESIG | Dec. 15, 03 | T.Anzai | CHECK | T.Anzai | Y.Takashima APPR. H.Hasegawa | | | | |

## 4.6 Diagram of Power Supply System




The Pin assignment of the connector between Power supply and Control PCA (CN15) is as follows.

CONNECTOR(CN15)

| | |
|---|---|
| PIN 1 | +24V |
| PIN 2 | GND |
| PIN 3 | -15V |
| PIN 4 | GND |
| PIN 5 | +15V |
| PIN 6 | ON/OFF SIGNAL |
| PIN 7 | +5V |
| PIN 8 | +5V |
| PIN 9 | GND |
| PIN 10 | GND |

# Chapter 5 Troubleshooting

This section describes the self-diagnostic functions of the scanner, temporary errors and detection algorithms, and how to troubleshoot them.

## 5.1 Self-diagnostic Functions

### 5.1.1 Scanner Status Display and Self-diagnostics at Power-ON

**(1) Operator panel display sequence at power-on**

The following display is shown during initial processing (self-diagnostics).

| Function No. Display | Power LED | Description |
|---|---|---|
|  | ON | Displays “8” without blinking.<br><br>Immediately after power-on, the scanner turns all the segments ON. |

When the initial processing starts, the following is displayed.

| Function No. Display | Power LED | Description |
|---|---|---|
|  | ON | Displays “P” without blinking.<br><br>Indicates the scanner is currently in initial processing (self-diagnostics). |

When the lamp intensity is within operating specifications, the following is displayed.

| Function No. Display | Power LED | Description |
|---|---|---|
|  | ON | Displays “0” without blinking.<br><br>Indicates the lamp intensity is within the operating specifications. |

When the initial processing terminates properly, the following is displayed.

| Function No. Display | Power LED | Description |
|---|---|---|
|  | ON | Displays default Function No. without blinking.<br><br>Indicates the scanner is in ready state. |

The Function No. is incremented by 1 every time the Function button is pressed. After Function No. 9 is displayed, the number changes to “C” and then returns to “0”.

**(2) Self-diagnostics**

The scanner checks the following items at power-on and displays errors or alarms if any.

| No. | Check items | Error display | | Remarks, Reference section |
|---|---|---|---|---|
| | | Scanner display | TWAIN display | |
| 1 | Motor fuse alarm | E4 | <Motor fuse is blown.><br>Sense Key=0x04<br>ASC=0x181<br>DDES=0x81 | -> 5.3.21 |
| 2 | Operator panel alarm | E6 | None | *2, ->5.3.23 |
| 3 | EEPROM alarm | E7 | <EEPROM is not accessible.><br>Sense Key=0x04<br>ASC=0x44<br>DDES=0xD2 | *2<br>->5.3.24 |
| 4 | SCSI fuse blown | E8 | None | *2<br>->5.3.25 |
| 5 | Image memory alarm | E9 | <Memory is not accessible.><br>Sense Key=0x04<br>ASC=0x44<br>DDES=0xE4 (E5,E6) | *2<br>->5.3.26 |
| 6 | (Reserved) | EA | | ->5.3.27 |
| 7 | RAM alarm | Ec | None | ->5.3.28 |
| 8 | SPC alarm | Ed | None | ->5.3.29 |
| 9 | Extended memory alarm | E15 | None | *2*3->5.3.33 |
| 10 | LSI alarm | E19 | <LSI is not accessible.><br>Sense Key=0x04<br>ASC=0x44<br>DDES=0xE9 (EA) | *2 ->5.3.37 |
| 11 | ROM sum check | F | None | |
| 12 | Search home position for FB scanning | U0 | Please confirm the shipping lock is unlocked. | ->5.3.18 |
| 13 | (Reserved) | U6 | | |
| 14 | 5V, 2.3V fuse check | (*1) | None | ->5.3.1 |

*1 In this case, the scanner does not power on.

*2 The display blinks 3 times before indicating “P”.

*3 Displayed only when the extended memories are installed.

### 5.1.2 Online Self-diagnostics

The scanner checks the following items during online operation and displays errors or alarms if any.

| No. | Check items (Timing of occurrence) | Error display | | Remarks |
|---|---|---|---|---|
| | | Scanner display | TWAIN (Error recovery guide) display | |
| 1 | Paper jam check (during paper transport) | U1 | Paper jammed in the ADF. Please clean rollers. | ->5.3.14 |
| 2 | Double-feed detection (during paper transport) | U2 | A double feed is detected. | When double-feed detection is enabled. ->5.3.15 |
| 3 | ADF cover open (before scanning started) | U4 | The ADF is open. Close the ADF and set the document on ADF paper chute or Hopper. | ->5.3.16 |
| 4 | (Reserved) | U6 | | *2, ->5.3.17 |
| 5 | FB Transportation system alarm (before FB scanning begins) | E0 | <Anomaly in Flatbed motor operation.><br>Sense Key=0x04<br>ASC=0x580<br>DDES=0x87 | ->5.3.18 |
| 6 | FB lamp intensity check (before FB scanning begins) | E1 | <Anomaly in the light intensity of Flatbed lamp.><br>Sense Key=0x04<br>ASC=0x680<br>DDES=0x7E | *1, ->5.3.19 |
| 7 | ADF (front) lamp intensity check (before ADF scanning begins) | E2 | <Anomaly in the light intensity of ADF front side lamp.><br>Sense Key=0x04<br>ASC=0x680<br>DDES=0x74 | *1, ->5.3.20 |
| 8 | ADF (back) lamp intensity check (before ADF scanning begins) | E3 | <Anomaly in the light intensity of ADF back side lamp.><br>Sense Key=0x04<br>ASC=0x680<br>DDES=0x75 | *1, ->5.3.20 |
| 9 | Motor fuse blown (before paper transport) | E4 | <Motor fuse is blown.><br>Sense Key=0x04<br>ASC=0x181<br>DDES=0x81 | Common for ADF/FB, ->5.3.21 |
| 10 | Lamp fuse blown (before scanning begins) | E5 | <Lamp fuse is blown.><br>Sense Key=0x04<br>ASC=0x380<br>DDES=0x84 | Common for ADF/FB, >5.3.22 |
| 11 | (Reserved) | EA | | *2, ->5.3.27 |
| 12 | Background switcher alarm (before scanning begins) | EF | <Anomaly in Background change operation.><br>Sense Key=0x04<br>ASC=0x580<br>DDES=0xF2 | ->5.3.30 |
| 13 | Fan alarm | E11 | <Fan is halted.><br>Sense Key=0x04<br>ASC=0x780<br>DDES=0xEC | ->5.3.31 |

| No. | Check items (Timing of occurrence) | Error display | | Remarks |
|---|---|---|---|---|
| | | Scanner display | TWAIN (Error recovery guide) display | |
| 14 | Heater error | E12 | <Anomaly in ADF front side heater.><br>Sense Key=0x04<br>ASC=0x44<br>DDES=0x92<br><br><Anomaly in ADF back side heater.><br>Sense Key=0x04<br>ASC=0x44<br>DDES=0x93<br><br><Anomaly in Flatbed heater.><br>Sense Key=0x04<br>ASC=0x44<br>DDES=0x94 | Common for ADF/FB, ->5.3.32 |
| 15 | ~~Optional board (TPS board) error~~ | E16 | <Anomaly in the option board.><br>Sense Key=0x04<br>ASC=0x880<br>DDES=0xED(EE) | ~~->5.3.34~~ |
| 16 | (Reserved) | E17 | | *2, ->5.3.35 |
| 17 | Sensor error | E18 | <Anomaly in sensor response.><br>Sense Key=0x04<br>ASC=0x44<br>DDES=0x02(03) | ->5.3.36 |
| 18 | Communication error in the scanner | E1A | <Anomaly in communication in the scanner.><br>Sense Key=0x04<br>ASC=0x44<br>DDES=0xF0 | ->5.3.28 |
| 19 | Abnormal command | None | <Anomaly in the command for communicating with the scanner.><br>Sense Key=0x05<br>ASC=0x20(24, 25, 26, 2C, 22C) | ->5.3.40 |
| 20 | (Reserved) | None | | ->5.3.41 |
| 21 | Interface error | None | <Anomaly communication with the scanner.><br>Sense Key=0x0B<br>ASC=0x43 (45, 47, 48, 4E, 180) | ->5.3.42 |
| 22 | ROM sum check (mainly when firmware is rewritten) | F | None | ->5.3.39 |

02

*1 Displayed only when this scanning is specified.
*2 Displayed only when the optional imprinter is installed.

### 5.1.3 Self-diagnostics in Maintenance Mode

The scanner checks the following items during maintenance mode #1, #2, #3 or #4 and displays the result if any error or alarm is detected.

| No. | Check items (Timing of occurrence) | Error display | | Remarks |
|---|---|---|---|---|
| | | Scanner display | TWAIN display | |
| 1 | ROM sum check (at power-on) | F | None *3 | ->5.3.39 |
| 2 | RAM error (at power-on) | Ec | | ->5.3.28 |
| 3 | Image memory error (at power-on) | E9 | | ->5.3.26 |
| 4 | EEPROM error (at power-on) | E7 | | ->5.3.24 |
| 5 | Detects home position of Carrier unit (FB) (at power-on) | U0 | | ->5.3.18 |
| 6 | 5V and 2.3V fuse check (at power-on) | *1 | | ->5.3.1 |
| | Motor fuse check (at power-on and when Maintenance mode #1 is begun) | E4 | | ->Common for ADF/FB, ->5.3.21 |
| | SCSI fuse check (at power-on) | E8 | | ->5.3.25 |
| 7 | Light intensity check (when Maintenance mode #1, #2 is begun) | E1 | | ->5.3.19 |
| | | E2 | | ->5.3.20 |
| | | E3 | | ->5.3.20 |
| 8 | Paper jam check (during #1) | U1 | | ->5.3.14 |

*1 In this case, the scanner does not power on.

*2 Maintenance mode #1 does not detect double-feeding.

*3 There is no TWAIN display during off-line testing.

# 5.2 Temporary Errors and Alarm Detection Algorithm

## 5.2.1 Temporary Errors

Temporary errors occur during scanning operation and can be remedied by the operator. They are displayed on the PC screen through the driver or on the operator panel.
The display and detection algorithm of the temporary errors are described below.

**(1) Temporary errors and detection algorithm**

| No. | Error display | | Detection algorithm and action to recover |
|---|---|---|---|
| | Scanner display | TWAIN display | |
| 1 | None | No paper on ADF paper chute or Hopper. | **No paper on the Chute unit**<br>This error occurs when the Empty sensor detects no paper loaded on the Chute unit at the receipt of a Feed command.<br><br>**How to recover:**<br>Load documents on the Chute unit.<br>When the error occurs frequently, refer to section 5.3.13. |
| 2 | U0<br>  | Please confirm the shipping lock is unlocked. | **Shipping lock confirmation error**<br>This error occurs when the FB scanning section fails to detect home position at power-on. Once home position detection is completed successfully after power-on, this error is treated as a transportation system error (E0).<br><br>**How to recover:**<br>Slide the shipping lock to unlock. (Refer to 2.2.2.) |
| 3 | U1<br>  | Paper jammed in the ADF. Please clean rollers. | **Paper jam**<br>This error is detected when one of the following occurs:<br>1) A document does not reach the Pick sensor or TOP sensor while the pick roller and separation roller have transported the document a specified length. (The scanner performs retry operation.)<br>2) The TOP sensor has detected the document is longer than the specified length. (The document may have slipped on the rollers)<br><br>**How to recover:**<br>Open the ADF and remove the jammed document. Close the ADF.<br>When the error occurs frequently, refer to section 5.3.14. |

<table>
<tr><th rowspan="2">No.</th><th colspan="2">Error display</th><th rowspan="2">Detection algorithm and action to recover</th></tr>
<tr><th>Scanner display</th><th>TWAIN display</th></tr>
<tr><td>4</td><td>U2<br>  </td><td>A double feed is detected.</td><td>

**Double-feed**

Three methods are used to detect this error. The methods for detecting double feeds are listed in Table A. The default double feed detection setting is “OFF”.(*)

Table A: Methods of double feed detection

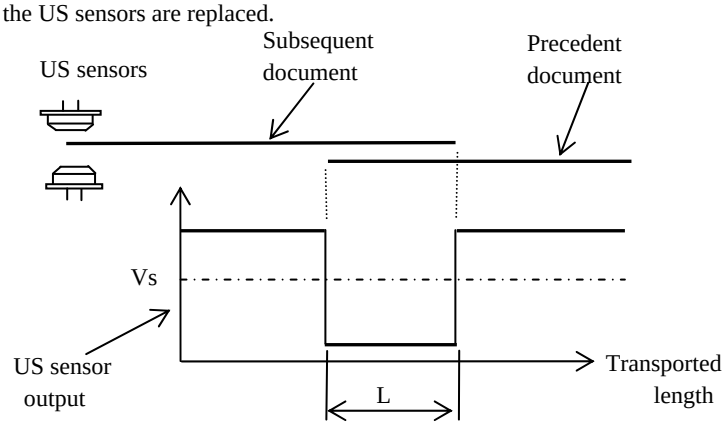
<table>
<tr><th>No.</th><th>Method</th><th>Document Type</th><th>Remarks</th></tr>
<tr><td>(a)</td><td>Overlapping detection by ultra sonic only</td><td>Different document length</td><td></td></tr>
<tr><td>(b)</td><td>Document length only</td><td>Constant document length</td><td></td></tr>
<tr><td>(c)</td><td>Combination of overlapping and document length detection</td><td></td><td></td></tr>
</table>

* Double-feed detection method can be selected both on the setting screen on the driver and on the Software Operation Panel (see section 3.2.3). The setting on the driver is recommended since it is prioritized.

**(a) Double-feed detection by ultra sonic sensors (US sensors)**

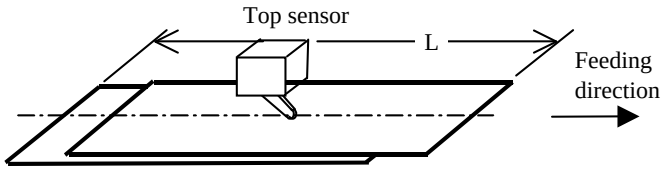
The ultra sonic sensors (US sensor, see section 4.1 (1)) are located above and below the document transporting section. The ultra sonic wave emitted from the transmitter goes through the document and is read at the receiver. When two sheets exist between the ultra sonic sensors, the output at the receiver is lower compared to when one sheet exists. When sensor output is consistently lower by 3mm than the specified slice level (Vs), a double-feed is detected. (See section 1.2.5 for document condition.)

The specified slice level needs to be set by referring to section 7.1.9 when the US sensors are replaced.




L > 3 mm: Double feed

</td></tr>
</table>

| No. | Error display | | Detection algorithm and action to recover |
|---|---|---|---|
| | Scanner display | TWAIN display | |
| 4 | U2<br>0<br>⇕<br>2 | The double feed is detected. | (Continued)<br>**(b) Double-feed detection by TOP sensor**<br>Using the TOP sensor, the scanner measures the length of the first document transported in the batch. The measured length is used as a standard length to be compared with the length of subsequent documents to be scanned. (See section 1.2.5 for document condition.)<br>If the second document is shorter than the first one, it means the double-feed occurred at the first document.<br>The scanner detects a double-feed when the detected paper length is larger or smaller than the standard value by ±10mm, ±15mm or ±20mm which is specified by the command. Immediately after a double-feed error is detected, the feeding operation stops.<br>  <br><br>L – paper length > ±10, ±15, ±20 (selectable)<br><br>**How to recover:**<br>Open the ADF and remove the document.<br>When the error occurs frequently, refer to section 5.3.15. |
| 5 | U4<br>0<br>⇕<br>4 | The ADF is open. Close the ADF and set the document on ADF paper chute or Hopper. | **ADF cover open**<br>This error occurs when the ADF Cover open sensor (sensor OP) detects that the ADF is not closed at the receipt of a Feed command.<br><br>**How to recover:**<br>Close the ADF.<br>When the error occurs frequently, replace the sensor OP by referring to section 6.10.7. |
| 6 | U6<br>0<br>⇕<br>8 | | (Reserved) |

**(2) Temporary error scanner display**

When a temporary error occurs, the scanner displays the following:

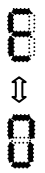
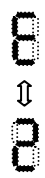
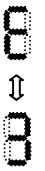
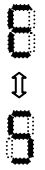
| Function No. Display | Power LED | Description (supplement) |
|---|---|---|
|  | ON | Displays “U” and the error No. (0 to 9) alternately.<br><br>Example)<br>When error “U0” occurs, the scanner displays the following:<br><br>“U” -> “0” …… |

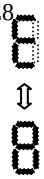
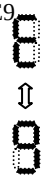
When the Scan or Send to button is pressed while the alarm is displayed, the scanner returns to the “Ready” display (Function number display).

## 5.2.2 Alarms

Alarms require maintenance by an authorized service person. The following table shows the display and detection algorithm for alarms. The alarms are displayed on a PC screen and/or on the operator panel (Function No. Display).

**(1) Alarms and their detection algorithm**

| No. | Error display | | Error name and occurrence algorithm | Related section |
|---|---|---|---|---|
| | Scanner display | TWAIN display | | |
| 1 | E0  | <Anomaly in Flatbed motor operation.> … (Code DS42045)<br><br>Sense Key=0x04<br>ASC=0x580<br>DDES=0x87 | **FB mechanical alarm**<br>After power-on, the Optical unit FB moves to the home position. If the home position detection sensor is not turned ON after the optical system has moved pre-defined steps, this error occurs.<br><br>**Probable causes:**<br>Defective sensor, FB motor, FB junction PCA or control PCA. | 5.3.18 |
| 2 | E1  | <Anomaly in the light intensity of Flatbed lamp.> …(Code DS42039)<br>Sense Key=0x04<br>ASC=0x680<br>DDES=0x7E | **Optical alarm (FB)**<br>This alarm occurs when the READ command for the first document is received, or when gain of the CCD amplifier is adjusted (sheet guide is read) during scanning. (Refer to (3) in section 4.3.)<br><br>**Probable causes:**<br>- The lamp, optical system or white sheet guide is dirty.<br>- Defective lamp, heater, CCD, or inverter.<br>- Connector disconnected | 5.3.19 |
| 3 | E2  | <Anomaly in the light intensity of ADF front side lamp.> … (Code DS42037) or (Code DS42040)<br>Sense Key=0x04<br>ASC=0x680<br>DDES=0x74 | **Optical alarm (ADF front)**<br>See item 2 (Optical alarm (FB)) above.<br><br>**Probable causes:**<br>See item 2 (Optical alarm (FB)) above. | 5.3.20 |
| 4 | E3  | <Anomaly in the light intensity of ADF back side lamp.> … (Code DS42038) or (Code DS42040)<br>Sense Key=0x04<br>ASC=0x680<br>DDES=0x75 | **Optical alarm (ADF back)**<br>See item 2 (Optical alarm (FB)) above.<br><br>**Probable causes:**<br>See item 2 (Optical alarm (FB)) above. | |
| 5 | E4  | <Motor fuse is blown.> … (Code DS42034)<br>Sense Key=0x04<br>ASC=0x181<br>DDES=0x81 | **Motor fuse blown**<br>This alarm occurs immediately after the motor fuse is blown. The motor fuse is blown when any of the FB motor or motors in ADF are abnormal. For maintenance, the Control PCA needs replacing because the fuse is soldered to the Control PCA.<br><br>**Probable causes:**<br>- Metal material dropped on the Control PCA<br>- Insulating material of motor cable damaged<br>- Defective motors | 5.3.21 |
| 6 | E5  | <Lamp fuse is blown out.> … (Code DS42035)<br>Sense Key=0x04<br>ASC=0x380<br>DDES=0x84 | **Lamp fuse blown**<br>This alarm occurs immediately after the lamp fuse is blown. The lamp fuse is blown when any of the lamps (ADF front/back/FB) are abnormal. The control PCA needs replacing because the fuse is soldered to the board.<br><br>**Probable causes:**<br>- Defective insulation of lamp cable<br>- Defective lamp, control PCA or Inverter | 5.3.22 |

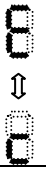
| No. | Error display | | Error name and occurrence algorithm | Related section |
|---|---|---|---|---|
| | Scanner display | TWAIN display | | |
| 7 | E6<br>  <br>Note1 | None | **Operator panel alarm**<br>Before the Panel PCA is replaced, EEPROM information is saved on the Control PCA, so that this information does not exist in the Panel PCA anymore. Operator panel alarm occurs if no EEPROM information existence on the Panel PCA is detected during initial processing immediately after power-on.<br><br>**Probable causes:**<br>- Panel PCA not connected properly<br>- Defective Panel PCA | 5.3.23 |
| 8 | E7<br>  <br>Note1 | <EEPROM is not accessible.> … (Code DS42022)<br>Sense Key=0x04<br>ASC=0x44<br>DDES=0xD2 | **EEPROM alarm**<br>This alarm is detected by comparing data in EEPROM during initial processing immediately after power-on.<br><br>**Probable causes:**<br>Damaged EEPROM in Panel PCA. (Replace Panel PCA) | 5.3.24 |
| 9 | E8<br>  <br>Note1 | None | **SCSI fuse blown**<br>This alarm is detected only during initial processing immediately after power-on.<br><br>**Probable causes:**<br>- Defective insulation of the devices connected to SCSI cable<br>- Defective Control PCA | 5.3.25 |
| 10 | E9<br>  <br>Note1 | <Memory is not accessible.> … (Code DS42023)<br>Sense Key=0x04<br>ASC=0x44<br>DDES=0xE4 (E5, E6) | **Image memory alarm**<br>This alarm is detected by checking read/write and bus only during initial processing immediately after power-on.<br><br>**Probable causes:**<br>- Defective memory<br>- Defective Control PCA | 5.3.26 |

Note 1) The alarm E6 to E9 is displayed 3 times before "0" during the initial processing immediately after power-on. When more than 1 of these errors occur simultaneously, they are displayed in the order of the priority described below:

E6 > E7 > E8 > E9

High priority ⟷ Low priority

The scanner can perform a scan operation even if these alarms occur, but the scanner might not operate properly.
For instance, when EEPROM is damaged, the document is scanned by default settings, which means the settings of magnification, offset and white level may not be optimum for the document to be scanned.
When the image memory is damaged, irregular image may appear which can be easily detected by a visual check.

| No. | Error display | | Error name and occurrence algorithm | Related section |
|---|---|---|---|---|
| | Scanner display | TWAIN display | | |
| 11 | EA  | | (Reserved) | 5.3.27 |
| 12 | Ec  | None | **RAM alarm**<br>This alarm is detected by checking read/write and bus.<br><br>**Probable causes:**<br>Defective Control PCA | 5.3.28 |
| 13 | Ed  | None | **SPC alarm**<br>This alarm is detected by checking read/write and bus.<br>SPC: SCSI Protocol Controller<br><br>**Probable causes:**<br>Defective Control PCA | 5.3.29 |
| 14 | EF  | <Anomaly in Background change operation.> … (Code DS42046)<br>Sense Key=0x04<br>ASC=0x580<br>DDES=0xF2 | **Background switching mechanism alarm**<br>1) Sensor is not turned OFF even if the motor is rotated from ON to OFF direction.<br>2) Sensor is not turned ON even if the motor is rotated from OFF to ON direction.<br><br>**Probable causes:**<br>- Background detection sensor connector disconnected.<br>- Defective background detection sensor<br>- BW motor connector disconnected, Defective BW motor<br>- Defective background unit F<br>- Defective background unit B | 5.3.30 |
| 15 | E11  | <Fan is halted.> … (Code DS42041)<br>Sense Key=0x04<br>ASC=0x780<br>DDES=0xEC | **Fan alarm**<br>This alarm is displayed when fan rotation is not detected<br>**Probable causes:**<br>Defective fan or control PCA | 5.3.31 |
| 16 | E12  | <Anomaly in ADF front side heater.> … (Code DS42031)<br>Sense Key=0x04<br>ASC=0x44<br>DDES=0x92<br><br><Anomaly in ADF back side heater.> … (Code DS42032)<br>Sense Key=0x04<br>ASC=0x44<br>DDES=0x93<br><br><Anomaly in Flatbed heater.> … (Code DS42033)<br>Sense Key=0x04<br>ASC=0x44<br>DDES=0x94 | **Heater alarm**<br>This alarm occurs if thermistor temperature is less than 40 $C^{o}$ for more than 10 minutes.<br>Common for ADF/FB.<br>**NOTICE**<br>Scanning is still available even when the heater alarm occurs. Once it occurs after power-on and is canceled, this alarm will not be detected until next power OFF/ON. If the heaters are not operating properly, image quality may be affected.<br><br>**Probable causes:**<br>- Connector disconnected between Control PCA and lamp, and Control PCA and thermistor<br>- Defective lamp<br>- Defective Control PCA<br>- Defective Background units | 5.3.32 |

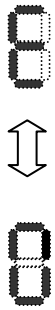
| No. | Error display | | Error name and occurrence algorithm | Related section |
|---|---|---|---|---|
| | Scanner display | TWAIN display | | |
| 17 | E15  | None | **Extended memory alarm**<br>This alarm is detected when the extended memories are installed.<br>This alarm is detected only during initial diagnostics immediately after power-on and blinks 3 times before displaying "P".<br><br>**Probable causes:**<br>- Improper installation of extended memories<br>- Defective extended memories<br>- Defective Control PCA | 5.3.33 |
| 18 | E16  | <Anomaly in the option board.> … (Code DS42042)<br>Sense Key=0x04<br>ASC=0x880<br>DDES=0xED (EE) | **Optional board (TPS board) alarm**<br>This alarm is detected only when the optional board (TPS board) is mounted.<br><br>**Probable causes:**<br>- Improper installation of optional board<br>- Defective optional board<br>- Defective Control PCA | 5.3.34 |
| 19 | E17  | | (Reserved) | 5.3.35 |
| 20 | E18  | <Anomaly in sensor response.> … (Code DS42026)<br>Sense Key=0x04<br>ASC=0x44<br>DDES=0x02(03) | **Sensor alarm**<br>This alarm is detected when communication with either of empty sensor, ADF cover open sensor, TOP sensor, US sensor, DF sensor, pick sensor or FB cover sensor is not available. This alarm is detected only during initial diagnostics immediately after power-on and blinks 3 times before displaying "P".<br><br>**Probable causes:**<br>- Each sensor's connector disconnected<br>- Defective sensors<br>- Defective US PCA<br>- Defective Control PCA | 5.3.36 |
| 21 | E19  | <LSI is not accessible.> … (Code DS42029)<br>Sense Key=0x04<br>ASC=0x44<br>DDES=0xE9(EA) | **LSI alarm**<br>This alarm is detected when register (LSI) is not accessible.<br><br>**Probable causes:**<br>- LSI on the Control PCA is shorted out<br>- Defective Control PCA | 5.3.37 |

02

| No. | Error display | | Error name and occurrence algorithm | Related section |
|---|---|---|---|---|
| | Scanner display | TWAIN display | | |
| 22 | E1A  | <Anomaly of internal communication of the scanner.> … (Code DS42028)<br>Sense Key=0x04<br>ASC=0x44<br>DDES=0xF0 | **Scanner internal communication error**<br>This alarm is detected when MDC and SDC are unable to communicate via DPRAM.<br><br>**Probable causes:**<br>- DPRAM pins on the Control PCA are shorted out.<br>- Defective Control PCA | 5.3.38 |
| 23 | None | <Anomaly in the command for communicating with the scanner.> … (Code DS00003)<br>Sense Key=0x05<br>ASC=0x20(24,25,26,2C,22C) | **Abnormal command**<br>Detected by the driver.<br><br>**Probable causes:**<br>- Communication error between the scanner and the PC<br>- Defective Control PCA | 5.3.40 |
| 24 | None | (Reserved) | (Reserved) | 5.3.41 |
| 25 | None | <Anomaly in communication with the scanner.> … (Code DS42050)<br>Sense Key=0x0B<br>ASC=0x43(45,47,48,4E,180) | **Interface alarm**<br>Detected by the driver.<br><br>**Probable causes:**<br>- Communication error between the scanner and the PC<br>- Defective Control PCA | 5.3.42 |

**(2) Alarm displayed on the operator panel**

When an alarm occurs, the scanner displays the following on the operator panel:

| Function No. Display | Power LED | Description (supplement) |
|---|---|---|
|  | ON | Displays “E” and one of the alarms (0 - 9, A, c, d, F) alternately.<br><br>The example shown in the left column is the case of Alarm “E0”.<br>The display sequence is:<br>“E” → “0” → ……<br><br>The interval of the display change is approximately 1 second. |

When Scan or Send to button is pressed while the alarm is displayed, the scanner returns to the “Ready” display (Function number display).

### 5.2.3 Flash Memory Status Display

The display and detection algorithm of the flash memory status are described below.

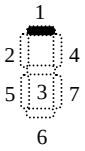
**(1) Error status display**

The following display appears when a check sum error of the flash memory occurs:

| Function No. Display | Power LED | Description (supplement) |
|---|---|---|
|  | ON | "F" is displayed without blinking on the Function No. Display. |

**(2) Flash memory (firmware) update display**

The following display appears while the firmware is being updated.

| Function No. Display | Power LED | Description (supplement) |
|---|---|---|
|  | ON | The Function No. Display changes in the order below.<br><br>1) Lights 1 → 2 → 3 → 4<br>2) Goes out 1 → 2 → 3 → 4<br>3) Lights 3 → 5 → 6 → 7<br>4) Goes out 3 → 5 → 6 → 7<br><br>The step (1) to (4) is repeated.<br>The interval of display change is approximately 0.5 seconds. |

## 5.3 Troubleshooting

When a temporary error or an alarm occurs, find the troubleshooting procedure from the list in this section and go to the related section for maintenance. Before starting the troubleshooting, get the following information from your customer to understand whether the error is scanner-related or system-related.

- Is the scanner operated correctly?
- Are the fault symptoms reproducible or persistent?
  (Check if the target scanner causes the same error connected to another computer system.)

Following lists the case of troubleshooting described later in this section.

| Error category | Error description | Related section | Remarks |
|---|---|---|---|
| Device | Scanner does not turn ON. (No display on the operator panel) | 5.3.1 | |
| | Scanning does not start. | 5.3.2 | |
| | Scanned image is distorted. | 5.3.3 | |
| Image | Resolution or gradation of scanned image is unsatisfactory. | 5.3.4 | |
| | Too much jitter on scanned image from the FB | 5.3.5 | |
| | Scanned image is misaligned from the FB | 5.3.6 | |
| | Scan magnification factor abnormal from the FB | 5.3.7 | |
| | Too much jitter on scanned image from the ADF | 5.3.8 | |
| | Scanned image is misaligned from the ADF | 5.3.9 | |
| | Scan magnification factor abnormal from the ADF | 5.3.10 | |
| | Vertical streaks appear in scanned image | 5.3.11 | |
| | When calibrating white level of scanned image | 5.3.12 | |
| Temporary error | Improper “No paper on the Chute unit” error | 5.3.13 | |
| | U1: Frequent paper jam error | 5.3.14 | |
| | U2: Frequent double-feed error | 5.3.15 | |
| | U4: Improper “ADF cover open” error | 5.3.16 | |
| | U6: (Reserved) | 5.3.17 | |
| Alarm | E0: Frequent “Flatbed transportation system alarm” or U0: “Shipping lock error” | 5.3.18 | |
| | E1: “Optical alarm” | 5.3.19 | |
| | E2 or E3: “Optical alarm” | 5.3.20 | |
| | E4: “Motor fuse blown” | 5.3.21 | |
| | E5: “Lamp fuse blown” | 5.3.22 | |
| | E6: “Operator panel alarm” | 5.3.23 | |
| | E7: “EEPROM alarm” | 5.3.24 | |
| | E8: ” SCSI fuse blown” | 5.3.25 | |
| | E9: ”Memory alarm” | 5.3.26 | |
| | EA: (Reserved) | 5.3.27 | |
| | Ec: “RAM alarm” | 5.3.28 | |
| | Ed: “SPC alarm” | 5.3.29 | |
| | EF: “Background switch alarm” | 5.3.30 | |
| | E11: “Fan alarm” | 5.3.31 | |
| | E12: “Heater alarm” | 5.3.32 | |
| | E15: “Optional extended memory alarm” | 5.3.33 | |
| 02 | ~~E16: “Optional board (TPS board) alarm”~~ | ~~5.3.34~~ | |
| | E17: (Reserved) | 5.3.35 | |
| | E18: “Sensor alarm” | 5.3.36 | |

| Error category | Error description | Related section | Remarks |
|---|---|---|---|
| Alarm | E19: “LSI alarm” | 5.3.37 | |
| | E1A: “Communication error inside of scanner” | 5.3.38 | |
| | F: “ROM sum check alarm” | 5.3.39 | |
| | “Abnormal command” | 5.3.40 | |
| | (Reserved) | (Reserved) | |
| | “Interface alarm” | 5.3.42 | |

**NOTICE**

The troubleshooting should be conducted from item number 1 to the last item number in each table.
Continue the troubleshooting until the error is resolved.

### 5.3.1 Scanner Does not Turn ON (No display on the operator Panel)

Table 5.3.1

| Item No. | Check items | How/where to check |
|---|---|---|
| 1 | Is the AC cable connected correctly? Does the same symptom occur after turning OFF and ON the scanner? | Press the “O” area of power switch to turn the scanner OFF, and press the “I” area to turn it ON. |
| 2 | Connect the AC cable to a different wall outlet. | |
| 3 | Replace AC cable and see if the error is resolved. | --- |
| 4 | Replace Panel PCA and see if the error is resolved. | Refer to section 6.12.1. |
| 5 | Replace Power supply and see if the error is resolved. | Refer to section 6.7. |
| 6 | Replace Control PCA and see if the error is resolved. | Refer to section 6.7. |

### 5.3.2 Scanning Does not Start

Table 5.3.2

| Item No. | Check items | How/where to check |
|---|---|---|
| 1 | Does the same symptom appear after turning OFF and ON the scanner? | Press the “O” area of power switch to turn the scanner OFF, and press the “I” area to turn it ON. |
| 2 | Check the items listed in the right column. | ・ Is the AC cable connected properly?<br>・ Is the interface cable (SCSI or USB) connected properly?<br>・ Is the SCSI ID correctly set?<br>・ Is there documents loaded on the Chute unit?<br>・ Is the ADF cover completely closed?<br>・ If any temporary error or alarm is indicated, follow the corresponding troubleshooting. |

### 5.3.3 Scanned Image is Distorted

Due to loose connectors, cut wire in cables, or defective parts, scanned images may have regular or random patterns of distortion on it.

Table 5.3.3

| Item No. | Check items | How/where to check |
|---|---|---|
| 1 | Check the items listed in the right column. | ・ Is the interface cable (SCSI or USB) connected properly?<br>・ If any temporary error or alarm is indicated, follow the corresponding troubleshooting. |
| 2 | Are the cables between the Control PCA and the Optical unit damaged? Or are the connectors connected properly? | ADF front scanning: See section 6.11.2.<br>ADF back scanning: See section 6.10.2. |
| 3 | Replace the Optical unit and see if the error is resolved. | ADF front scanning: See section 6.11.2 for replacement.<br>ADF back scanning: See section 6.10.2 for replacement. |
| 4 | Replace the Control PCA and see if the error is resolved. | Refer to section 6.7. |

### 5.3.4 Resolution or Gradation of Scanned Image is Unsatisfactory

Table 5.3.4

| Item No. | Check items | How/where to check |
|---|---|---|
| 1 | Check the items listed in the right column. | ・ Does the document satisfy the paper specifications described in the section 1.2?<br>・ Are the scan settings (resolution, density) correctly specified in the application software used for the document being scanned?<br>・ Is the interface cable (SCSI or USB) connected correctly?<br>・ If any temporary error or alarm is indicated, follow the corresponding troubleshooting. |
| 2 | Clean the reading section (glass) and see if the error is resolved. | |
| 3 | Clean the Feed rollers and Plastic rollers and see if the error is resolved. | Refer to section 3.4.1. |
| 4 | Is the Optical unit or lamp dirty?<br>Are the cables damaged?<br>Are the connectors connected properly? | ADF front scanning: See section 6.3.1 for cleaning.<br>ADF back scanning: See section 6.3.1 for cleaning. |
| 5 | Replace the Optical unit and see if the error is resolved. | ADF front scanning: See section 6.11.2 for replacement.<br>ADF back scanning: See section 6.10.2 for replacement. |
| 6 06 | Replace the Background unit and see if the error is resolved. | ADF back scanning: Replace Background unit F by referring to Section 6.11.2.<br>ADF front scanning: Replace Background unit B by referring to Section 6.10.8. |
| ~~6~~ 7 06 | Replace the Control PCA and see if the error is resolved. | Refer to section 6.7. |

### 5.3.5 Too Much Jitter on Scanned Image when Scanning from the FB

The following shows a sample of scanned image when "Jitter" error occurs. This error occurs when the Optical unit FB does not move smoothly.

Scanned image with jitter 


Normal scanned image 


Table 5.3.5

| Item No. | Check items | How/where to check |
|---|---|---|
| 1 | Check the items listed in the right column | ・ Is the scanner bumped during the scan operation?<br>・ Is the scanner placed on a level surface? |
| 2 | Is there a foreign object preventing the Optical unit FB from moving? | Remove FB cover by referring to steps (1) to (4) in section 6.12.2 and remove object. |
| 3 | Is the Optical unit FB installed correctly? | Refer to section 6.12.5. |
| 4 | Is the FB belt installed correctly? | Refer to section 6.12.6. |
| 5 | Replace the FB motor and see if the error is resolved. | Refer to section 6.12.6. |
| 6 | Replace the Optical unit FB and see if the error is resolved. | Refer to section 6.12.5. |
| 7 | Replace the Control PCA and see if the error is resolved. | Refer to section 6.7. |

### 5.3.6 Scanned Image is Misaligned when Scanning from the FB

Table 5.3.6

| Item No. | Check items | How/where to check |
|---|---|---|
| 1 | Check the items listed in the right column. | ・ Was the scanner bumped during operation?<br>・ Are the scan settings (document size, etc.) correct in the application software used?<br>・ Is the scanner placed on a level surface? |
| 2 | Adjust the offset values in the software operation panel. | Refer to section 3.2.9. |
| 3 | Adjust the offset by Maintenance mode. | Refer to section 7.1.4. |
| 4 | Is there a foreign object preventing the Optical unit FB from moving? | Remove the FB cover by referring to steps (1) to (4) in section 6.12.2 and remove object. |
| 5 | Is the Optical unit FB installed correctly? | Refer to section 5.12.5. |
| 6 | Replace the Optical unit FB and see if the error is resolved. | Refer to section 5.12.5. |

### 5.3.7 Scan Magnification Factor is Incorrect when Scanning from the FB

Table 5.3.7

| Item No. | Check items | How/where to check |
|---|---|---|
| 1 | Check the items listed in the right column. | ・ Was the scanner bumped during the scan operation?<br>・ Are the scan settings (resolution, etc.) correct in the application software used?<br>・ Is the scanner placed on a level surface? |
| 2 | Does the abnormal magnification occur horizontally (main scanning direction) or vertically (sub-scanning direction)? | Sub-scanning direction: Go to item No.3<br>Main scanning direction Go to item No.7. |
| 3 | Adjust the vertical magnification using the Set up mode in the software operation panel. | Refer to section 3.2.10. |
| 4 | Is there a foreign object preventing the Optical unit FB from moving? | Remove the FB cover by referring to steps (1) to (4) in section 6.12.2. |
| 5 | Is the belt installed correctly? | Refer to section 6.12.6. |
| 6 | Replace the FB motor and see if the error is resolved. | Refer to section 6.12.6.<br>If the FB motor is OK, go to item No. 8. |
| 7 | Is the Optical unit installed in the FB correctly? | Refer to section 6.12.5. |
| 8 | Replace the Optical unit FB and see if the error is resolved. | Refer to section 6.12.5. |
| 9 | Replace the Control PCA and see if the error is resolved. | Refer to section 6.7. |

### 5.3.8 Too Much Jitter on Scanned Image when Scanning from ADF

The following shows a sample of scanned image when “Jitter” error occurs. This error occurs when the ADF feed roller do not transport the document smoothly.

Scanned image with jitter 


Normal scanned image 


Table 5.3.8

| Item No. | Check items | How/where to check |
|---|---|---|
| 1 | Does the document satisfy the paper specification? | Refer to section 1.2 for the paper specification. |
| 2 | Clean the Feed rollers and the Plastic rollers and see if the error is resolved. | Refer to section 3.4.1. |
| 3 | Replace the Pick roller and the Brake roller and see if the error is resolved. | Check the consumable counter in the software operation panel or in the built-in Maintenance mode. When the counter exceeds the values shown in section 3.5.1, replace the Pick roller or the Brake roller. |
| 4 | Are the cables between the Control PCA and the Feed motor damaged?<br>Are the connectors connected properly? | Refer to section 6.10.4 for checking. |
| 5 | Is the Optical unit ADF installed correctly? | ADF front scanning: See section 6.11.2.<br>ADF back scanning: See section 6.10.2. |
| 6 | Is the Belt ADF installed correctly? | Refer to section 6.10.4. |
| 7 | Is the Belt ADF damaged? | Refer to section 6.10.4. |
| 8 | Replace Feed motor and see if the error is resolved. | Refer to section 6.10.4. |
| 9 | Replace the Optical unit ADF and see if the error is resolved. | ADF front scanning: See section 6.11.2.<br>ADF back scanning: See section 6.10.2. |
| 10 | Replace the ADF unit and see if the error is resolved. | Refer to section 6.8. |

### 5.3.9 Scanned Image is Misaligned when Scanning from the ADF

Table 5.3.9

| Item No. | Check items | How/where to check |
|---|---|---|
| 1 | Check the items listed in the right column. | ・ Does the document satisfy the paper specifications described in section 1.2?<br>・ Are the scan settings (document size, etc.) correct in the application software used? |
| 2 | Clean the Feed rollers and the Plastic rollers and see if the error is resolved. | Refer to section 3.4.1. |
| 3 | Adjust the offset value in the software operation panel. | Refer to section 3.2.9. |
| 4 | Adjust the offset by Maintenance mode. | Refer to section 7.1.4. |
| 5 | Is the Optical unit installed correctly? | ADF front: Refer to section 6.11.2.<br>ADF back: Refer to section 6.10.2. |
| 6 | Replace the ADF unit and see if the error is resolved. | Refer to section 6.8. |

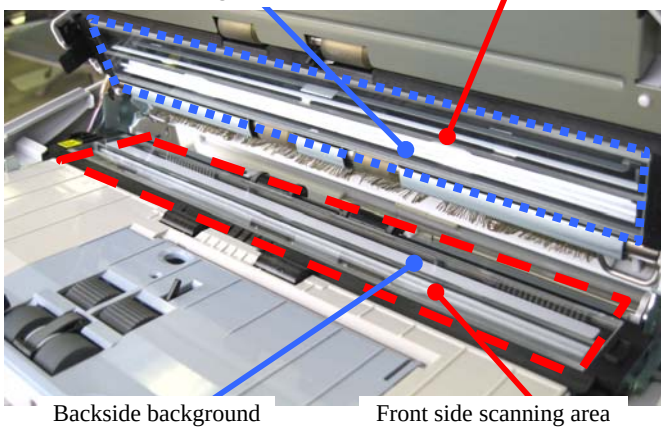
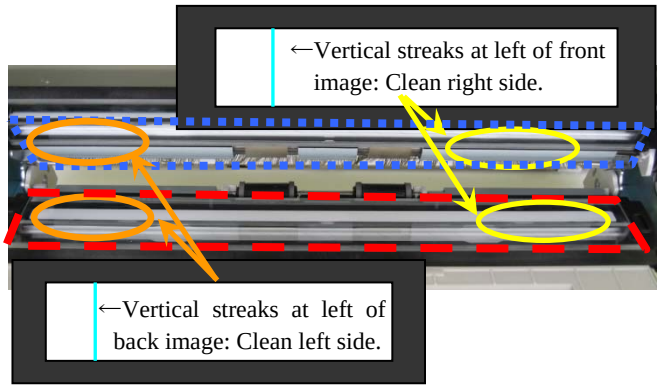
### 5.3.10 Scan Magnification Factor Abnormal is Incorrect when Scanning from the ADF

Table 5.3.10

| Item No. | Check items | How/where to check |
|---|---|---|
| 1 | Check the items listed in the right column. | Are the scan settings (resolution, etc.) correct in the application software used? |
| 2 | Does the abnormal magnification occur horizontally (main scanning direction) or vertically (sub-scanning direction)? | Sub-scanning direction: Go to item No.3<br>Main scanning direction Go to item No.8 |
| 3 | Clean the Feed rollers and the Plastic rollers and see if the error is resolved. | Refer to section 3.4.1. |
| 4 | Is there a foreign object in the roller section of the ADF, affecting the rotation of the Feed rollers? | Referring to step (1) in section 6.10.1, remove the ADF cover, and check the ADF belt. |
| 5 | Adjust the vertical magnification in the software operation panel. | Refer to section 3.2.10. |
| 6 | Is the Feed motor belt loose? | Refer to section 6.10.4. |
| 7 | Replace the Feed motor and see if the error is resolved. | Refer to section 6.10.4. |
| 8 | Is the Optical unit ADF installed correctly? | ADF front scanning: Refer to section 6.11.2.<br>ADF back scanning: Refer to section 6.10.2. |
| 9 | Replace the Optical unit ADF and see if the error is resolved. | |
| 10 | Replace the ADF unit and see if the error is resolved. | Refer to section 6.8. |

## 5.3.11 Vertical Streaks Appear in Scanned Image

Table 5.3.11

| Item No. | Check items | How/where to check |
|---|---|---|
| 1 | Check the items listed in the right column. | Is the interface cable connected properly? |
| 07<br>2 | When vertical streaks appear on the front side image, clean the scanning area of the front side and the front side background unit (photo on the right).<br><br>When vertical streaks appear on the backside image, clean the scanning area of the backside and the backside background unit (photo on the right).<br><br>When vertical streaks appear on the image scanned on the Flatbed, clean the glass of the document bed. | Cleaning ADF: Refer to Section 3.4.1<br>Cleaning FB: Refer to Section 3.4.2<br>Backside scanning area Front side background<br>  <br>Backside background Front side scanning area<br><br>**Front side**: Vertical streaks and cleaning position are **left-right reversal**.<br>**Backside**: Vertical streaks and cleaning position are the **same side**.<br>  <br> |
| 07<br>3 | Inside of the glasses at the scanning area or white reference may be dirty.<br>In the case of Background unit F, Clean inside of the unit.<br>In the case of Background unit B, replace the unit. | Cleaning inside of Background unit F: Refer to Section 6.3.3.<br>Replacing Background unit B: Refer to Section 6.10.8. |
| 4 | Is the Optical unit dirty?<br>Are the cables damaged?<br>Are the connectors connected properly? | ADF front: Refer to section 6.3.1 for cleaning.<br>ADF back: Refer to section 6.3.1 for cleaning.<br>FB: Refer to section 6.3.2 for cleaning. |
| 5 | Replace the Optical unit and see if the error is resolved. | ADF front: Refer to section 6.11.2 for replacement procedure.<br>ADF back: Refer to section 6.10.2 for replacement procedure.<br>FB: Refer to section 6.12.6 for replacement procedure. |
| 6 | Replace the Control PCA and see if the error is resolved. | Refer to section 6.7. |

### 5.3.12 When Calibrating White Level of Scanned Image

Table 5.3.12

| Item No. | Check items | How/where to check |
|---|---|---|
| 1 | Check the items listed in the right column. | ・ Are the scan settings (density, number of colors) correct for the application software used?<br>・ Is the sheet guide (White part) in the ADF dirty? |
| 2 | Conduct the white level adjustment by Maintenance mode. | Refer to section 7.1.5. |

### 5.3.13 Improper "No Paper on the Chute Unit" Error

Table 5.3.13

| Item No. | Check items | How/where to check |
|---|---|---|
| 1 | Does the same symptom occur after turning OFF and ON the scanner? | Press the "O" area of power switch to turn the scanner OFF, and press the "I" area to turn it ON. |
| 2 | Is there a slip of paper left near the Empty sensor? | Open the ADF and check inside visually. |
| 3 | Check the performance of the Empty sensor. | Conduct Maintenance mode (refer to section 7.1.2) to see if the sensor works properly.<br>If the error still occurs, confirm that the cable is correctly connected then replace the sensor. (Refer to section 6.9.3.) |

### 5.3.14 "U1:Frequent Paper Jam Error"

Table 5.3.14

| Item No. | Check items | How/where to check |
|---|---|---|
| 1 | Do the documents satisfy the paper specification? | Refer to section 1.2 for the paper specifications. |
| 2 | Have the documents been prepared properly? | ・ Align the edge of documents for stable paper feeding.<br>・ Remove documents with creases or dog-ear corners.<br>・ Scanning different widths documents may cause skew and result in paper jam. |
| | Clean the Pick roller, the Separation roller, the Brake roller and the Chute roller and see if the error is resolved. | Refer to section 3.4.1. |
| 3 | Clean the Feed rollers and the Plastic rollers and see if the error is resolved. | Refer to section 3.4.1. |
| 4 | Replace the Pick roller, the Brake roller and the Chute roller, and see if the error is resolved. | Check the consumable counter in the software operation panel or from the built-in Maintenance mode (section 7.1.6). When the counter exceeds the values shown in section 3.5.1, replace the Pick roller or the Brake roller. |
| | Check the performance of the Pick arm. | If it does not perform correctly, replace BW motor (pick arm side). Refer to section 6.10.3. |
| 5 | Check the performance of TOP sensor. | Refer to section 7.1.2. |
| 6 | Is the Pick sensor malfunctioning? | Refer to section 7.1.2. |

### 5.3.15 "U2: Frequent Double-feed Error"

Table 5.3.15

| Item No. | Check items | How/where to check |
|---|---|---|
| 1 | Do the documents satisfy the paper specification? | Refer to section 1.2 for paper specification, paying attention to the following points:<br>・ Is double-feed error detected by paper length when scanning documents with different length?<br>・ Are there perforations in the center of the documents? |
| 2 | Are the document handled well? | Check whether the paper is handled as described in step (2) of section 3.1.3. |
| 3 | Clean the ADF unit. | Refer to section 3.4.1 for cleaning cycle and method. Clean the Pick roller, the Brake roller, the Ultra sonic sensor and the DF sensor with care. |
| 4 | Replace the Pick roller and the Brake roller and see if the error is resolved. | Check the consumable counter in the software operation panel or from the built-in Maintenance mode (section 7.1.6). When the counter exceeds the values shown in section 3.5.1, replace the Pick roller or the Brake roller. |
| 5 | Check the performance of the Ultra sonic sensor and the DF sensor. | Conduct Maintenance mode (refer to section ~~7.1.2~~ 7.1.9) to see if the sensors work properly. 02<br>If the error still occurs, confirm that the cables are correctly connected then replace the corresponding sensor. (Refer to section 6.9.2.) |

### 5.3.16 Improper "ADF Cover Open" Error

Table 5.3.16

| Item No. | Check items | How/where to check |
|---|---|---|
| 1 | Does the same symptom occur after turning OFF and ON the scanner? | Press the "O" area of power switch to turn the scanner OFF, and press the "I" area to turn it ON. |
| 2 | Is there a slip of paper left near Cover open sensor? | Open the ADF and check inside visually. |
| 3 | Check the performance of Cover open sensor. | Conduct Maintenance mode (refer to section 7.1.2) to see if the sensor works properly.<br>If the error still occurs, confirm that the cable is correctly connected. |

### 5.3.17 "U6: (Reserved)"

### 5.3.18 Frequent "U0: Shipping Lock Error" or "E0: Drive Unit Error"

Table 5.3.18

| Item No. | Check items | How/where to check |
|---|---|---|
| 1 | Does the same symptom occur after turning OFF and ON the scanner? | Press the "O" area of power switch to turn the scanner OFF, and press the "I" area to turn it ON. |
| 2 | Does the same symptom occur after unlocking the Shipping lock? | Refer to step (2) of section 2.2.2 for unlocking. |
| 3 | Is there abnormal noise from the FB motor when this error occurs? | If abnormal noise is heard, go to item No. 4.<br>If there is no abnormal noise, go to item No.6 to check circuit. |
| 4 | Is there a foreign object in the FB area? | Check visually. |
| 5 | Is the belt installed correctly? | Refer to section 6.12.7. |
| 6 | Is the FB motor cable connected properly? | Be sure to connect it. |
| 7 | Check the performance of FB motor. | Replace it if not performing correctly. |
| 8 | Replace the Home position sensor and see if the error is resolved. | Refer to section 6.12.4. |
| 9 | Replace the Control PCA and see if the error is resolved. (*) 08 | Refer to section 6.7 for replacement procedure. |

08 * If the Fuse F5 mounted on the Control PCA is blown, the FB motor cannot rotate which generates "E0" error. The Fuse F5 is blown due to PCA/Sensors damage (short out). Before replacing the Control PCA, check if any of the following parts are damaged or metal pieces exist in those parts.

- ADF Junction PCA
- Optical Unit ADF
- Optical Unit FB
- FB Junction PCA
- Sensor (for home position detection)
- Sensor (for Pick arm position detection)
- ADF Cable

### 5.3.19 "E1: Optical Alarm (FB)"

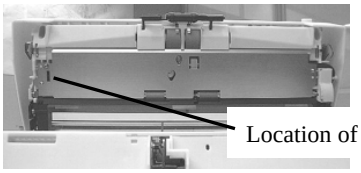
Table 5.3.19

| Item No. | Check items | How/where to check |
|---|---|---|
| 1 | Does the same symptom occur after turning OFF and ON the scanner? | Press the "O" area of power switch to turn the scanner OFF, and press the "I" area to turn it ON. |
| 1 | Is the White sheet guide (glass) in the FB cover dirty? | Remove the FB cover and clean the White sheet guide (glass). Refer to section 6.12.2. |
| 2 | Is the Optical unit dirty?<br>Are cables damaged?<br>Are the connectors connected properly? | Refer to section 6.3.2 for cleaning. |
| 4 | Do the Lamps FB light up?<br>Are cables damaged?<br>Are the connectors connected properly? | Check if the lamps light up during the Paper feeding test (section 7.1.2).<br>If not, the error is caused by the defective Lamp FB (section 6.12.5) or Inverter (section 6.12.5). |
| 5 | Replace the Optical unit FB and see if the error is resolved. | Refer to section 6.12.5. |

## 5.3.20 "E2 or E3: Optical Alarm"

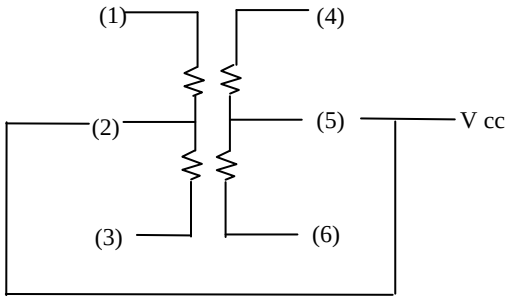
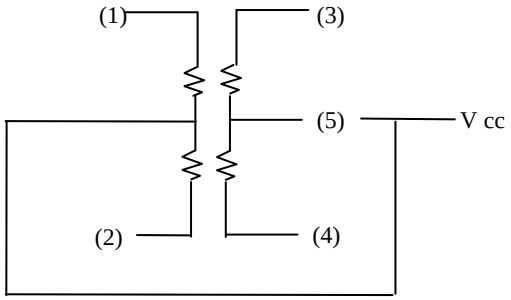
Ref) E2: ADF front side scanning optical alarm (lower optical unit ADF)
E3: ADF backside scanning optical alarm (upper optical unit ADF)

Table 5.3.20

| Item No. | Check items | How/where to check |
|---|---|---|
| 1 | Does the same symptom occur after turning OFF and ON the scanner? | Press the "O" area of power switch to turn the scanner OFF, and press the "I" area to turn it ON. |
| 2 | E2: Is the upper glass (white sheet guide) of the reading section dirty?<br>E3: Is the lower glass (white sheet guide) of the reading section dirty? | Open the ADF, and clean the sheet guide (white part) and the glass. (Refer to section 3.4.1.) |
| 3 | E2: Is the lower Optical unit ADF dirty?<br>E3: Is the upper Optical unit ADF dirty?<br>Are the cables damaged?<br>Are the connectors connected properly? | E2 (ADF front): Refer to section 6.3.1 for cleaning.<br>E3 (ADF back): Refer to section 6.3.1 for cleaning. |
| 4 | E2: Is the lower lamp ON?<br>E3: Is the upper lamp ON?<br>Are the cables damaged?<br>Are the connectors connected properly? | Disconnect the SCSI cable and turn the scanner ON. Open the ADF and press Sensor as shown below to see if the ADF lamps light. If not, the error is caused by defective lamps or inverter.<br>If upper lamp does not light: See section 6.10.8.<br>If lower lamp does not light: See section 6.11.2.<br>  <br>Location of sensor OP |
| 5 | Replace the lower Optical unit ADF and see if the error is resolved.<br>Replace the upper Optical unit ADF and see if the error is resolved. | E2 (ADF front): See section 6.11.2.<br>E3 (ADF back): See section 6.10.2. |

### 5.3.21 "E4: Motor Fuse Blown"

Table 5.3.21

| Item No. | Check items | How/where to check |
|---|---|---|
| 1 | Does the same symptom occur after turning OFF and ON the scanner? | Press the "O" area of power switch to turn the scanner OFF, and press the "I" area to turn it ON. |
| 2 | Are there any foreign objects lying on the Control PCA? | Remove the Control PCA and inspect. (Refer to section 6.7.). |
| 3 | Are the cables between the Control PCA and the motor damaged?<br>Are the connectors connected properly? | Pick motor: Refer to section 6.11.2.<br>BW motor: Refer to section 6.10.3 or 6.10.5.<br>Feed motor: Refer to section 6.10.4. |
| 4 | Is the coil resistance of the motor normal? | Remove the motor cable to check the coil resistance between the following pins of the motor.<br><br>1) Pick motor unit, Feed motor, FB motor<br>Pick motor unit<br>Feed motor / FB motor<br>Resistance 2-1, 2-3: approx. 1.7 Ohms / approx.1.9 Ohms<br>Resistance 5-4, 5-6: approx. 1.7 Ohms / approx.1.9 Ohms<br>Resistance 1-3, 4-6: approx. 3.4 Ohms / approx.3.8 Ohms<br>Other match: Infinite / Infinite<br>  <br><br>2) BW motor<br>BW motor<br>Resistance 1-2, 1-3, 1-4: approx.20 Ohms<br>Resistance 2-3, 2-4, 3-4: approx.20 Ohms<br>Resistance 5-1, 5-2, 5-3, 5-4: approx.40 Ohms<br>Other match: Infinite<br>  <br><br>Replace the corresponding motor if the resistance is abnormal. |
| 5 | Replace the Control PCA and see if the error is resolved. | Refer to section 6.7 for replacement. |

### 5.3.22 "E5: Lamp Fuse Blown"

Table 5.3.22

| Item No. | Check items | How/where to check |
|---|---|---|
| 1 | Does the same symptom occur after turning OFF and ON the scanner? | Press the "O" area of power switch to turn the scanner OFF, and press the "I" area to turn it ON. |
| 2 | Are there any foreign objects lying on the Control PCA? | Remove the Control PCA and inspect. (Refer to section 6.7.). |
| 3 | Are the cables between the Control PCA and the lamp damaged?<br>Are the connectors connected correctly? | Referring to the following sections, check the cables (pink and blue lines).<br>Lamp for ADF front: Refer to section 6.11.2.<br>Lamp for ADF back: Refer to section 6.10.8.<br>Lamp for FB: Refer to section 6.12.5 |
| 4 | Replace the Control PCA and see if the error is resolved. | Refer to section 6.7 for replacement. |

### 5.3.23 "E6: Operator Panel Alarm"

Table 5.3.23

| Item No. | Check items | How/where to check |
|---|---|---|
| 1 | Does the same symptom occur after turning OFF and ON the scanner? | Press the "O" area of power switch to turn the scanner OFF, and press the "I" area to turn it ON. |
| 2 | It seems the installed Panel PCA has been used in other scanner before and it may be faulty one. Replace it with the new Panel PCA and see if the error is resolved. | Install the new Panel PCA after saving the EEPROM data (See Section 6.12.1).<br>Then conduct Maintenance mode #7 by referring to Section ~~5.1.8~~ 7.1.8.<br>02 |

### 5.3.24 "E7: EEPROM Alarm"

Table 5.3.24

| Item No. | Check items | How/where to check |
|---|---|---|
| 1 | Does the same symptom occur after turning OFF and ON the scanner? | Press the "O" area of power switch to turn the scanner OFF, and press the "I" area to turn it ON. |
| 2 | Replace the Panel PCA and see if the error is resolved. | Refer to section 6.12.1 for replacement. |
| 3 | Replace the Control PCA and see if the error is resolved. | Refer to section 6.7 for replacement. |

### 5.3.25 "E8: SCSI Fuse Blown"

Table 5.3.25

| Item No. | Check items | How/where to check |
|---|---|---|
| 1 | Does the same symptom occur after turning OFF and ON the scanner? | Press the "O" area of power switch to turn the scanner OFF, and press the "I" area to turn it ON. |
| 2 | Was this error caused by the SCSI cable connected to the scanner or other SCSI devices? | - Disconnect any other SCSI device connected.<br>- Replace the SCSI cable. |
| 3 | Replace the Control PCA and see if the error is resolved. | Refer to section 6.7 for replacement. |

### 5.3.26 "E9: Memory Alarm"

Table 5.3.26

| Item No. | Check items | How/where to check |
|---|---|---|
| 1 | Does the same symptom occur after turning OFF and ON the scanner? | Press the "O" area of power switch to turn the scanner OFF, and press the "I" area to turn it ON. |
| 2 | Replace the Control PCA and see if the error is resolved. | Refer to section 6.7 for replacement. |

### 5.3.27 (Reserved)

### 5.3.28 "Ec: RAM Alarm"

Table5.3.28

| Item No. | Check items | How/where to check |
|---|---|---|
| 1 | Does the same symptom occur after turning OFF and ON the scanner? | Press the "O" area of power switch to turn the scanner OFF, and press the "I" area to turn it ON. |
| 2 | Replace the Control PCA and see if the error is resolved. | Refer to section 6.7 for replacement. |

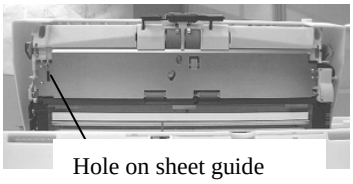
### 5.3.29 "Ed: SPC Alarm"

Table 5.3.29

| Item No. | Check items | How/where to check |
|---|---|---|
| 1 | Does the same symptom occur after turning OFF and ON the scanner? | Press the "O" area of power switch to turn the scanner OFF, and press the "I" area to turn it ON. |
| 2 | Replace the Control PCA and see if the error is resolved. | Refer to section 6.7 for replacement. |

### 5.3.30 "EF: Background Switch Alarm"

Table 5.3.30

| Item No. | Check items | How/where to check |
|---|---|---|
| 1 | Does the same symptom occur after turning OFF and ON the scanner? | Press the "O" area of power switch to turn the scanner OFF, and press the "I" area to turn it ON. |
| 2 | Are the cables between the Control PCA, the BW motor (for driving background switch mechanism) and sensors (for detecting background position) damaged?<br>Are the connectors connected properly? | BW motor (background switch mechanism drive): Refer to section 6.10.5.<br>Sensor (background position detection): Refer to section 6.10.6. |
| 3 | Check if the BW motor performs correctly.<br>  <br>Hole on sheet guide | Open the ADF, turn ON the power while pressing the Sensor OP.<br>- If ~~Sheet guide~~ Background unit Bon upper ADF does NOT operate, BW motor is not operating correctly. Replace the parts in the following order and find defective parts. 06<br>1) BW motor (section 6.10.3)<br>2) Background unit F (section 6.11.2) and Background unit B (section 6.10.8)<br>3) Control PCA (section 6.7)<br>- If ~~Sheet guide~~ Background unit B on upper ADF operates correctly, replace the parts in the following order and find defective parts. 06<br>1) Sensor for background position detection (section 6.10.6)<br>2) Background unit F (section 6.11.2) and Background unit B (section 6.10.8)<br>3) Control PCA (section 6.7) |

### 5.3.31 "E11: Fan Alarm"

Table 5.3.31

| Item No. | Check items | How/where to check |
|---|---|---|
| 1 | Does the same symptom occur after turning OFF and ON the scanner? | Press "O" area of power switch to turn the scanner OFF, and press "I" area to turn it ON. |
| 2 | Check if the fan ASSY cable is not damaged, if the connectors are connected correctly, then replace the fan ASSY. 02 | Refer to 6.7 for replacement. |
| 3 | Replace the Control PCA and see if the error is resolved. | Refer to section 6.7 for replacement. |

### 5.3.32 "E12: Heater Alarm"

**NOTICE**

Scanning is still available even when the heater alarm occurs. Once it occurs after power-on and is canceled, this alarm will not be detected until next power OFF/ON. If the heaters are not operating properly, image quality may be affected.

Table 5.3.32

| Item No. | Check items | How/where to check |
|---|---|---|
| 1 | Does the same symptom occur after turning OFF and ON the scanner? | Press the "O" area of power switch to turn the scanner OFF, and press the "I" area to turn it ON. |
| 2 | Are the cables between the Control PCA and the Background unit F, Background unit B and Lamp FB damaged?<br>Are the connectors connected correctly? | Refer to the following sections.<br>Background unit F: Section 6.11.2<br>Background unit B: Section 6.10.8<br>Lamp FB: Section 6.12.5 |
| 3 | Replace the Background unit F, Background unit B or Optical unit FB and see if the error is resolved. | Refer to the following sections.<br>Background unit F: Section 6.11.2<br>Background unit B: Section 6.10.8<br>Optical unit FB: Section 6.12.5 |
| 4 | Replace the Control PCA and see if the error is resolved. | Refer to section 6.7. |

### 5.3.33 "E15: Extended Memory Alarm"

Table 5.3.33

| Item No. | Check items | How/where to check |
|---|---|---|
| 1 | Does the same symptom occur after turning OFF and ON the scanner? This alarm displayed 3 times (blinking) before "P" is displayed immediately after power-on. | Press the "O" area of power switch to turn the scanner OFF, and press the "I" area to turn it ON. |
| 2 | Confirm with the user whether the recommended Extended memories with the same specification described in section 1.1.2 are installed correctly. | Refer to section 1.1.2.<br>If the memories are not the recommended model type, ask the user to install the recommended ones. |
| 3 | Replace the Control PCA and see if the error is resolved. | Refer to section 6.7. |

### ~~5.3.34 "E16: Optional Board (TOS board) Alarm"~~ 02

Table 5.3.34

| Item No. | Check items | How/where to check |
|---|---|---|
| 1 | Does the same symptom occur after turning OFF and ON the scanner? | Press the "O" area of power switch to turn the scanner OFF, and press the "I" area to turn it ON. |
| 2 | Is the optional board (TPS board) installed correctly? | |
| 3 | Replace the optional board (TPS board) and see if the error is resolved. | |
| 4 | Replace the Control PCA and see if the error is resolved. | Refer to section 6.7. |

### 5.3.35 "E17: (Reserved)

### 5.3.36 "E18: Sensor Alarm"

Table 5.3.36

| Item No. | Check items | How/where to check |
|---|---|---|
| 1 | Does the same symptom occur after turning OFF and ON the scanner? | Press the "O" area of power switch to turn the scanner OFF, and press the "I" area to turn it ON. |
| 2 | Are the cables between the Control PCA and the sensors damaged?<br>Are the connectors connected properly? | Refer to the following sections.<br>Pick sensor, DF sensor, Top sensor, Empty sensor: Section 6.9.2<br>ADF cover open sensor: Section 6.10.7<br>Document cover open sensor: Section 6.12.3 |
| 3 | Replace each sensor and the US PCA and see if the error is resolved. | Refer to the following sections.<br>Pick sensor, DF sensor, Top sensor, Empty sensor: Section 6.9.2<br>ADF cover open sensor: Section 6.10.7<br>Document cover open sensor: Section 6.12.3 |
| 4 | Replace the Control PCA and see if the error is resolved. | Refer to section 6.7. |

### 5.3.37 "E19: LSI Alarm"

Table 5.3.37

| Item No. | Check items | How/where to check |
|---|---|---|
| 1 | Does the same symptom occur after turning OFF and ON the scanner? | Press the "O" area of power switch to turn the scanner OFF, and press the "I" area to turn it ON. |
| 2 | Replace the Control PCA and see if the error is resolved. | Refer to section 6.7. |

### 5.3.38 "E1A: Internal Scanner Communication Error"

Table 5.3.38

| Item No. | Check items | How/where to check |
|---|---|---|
| 1 | Does the same symptom occur after turning OFF and ON the scanner? | Press the "O" area of power switch to turn the scanner OFF, and press the "I" area to turn it ON. |
| 2 | Replace the Control PCA and see if the error is resolved. | Refer to section 6.7. |

### 5.3.39 "F: ROM Sum Check Alarm"

Table 5.3.39

| Item No. | Check items | How/where to check |
|---|---|---|
| 1 | Does the same symptom occur after turning OFF and ON the scanner? | Press the "O" area of power switch to turn the scanner OFF, and press the "I" area to turn it ON. |
| 2 | Replace the Control PCA and see if the error is resolved. | Refer to section 6.7. |

### 5.3.40 "Abnormal Command"

Table 5.3.40

| Item No. | Check items | How/where to check |
|---|---|---|
| 1 | Does the same symptom occur after turning OFF and ON the scanner and PC? | Press the "O" area of power switch to turn the scanner OFF, and press the "I" area to turn it ON. |
| 2 | Replace the Control PCA and see if the error is resolved. | Refer to section 6.7. |

### 5.3.41 (Reserved)

### 5.3.42 "Interface Alarm"

Table 5.3.42

| Item No. | Check items | How/where to check |
|---|---|---|
| 1 | Does the same symptom occur after turning OFF and ON the scanner and PC? | Press the "O" area of power switch to turn the scanner OFF, and press the "I" area to turn it ON. |
| 2 | Replace the Control PCA and see if the error is resolved. | Refer to section 6.7. |

# Chapter 6 Maintenance Procedure

This chapter describes how to replace maintenance parts, and clean the scanner to ensure normal operations. When assembling the maintenance parts, conduct necessary cleaning when instructed in this manual.

## 6.1 For Safety Operation

Please read this page carefully before disassembling or assembling.

**⚠Warning** **Electric shock**

Before disassembling or assembling, turn the power switch off,
and unplug the AC power source from the outlet.
If you do not do this, an electric shock may occur.

**⚠CAUTION** **Injury**

Be careful not to get your fingers, hair, clothes or accessories caught in a moving part.
It may cause injury.

**Machine damage**

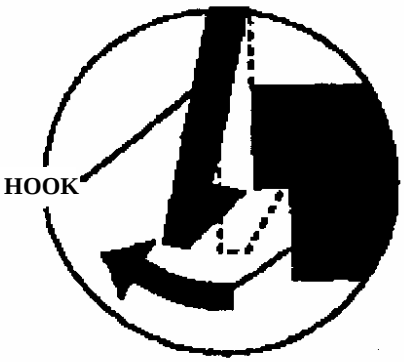
Static Electricity may cause the damage to the scanner.
When repairing the scanner, wear a wrist strap to avoid ESD.

**Notes when cleaning**

When cleaning the scanner, be careful not to allow foreign matter,
such as dried ink and toner, to fall inside the scanner.

**How to unlock plastic hooks**

Many parts of the scanner are held in place with plastic hooks.
When removing parts that are held in place with hooks, be very careful not to break the hooks.
Pull out the latch to unlock, then pull up on the assembly to remove.




Do not use excessive force when removing parts held in place with hooks.

07

## 6.2 Periodic Maintenance

Periodic maintenance should be performed on the scanner at the following intervals.

| Item | Maintenance cycle |
|---|---|
| Periodic maintenance | Every 12 months |

At maintenance, clean the following if they are dirty.

- ADF (See section 3.4.1)
- Document cover, Document pad (See section 3.4.2)

# 6.3 Cleaning

## 6.3.1 Cleaning the Optical Unit ADF

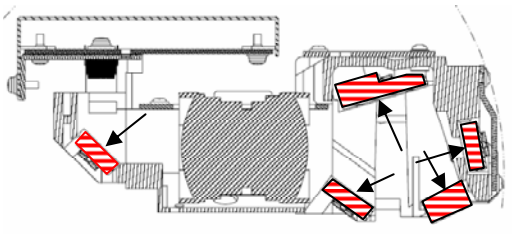
Clean the Optical unit ADF using the following procedure.

1) To clean the Optical unit ADF for front side scanning (lower parts in ADF), remove the Optical unit ADF by referring to section 6.11.2.
   To clean the Optical unit ADF for backside scanning (upper parts in ADF), remove the Optical unit ADF by referring to section 6.10.2.

07

2) Remove any dirt inside of the mirrors and lens of the Optical unit ADF (arrows in the figure below) with blow brush (photo below). Do not use air sprays which may build up condensation on the mirrors.

~~Using alcohol may leave residue. Make sure not to touch the mirrors with your fingers.~~



Blow brush

**NOTICE** 07

Do not disassemble any parts of this unit (PCA's and mirrors) as mentioned in section 6.5.

## 6.3.2 Cleaning the Optical unit FB

Clean the Optical unit FB using the following procedure.

1) Remove the Optical unit FB by referring to section 6.12.5.

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2) Remove any dirt inside of the mirrors of the Optical unit FB with blow brush (photo above). Do not use air sprays which may build up condensation on the mirrors.

~~Using alcohol may leave residue. Make sure not to touch the mirrors with your fingers.~~

**NOTICE** 07

Do not disassemble any parts of this unit (PCA's and mirrors) as mentioned in section 6.5.

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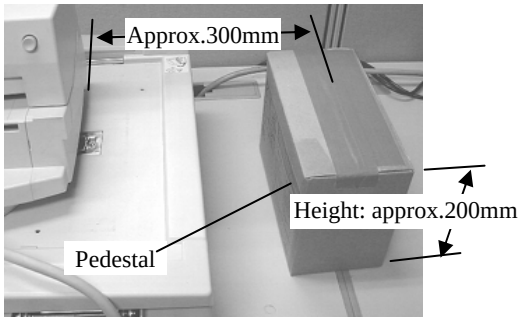
### 6.3.3 Cleaning inside of the Background unit F

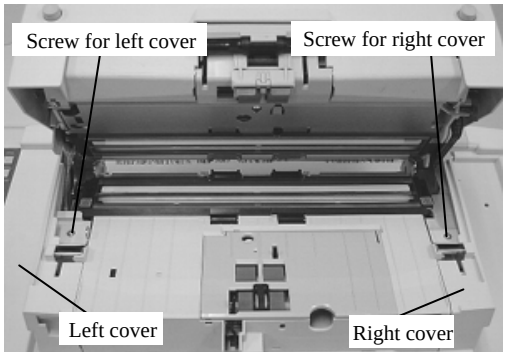
This cleaning requires a pedestal described in step (1) and a vacuum cleaner. Prepare them in advance. Follow the procedure below for cleaning.



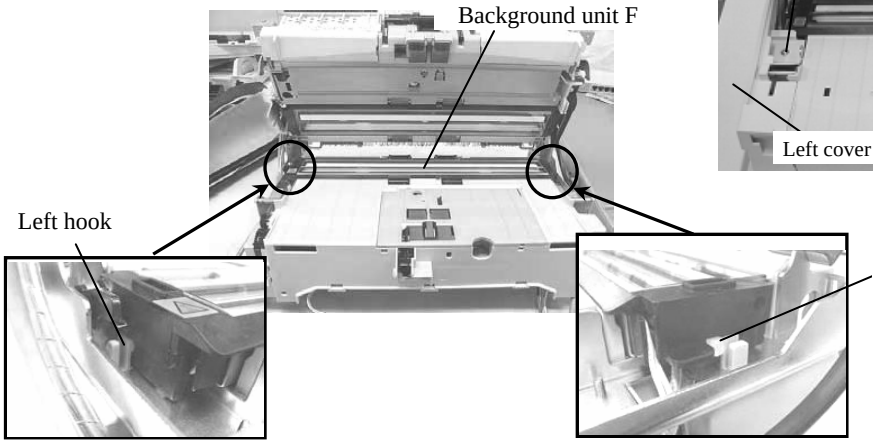

(1) Place a pedestal with 200mm high as shown in the photo on the right.

(2) Remove the Chute ASSY (Section 6.6.1) and Stacker ASSY (Section 6.6.3), and then open the ADF.

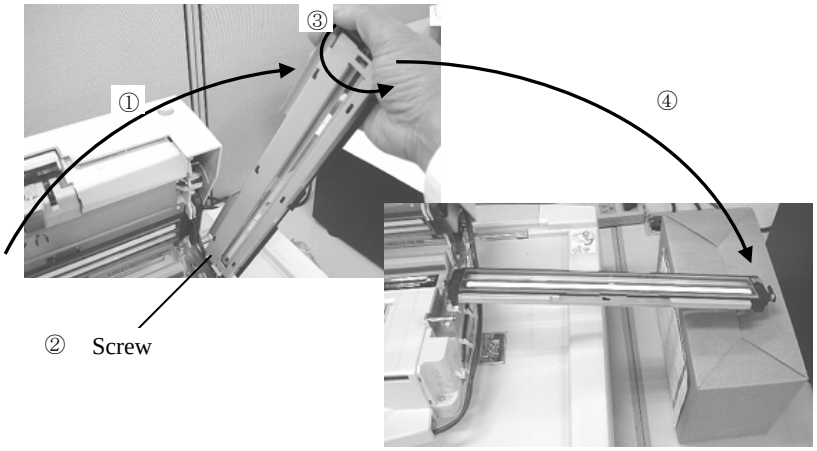
(3) Referring to steps (2) ~ (5) of Section 6.8.1, remove the right cover and the left cover (photo on the right).




(4) Unlatch the right hook on the Background unit F at first, and then the left hook (photo below).



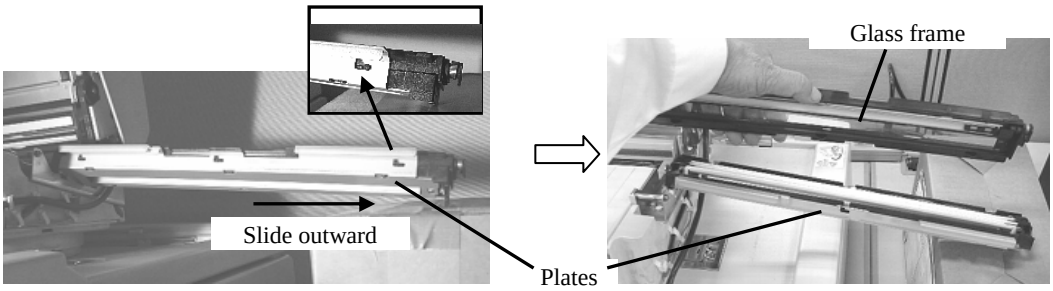

(5) Raise the Background unit F 90 degrees, remove a screw from this unit, rotate it 180 degrees and place it as shown in the photo below.



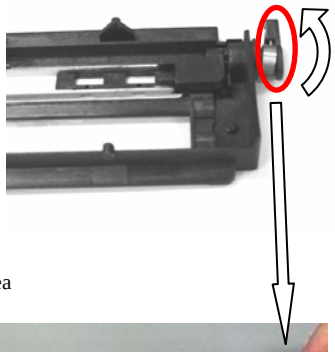

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 09 | May 19, 2009 | T.Yoshimoto | A.Miyoshi | I.Fujioka | See page 2. | | TITLE | fi-5750C IMAGE SCANNER MAINTENANCE MANUAL | |
| 08 | Jan. 7, 2009 | K.Okada | T.Anzai | I.Fujioka | See page 2. | | | | |
| | | | | | | | DRAW. No. | P1PA03338-B00X/6 | CUST. |
| 10 | July 13, 2009 | K.Okada | A.Miyoshi | I.Fujioka | See page 2. | | | | |
| Rev | DATE | DESIG. | CHECK | APPR. | DESCRIPTION | | PFU LIMITED | | PAGE 97/200 |
| DESIG | Dec. 15, 03 | T.Anzai | CHECK | T.Anzai | Y.Takashima | APPR. H.Hasegawa | | | |

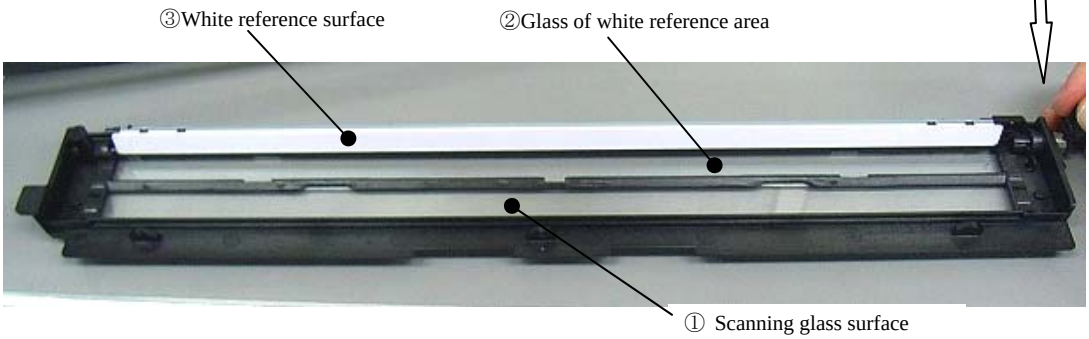
07

(6) Slide the plate outward, and raise the glass frame without moving the plate.




(7) Rotate the cam of the glass frame in the direction of the arrow (photo on the right), and then wipe the glass surfaces (① and ② in the photo below) and white reference surface (③ in the photo below) with a dust-free dry cloth. Be sure to wipe them from one edge to another **in one direction**, and **suck the dust with a vacuum cleaner** if there still is dust at the edge and groove of the frame. Do not use alcohol but **rub with a dry cloth.** If you want to use alcohol, soak it on a cloth and wipe in one direction. After wiping with alcohol, **be sure to wipe with a dry cloth**.

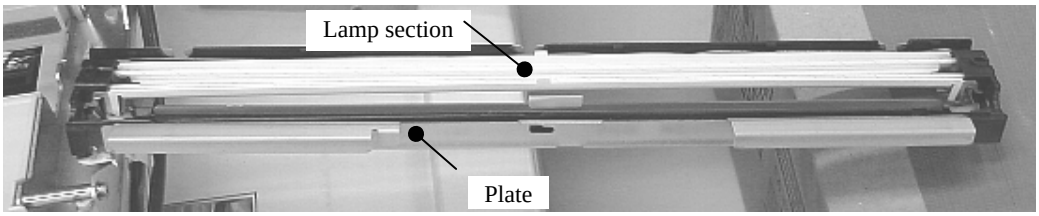





Note: After cleaning, expose the glass to the light (ex: Hold the glass against the fluorescent lamp to see dust). Make sure that there is no dust on the glass. If dust is still on the glass, clean the parts again in the procedure above.

(8) After cleaning, install the Background unit F in the procedure above in reverse order.

Note 1: The plate and the lamp section are assembled as shown in the photo below (for your reference).




Note 2: After assembling all the parts, open the ADF and clean the glass of the Background unit F.
Note 3: Turn on the power, and confirm that no error “EF (background switch alarm)” appears.

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## 6.3.4 (Reference-Overseas only) Cleaning inside of the Background unit B

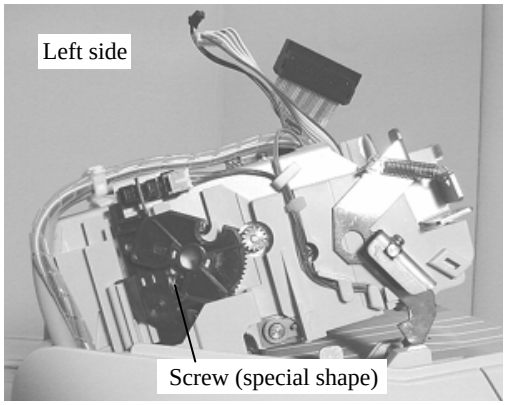
This cleaning requires the following part. Prepare it in advance.

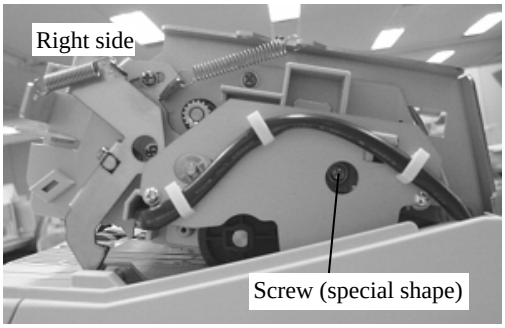
| Part name | Part number |
|---|---|
| P SHEET | PA03338-Y451 |

As cleaning kits, a vacuum cleaner, a packing tape, and alcohol are required as well.

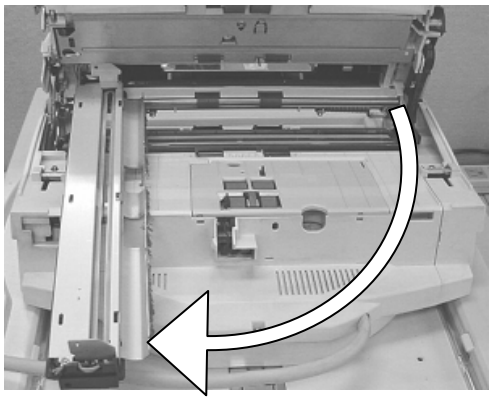
(1) Referring to step (1) of Section 6.10.1, remove the ADF cover.

(2) Remove screws (special shape) from both right and left sides of the ADF.

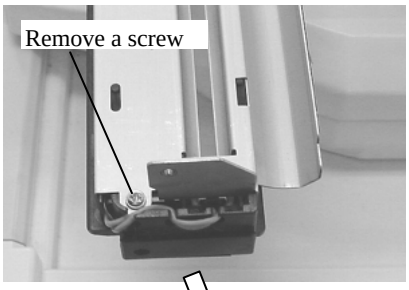


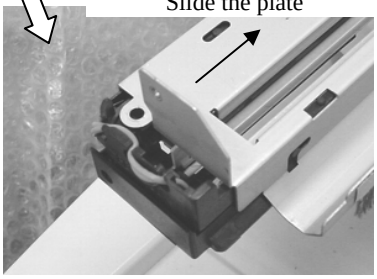



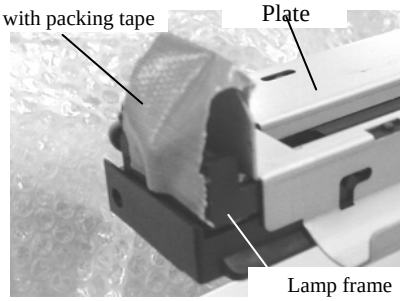

(3) Open the ADF, take out the Background unit B in the direction of the arrow in the photo on the right. Be careful not to pull the cable forcibly.



(4) Remove a screw from the Background unit B, slide the plate in the direction of the arrow (photo below), and then fix the lamp frame and the plate with packing tape.

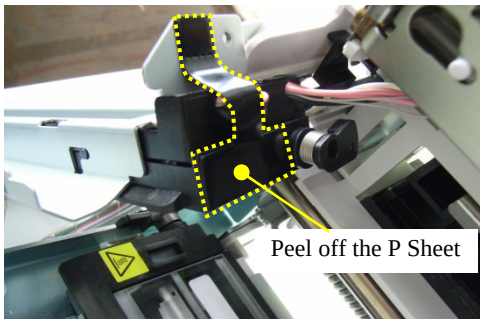


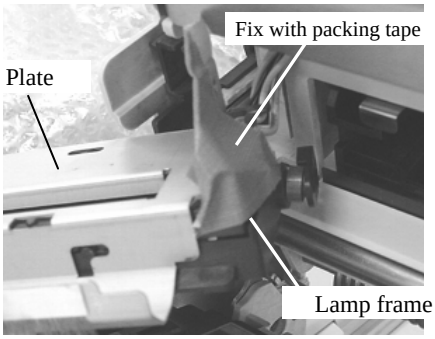



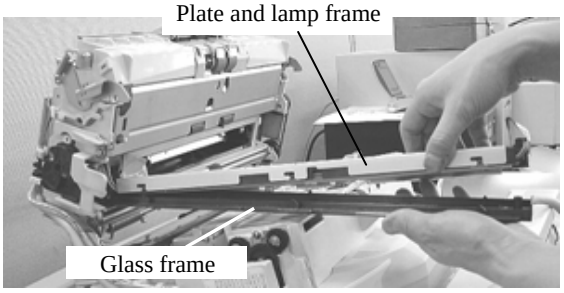
07

(5) If there is P SHEET at one edge of the Background unit B, remove it. Then, fix the lamp frame and the plate with packing tape.

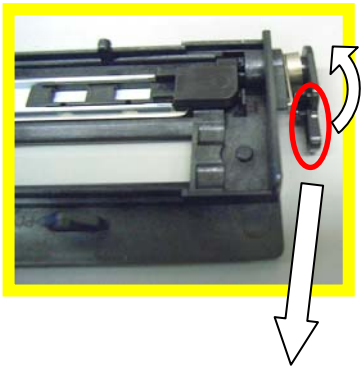


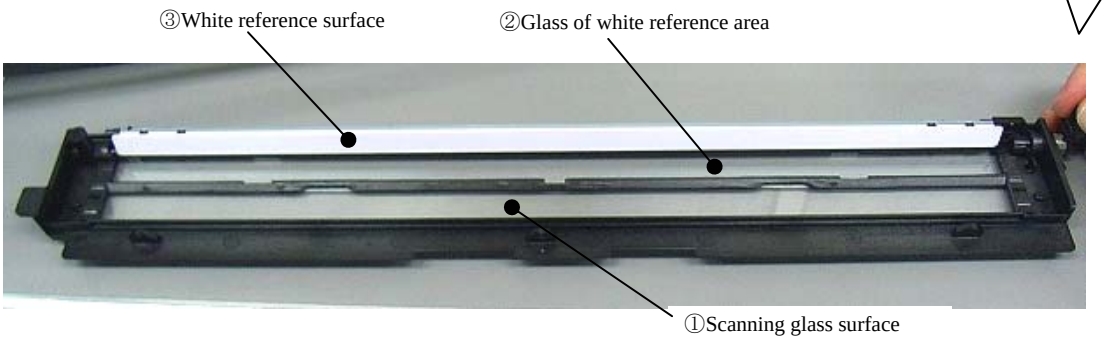




(6) Lower the glass frame to remove.




(7) Rotate the cam of the glass frame in the direction of the arrow (photo on the right), and then wipe the glass surfaces (① and ② in the photo below) and white reference surface (③ in the photo below) with a dust-free dry cloth. Be sure to wipe them from one edge to another **in one direction**, and **suck the dust with a vacuum cleaner** if there still is dust at the edge and groove of the frame. Do not use alcohol but **rub with a dry cloth.** If you want to use alcohol, soak it on a cloth and wipe in one direction. After wiping with alcohol, **be sure to wipe with a dry cloth**.






Note: After cleaning, expose the glass to the light (ex: Hold the glass against the fluorescent lamp to see dust). Make sure that there is no dust on the glass. If dust is still on the glass, clean the parts again in the procedure above.

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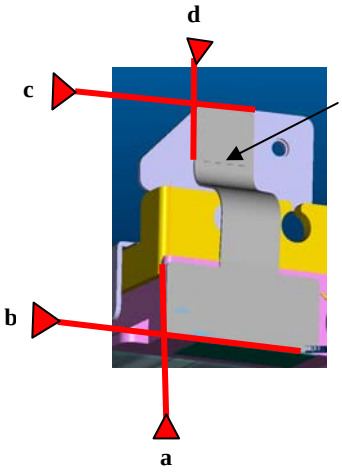
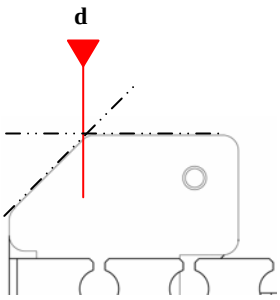
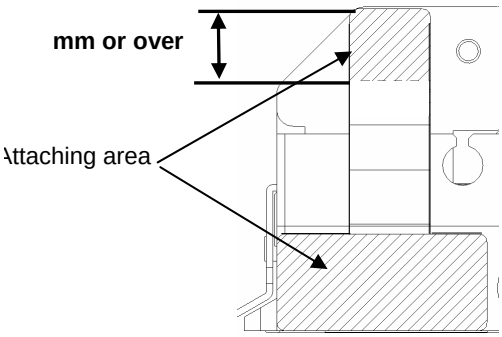
(8) After cleaning, attach the P SHEET in the following method.

Note 1: Before attaching the P SHEET, peel off all debris of packing tape on the frame and metal plate, and degrease with alcohol.

P SHEET
Align against the edges a, b, c, and d, then paste the P SHEET.
Bulge should be 0~1mm.




Note: After attaching, fully press the attaching surface.

(9) Install the Background unit B in the procedure above in reverse order.

Note 2: After installing the Background unit B, check that it moves slightly (approx. 1mm) up and down.
Note 3: After assembling all the parts, open the ADF and clean the glass of the Background unit B.
Note 4: Turn on the power, and confirm that no error “EF (background switch alarm)” appears.

## 6.4 Maintenance Tool

Special tools to maintain this scanner are shown in table 6.4.

Table 6.4

| No. | Tools | When to use | Remarks |
|---|---|---|---|
| 1 | Philips screwdriver | | For M3, M4 screws |
| 02 ~~2~~ | ~~Spring gauge~~ | ~~Belt tension adjustment~~ | ~~Max 1 kg force~~ |
| 3 | Alcohol | Cleaning | Ethyl alcohol or isopropyl alcohol |
| 4 | Blow brush | Cleaning mirror | |
| 5 | Glove or cloth | Handling CR shaft | |
| 6 | Small flat-blade screwdriver | Removing sensors and connector | |
| 7 | Allen Wrench (2mm) | Removing special screws for carrier guide shaft | |
| 8 | Longnose plier | Installing E ring | |
| 9 | White level adjustment sheet | White level adjustment (See section 7.1.5) | Description: TEST SHEET (W)<br>Part number: PA03277-Y123<br>Please purchase this sheet prior to maintenance. |
| 10 | Magnification / Offset adjustment sheet | Magnification adjustment (See section 7.1.3)<br>Offset adjustment (See section 7.1.4) | Required for magnification / offset adjustment for ADF. See figure 7.1.3, and prepare the sheet in advance, if you do not have the sheet. |
| 11 | Adjustment sheet | Ultrasonic sensor adjustment (See section7.1.9) | Part number: PA03296-Y990<br>Used when replacing US sensor, or when replacing Control PCA without installing original EEPROM. |
| 07 12 | Vacuum cleaner | Commercial item | Required for cleaning the Background units in Section 6.3.3 and 6.3.4. |
| 07 13 | Packing tape | Commercial item | Required for cleaning the Background unit in Section 6.3.4. |

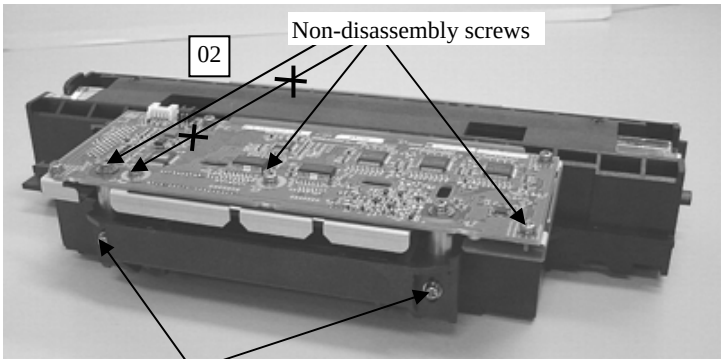
## 6.5 Non-disassembly Parts

**⚠CAUTION**

The following screws are adjusted and secured at the factory. Do not attempt to disassemble or loosen them.

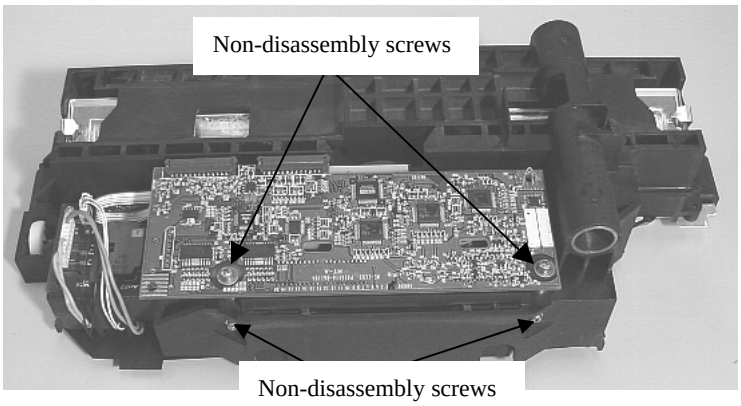
**(1) Optical unit ADF**

07 Besides the non-disassembly screws, do NOT disassemble any parts on this unit (mirrors).

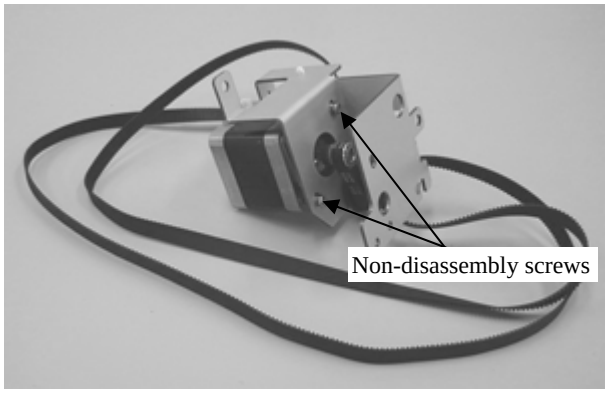



**(2) Optical unit FB**

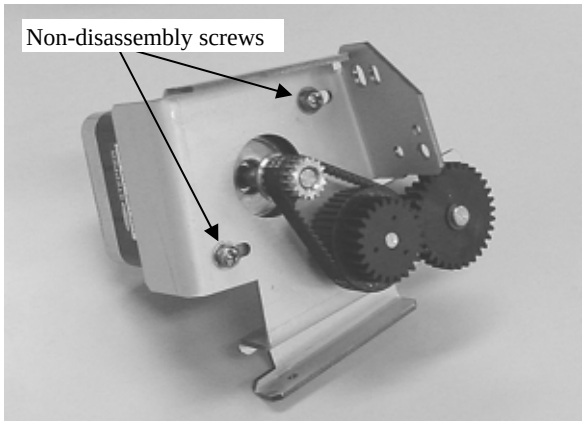
07 Besides the non-disassembly screws, do NOT disassemble any parts on this unit (mirrors).




**(3) FB motor screws**




**(4) PICK motor unit screws**



# 6.6 Removing / Installing the Chute ASSY, Chute roller, and Stacker ASSY

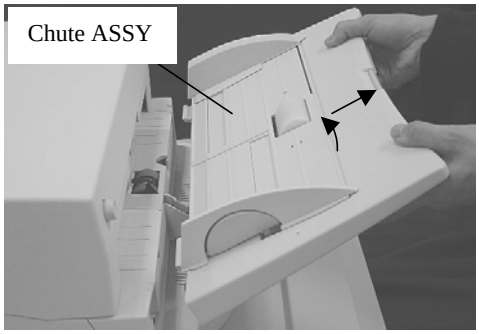
## 6.6.1 How to remove/install the Chute ASSY

**NOTICE**

Refer to section 8.33 for the specifications of the replacement parts.

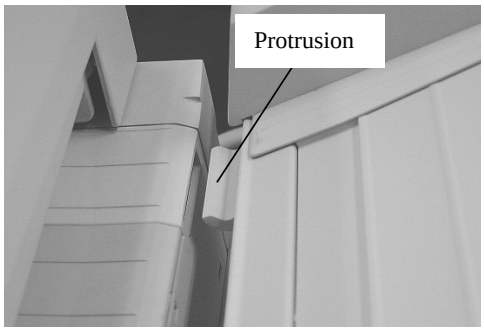
<Removing>

(1) Lifting up the front edge of the Chute ASSY slightly, pull it out of the scanner.




<Installing>

(1) Insert the protrusions of the Chute ASSY into the openings in the scanner.



### 6.6.2 How to remove/install the Chute roller

**NOTICE**

Refer to section 8.34 for the specifications of the replacement parts.

<Removing>

(1) Remove the Chute ASSY by referring to section 6.6.1.

(2) Extend the extension of the Chute ASSY all the way out.

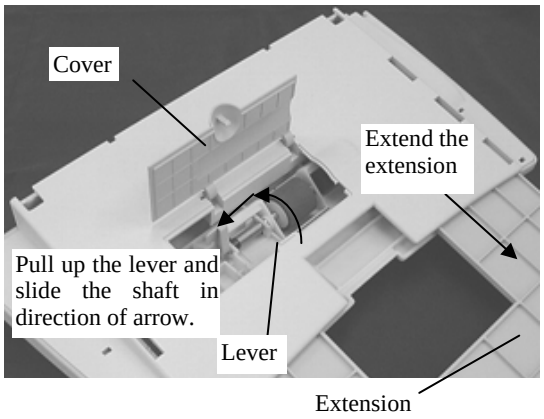
(3) Open the lower cover of the Chute.

(4) Pull up on the lever to release, then slide it away from the roller.

(5) Lift the Chute roller top remove.

<Installing>

Follow the above procedure in reverse.



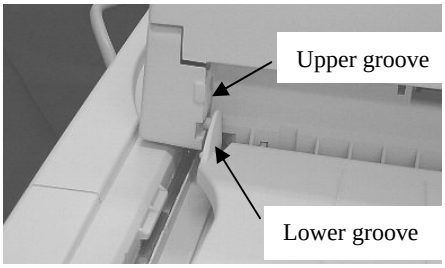
### 6.6.3 How to remove/install the Stacker ASSY

**NOTICE**

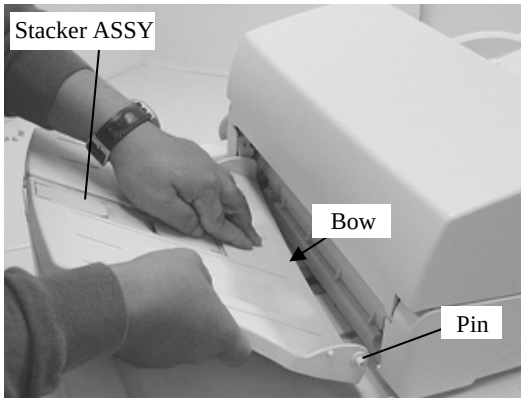
Refer to section 8.32 for the specifications of the replacement parts.

<Removing>

(1) Move the Stacker ASSY to the lower groove.




(2) Pressing the center of the stacker to bow it, remove the stacker pin at one side from the scanner. Remove the stacker.




<Installing>

Follow the above procedure in reverse.

.

## 6.7 Removing / Installing the Power supply, Control PCA, and Fan ASSY

02

**NOTICE**

Refer to the following sections for the specifications of the replacement parts.

Power supply: Section 8.31

Control PCA: Section 8.30

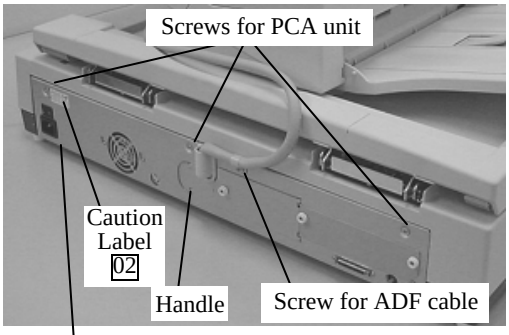
Fan ASSY: Section 8.36

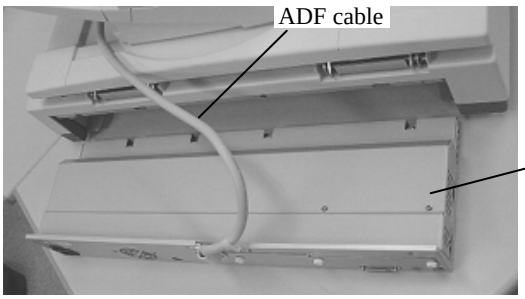
02

<Removing> 02

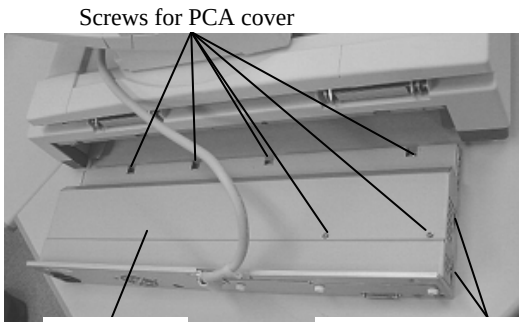
(1) Turn OFF the scanner, and remove the AC cable and a screw for ADF cable from the AC inlet.

(2) Remove 3 screws from the PCA unit at rear of the scanner. Being careful not to pull the ADF cable that connects this unit and ADF, hold the handle in the center of the PCA unit and pull out the PCA unit. (photo below)

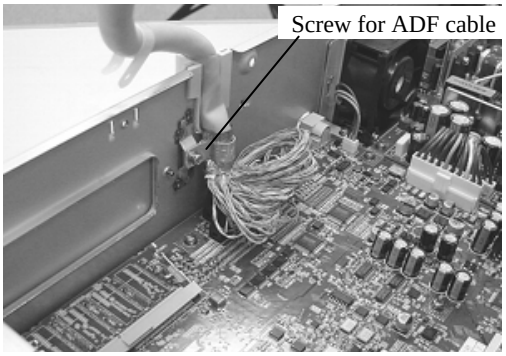



(3) Remove 8 screws to remove the PCA cover.




(4) Remove 2 screws for the ADF cable. Disconnect the 2 connectors for the ADF cable out of the Control PCA to remove the PCA unit. Go to replacement procedures for each part.

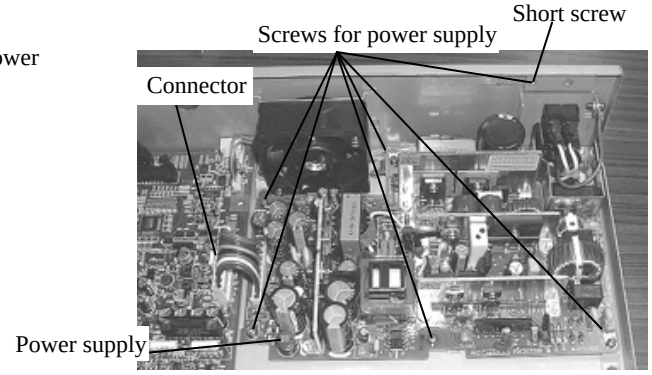


**<Replacement of Power supply>**

(5) Disconnect a connector and 6 screws that hold the power supply in place, then remove the power supply.

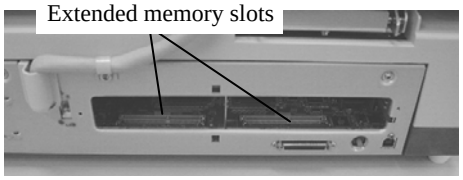
<Installing>

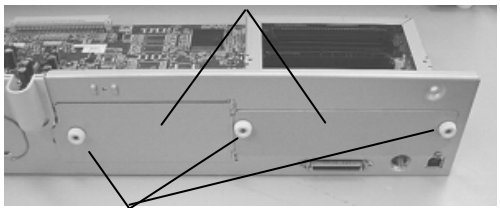
Follow the above procedure in reverse.




**<Replacement of Control PCA>**

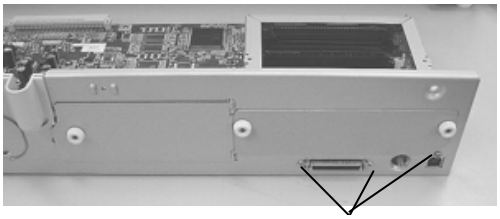
(6) Remove 3 thumb screws and remove the PCA covers. Remove the extended memories or Third party board if inserted.

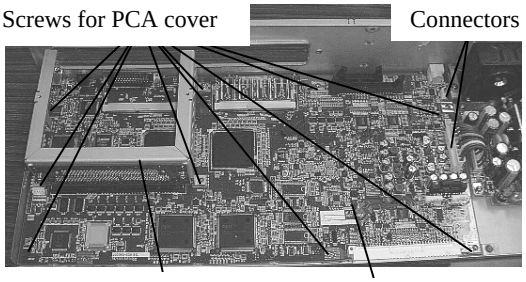



(7) Disconnect 2 connectors and remove 9 screws. Lift the Third party slot (TPS) rails off the Control PCA.

(8) Remove 3 screws from the Interface connectors and remove the Control PCA.



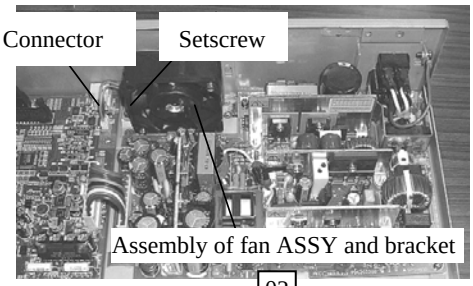

<Installing>

Follow the above procedure in reverse.

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 09 | May 19, 2009 | T.Yoshimoto | A.Miyoshi | I.Fujioka | See page 2. | | | TITLE | fi-5750C IMAGE SCANNER MAINTENANCE MANUAL | | |
| 08 | Jan. 7, 2009 | K.Okada | T.Anzai | I.Fujioka | See page 2. | | | | | | |
| | | | | | | | | DRAW. No. | P1PA03338-B00X/6 | | CUST. |
| 10 | July 13, 2009 | K.Okada | A.Miyoshi | I.Fujioka | See page 2. | | | | | | |
| Rev | DATE | DESIG. | CHECK | APPR. | DESCRIPTION | | | PFU LIMITED | | PAGE | 108/200 |
| DESIG | Dec. 15, 03 | T.Anzai | CHECK | T.Anzai | Y.Takashima | APPR. | H.Hasegawa | | | | |

**<Replacement of Fan ASSY>** 02

(9) Disconnect the connector from the Control PCA, remove 1 screw, then lift ~~ASSY~~ the assembly of the fan ASSY and bracket upward. 02 02

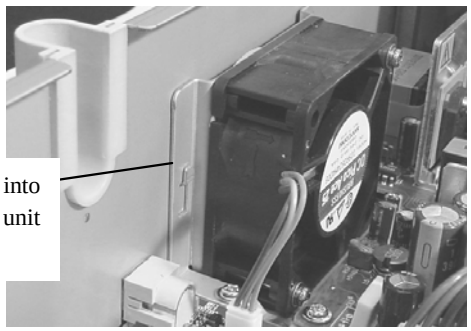



02

<Installing>

Follow the above procedure in reverse.

When installing the bracket, insert holes of bracket into the 2 hooks of the PCA unit.



Holes of bracket into hooks of the PCA unit (right & left)

## 6.8 Removing / Installing the ADF unit, Document cover, etc.

**NOTICE**

Refer to the following sections for the specifications of replacement parts.

ADF unit: Section 8.1

Document cover: Section 8.28

Hinge unit: Section 8.29

FB unit: Section 8.20

04 ADF Base unit: Section 8.37

04 ADF Upper unit: Section 8.38

04

### 6.8.1 How to remove/install the ADF unit, Document Cover, Hinge unit and FB unit

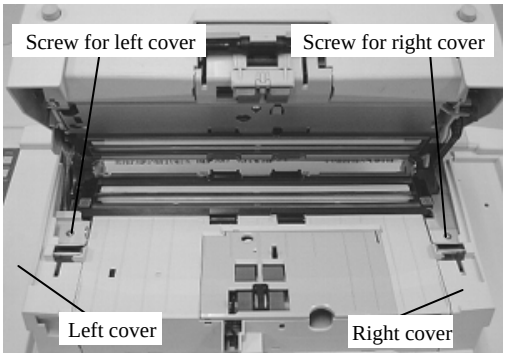
<Removing>

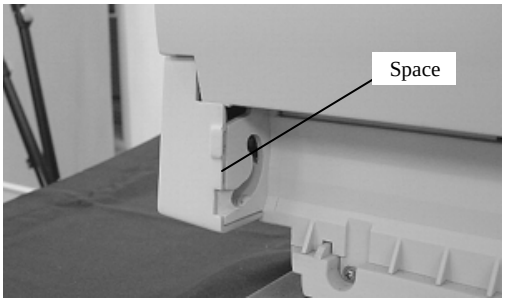
(1) Remove the Chute ASSY (section 6.6.1) and the Stacker ASSY (section 6.6.3).

(2) Move the ADF to the center of the scanner and rotate it 90 degrees.

(3) Open the ADF, and remove each screw that holds the right and left covers.

(4) With the ADF left open a bit, insert a small flat-blade screwdriver in the space at the rear of the right cover and unlatch the cover from the scanner.

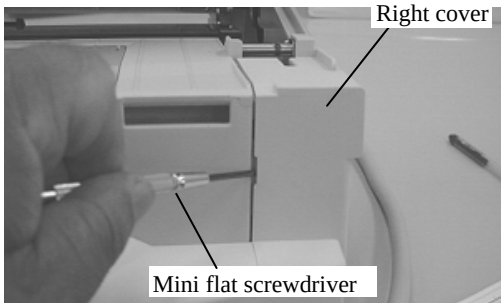


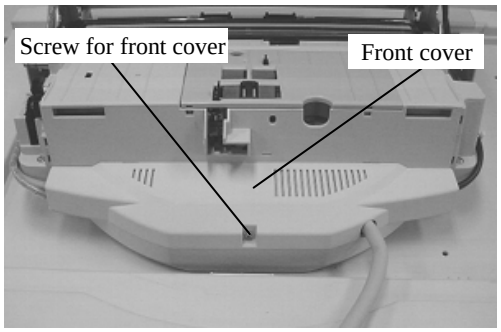




- Insert a small flat-blade screwdriver into the space at the front side of the right cover and unlatch.

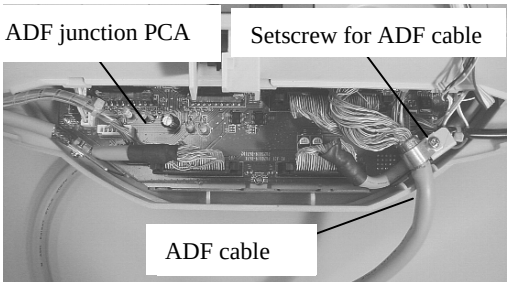
(5) Remove the left cover using the same procedure.

(6) Remove 1 screw at the front of the ADF unit, then remove the front cover.

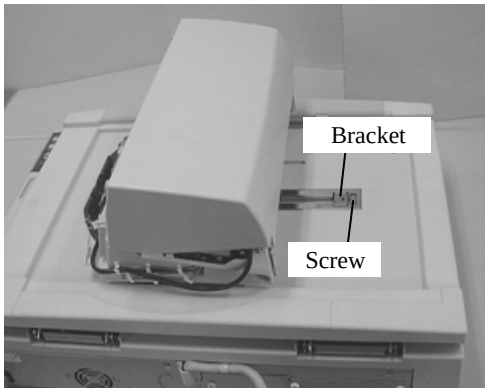


(7) Remove 1 screw from the ADF cable and remove it from the ADF junction PCA.




(8) Close the ADF, rotate it 90 degrees to place it as shown in the photo on the right, and remove a screw, then a bracket.



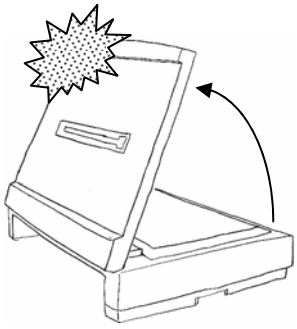

(9) Open the Document cover. Supporting the ADF unit from the bottom not to drop it, move it to the edge of the Document cover, then remove it.

02

(10) Remove the Optical unit ADF. (Refer to Section 6.10.2 for backside. Refer to Section 6.11.2 for front side.)

**DANGER**

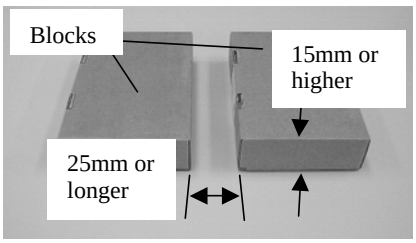
Never remove the ADF from the Document cover while the Document is installed on the FB unit.
The Document cover hinges are very strong. Without the weight of the ADF, the Document cover will open with great force possibly causing injury.



For replacement of the Document cover and Hinge unit, go to step ~~(10)~~ (11). Go to step ~~(13)~~ (14) for replacement of the FB unit.

02 02

Ref) There is a projection at the bottom of the ADF unit. Prepare blocks as shown in the photo below and place the ADF unit on them. This will make the ADF more stable.

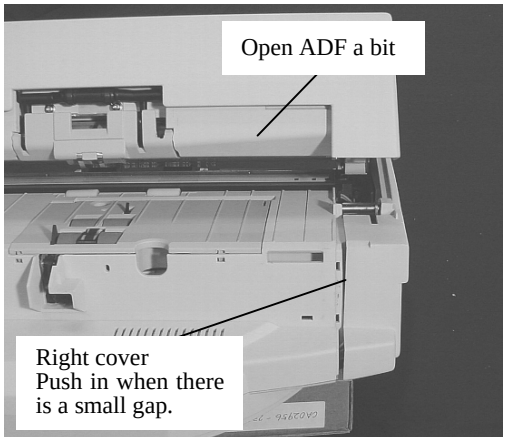


<Installing>

Follow the above procedure in reverse.

When installing the left and right covers, it would be easier if you open the ADF a bit, place the covers horizontally onto the side of the scanner, being carefully not to pinch the cables, and push them into place.

After replacing the ADF unit, perform the magnification adjustment (Section 7.1.3), offset adjustment (Section 7.1.4), white level adjustment (Section 7.1.5) and Ultra sonic sensor adjustment (Section 7.1.9). Reset the consumables counters as well (Section 7.1.6). 02

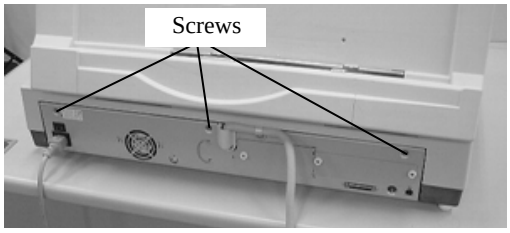



**<Replacement of Document cover, Hinge unit>**

Follow the procedure below after step (9).

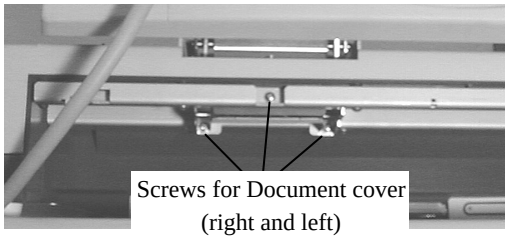
02

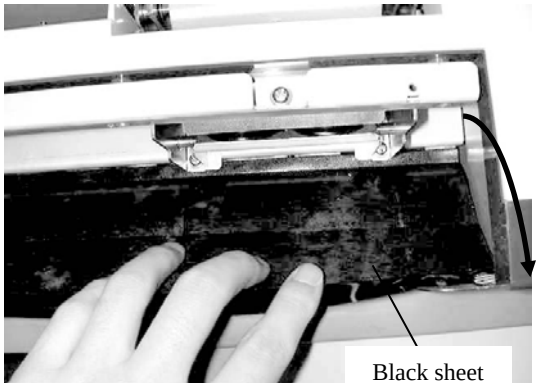
~~(10)~~ (11) Remove 3 screws at the rear of the scanner and remove the PCA unit.




02 05

~~(11)~~ (12) Open the Document cover. Opening the black sheet if there is a black sheet as shown in the photo, remove 6 large screws from the Document cover at the rear of the scanner. Lift the Document cover and the ADF unit out of the FB unit. (Photo on the right below)




02 05

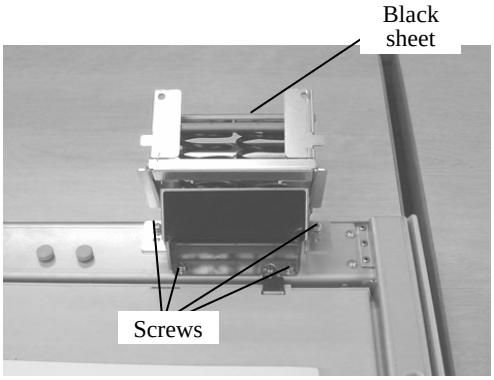
~~(12)~~ (13) ~~Peel the black sheet off the Hinge unit, and~~ remove 4 screws from the Hinge unit. The Hinge unit and the Document cover are disassembled.

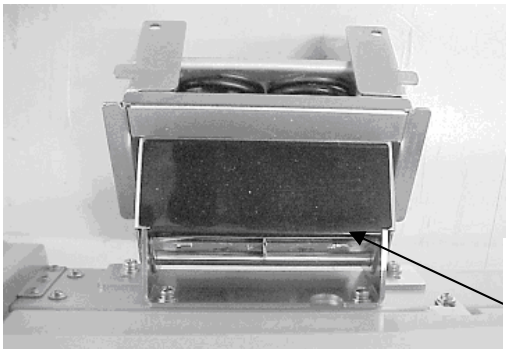
<Installing>

Follow the above procedure in reverse.

05 If the Hinge unit has been replaced, paste the enclosed black sheet onto the ~~Maintenance part~~ Hinge unit as shown in the photo below.

05 Note: A black sheet for the Hinge unit may be enclosed with the Document cover, but dispose of it.



Superpose the fold of the Hinge unit and the crease of the sheet, and paste it symmetrically.

**<Replacement of FB unit>**

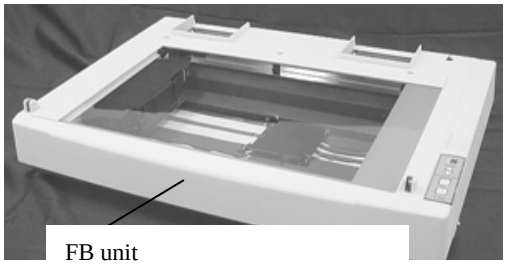
Follow the procedure below after step ~~(11)~~ (9). 04

02

~~(13)~~ (14) Referring to section 6.12.1, remove the Panel unit from the Flatbed.

02

~~(14)~~ (15) Referring to section 6.12.5, remove the Optical unit FB. The remaining parts are the FB unit.



FB unit
(Remove PCA unit, Panel unit and Optical unit FB)

<Installing>

Follow the above procedure in reverse.

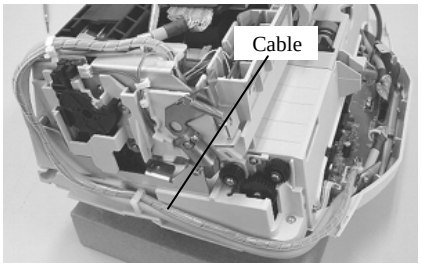
After replacing the FB, perform the magnification adjustment (section 7.1.3), offset adjustment (section 7.1.4), and white level adjustment (section 7.1.5).

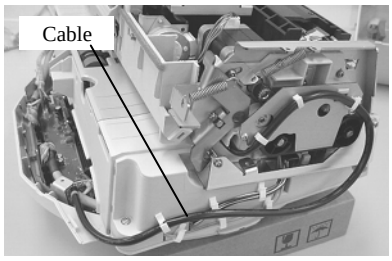
## 6.8.2 How to remove/install the ADF Base unit and ADF Upper unit

(1) Follow steps (1) ~ (9) of Section 6.8.1.

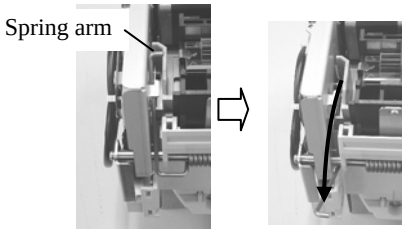
(2) Referring to step (1) of Section 6.10.1, detach the ADF cover.

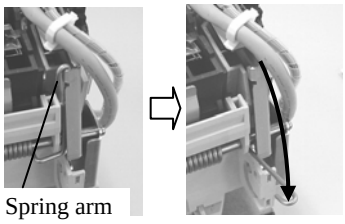
(3) Remove cables (right and left, 3 in total) connected to the ADF movable unit from cable clamp.



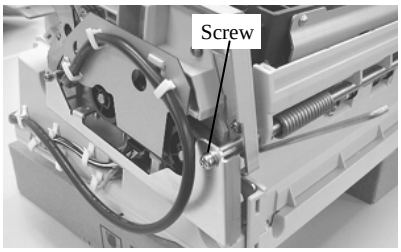



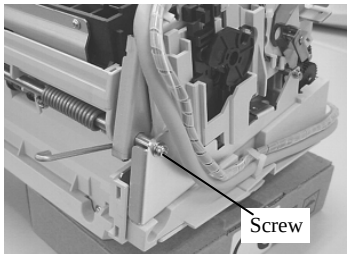

(4) Release the arm of the torsion coil spring for balancing weight in the ADF from the side panel of the frame. It is easier to work on if you open the ADF.



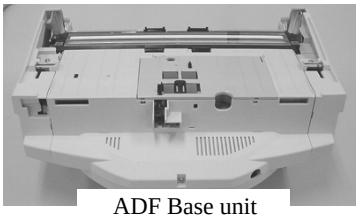



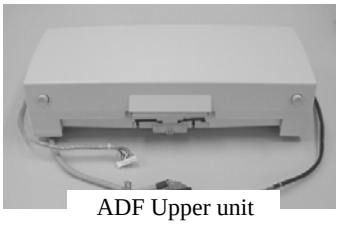

(5) Remove 2 large screws (each on right and left) from the left and right side panel.




(6) Slide the ADF movable unit in the direction of the shaft to the right and pull out the shaft on the other end from the hole on the side panel. Slide the unit to the opposite direction to remove.
The ADF Base unit is the ADF fixed unit with Right cover, Left cover, and Front cover attached.
The ADF Upper unit is the ADF movable side with ADF cover attached.


ADF Base unit


ADF Upper unit

Note: Be careful not to damage the glass on the ADF Upper unit.

<Installing>

Follow the above procedure in reverse.

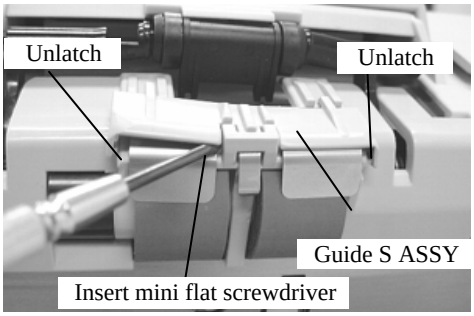
After replacing the ADF Base unit or the ADF Upper unit, perform the magnification adjustment (Section 7.1.3), offset adjustment (Section 7.1.4), white level adjustment (Section 7.1.5) and Ultra sonic sensor adjustment (Section 7.1.9). Reset the consumables counters as well (Section 7.1.6).

## 6.9 Removing / Installing the Paper path

### 6.9.1 How to remove/install the Guide S ASSY

**NOTICE**

Refer to section 8.10 for the specifications of replacement parts.

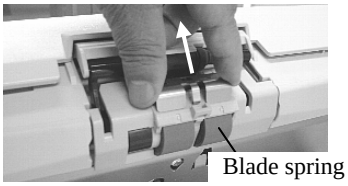



<Removing>

(1) Open the ADF.

(2) Unlatch both sides of the Guide S ASSY, insert a small flat-blade screwdriver between the blade spring and plastic part and remove the plastic part.

(3) Remove the blade spring by lifting up.




<Installing>

Follow the above procedure in reverse.

### 6.9.2 How to remove/install the US sensor, US PCA, Pick sensor, DF sensor, TOP sensor and Empty sensor

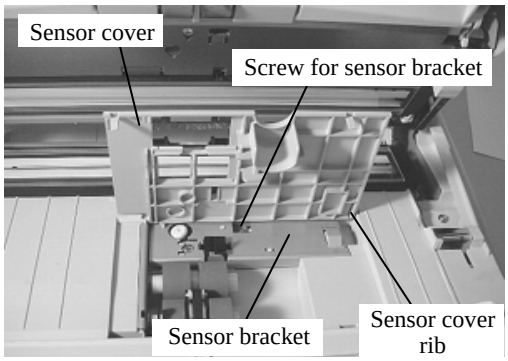
**NOTICE**

Refer to the following sections for the specifications of replacement parts.
US sensor: Section 8.5
US PCA: Section 8.6
Pick sensor: Section 8.8
DF sensor: Section 8.9
TOP sensor: Section 8.17
Empty sensor: Section 8.7

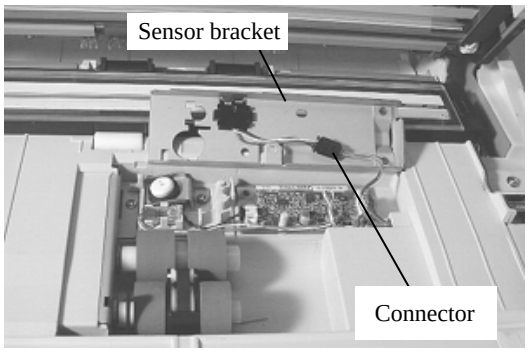
<Removing>

(1) Open the ADF, then open the Sensor cover.

(2) Carefully bow the sensor cover rib and remove the Sensor cover. Remove a screw from the Sensor bracket. (Photo on the right)



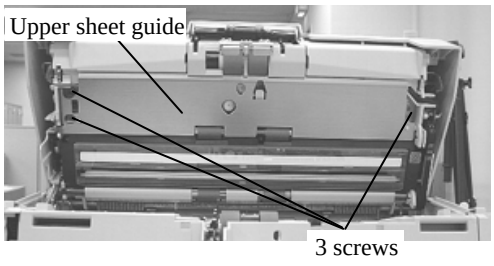

(3) Turn the Sensor bracket over, and disconnect a connector and remove the Sensor bracket.




Go to step (6) for replacement of the US sensor (lower) , go to step (10) for replacement of the US PCA, and go to step (15) for replacement of the Empty sensor.

(4) Referring to section 6.6.1, remove the Chute ASSY. Remove 3 screws shown in the right and remove the upper Sheet guide.

Go to step (8) for replacement of the US sensor (upper), go to step (11) for the DF sensor, and step (13) for the TOP sensor.

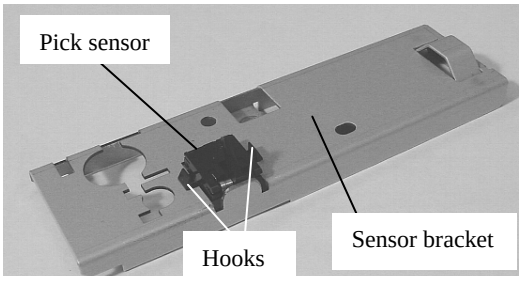



**NOTICE**

Be careful not to drop the upper Sheet guide when removing/installing it. It may break the glass at the reading section.

**<Replacement of Pick sensor>**

(5) Unlatch the hooks of the Pick sensor from the sensor bracket that was removed in step (2), and detach the Pick sensor.




<Installing>

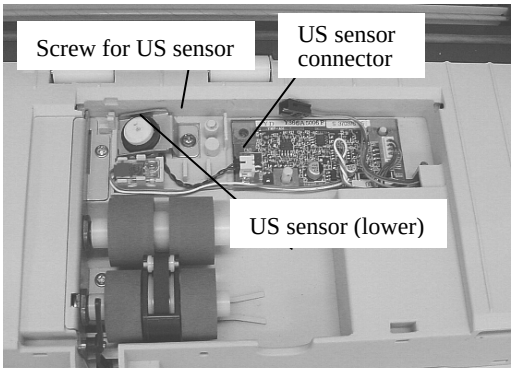
Follow the above procedure in reverse.
Make sure that the claws of the Pick sensor are latched on the bracket firmly.

**<Replacement of US sensor (lower)>**

Follow the procedure below after step (3).

(6) Disconnect the US sensor (lower) connector out of the US PCA.

(7) Remove a screw from the US sensor and remove the bracket and the US sensor. Remove the sensor from the bracket.




<Installing>

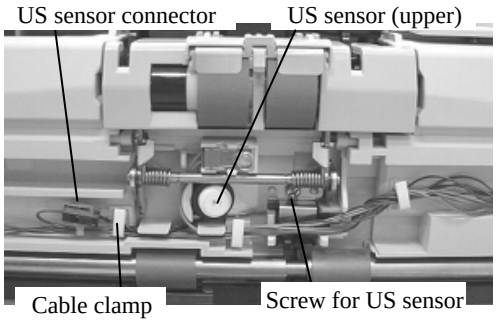
Follow the above procedure in reverse.
Place the cables as shown in the photo above.
After replacing the US sensor, perform the Ultra sonic sensor adjustment (section 7.1.9).

**<Replacement of US sensor (upper)>**

Follow the procedure below after step (4).

(8) Disconnect the US sensor (upper) cable from the Cable clamp and disconnect its connector.

(9) Remove 1 screw from the US sensor and remove the bracket then the US sensor.

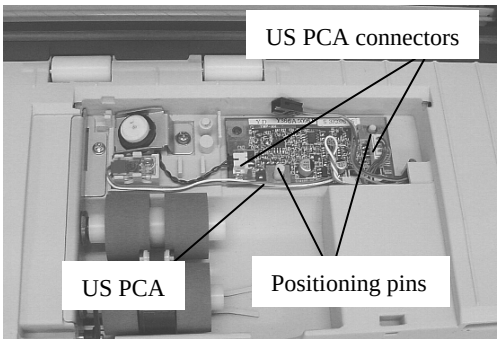



<Installing>

Follow the above procedure in reverse.
Place the cables as shown in the photo on the right.
After replacing the US sensor, perform the Ultra sonic sensor adjustment (section 7.1.9).

**<Replacement of US PCA>**

Follow the procedure below after step (3).




(10) Disconnect 2 connectors from the US PCA at the bottom of the Paper path and remove the US PCA.

<Installing>

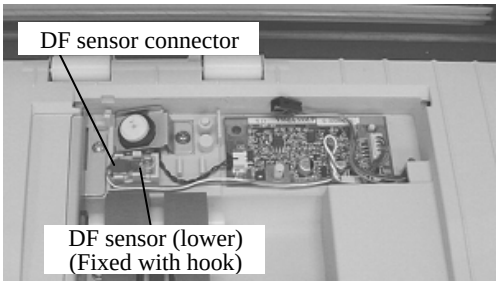
Follow the above procedure in reverse. Make sure that the holes of the US PCA are inserted in the positioning pins. Place the cables as shown in the right photo.

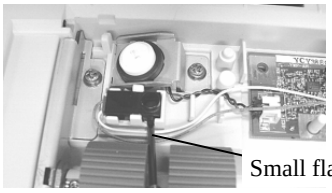
Note: After replacing the US PCA, perform the Ultra sonic sensor adjustment (section 7.1.9).

**<Replacement of DF sensor>**

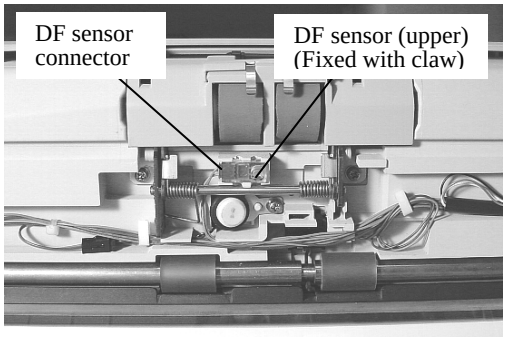
Follow the procedure below after step (4).

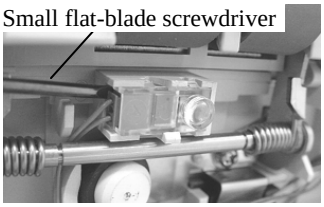
(11) Disconnect the lower DF sensor connector, unlatch the DF sensor hook, and then remove the DF sensor (lower).
Inserting a small flat-blade screwdriver under the sensor will make it easier to remove the sensor. (Photo below)




(12) Disconnect the upper DF sensor connector, unlatch the DF sensor hook, and then remove the DF sensor (upper).
Inserting a small flat-blade screwdriver under the sensor will make it easier to remove the sensor. (Photo below)



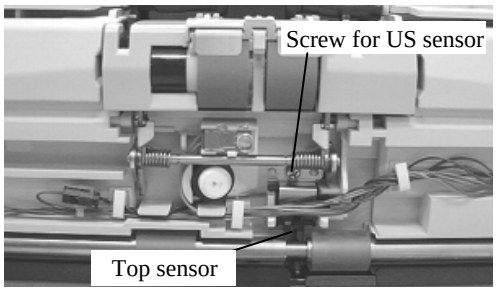

<Installing>

The DF sensor consists of two parts. DF sensor (lower) is black and DF sensor (upper) is transparent. Do not confuse them when installing.
Follow the above procedure in reverse.
Place the cables as shown in the photo on the above right.

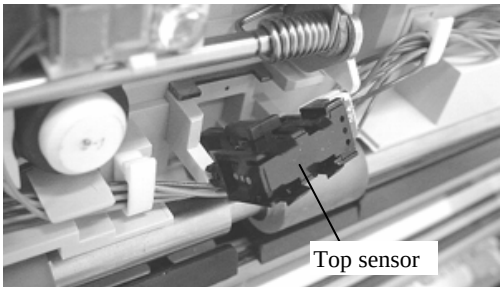
**<Replacement of TOP sensor>**

Follow the procedure below after step (4).

(13) Remove 1 screw that secures the US sensor, and then remove the bracket.




(14) Remove the TOP sensor (photo on the right), and disconnect 1 connector, then the TOP sensor.




<Installing>

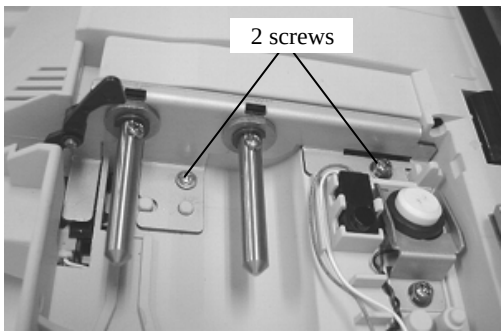
Follow the above procedure in reverse.
Place the cables as shown in the photo above right.
Make sure that the TOP sensor lever moves smoothly after installation.
After replacing the TOP sensor, perform offset adjustment (section 7.1.4).

**<Replacement of Empty sensor>**

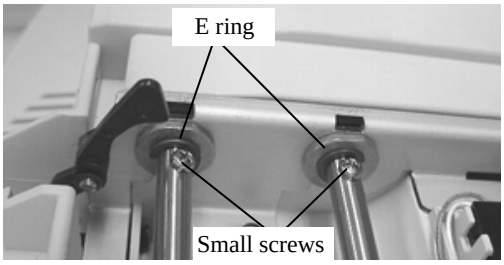
Note: A small flat-blade screwdriver (M2) is required for replacing this part.

Follow the procedure below after step (3).

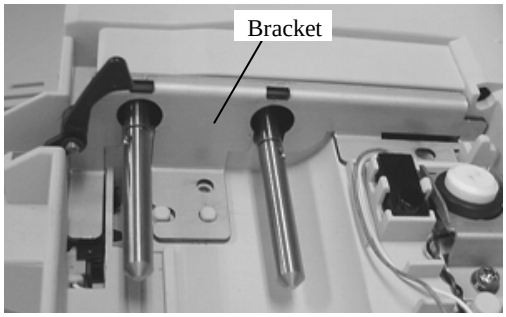
(15) Open the ADF, then the sensor cover. Remove 2 screws that secure the bracket which holds the pick roller axis.



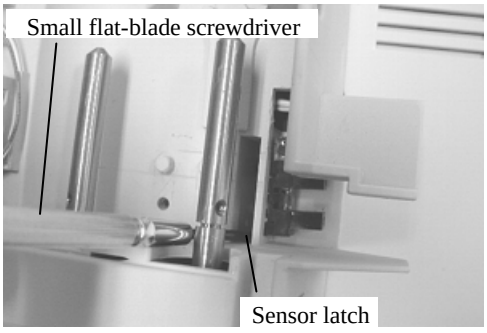

(16) Remove 2 screw (small, M2) and E ring from each of the pick roller shaft, and pull the roller bearing off the shafts.



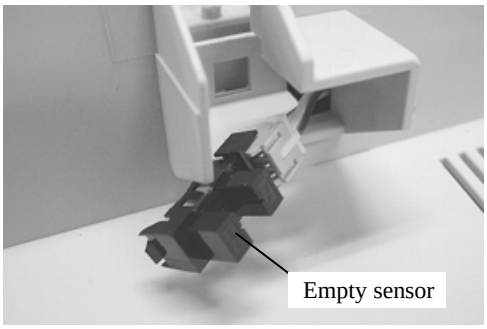

(17) Disconnect the connector from the Empty sensor. Remove the bracket that supports the pick roller shafts. (Photo on the right)




(18) Unlatch from the Empty sensor using a small flat-blade screwdriver (photo on the right) and remove it.




(19) Disconnect the cable from the empty sensor.




<Installing>

Follow the above procedure in reverse.

# 6.10 Removing / Installing the Parts in the ADF cover

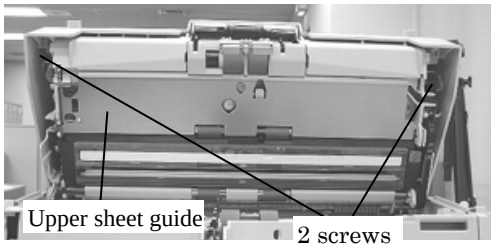
## 6.10.1 How to remove/install the Inverter (for ADF backside scanning)

**NOTICE**

Refer to section 8.4 for the specifications of replacement parts.

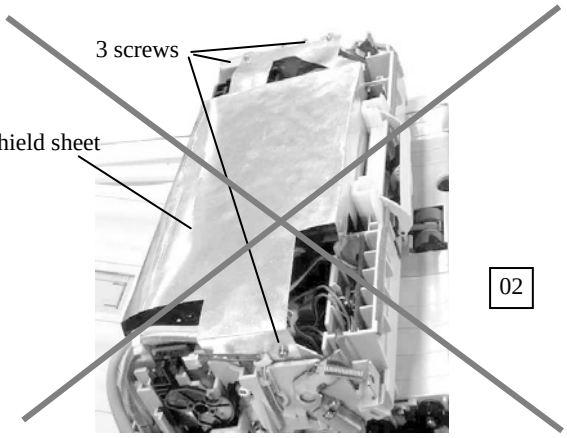
<Removing>

(1) Open the ADF and remove 2 screws (photo at right) that secure the ADF cover. Pull out on the cover on the ejection side and remove. (Photo below)



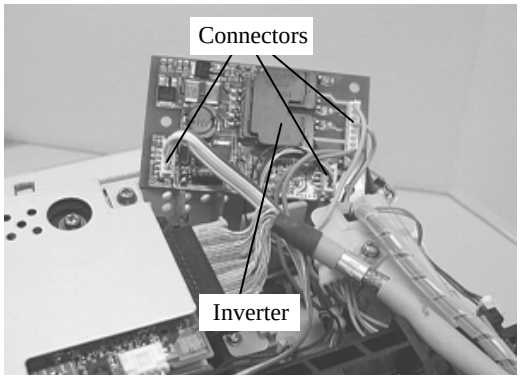

(2) ~~Remove 3 screws and remove the shield cover. (Photo on the right)~~

02




02

(3) Lifting up the Inverter from the groove, disconnect 3 connectors connected to the Inverter, then remove the Inverter.

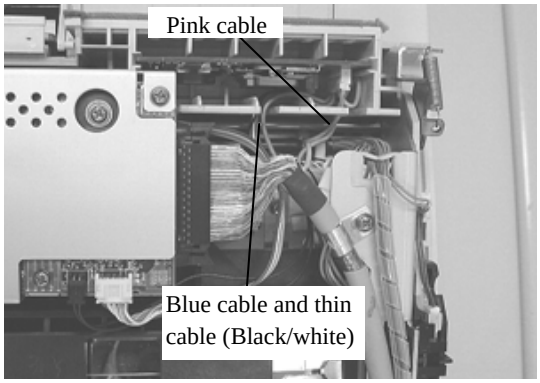



<Installing>

Follow the above procedure in reverse.

**NOTICE**

To avoid defective images, insert the pink and blue cables and thin black/white cable connected to the Inverter into respective grooves as shown on the right.



## 6.10.2 How to remove/install the Optical unit ADF (for backside optical system)

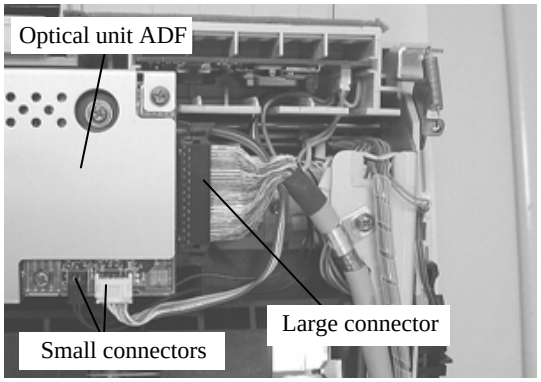
**NOTICE**

Refer to section 8.19 for the specifications of replacement parts.

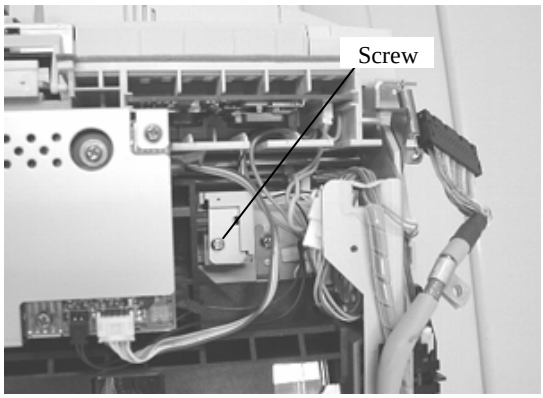
<Removing> 02

(1) Remove the ADF cover ~~and the shield sheet~~ by referring to step (1) and (2) on section 6.10.1.

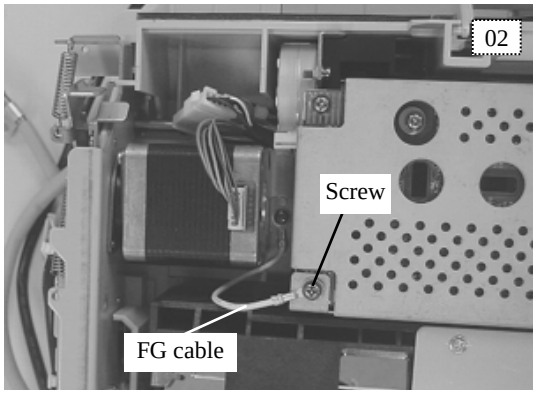
(2) Pull one large and 2 small connectors out of the Optical unit ADF.




(3) Remove a screw which secures the bracket (photo below) and remove the bracket.

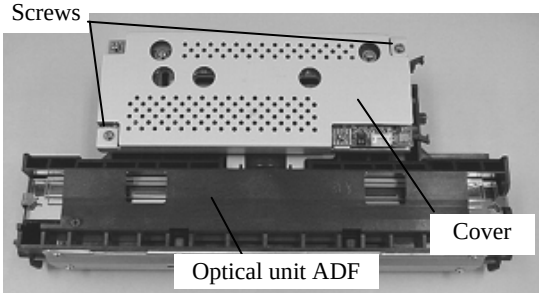



02 If there is an FG cable as shown in the right photo, remove a screw for the FG cable of the Optical unit ADF.




(4) Remove the Optical unit by lifting upward.

(5) Remove 2 screws from the Optical unit ADF, then remove the cover.




<Installing>

Follow the above procedure in reverse.

**NOTICE**

1) Be careful not to touch the mirror in the Optical unit ADF. 02
2) After replacing the Optical unit ADF, perform ~~the magnification adjustment (section 7.1.3),~~ offset adjustment (section 7.1.4) and white level adjustment (section 7.1.5).

## 6.10.3 How to remove/install the BW motor (for driving pick arm) Sensor (for detecting pick arm position)

**NOTICE**

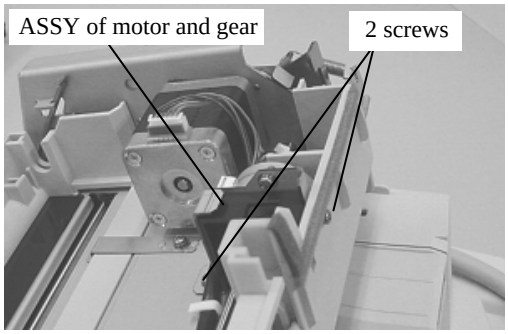
Refer to the following sections for the specifications of replacement parts.
BW motor: Section 8.13
Sensor: Section 8.7

<Removing>

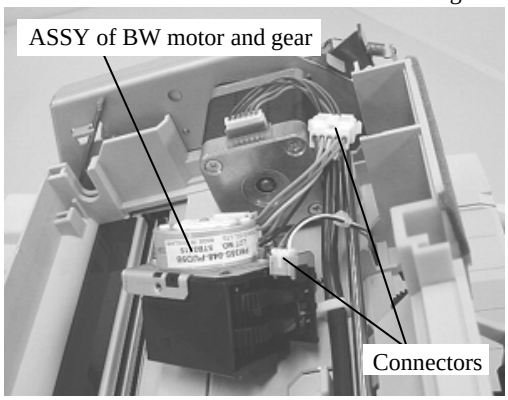
(1) Remove the ADF cover and the shield sheet by referring to step (1) and (2) on section 6.10.1.

(2) Remove the Optical unit ADF by referring to step (2) to (4) of section 6.10.2.

(3) Remove 2 screws shown on the right. Insert a small flat-blade screwdriver in the space between the frame and gearbox and release the gearbox from the frame.



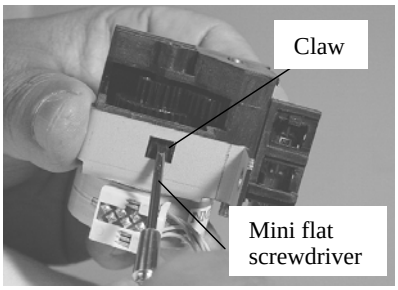

(4) Disconnect the connectors of the BW motor and the sensor, and remove the ASSY of BW motor and the gear.




Go to step (7) for replacement of the sensor.

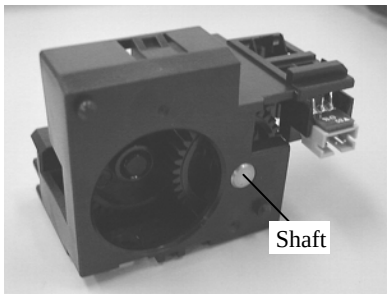
**<Replacement of BW motor>**

(5) Push the claw of the ASSY of the BW motor and gear (in the holes) to remove the gearbox. (Photo on the right)

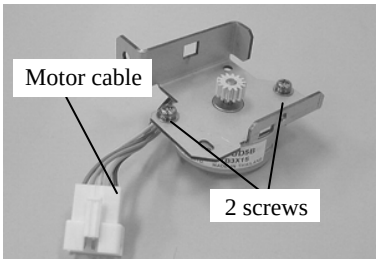



**NOTICE**

Make sure that the metal shaft does not come off the gearbox and fall off. Refer to photo below for location of the shaft.




(6) Remove 2 screws from the bracket and remove the BW motor.



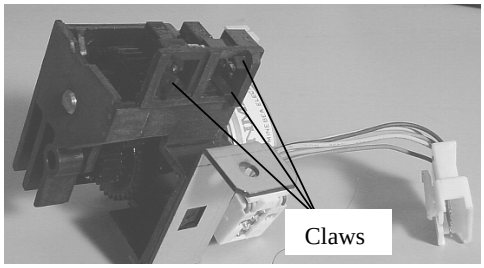

<Installing>

Follow the above procedure in reverse.
When installing the BW motor, place the cable as shown on the right.

**<Replacement of Sensor>**

Follow the procedure below after step (4).

(6) Unlatch the claws of the sensor, and remove the sensor from the gear unit.




<Installing>

Follow the above procedure in reverse.

**NOTICE**

Be careful not to pinch any cables.

## 6.10.4 How to remove/install the Feed motor, Belt ADF

**NOTICE**

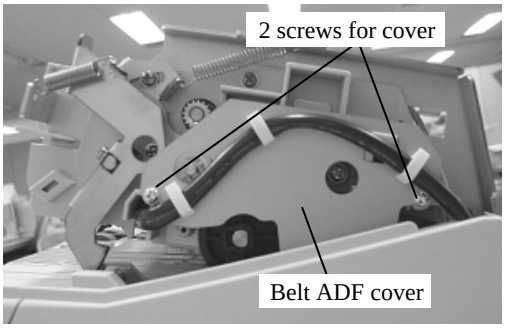
Refer to the following sections for the specifications of replacement parts.
Feed motor: Section 8.15
Belt ADF: Section 8.16

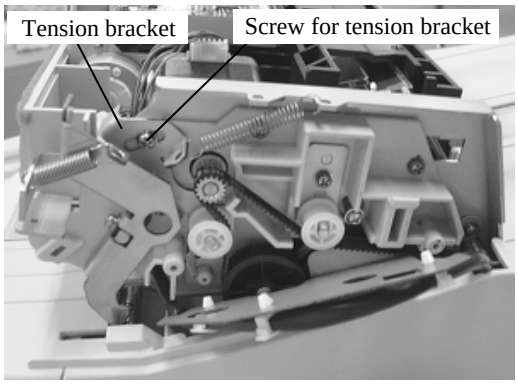
<Removing>

(1) Remove the ADF cover and the shield sheet by referring to step (1) and (2) on section 6.10.1.

(2) Referring to step (2) to (4) on section 6.10.2, remove the Optical unit ADF.

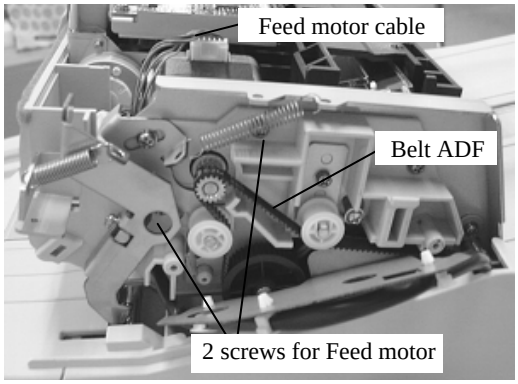
(3) Loosen 2 screws that secure the Belt ADF cover (no need to remove them) and pull down the cover to the front. (Photo below).

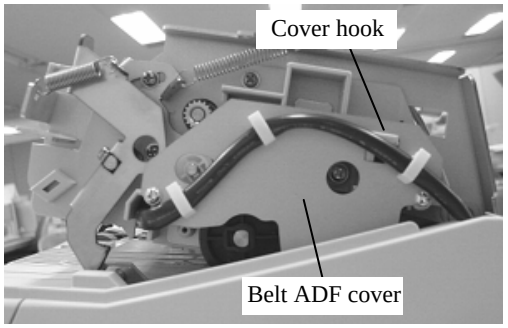



(4) Loosen a screw of the tension bracket as shown above, and rotate the bracket clockwise to loosen the belt tension. Remove the ADF belt if it will be replaced.

(5) Disconnect the cable from the Feed motor. Remove 2 screws that secure the Feed motor as shown on the right and remove the Feed motor.




<Installing>

Follow the above procedure in reverse.

Make sure that the cover is hung on the hook when installing the Belt ADF cover.

After replacing the Feed motor or Belt ADF, perform the magnification adjustment (section 7.1.3) and offset adjustment (section 7.1.4).

## 6.10.5 How to remove/install the BW motor (for driving background switch mechanism)

**NOTICE**

Refer to section 8.13 for the specifications of replacement parts.

<Removing>

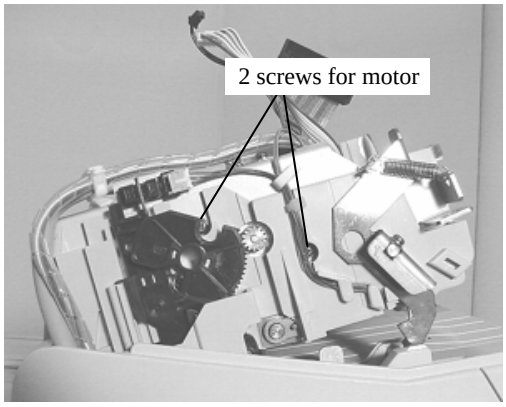
(1) Remove the ADF cover and the shield sheet by referring to step (1) and (2) on section 6.10.1.

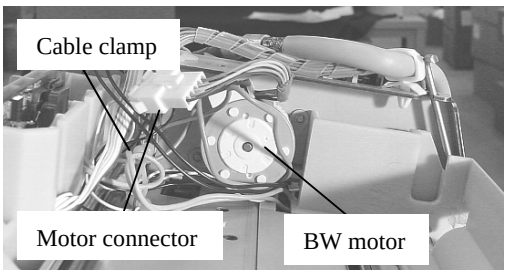
(2) Remove the Optical unit ADF by referring to step (2) to (4) on section 6.10.2.

(3) Remove the wires from the cable clamp behind the motor.

(4) Remove 2 screws that secure the BW motor.

(5) Disconnect the BW motor connector and remove the BW motor.




<Installing>

Follow the above procedure in reverse.

**NOTICE**

Place the cables as shown in the photo on the right.

## 6.10.6 How to remove/install the Sensor (for detecting background position)

**NOTICE**

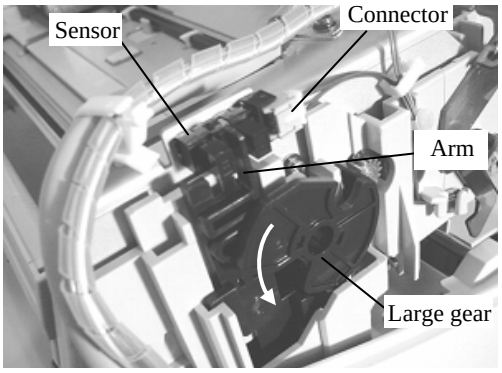
Refer to section 8.7 for the specifications of replacement parts.

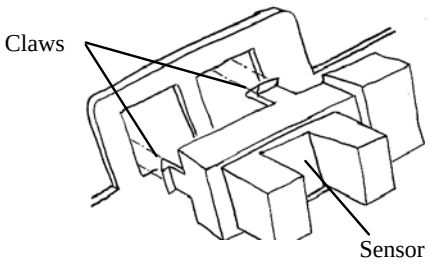
<Removing>

(1) Remove the ADF cover and the shield sheet by referring to step (1) and (2) on section 6.10.1.

(2) Rotate the large gear counterclockwise and lower the arm below the sensor position.

(3) Disconnect the cable connected to the sensor, unlatch the claws of the sensor and remove the sensor.




<Installing>

Follow the above procedure in reverse.

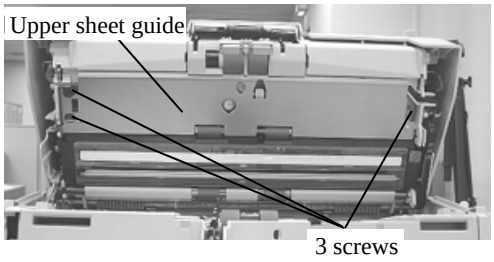
## 6.10.7 How to remove/install the Sensor OP

**NOTICE**

Refer to section 8.18 for the specifications of replacement parts.

<Removing>

(1) Open the ADF, remove 3 screws that secure the upper Sheet guide (shown on the right), and remove the upper Sheet guide.
If the screwdriver cannot reach, remove the Chute ASSY by referring to section 6.6.1.

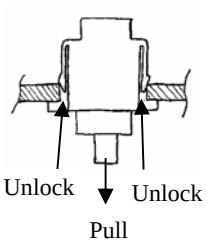



**NOTICE**

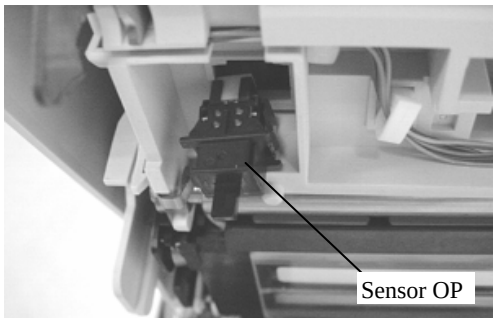
Be careful not to drop the upper sheet guide when removing/installing it. It may break the glass at the reading position.

(2) Remove the ADF cover and the shield sheet by referring to step (1) and (2) on section 6.10.1.

(3) Pushing out the Sensor OP from of the inside, insert a small flat-blade screwdriver into both spaces of the sensor OP to unlock. (Photo on the right)




(4) Disconnect the connector from Sensor OP. (Photo on the right)




<Installing>

Follow the above procedure in reverse.

## 6.10.8 How to remove/install the Background unit B

**NOTICE**

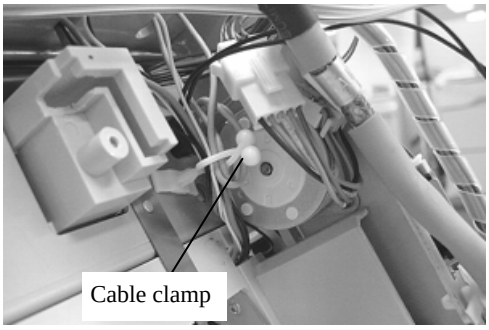
1) Refer to section 8.3 for the specifications of replacement parts.
2) Background unit B includes the lamp for backside scanning and the background for front side scanning.

<Removing>

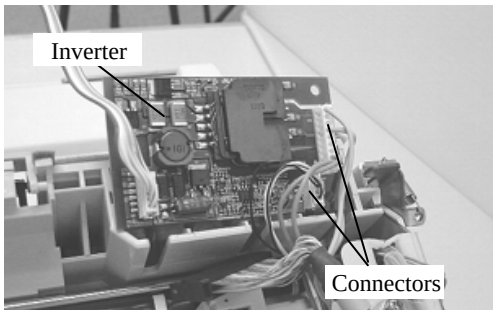
(1) Remove the ADF cover and the shield sheet by referring to step (1) and (2) on section 6.10.1.

(2) Remove the Optical unit ADF by referring to step (2) and (3) on section 6.10.2.

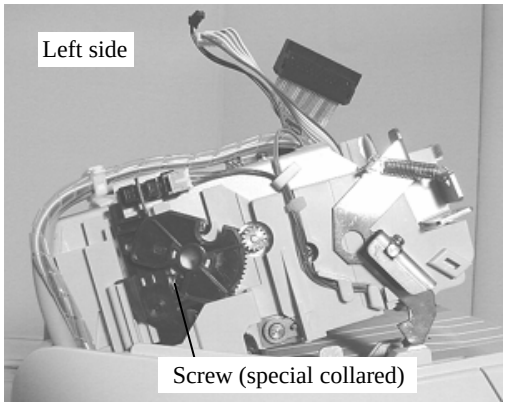
(3) Remove wires from cable clamp.

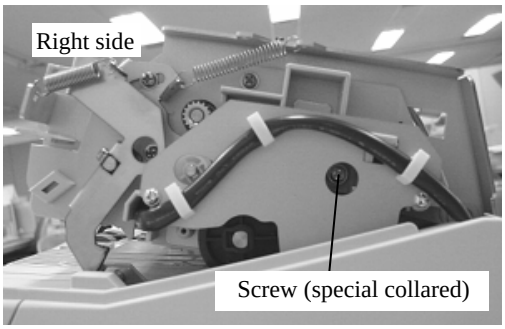


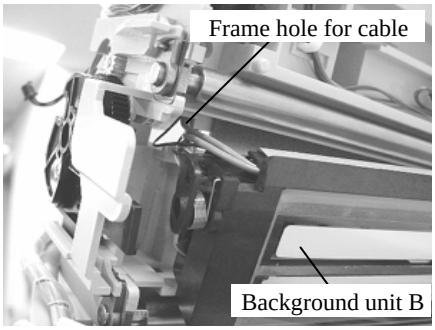

(4) Disconnect 2 connectors from the Inverter.




(5) Remove screws (special collared) from left and right side board of the ADF, and remove the Background unit B by pulling the cable through the opening in the frame. Be careful not to drop the screws.




<Installing>

Follow the above procedure in reverse.

**NOTICE**

1) Be sure to route the cables of the Background unit B into the original opening in the frame.
2) If the background unit B is installed appropriately, it moves up and down a bit (approx. 1mm).
3) After replacing the Background unit B, perform the ~~magnification adjustment (section 7.1.3),~~ offset adjustment (section 7.1.4) and white level adjustment (section 7.1.5). 02

## 6.11 Removing / Installing the ADF Fixing Parts

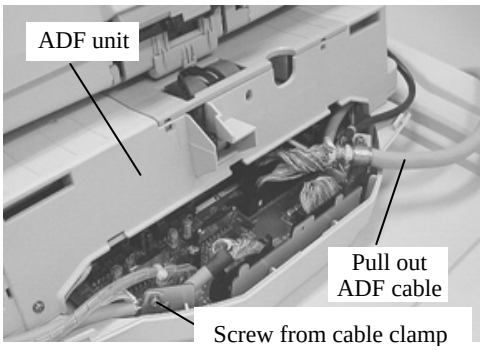
### 6.11.1 How to remove/install the ADF junction PCA

**NOTICE**

Refer to section 8.14 for the specifications of replacement parts.

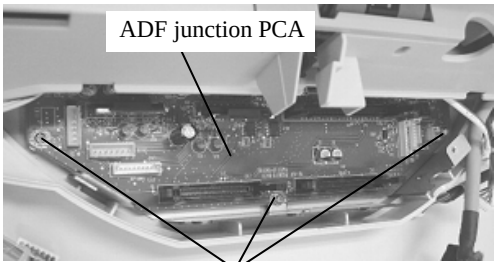
<Removing>

(1) Disconnect the ADF cable from the ADF unit by referring to step (1) to (7) of the section 6.8.1. 04. The ADF unit can remain on the FB unit when removing the cable.




(2) Disconnect all other (8) cables connected to the ADF junction PCA. You will need to remove a cable clamp screw before disconnecting one of the cables. (Photo right above)

(3) Remove 3 screws that secure the ADF junction PCA and remove the ADF junction PCA.




<Installing>

Follow the above procedure in reverse.

**NOTICE**

Be careful not to pinch any cables.

## 6.11.2 How to remove/install the Optical unit ADF(for front side scanning), Inverter, Pick motor unit, and Background unit F

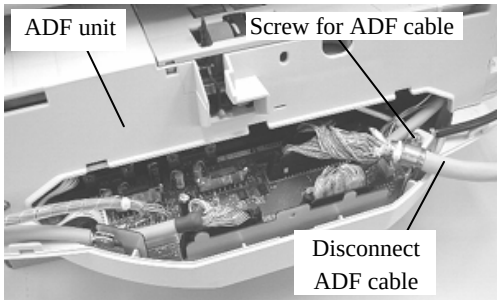
**NOTICE**

1) Refer to the following sections for the specifications of replacement parts.
   Optical unit ADF: Section 8.19
   Inverter: Section 8.4
   Pick motor unit: Section 8.11
   Background unit F: Section 8.2

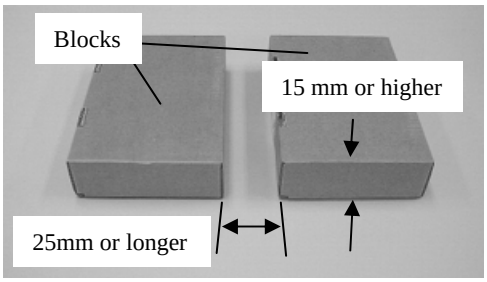
06 2) Background unit F includes the lamp for front side scanning and the background for backside scanning.

<Removing> 04

(1) Referring to steps (1) to (9) of section 6.8.1, remove the ADF unit, then remove the right, left and front covers from the ADF unit. (Photo on the right)

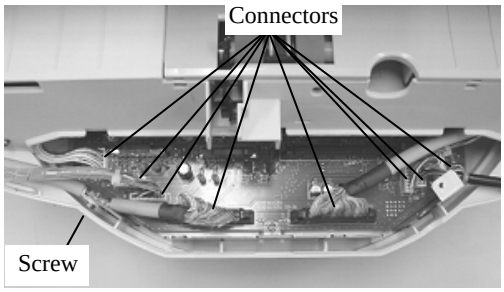



Ref) There is a projection at the bottom of the ADF unit. Prepare blocks as shown in the photo below and place the ADF unit on them. This will make the ADF more stable.

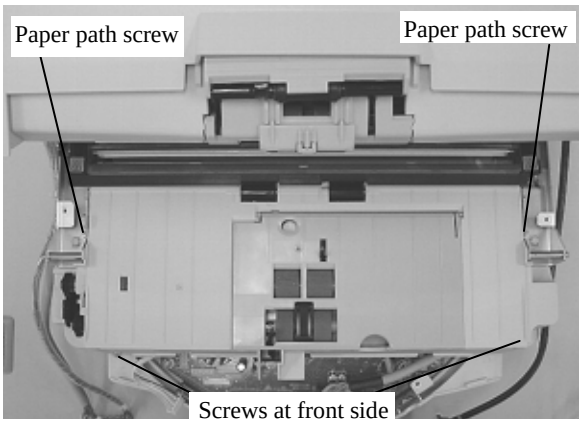



(2) Remove 1 screw that secure the ADF cable, and disconnect the ADF cable. (Photo on the right)

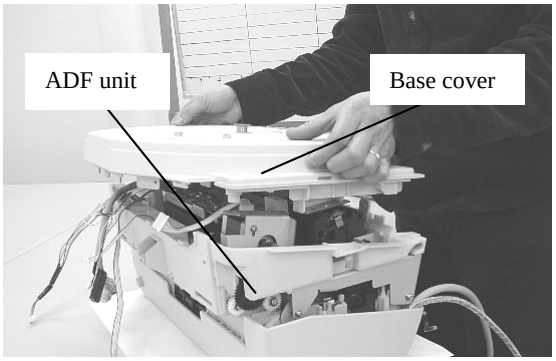
(3) Disconnect all (8) cables connected to the ADF junction PCA. You will need to remove 1 cable clamp screw before disconnecting one of the cables.

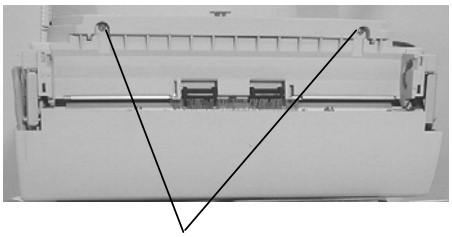


(4) Remove 2 screws at the front side of the ADF unit and 2 screws on the Paper path.




(5) Turn the ADF unit upside down, remove 2 screws from back of the unit and remove the base cover.



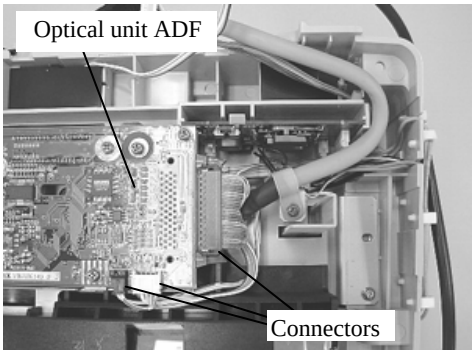



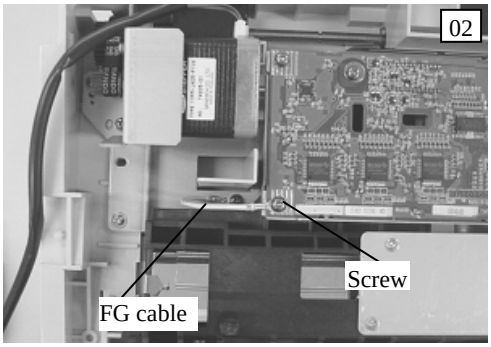

Go to each step depending on the parts to be replaced.
Go to step (6) for the Optical unit ADF
Go to step (8) for the Pick motor unit.
Go to step (9) for the Background unit F.
Go to step (12) for the Inverter.

**<Replacement of Optical unit ADF>**

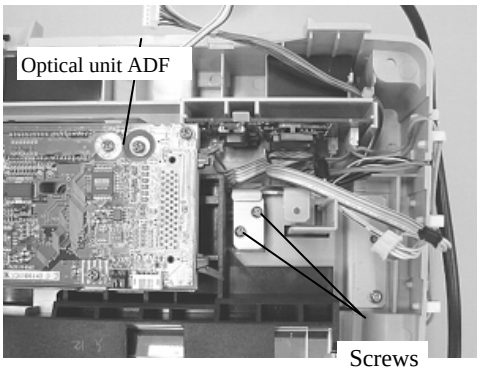
(6) Remove a cable clamp screw and disconnect 3 cables connected to the Optical unit ADF. (Photo on the right)

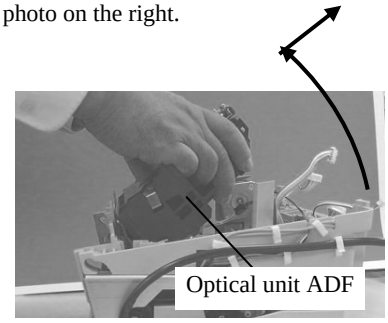
02 If there is an FG cable as shown in the photo below, remove a fixing screw for the FG cable of the Optical unit ADF.




Remove 2 bracket screws (photo on the right) and remove the bracket. Then remove the Optical unit ADF by rotating it as shown in the photo on the right.




<Installing>

Follow the above procedure in reverse.

**NOTICE**

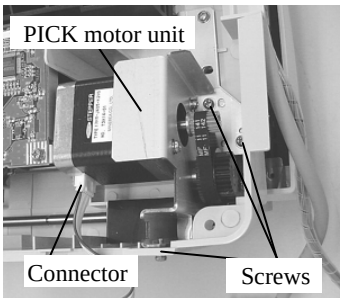
- Be careful not to touch the mirrors on the Optical unit ADF.
- After replacing the Optical unit ADF, perform the ~~magnification adjustment (section 7.1.3),~~ offset adjustment (section 7.1.4) and white level adjustment (section 7.1.5). 02

**<Replacement of Pick motor unit>**

Follow the procedure below after step (5).

(7) Remove 4 screws that secure the Pick motor unit (one of the screws is short) as shown in the photos on the right and right below, disconnect 1 connector, then remove the Pick motor unit.

The Pick motor includes the gear and bracket.

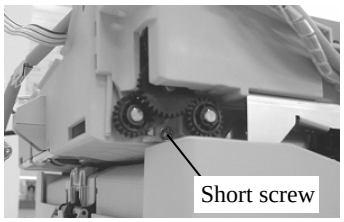



<Installing>

Follow the above procedure in reverse.

02

Note: After replacing the Pick motor unit, perform the magnification adjustment (Section 7.1.3).

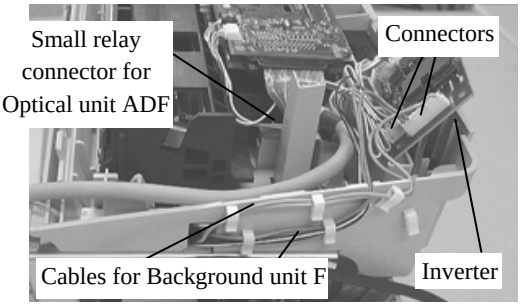


**<Replacement of Background unit F>**

**NOTICE**

1) The Background unit F includes the lamp for front side scanning and the background for backside scanning.
2) Follow the procedure below after step (5).

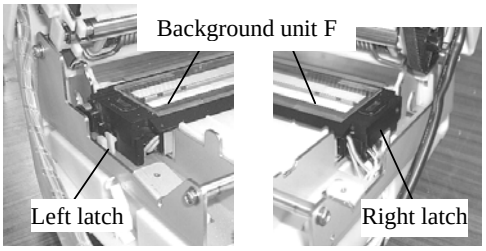
(8) Remove the Inverter, disconnect two connectors, then a small relay connector from the Optical unit ADF, and remove it from the cable clamps.




(10) Open the ADF, and place it on its side. (See photo below)

07

(11) Unlatch the right latch of the Background unit F, then the left latch, and then remove the Background unit F.




<Installing>
Follow the above procedure in reverse.

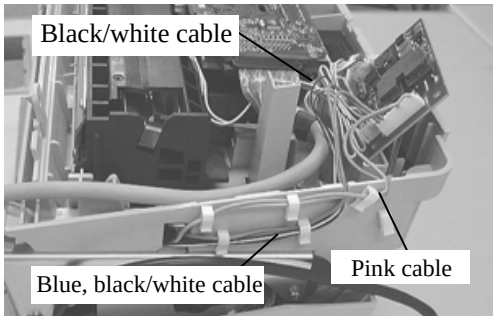
07 Note: Before installing the Background unit F, check that both left and right latches secure the Background unit F.

**NOTICE**

02

After replacing the Background unit F, perform the ~~magnification adjustment (section 7.1.3),~~ offset adjustment (section 7.1.4) and white level adjustment (section 7.1.5).

To avoid defective images, make sure the pink, blue and black/white cables are separated as shown in photo on the right.



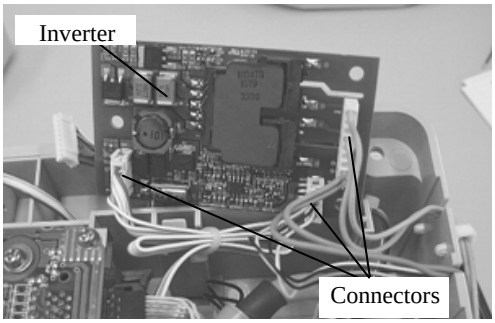

**<Replacement of Inverter>**

Follow the procedure below after step (5).

(12) Remove an Inverter latch and remove the Inverter.

(13) Disconnect 3 connectors from the Inverter and remove the Inverter.

<Installing>
Follow the above procedure in reverse.



## 6.11.3 How to remove/install the HK Ring ME

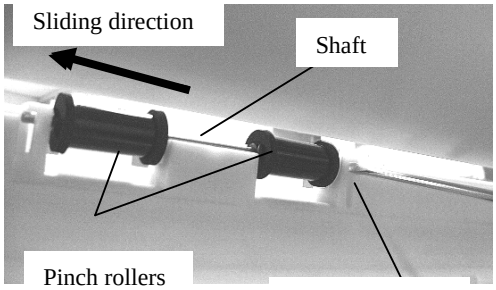
**NOTICE**

Refer to Section 8.12 for the specifications of replacement parts.
Do not touch the glass of the reading section while disassembling.

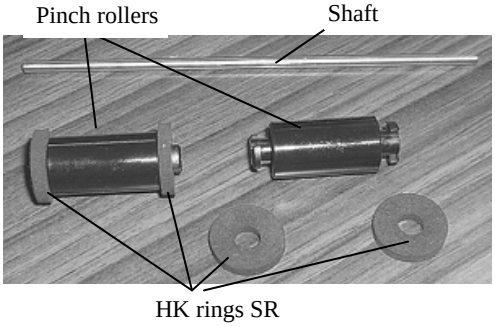
<Removing>

(1) Referring to Section 6.11.2, remove the Background unit F.

(2) Insert a small flat-blade screwdriver in the right groove when you look at the ADF unit from the document exit side (photo on the right), and slide the shaft of the Pinch rollers in the direction of the arrow until the Pinch rollers and shaft are removed.




(3) Remove the pinch rollers from the shaft, then remove the HK rings SR from the rollers.

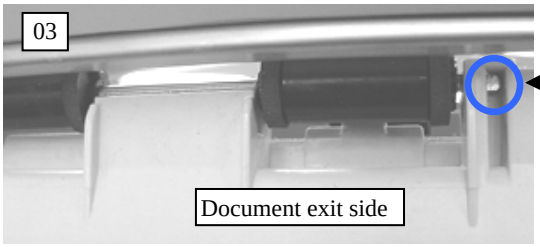



<Installing>

Follow the above procedure in reverse.

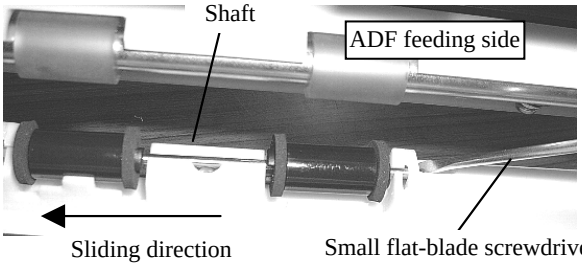
**NOTICE**

1) When installing the pinch roller shaft, be sure that the end of the shaft with the flat area comes at right side and the flat area faces to the document exit side. 03




Face the flat area on the shaft to the document exit side.

2) After inserting the pinch roller shaft in the groove, slide the edge of the shaft in the direction of the arrow with a small flat-blade screwdriver.




3) After replacing the HK ring F, perform the magnification adjustment (section 7.1.3) and offset adjustment (section 7.1.4).

## 6.12 Removing / Installing the Parts inside of FB

### 6.12.1 How to remove/install the Panel unit and Panel PCA

**NOTICE**

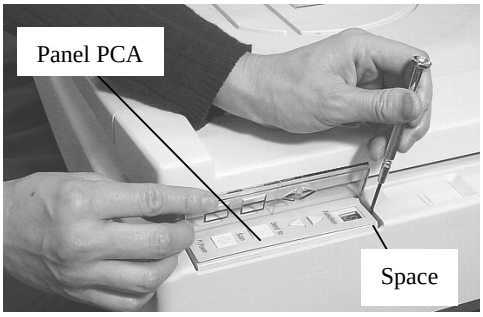
Refer to the following sections for the specifications of replacement parts.
Panel unit: Section 8.22
Panel PCA: Section 8.23

<Removing>

02 (1) EEPROM is mounted in the Panel PCA. Before replacing the Pane PCA, save EEPROM data to the Control PCA temporarily by referring to Section 7.2.

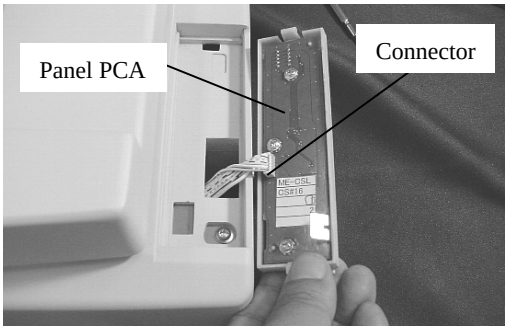
02

~~(1)~~ (2) Open the Panel unit cover. Insert a small flat-blade screwdriver in the space above the Panel unit (photo on the right) and unlatch the Panel unit claw and lift the unit from the flatbed.



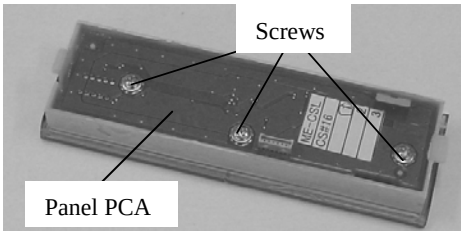

02

~~(2)~~ (3) Disconnect the connector from the Panel unit and remove the unit.




02

~~(3)~~ (4) To remove the Panel PCA, remove 3 screws from the Panel unit, then remove the Panel PCA.




02

(5) Referring to Section 7.1.8, restore the EEPROM data which has been saved in the Control PCA to the Panel PCA.

<Installing>

Follow the above procedure in reverse.

## 6.12.2 How to remove/install the FB junction PCA

**NOTICE**

Refer to section 8.26 for the specification of the replacement parts.

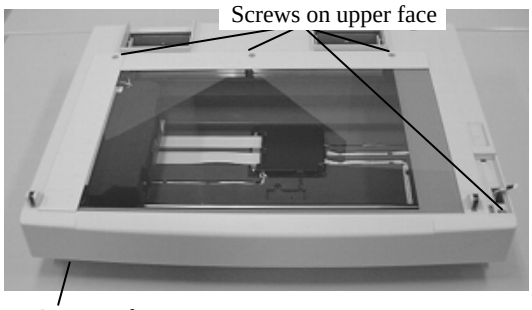
<Removing> 04

(1) Referring to step (1) to (9) of section 6.8.1, remove the ADF unit.
04

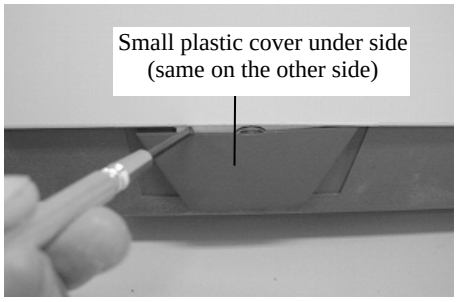
(2) Referring to step (10) to (12) of section 6.8.1, remove the PCA unit and the Document cover.

(3) Referring to section 6.12.1, remove the Panel unit.
02 Moving the EEPROM data is unnecessary.

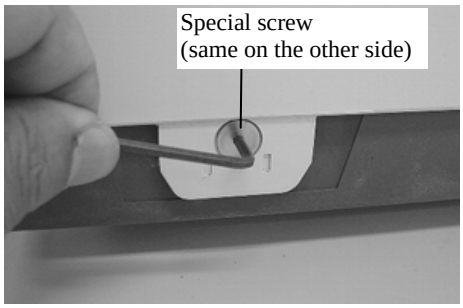
(4) Remove 4 small screws on upper surface and 1 screw from the lower left front of the FB cover.

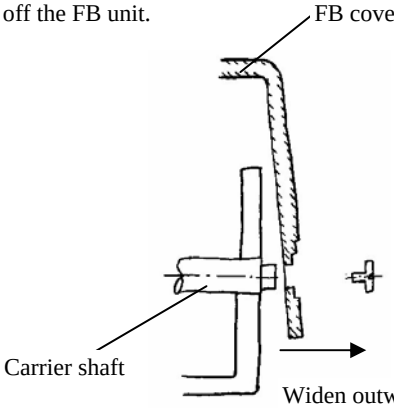



(5) With a small flat-blade screwdriver, lower the 2 small plastic covers under each side of the FB cover to remove them.

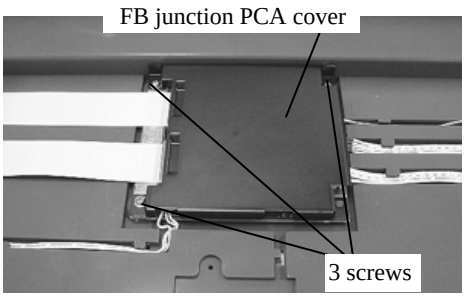



(6) Remove the special screws from the both sides of the carrier shaft using a 2 mm Allen wrench. Pull out on the FB cover where the carrier shaft is secured as shown below, then lift the cover off the FB unit.

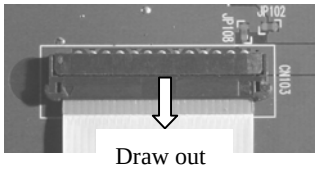


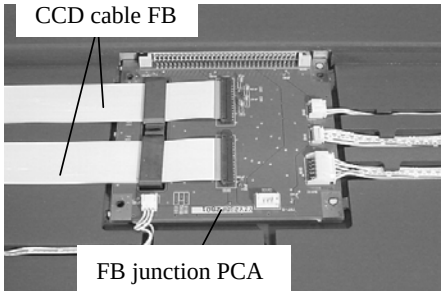



(7) Remove 3 screws that secure the FB junction PCA cover, and remove the cover.

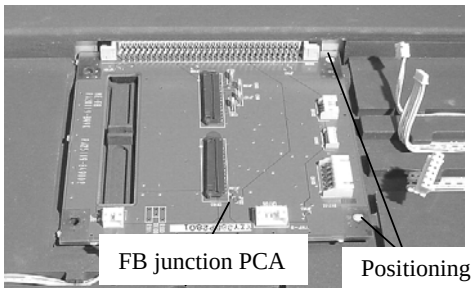



(8) Disconnect 2 CCD cable FB and 4 other cables from the FB junction PCA.
To disconnect the CCD cable FB, unlock the front edge of the connectors.



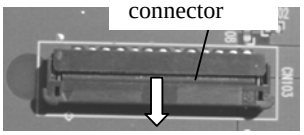

(9) Remove the FB junction PCA from the positioning pins and lift out of the FB unit.



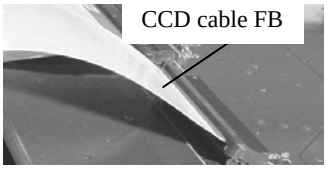

<Installing>
Follow the above procedure in reverse.

**NOTICE**

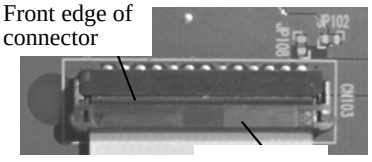
1) When inserting the CCD cable into the connector, follow the procedure below.
   (a) Unlock out the front edge of the connector.



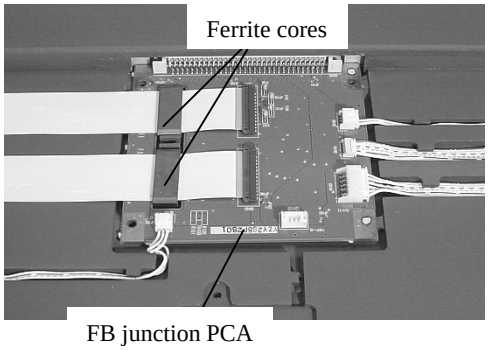

   (b) With the blue area each cable facing up, insert each CCD cable FB into the connector. Insertion will be easier if the connector is turned up a bit. Press the connector toward the FB junction PCA after insertion.




   (c) Push in the front edge of the connector to lock.




2) Set the ferrite cores into the grooves as shown on the right.



### 6.12.3 How to remove/install the Sensor OP (for detecting document cover open)

**NOTICE**

Refer to section 8.18 for the specification of replacement parts.

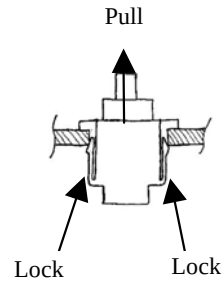
<Removing> 04

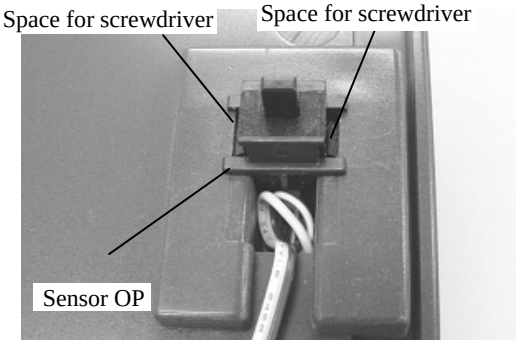
(1) Referring to step (1) to (9) of section 6.8.1, remove the ADF unit.
04

(2) Referring to step (10) to (12) of section 6.8.1, remove the PCA unit and the Document cover.

(3) Referring to step (3) and (4) of section 6.12.2, remove the FB cover.

(4) To remove the Sensor OP, insert a small flat-blade screwdriver into the spaces on each side of the sensor and unlock the sensor.



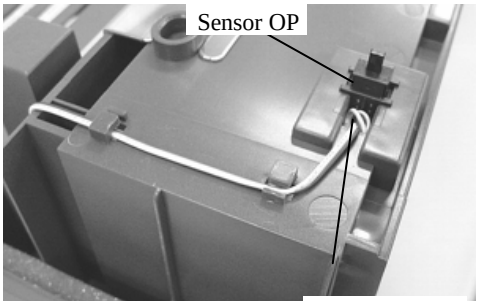




(5) Disconnect the connector from the Sensor OP.

<Installing>

Follow the above procedure in reverse.

Push surplus of the cable into the hole.



### 6.12.4 How to remove/install the Sensor (for detecting home position)

**NOTICE**

Refer to section 8.7 for the specification of replacement parts.

<Removing> 04

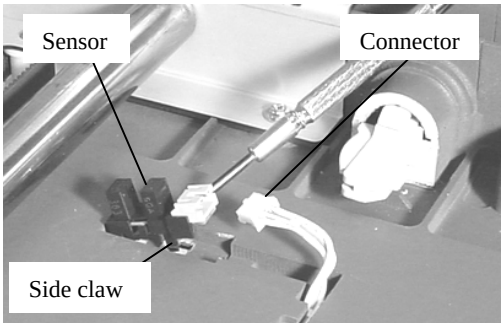
(1) Referring to step (1) to (9) of section 6.8.1, remove the ADF unit.
04

(2) Referring to step (10) to (12) of section 6.8.1, remove the PCA unit and the Document cover.

(3) Referring to step (3) and (4) of section 6.12.2, remove the FB cover.

(4) Disconnect the cable connected to the Sensor.

(5) Unlatch the claw at the side of the Sensor, then remove the Sensor.




<Installing>

Follow the above procedure in reverse.

**NOTICE**

Be careful not to pinch any cables.

## 6.12.5 How to remove/install the Optical unit FB, CCD cable FB, Inverter, and Lamp FB

**NOTICE**

Refer to the following sections for the specifications of replacement parts.

Optical unit FB: Section 8.27
CCD cable FB: Section 8.24
Inverter: Section 8.4
Lamp FB: Section 8.25

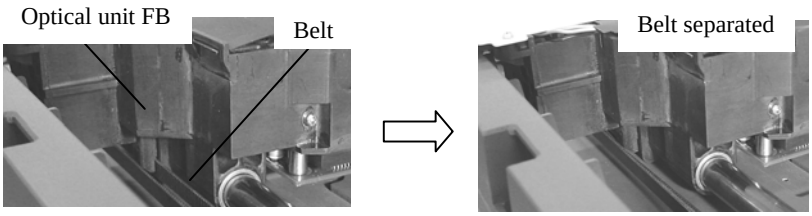
<Removing> 04

(1) Referring to step (1) to (9) of section 6.8.1, remove the ADF unit.
04

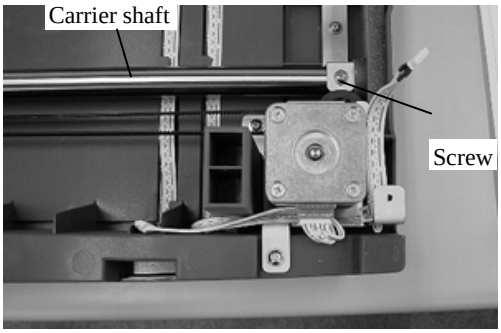
(2) Referring to steps (10) to (12) of section 6.8.1, remove the PCA unit and the Document cover.

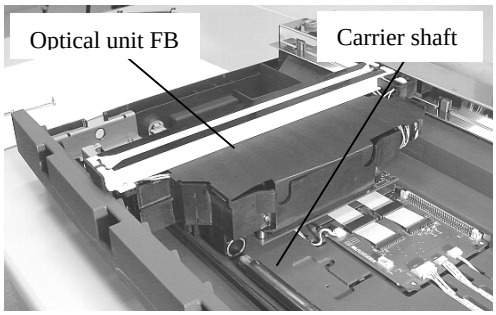
(3) Referring to step (3) and (4) of section 6.12.2, remove the FB cover.

(4) Move the Optical unit FB to the center, push down to lower the belt and separate it from the Optical unit FB.




(5) Remove 1 screw from the Carrier shaft, slide the Carrier shaft toward the FB motor to remove the Optical unit FB. (Photo below)

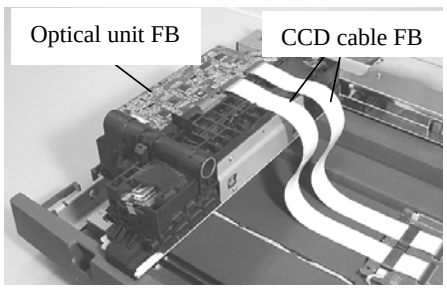



**<Replacement of Optical unit FB>**

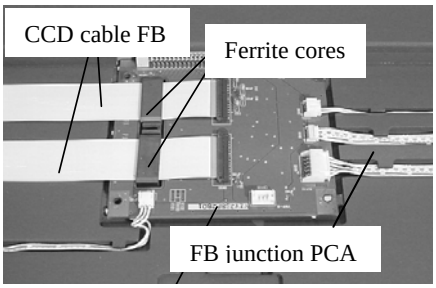
(6) Turn over the Optical unit FB upside down, disconnect 2 CCD cable FB. Lift the Optical unit out of the FB unit.

Go to step (9) for replacement of the Lamp FB.



**<Replacement of CCD cable>**

(7) Referring to step (8) of section 6.12.2, remove the FB junction PCA cover, and remove the CCD cable FB.



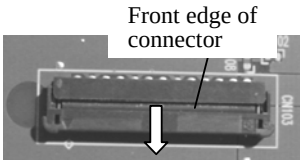

<Installing>

Refer to the Notice 1 and 2, and follow the above procedure in reverse.

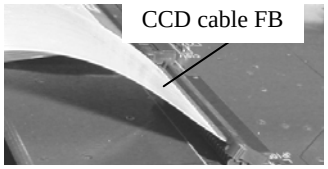
**NOTICE**

1) When inserting the CCD cable into the connector, follow the procedure below.

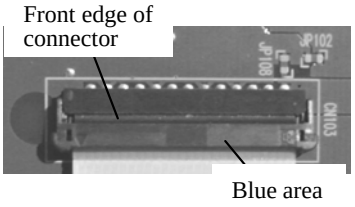
a) Unlock the front edge of the connector.



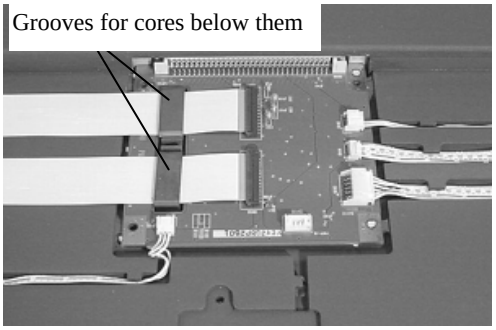

b) With the blue area of each cable facing up, insert each CCD cable FB into the connector. Insertion will be easier if the connector is turned up a bit. Press the connector toward the FB junction PCA after insertion.




c) Push in the front edge of the connector to lock.



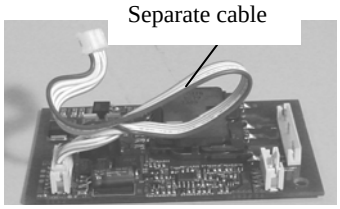

d) Set the ferrite cores into the grooves..

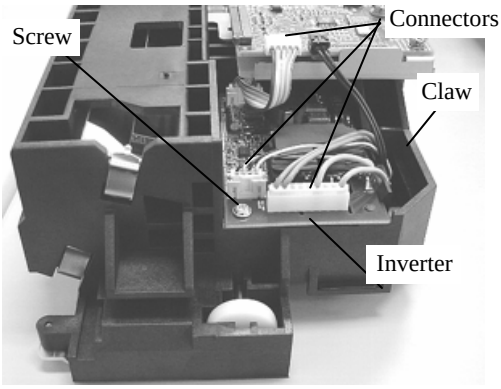



2) After replacing the Optical unit FB, perform the magnification adjustment (section 7.1.3), offset adjustment (section 7.1.4) and white level adjustment (section 7.1.5).

**<Replacement of Inverter>**

(8) Disconnect 3 connectors from the Inverter, remove the Inverter from the Optical unit FB by removing 1 screw and move the claw outward while you lift up the Inverter.

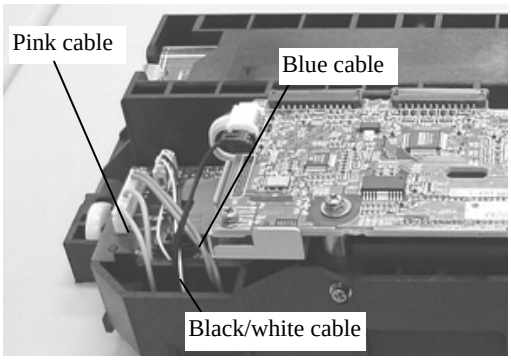



<Installing>
Refer to Notice 3, and follow the above procedure in reverse.

**NOTICE**

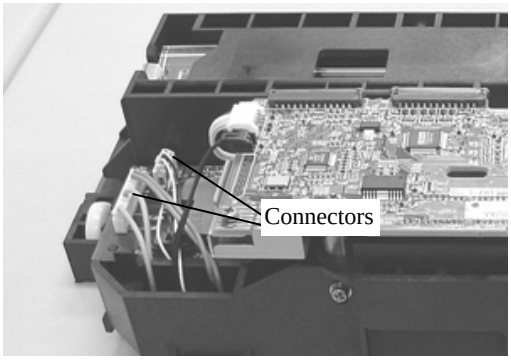
3) To avoid defective images, make sure the pink, blue, and black/white cables are separated as shown in photo on the right.



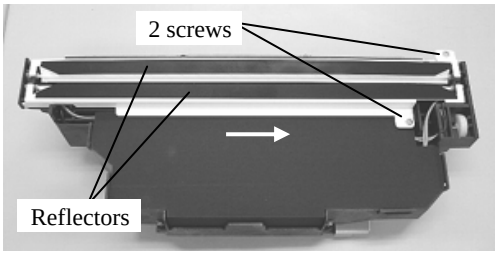

**<Replacement of Lamp FB>**

Follow the procedure below after step (6).

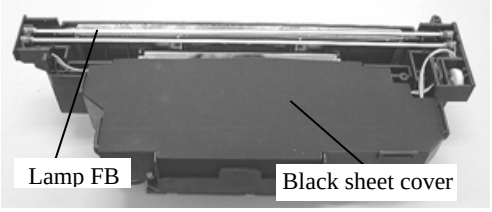
(9) Disconnect 2 connectors from the Inverter.



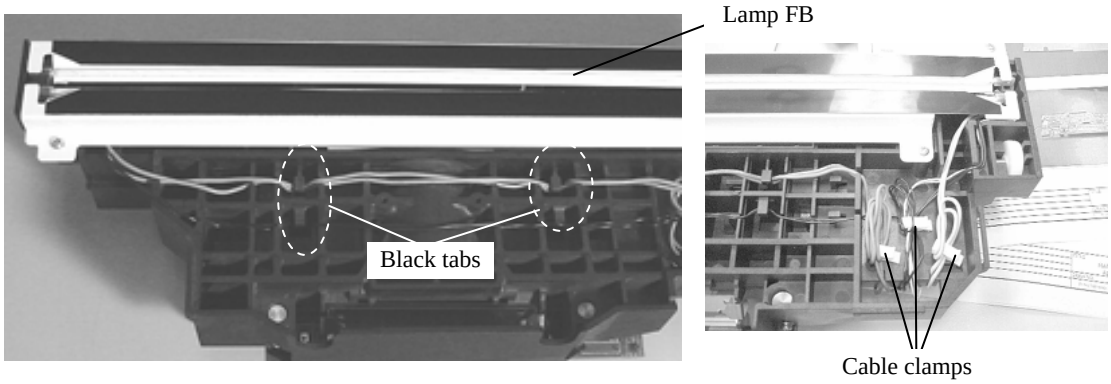

(10) Remove 2 screws, move the reflector in the direction of the arrow shown on the right and remove it from the Optical unit FB. The lamps will pop up when removing the reflectors.




(11) Remove the black sheet.



(12) Remove the wiring harness from black tabs in the Optical unit FB and the 3 white cable clamps and lift the Lamp FB from the Optical unit FB.

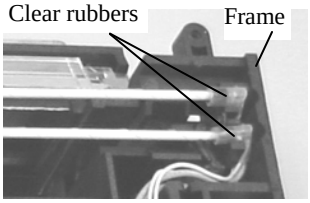



<Installing>

Refer to Notice 4, 5 and 6, and follow the above procedure in reverse.

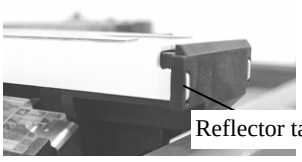
**NOTICE**

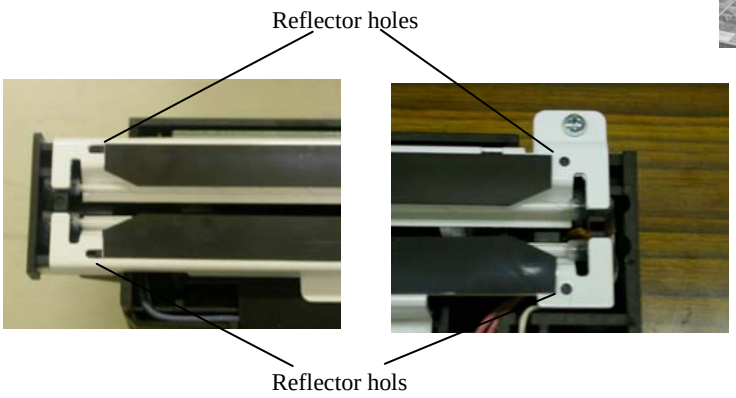
4) Insert the clear rubber lamp ends into the slots in the frame of the optical unit FB and install the reflector in order to avoid lamp breakage. Then route the lamp harness into the black tabs and the white cable clamps.




Same on the other side

5) When installing the reflectors, hang the tabs at the side of the reflector on the Optical unit FB frame, then fit the reflector holes and the Optical unit FB protrusions.




6) After replacing the Lamp FB, perform the magnification adjustment (section 7.1.3), offset adjustment (section 7.1.4) and white level adjustment (section 7.1.5).

## 6.12.6 How to remove/install the FB motor

**NOTICE**

Refer to section 8.21 for the specification of replacement parts.

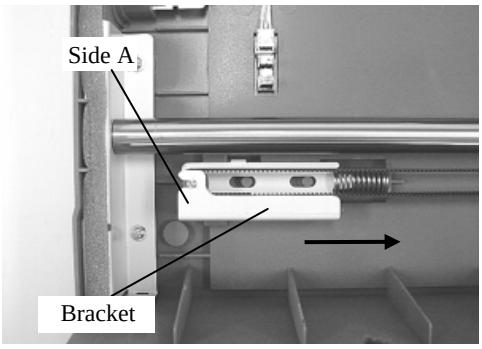
<Removing> 04

(1) Referring to step (1) to (9) of section 6.8.1, remove the ADF unit.
04

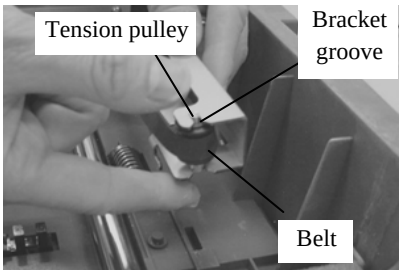
(2) Referring to step (10) to (12) of section 6.8.1, remove the PCA unit and the Document cover.

(3) Referring to step (3) and (4) of section 6.12.2, remove the FB cover.

(4) Slide the bracket which supports the tension pulley in the direction of the arrow, and lift side A to remove the bracket.



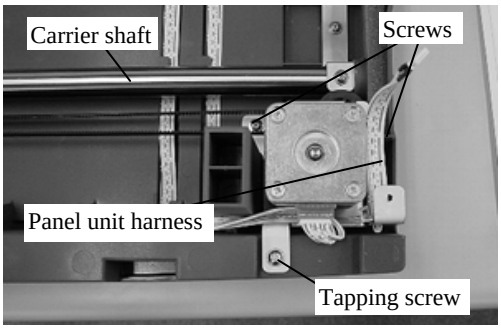

(5) Remove the tension pulley from the bracket groove, then the belt from the tension pulley.



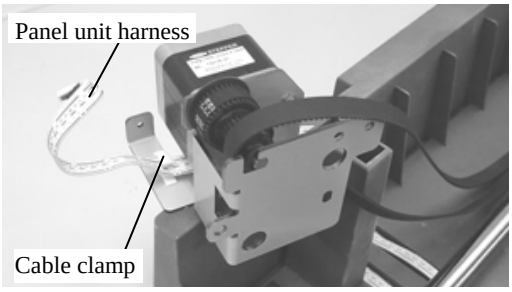

**NOTICE**

2 spacers (each for upper and lower) on the tension pulley shaft. Be careful not to lose them.

(6) Remove 2 screws and 1 tapping screw for the FB motor, disconnect the connector connected to the motor, and lift to remove the FB motor.




(7) Remove the Panel unit harness from the cable clamp.




**NOTICE**

The FB motor includes the belt.

<Installing>

Follow the above procedure in reverse.

After replacing the FB motor, perform the magnification adjustment (section 7.1.3) and offset adjustment (section 7.1.4).

## 6.13 Removing / Installing the ADF cable

Refer to section 8.35 for the specification of replacement parts.

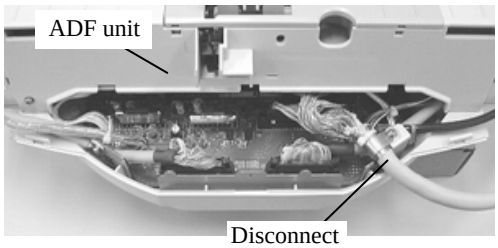
<Removing>

(1) Referring to step (1) to (4) of section 6.7, disconnect the ADF cable.

(2) Referring to step (1) to (7) of section 6.8.1, disconnect the ADF cable from the ADF unit. 04

<Installing>

Follow the above procedure in reverse.



# Chapter 7 Adjustment/Settings

## 7.1 Maintenance Mode

The scanner supports the built-in Maintenance mode that allows service providers to check the scanner performance and settings. This section gives the description of the Maintenance mode.

**Note on Maintenance Mode** 10

**1: Before performing the sub-scanning magnification adjustment, Offset adjustment, or White level adjustment, set the user's inherent adjustment value to the default value.**
**The adjustment is not performed properly if the offset adjustment value and magnification adjustment value are set individually.**

**[Default value setting method]**
**Check the following items on the Software Operation Panel. If you found any individual setting values, modify them before adjustment.**
**Software Operation Panel ➔ Device Setting ➔ Offset**
**- Offset setting: "0" for ADF (front) Main/Sub-scanning and ADF (back) Main/Sub-scanning**
**- Vertical magnification adjustment: "0.0" % for ADF/Flatbed**
**Software Operation Panel ➔ Device Setting 2 ➔ Page edge filler**
**- "0" for Top/Bottom/Right/Left**
*** After changing the setting values above, write into EEPROM to reflect the setting.**

**2: If you want to perform "White level adjustment" for Flatbed with a "Black document holding pad" installed onto the scanner, replace it with the standard "White document holding pad" before starting the adjustment.**
**If you cannot install the standard "White document holding pad", pile up three white reference sheets and close the "Black document holding pad", and then start adjustment.**
*** If White level adjustment is performed with a "Black document holding pad" installed, the correct offset may not be acquired which results in abnormal image (the image is too bright).**

**3: When performing Sub-scanning magnification adjustment, Offset adjustment and White level adjustment, do not adjust the ADF front side, ADF backside and Flatbed successively. When one adjustment is done, turn off the scanner, and back on again, and then start the next adjustment.**

## 7.1.1 Activating the Maintenance Mode and Mode Types

**(1) How to activate the Maintenance mode**

Open the ADF cover and press the "I" area of the power switch while holding down the Scan button. Keep holding the Scan button down until Screen T04 is displayed. This will put the scanner into the Maintenance mode. While in Maintenance mode, the scanner interface is off-line.
The following display appears during activation of Maintenance mode.

Screen T01

| Function No. Display | Power LED | Scanner status |
|---|---|---|
|  | ON | Initial processing in Maintenance mode |

When the Maintenance mode is activated normally after the initial processing, the following display appears.

Screen T04

| Function No. Display | Power LED | Scanner status |
|---|---|---|
|  | ON | Maintenance mode #1 selected |

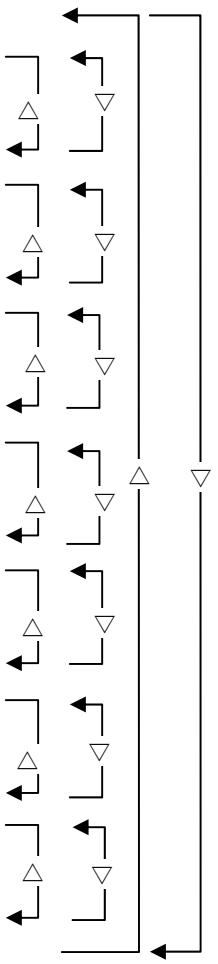
**(2) Test/adjustment items of the Maintenance mode**

The following lists test/adjustment items #1 ~ #8 that are supported by the scanner.

Mode #1: Paper feeding test and Sensor test
Mode #2: Sub-scanning magnification adjustment
Mode #3: Offset adjustment
Mode #4: White level adjustment
Mode #5: Consumables counter display and reset
Mode #6: Miscellaneous information display
Mode #7: EEPROM data restore
Mode #8: Ultra sonic sensor adjustment

**(3) How to change the Maintenance mode**

To change the Maintenance modes (#1 ~ #7), press the Function (△ or ▽) button on the operator panel. The display changes as follows. Mode #1 is the default.

| Maintenance mode No. | Display | | | Maintenance mode | Related section |
|---|---|---|---|---|---|
| | Function No. Display | Power LED | Status transition | | |
| **#1** |  | ON |  | Paper feeding test and Sensor test | 7.1.2 |
| **#2** |  | ON | | Sun-scanning magnification adjustment | 7.1.3 |
| **#3** |  | ON | | Offset adjustment | 7.1.4 |
| **#4** |  | ON | | White level adjustment | 7.1.5 |
| **#5** |  | ON | | Consumables counter display and reset | 7.1.6 |
| **#6** |  | ON | | Miscellaneous information display | 7.1.7 |
| **#7** |  | ON | | EEPROM data restore | 7.1.8 |
| **#8** |  | ON | | Ultra sonic sensor adjustment<br><br>Press Function key to return to #1. | 7.1.9 |

**(4) How to start the Maintenance mode**

Select a Maintenance mode and press the Scan button. The scanner activates the selected Maintenance mode.

### 7.1.2 Maintenance Mode #1: Paper feeding test and Sensor test

This mode tests the ADF and FB continuous scanning operation at the specified speed and also checks the sensor status (ON/OFF) for each of the ADF sensors.

[How to start]

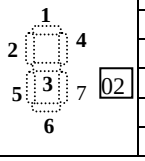
(1) From screen T04, press the Function (△ or ▽) button to select (Maintenance mode #1) and press the Scan button. The selection screen for scanning speed/sensor test appears. A number is shown on the Function No. Display indicating the selected scanning speed or test mode as follows.

| Function No. Display | Scanning speed/test mode | Remarks |
|---|---|---|
| 0 | 200 dpi | Default |
| 1 | 240 dpi | |
| 2 | 300 dpi | |
| 3 | 400 dpi | |
| 4 | 600 dpi | |
| 5 | | |
| 6 | | |
| 7 | Sensor test | |

(2) The scanning speed/test mode is changed by pressing the Function (△ or ▽) button. To test the continuous feeding operation, select the desired scanning speed (this varies depending on the scanning resolution) from 0 ~ 4.
When pressing the Scan button with paper on the ADF paper chute (Empty sensor ON), the ADF scanning starts. Without paper on the ADF paper chute, the FB scanning starts.

(3) By pressing the Scan button while "7" is shown on the display, the scanner enters the Sensor test mode.
The following table shows how the sensor status is displayed while the sensor test is in progress.

Screen T11

| Function No. Display | Description | Display |
|---|---|---|
|  | 2: indicates Empty sensor status | Illuminates when the sensor is ON. (Paper is detected) |
| | 5: indicates ADF Cover open sensor status | Illuminates when the sensor is OFF. (Cover is open) |
| | 4: indicates TOP sensor status | Illuminates when the sensor is ON. (Paper is detected) |
| | 1: indicates ~~DF~~ OMR sensor status | Illuminates when the sensor is ON. (Paper is detected) |
| | 3: indicates Pick sensor status | Illuminates when the sensor is ON. (Paper is detected) |
| | 6: indicates Document cover sensor status | Illuminates when the sensor is ON. (Cover is open) |

During the sensor test, you can check the sensor status (ON/OFF) when the document passes through the ADF by the following procedures:

1. Press the Function (△ or ▽) button. The ADF motor starts to rotate.
2. Set the document on the ADF paper chute.

[How to end]

Press the Send to button. The test stops and the Maintenance mode selection screen (T04) appears. The test also terminates when no paper remains on the ADF paper chute.

### 7.1.3 Maintenance Mode #2: Sub-scanning magnification adjustment

In this mode, the magnification correction values for sub-scanning are automatically calculated to satisfy the following adjustment value.

Adjustment value: Within ±1.0% (Without stop and start during scanning)
If stopped and started during scanning, the adjustment value is within ±2.0.

**NOTICE**

Before this adjustment, obtain the Test sheet described in the figure 7.1.3. This is an A3 size sheet of paper.

**Notes on Sub-scanning magnification adjustment** 10

**1: Before performing the sub-scanning magnification adjustment, set the user's inherent adjustment value to the default value.**
**The adjustment is not performed properly if the offset adjustment value and magnification adjustment value are set individually.**

**[Default value setting method]**
**Check the following items on the Software Operation Panel. If you found any individual setting values, modify them before adjustment.**
**Software Operation Panel ➔ Device Setting ➔ Offset**
**- Offset setting: "0" for ADF (front) Main/Sub-scanning and ADF (back) Main/Sub-scanning**
**- Vertical magnification adjustment: "0.0" % for ADF/Flatbed**
**Software Operation Panel ➔ Device Setting 2 ➔ Page edge filler**
**- "0" for Top/Bottom/Right/Left**
*** After changing the setting values above, write into EEPROM to reflect the setting.**

**2: When performing Sub-scanning magnification adjustment, do not adjust the ADF front side, ADF backside and Flatbed successively. When one adjustment is done, turn off the scanner, and back on again, and then start the next adjustment.**

[How to start]
(1) From screen T04, Press the Function (△ or ▽) button to select P (Maintenance mode #2) and press the Scan button. A number is shown on the Function No. Display indicating the magnification to be adjusted as follows.

| Function No. Display | Offset to be adjusted | Remarks |
|---|---|---|
| 0 | ADF sub-scanning magnification adjustment | Default<br>Prepare the test sheet described in figure 7.1.3. |
| 1 | FB sub-scanning magnification adjustment | Prepare the test sheet described in figure 7.1.3. |

(2) Change the selection by pressing the Function (△ or ▽) button.
(3) When adjusting the ADF, set a white A3 size sheet (Figure 7.1.3) on the ADF paper chute in Portrait orientation, and adjust the sheet guide to the width of the sheet.

For the FB adjustment, set a white A3 size sheet (Figure 7.1.3) aligning its corner to the corner of the Document bed (refer to section 3.1.4), and leave the Document cover open. In case the optional black document pad is attached, close the Document cover.

Press the Scan button to begin the adjustment operation.

[How to abort]
Press the Send to button during the adjustment operation. The operation stops and the Maintenance mode selection screen (T04) appears.

If U is displayed, the sub-scanning magnification is adjustment has been successful. Go to item No.4. If C is displayed, the sub-scanning magnification adjustment has failed. Go to item No.5.

(4) When the sub-scanning magnification adjustment is completed successfully

If the sub-scanning magnification adjustment is completed successfully, Screen T21 appears. To save the adjustment result, press the Function (△ or ▽) button. If not, press the Send to button.

Screen T21

| Function No. Display | Scanner status | Available buttons |
|---|---|---|
|  | Displays "o" without blinking.<br><br>The adjustment has been successful. | Function button: Displays screen T22 and writing offset correction value in EEPROM is available.<br><br>Send to button: Terminates this mode and returns to screen T04. |

After Function button is pressed, Screen T22 is displayed. To write the adjustment result, press the Scan and the Function buttons simultaneously. The writing operation begins. Screen T23 is displayed during the operation, and T24 is displayed when writing is completed.

Screen T22

| Function No. Display | Scanner status | Available buttons |
|---|---|---|
|  | "o" (lower half) blinks.<br><br>Confirming whether the correction value is written to EEPROM. | Scan + Function button: Begin writing the offset correction value into EEPROM. During writing operation, screen T23 is displayed. Screen T24 is displayed when writing is completed.<br><br>Send to button: Terminates this mode and returns to screen T04. |

Screen T23

| Function No. Display | Scanner status | Available buttons |
|---|---|---|
|  | "L" lights without blinking.<br><br>Correction value is being written to EEPROM. | All buttons are disabled. |

Screen T24

| Function No. Display | Scanner status | Available buttons |
|---|---|---|
|  | "o" (upper half) lights without blinking.<br><br>The value has been written successfully. | Send to button: Terminates this mode and returns to screen T04. |

Press the Send to button to terminate this mode and return to screen T04.

10

**When screen T04 appears (Maintenance Mode menu), turn off the scanner once and back on again, and then perform the next adjustment.**

(5) When the sub-scanning magnification adjustment fails

When the sub-scanning magnification adjustment fails, Screen T25 appears. Press the Function (△ or ▽) button to see what error has occurred. After checking the error, press the Send to button to return to Screen T04.

Screen T25

| Function No. Display | Scanner status | Available buttons |
|---|---|---|
|  | Displays "c" without blinking.<br><br>The adjustment has failed. | Function button: Displays error information (screen T26)<br>Send to button: Terminates this mode and returns to screen T04. |

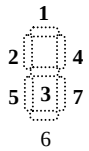
**NOTICE**

The major reason for adjustment failure is incorrect setting of the test sheet.

03

Set the test sheet correctly and try the ~~offset~~ magnification adjustment again.

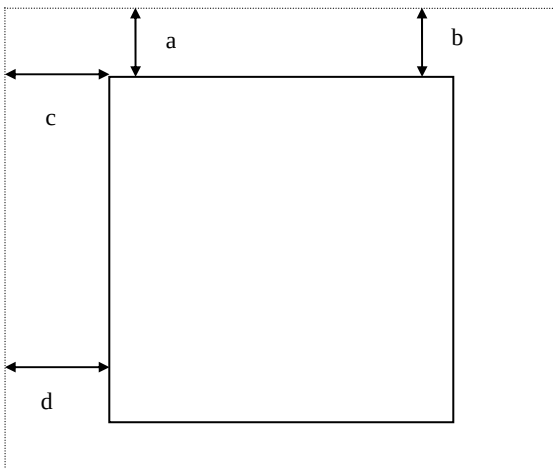
Screen T26

| Function No. Display | Description | Countermeasure when abnormal termination frequently occurs |
|---|---|---|
|  | 1:Cannot detect the leading edge of the document (black detection failed) | Conduct necessary operation by referring to step (2) and later in section 5.3.7 or step (2) and later in section 5.3.10. |
| | 2: Cannot detect the left edge of the document (black detection failed) | |
| | 3: Cannot detect the leading edge of the document (white detection failed) | |
| | 5: Cannot detect the left edge of the document (white detection failed) | |
| | 4: Excessive skew A | |
| | 7: Excessive skew B | |

Skew A and B are calculated by the following expression.

Skew A = a – b

Skew B = c – d




<Available buttons on screen T26>

Send to button: Terminates this mode and returns to screen T04.

10

**When screen T04 appears (Maintenance Mode menu), turn off the scanner once and back on again, and then perform the next adjustment.**

[Test sheet]
Use the test sheet for magnification / offset adjustment that meets the following specification (A3 copy paper is allowed).

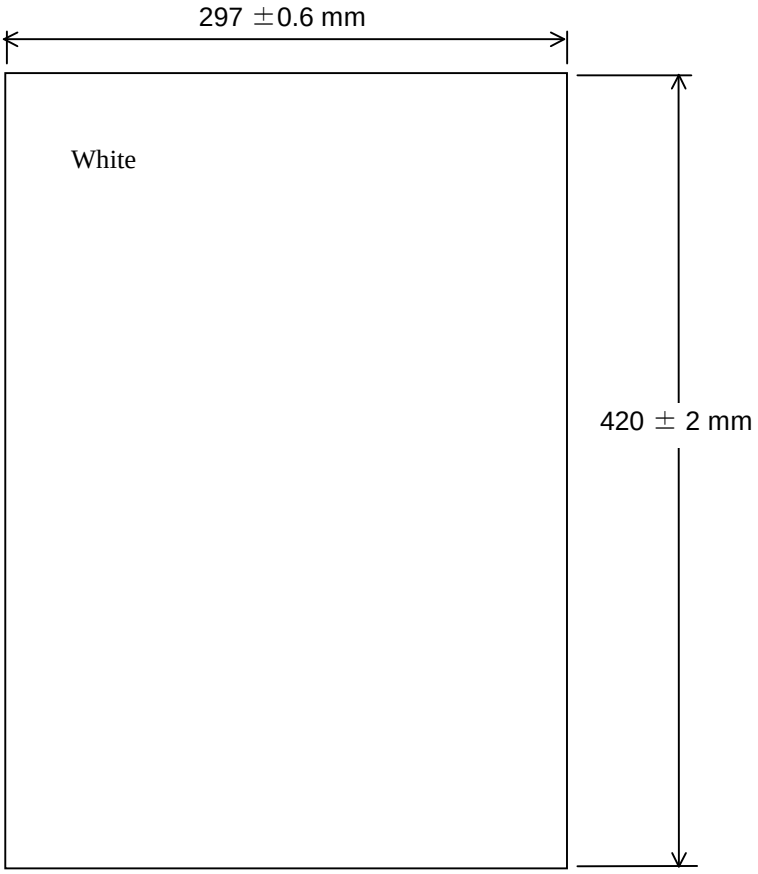



Figure 7.1.3 Magnification / Offset Adjustment Test Sheet

### 7.1.4 Maintenance Mode #3: Offset adjustment

In this mode, the offset correction values for main/sub-scanning are automatically calculated to satisfy the following offset values:

<Target offset value>
Main scanning: The largest offset of A6 or larger size of document shall be: ± 24 dot (@600dpi)
Sub-scanning: The largest offset of A6 or larger size of document shall be: ± 33 dot (@600dpi)

**NOTICE**

1) The value above is the target value of offset adjustment. Image specification is as follows:
   FB) Main scanning: 0 to 1.5mm for both top and bottom of left edge
   Sub-scanning: 0 to 2.0mm for both left and right of leading edge
   ADF) Main scanning: Smaller offset of top or bottom of left edge shall be 0 to 1.5mm.
   Sub-scanning: Smaller offset of left or right of leading edge shall be 0 to 2.0mm.
2) Before this adjustment, obtain the Test sheet described in the figure 7.1.3. This is an A3 size sheet of paper.

**Notes on Offset adjustment** 10

**1: Before performing the Offset adjustment, set the user's inherent adjustment value to the default value.**
**The adjustment is not performed properly if the offset adjustment value and magnification adjustment value are set individually.**

**[Default value setting method]**
**Check the following items on the Software Operation Panel. If you found any individual setting values, modify them before adjustment.**
**Software Operation Panel ➔ Device Setting ➔ Offset**
**- Offset setting: "0" for ADF (front) Main/Sub-scanning and ADF (back) Main/Sub-scanning**
**- Vertical magnification adjustment: "0.0" % for ADF/Flatbed**
**Software Operation Panel ➔ Device Setting 2 ➔ Page edge filler**
**- "0" for Top/Bottom/Right/Left**
*** After changing the setting values above, write into EEPROM to reflect the setting.**

**2: When performing Offset adjustment, do not adjust the ADF front side, ADF backside and Flatbed successively.**
**When one adjustment is done, turn off the scanner, and back on again, and then start the next adjustment.**

~~09~~

~~3) Do not adjust the offset for the ADF front side, ADF backside, and FB in a row. Be sure to turn off the scanner after adjusting one of them, turn on again to adjust another, and then do it again for the rest.~~

[How to start]
(1) From screen t04, Press the Function (△ or ▽) button to select (Maintenance mode #3) and press the Scan button. A number is shown on the Function No. Display indicating the location of the offset to be adjusted.

| Function No. Display | Offset to be adjusted | Remarks |
|---|---|---|
| 0 | ADF front | Default<br>Prepare the test sheet described in figure 7.1.3. |
| 1 | ADF back | Prepare the test sheet described in figure 7.1.3. |
| 2 | FB | Prepare the test sheet described in figure 7.1.3. |

(2) Change the selection by pressing the Function (△ or △) button.
(3) When adjusting the ADF, set a white A3 size sheet (Figure 7.1.3) on the ADF paper chute in Portrait orientation, and adjust the sheet guide to the width of the sheet.

For the FB adjustment, set a white A3 size sheet (Figure 7.1.3) aligning its corner to the corner of the Document bed (refer to section 3.1.4), and leave the Document cover open. In case the optional black document pad is attached, close the Document cover.

Press the Scan button to begin the adjustment operation.

[How to abort]

Press the Send to button during the adjustment operation. The operation stops and the Maintenance mode selection screen (T04) appears.

If  is displayed, the offset adjustment has been successful. Go to item No.4. If  is displayed, the offset adjustment has failed. Go to item No.5.

(4) When the offset adjustment is completed successfully

If the offset adjustment is completed successfully, Screen T31 appears. To save the adjustment result, press the Function (△ or ▽) button. If not, press the Send to button.

Screen T31

| Function No. Display | Scanner status | Available buttons |
|---|---|---|
|  | Displays "o" without blinking.<br><br>The adjustment has been successful. | Function button: Displays screen T32 and writing offset correction value in EEPROM is available.<br><br>Send to button: Terminates this mode and returns to screen T04. |

After Function button is pressed, Screen T32 is displayed. To write the adjustment result, press the Scan and the Function buttons simultaneously. The writing operation begins. Screen T33 is displayed during the operation, and T34 is displayed when writing is completed.

Screen T32

| Function No. Display | Scanner status | Available buttons |
|---|---|---|
|  | "o" (lower half) blinks.<br><br>Confirming whether the correction value is written to EEPROM. | Scan + Function button: Begin writing the offset correction value into EEPROM. During writing operation, screen T33 displayed. Screen T34 is displayed when writing is complete.<br><br>Send to button: Terminates this mode and returns to screen T04. |

Screen T33

| Function No. Display | Scanner status | Available buttons |
|---|---|---|
|  | "L" lights without blinking.<br><br>Correction value is being written to EEPROM. | All buttons are disabled. |

Screen T34

| Function No. Display | Scanner status | Available buttons |
|---|---|---|
|  | "o" (upper half) lights without blinking.<br><br>The value has been written successfully. | Send to button: Terminates this mode and returns to screen T04. |

Press the Send to button to terminate this mode and return to screen T04.

10

**When screen T04 appears (Maintenance Mode menu), turn off the scanner once and back on again, and then perform the next adjustment.**

(5) When the offset adjustment fails

When the offset adjustment fails, Screen T35 appears. Press the Function (△ or ▽) button to see what error has occurred. After checking the error, press the Send to button to return to Screen T04.

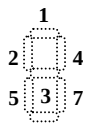
Screen T35

| Function No. Display | Scanner status | Available buttons |
|---|---|---|
|  | Displays "c" without blinking.<br><br>The adjustment has failed. | Function button: Displays error information (screen T36)<br>Send to button: Terminates this mode and returns to screen T04. |

**NOTICE**

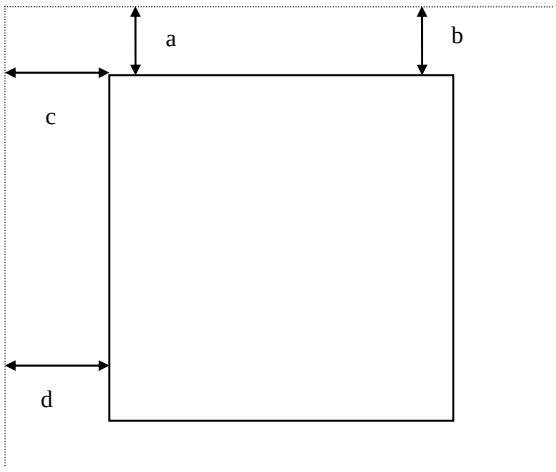
The major reason for adjustment failure is incorrect setting of the test sheet.
Set the test sheet correctly and try the offset adjustment again.

Screen T36

| Function No. Display | Description | Countermeasure when abnormal termination frequently occurs |
|---|---|---|
|  | 1:Cannot detect the leading edge of the document (black detection failed) | Conduct necessary operation by referring to step (2) and later in section 5.3.6 or step (3) and later in section 5.3.9. |
| | 2: Cannot detect the left edge of the document (black detection failed) | |
| | 3: Cannot detect the leading edge of the document (white detection failed) | |
| | 5: Cannot detect the left edge of the document (white detection failed) | |
| | 4: Excessive skew A | |
| | 7: Excessive skew B | |

Skew A and B are calculated by the following expression.

Skew A = a – b
Skew B = c – d




<Available buttons on screen T36>
Send to button: Terminates this mode and returns to screen T04.

10

**When screen T04 appears (Maintenance Mode menu), turn off the scanner once and back on again, and then perform the next adjustment.**

## 7.1.5 Maintenance Mode #4: White level adjustment

In this mode, the white level correction values for the ADF and FB are automatically adjusted.

**NOTICE**

Before this adjustment, obtain the white level adjustment sheet (A4 coated paper) described in section 6.4.

**Notes on White level adjustment** 10

**1: Before performing the White level adjustment, set the user's inherent adjustment value to the default value. The adjustment is not performed properly if the offset adjustment value and magnification adjustment value are set individually.**

**[Default value setting method】**
**Check the following items on the Software Operation Panel. If you found any individual setting values, modify them before adjustment.**
**Software Operation Panel ➔ Device Setting ➔ Offset**
**- Offset setting: "0" for ADF (front) Main/Sub-scanning and ADF (back) Main/Sub-scanning**
**- Vertical magnification adjustment: "0.0" % for ADF/Flatbed**
**Software Operation Panel ➔ Device Setting 2 ➔ Page edge filler**
**- "0" for Top/Bottom/Right/Left**
*** After changing the setting values above, write into EEPROM to reflect the setting.**

**2: If you want to perform "White level adjustment" for Flatbed with a "Black document holding pad" installed onto the scanner, replace it with the standard "White document holding pad" before starting the adjustment. If you cannot install the standard "White document holding pad", pile up three white reference sheets and close the "Black document holding pad", and then start adjustment.**
*** If White level adjustment is performed with a "Black document holding pad" installed, the correct offset may not be acquired which results in abnormal image (the image is too bright).**

**3: When performing White level adjustment, do not adjust the ADF front side, ADF backside and Flatbed successively. When one adjustment is done, turn off the scanner, and back on again, and then start the next adjustment.**

09

~~1) Do not adjust the white level for the ADF front side, ADF backside, and FB in a row. Be sure to turn off the scanner after adjusting one of them, turn on again to adjust another, and then do it again for the rest.~~

[How to start]

(1) From screen T04, press the Function (△ or ▽) button to select 8 (Maintenance mode #4) and press the Scan button. A number is shown on the Function No. Display indicating the location of the white level to be adjusted.

| Function No. Display | White level to be adjusted | Remarks |
|---|---|---|
| 0 | ADF front | Default<br>Use the white level adjustment sheet described in section 6.4. |
| 1 | ADF back | Use the white level adjustment sheet described in section 6.4. |
| 2 | FB | |

(2) Change the selection by pressing the Function (△ or ▽) button.

03

(3) For the ADF adjustment, set the adjustment test sheet (see section 6.4) on the Chute unit in landscape orientation and adjust the sheet guide to the width of the test sheet.

For the FB adjustment, set the test sheet (see section 6.4) on the Document bed (see section 3.1.4) and close the Document cover.

Press the Scan button to begin the adjustment operation.

**NOTICE**

The adjustment starts approx. 10 seconds after pressing the Scan button.

[How to abort]
Press the Send to button during the adjustment operation. The operation stops and the Maintenance mode selection screen (T04) appears.

If  is displayed, the white level adjustment has been successful. Go to item No.4. If  is displayed, the white level adjustment has failed. Go to item No.5.

**NOTICE**

After scanning the white level adjustment sheet, it takes approx. 10 seconds for the scanner to calculate the level adjustment.

(4) When the white level adjustment is completed successfully

If the white level adjustment is completed successfully, Screen T41 appears. To save the adjustment result, press the Function (△ or ▽) button. If not, press the Send to button.

Screen T41

| Function No. Display | Scanner status | Available buttons |
|---|---|---|
|  | Displays "o" without blinking.<br><br>The adjustment has been successful. | Function button: Displays screen T42 and writing the correction value in EEPROM is available.<br>Send to button: Terminates this mode and returns to screen T04. |

After Function (△ or ▽) button is pressed, Screen T42 is displayed. To write the adjustment result, press the Scan and the Function buttons simultaneously. The writing operation begins. Screen T43 is displayed during the operation, and T44 is displayed when writing is complete.

Screen T42

| Function No. Display | Scanner status | Available buttons |
|---|---|---|
|  | "o" (lower half) blinks.<br><br>Confirming whether the correction value is written to EEPROM. | Scan + Function button: Begin writing the white level correction value to EEPROM. During the writing operation, screen T43 displayed. Screen T44 is displayed when writing is complete.<br>Send to button: Terminates this mode and returns to screen T04. |

Screen T43

| Function No. Display | Scanner status | Available buttons |
|---|---|---|
|  | "L" lights without blinking.<br><br>Correction value is being written to EEPROM. | All buttons are disabled. |

Screen T44

| Function No. Display | Scanner status | Available buttons |
|---|---|---|
|  | "o" (upper half) lights without blinking.<br><br>The value has been written successfully. | Send to button: Terminates this mode and returns to screen T04. |

Press the Send to button to terminate this mode and return to screen T04.

10

**When screen T04 appears (Maintenance Mode menu), turn off the scanner once and back on again, and then perform the next adjustment.**

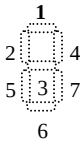
(5) When the white level adjustment fails

When the white level adjustment fails, Screen T45 appears. Press the Function (△ or ▽) button to see what error has occurred. After checking the error, press the Send to button to return to Screen T04.

Screen T45

| Function No. Display | Scanner status | Available buttons |
|---|---|---|
|  | Displays "c" without blinking.<br><br>The adjustment has failed. | Function button: Displays error information (screen T46)<br>Send to button: Terminates this mode and returns to screen T04. |

Screen T46

| Function No. Display | Description | Countermeasure when abnormal termination frequently occurs |
|---|---|---|
|  | 1: media error<br><br>The test sheet may not be the specified one. Please confirm the test sheet. | The Lamps, Optical units may be defective. Replace the defective parts. |

<Available buttons at screen T46>

Send to button: Terminates this mode and return to screen T04.

10

**When screen T04 appears (Maintenance Mode menu), turn off the scanner once and back on again, and then perform the next adjustment.**

### 7.1.6 Maintenance Mode #5: Consumables counter display and Reset

In this mode, the following consumable counters cab be displayed and reset:

- Pick counter (Abrasion counter for the Pick roller)
- Brake roller counter (Abrasion counter for the Brake roller)

[How to operate]

(1) From screen T04, press the Function (△ or ▽) button to select  (Maintenance mode #5) and press the Scan button. A number is shown on the Function No. Display indicating the counters as follows.

| Function No. Display | Display | Remarks |
|---|---|---|
| 0 | Pick counter (Abrasion counter for Pick roller) | Default |
| 1 | Brake roller counter (Abrasion counter for Brake roller) | |

(2) Change the selection by pressing the Function (△ or ▽) button.

(3) The counter is displayed as follows when pressing the Scan button.

| Counter | Display |
|---|---|
| Pick counter | The counter displays 8 digits in total, 1 number at a time (1 blink), from left digit to right digit. (If the counter has not reached 8 digits yet, 0 is added to blank digits.) The symbol "-" is displayed before the first number, indicating the counter display begins. The counter displays "0" until it reaches 500, and increases in increments of 10 after 500.<br><br>eg. When the counter is "16,245", "-00016240" is displayed in the following order:<br>"-" → "0" → "0" → "0" → "1" → "6" → "2" → "4" → "0" |
| Brake roller counter | See above. |

The following buttons are available during the counter display.

Function button: Displays screen T51 to reset the counter.
Send to button: Terminates this mode and returns to screen T04.

Screen T51

| Function No. Display | Power LED | Scanner status | Available buttons |
|---|---|---|---|
|  | ON | "o" (lower half) blinks.<br><br>Counter is ready to be reset. | Scan + Function button: Begin resetting the displayed counter value to 0. During the reset operation, screen T52 displayed. Screen T53 is displayed when the counter is reset.<br>Send to button: Terminates this mode and returns to screen T04. |

Screen T52

| Function No. Display | Scanner status | Available buttons |
|---|---|---|
|  | "L" lights without blinking.<br><br>The counter is being reset. | All buttons are disabled. |

Screen T53

| Function No. Display | Scanner status | Available buttons |
|---|---|---|
|  | "o" (upper half) lights without blinking.<br><br>Counter reset is complete. | Send to button: Terminates this mode and returns to screen T04. |

Press the Send to button to terminate this mode and return to screen T04.

### 7.1.7 Maintenance Mode #6: Miscellaneous information display

In this mode, the following information is displayed:

- Firmware version number
- Starting date of the scanner *
- The accumulated number that have been scanned by the ADF
- The accumulated number that have been scanned by the FB

*: This indicates the date when the scanner is activated by the driver for the first time. This information is only available if the driver supports this function.

[How to start]

(1) From screen T04, press the Function (△ or ▽) button to select 8 (Maintenance mode #6) and press the Scan button. A number is shown on the Function No. Display indicating the information as follows.

| Function No. Display | Display | Remarks |
|---|---|---|
| 0 | Firmware version | Default |
| 1 | Starting date of the scanner | |
| 2 | Accumulated number of paper scanned by ADF | |
| 3 | Accumulated number of paper scanned by FB | |

(2) Change the selection by pressing the Function (△ or ▽) button.

(3) The information is displayed as follows when pressing the Scan button.

| Information | Display |
|---|---|
| Firmware version number | The version numbers (4 digits for each) of firmware for interface control (SDC) and for mechanical control (MDC) are displayed following the symbol "-".<br>eg. When the SDC version is "A00" and the MDC version is "B00" (*1), "A" is converted to "01" and "B" is converted to "02" so the scanner displays them in the following order:<br><SDC> <MDC><br>"-" → "0" → "1" → "0" → "0" → "-" → "0" → "2" → "0" → "0"<br>"A" is converted to "01" "B" is converted to "02" |
| Starting date of the scanner | Starting date of the scanner is displayed in 6 digits, 2 digits for "Year (Christian calendar)", 2 digits for "Month", and 2 digits for "Date", following the symbol "-". You cannot reset the date.<br>eg. When the starting date is January 31st, 2002, "020131" is displayed in the following order:<br>"-" → "0" → "2" → "0" → "1" → "3" → "1" |
| The accumulated number of paper scanned by the ADF | The accumulated number of scanned by the ADF is displayed in 8 digits from left to right, following the symbol "-". (If the counter does not reach 8 digits, 0 is added to blank digits.)<br>The counter displays "0" until it reaches 10, and increases in increment of 10. You cannot reset this counter.<br>eg. When the accumulated number is "16,245", "00016240" is displayed in the following order:<br>"-" → "0" → "0" → "0" → "1" → "6" → "2" → "4" → "0" |
| The accumulated number of scanned by the FB | See the case of ADF. |

*1: The firmware version is normally expressed by an alphabet, such as A, B or C. However, if the firmware is a beta version, two digits are added after the alphabet character, such as A01, A02 or A03. So the firmware version like A00, B00 or C00 means this is an official version.

*2: As the Function No. display cannot display alphabets, an alphabet is expressed by two digits as follows:

| A | B | C | ---------- | J | K | L |
|---|---|---|---|---|---|---|
| 01 | 02 | 03 | ---------- | 10 | 11 | 12 |

[How to abort]

Press the Send to button to terminate this mode and return to screen T04.

### 7.1.8 Maintenance Mode #7: EEPROM data restore

When replacing the Panel PCA, the EEPROM data on the Panel PCA must be moved to the flash memory of the Control PCA. In this mode, the data is restored from the Control PCA to the Panel PCA.

[How to start]

(1) From screen T04, press the Function (△ or ▽) button to select  (Maintenance mode #7) and press the Scan button. The following display appears.

Screen T71

| Function No. Display | Scanner status | Available buttons |
|---|---|---|
|  | "o" (lower half) blinks.<br><br>Confirming whether the data is restored or not. | Scan + Function button: Returns the data from the Control PCA to the EEPROM. During the restore operation, screen T72 is displayed.<br>Send to button: Terminates this mode and returns to screen T04. |

Screen T72

| Function No. Display | Scanner status | Available buttons |
|---|---|---|
|  | "L" lights without blinking.<br><br>The data is being restored. | All buttons are disabled. |

When the data restoration is successful, the following display appears. Press the Send to button: to return to screen T04.

Screen T73 Normal termination

| Function No. Display | Scanner status | Available buttons |
|---|---|---|
|  | Displays "o" (upper half) without blinking.<br><br>The data has been restored successfully. | Send to button: Terminates this mode and returns to screen T04. |

When no data exists on the Control PCA, the following display appears. Press the Send to button to return to screen T04.

Screen T74 No data

| Function No. Display | Scanner status | Available buttons |
|---|---|---|
|  | Displays "c" without blinking. | Send to button: Terminates this mode and returns to screen T04. |

### 7.1.9 Maintenance Mode #8: Ultra sonic sensor adjustment

In this mode, the optimum Ultra sonic sensor (US sensor) output is automatically adjusted in order to improve the double-feed detection accuracy.

**NOTICE**

Before this adjustment, obtain the adjustment sheet (A4 size thick paper) described in section 6.4.

[How to start]

(1) From screen T04, press the Function (△ or ▽) button to select 8 (Maintenance mode #8). Place the adjustment sheet on the ADF paper chute and press the Scan button. The adjustment will begin.

[How to abort]

Press the Send to button during the adjustment operation. The operation stops and the Maintenance mode selection screen (T04) appears.

If 0 is displayed, the adjustment was successful. Go to item No.4. If E is displayed, the adjustment failed. Go to item No.5.

**NOTICE**

After scanning the US sensor adjustment sheet, it takes approx. 10 seconds for the scanner to calculate the level adjustment.

(4) When the ultra sonic sensor adjustment is successful

If the ultra sonic sensor adjustment is successful, Screen T81 appears. To save the adjustment result, press the Function (△ or ▽) button. If not, press the Send to button.

Screen T81

| Function No. Display | Scanner status | Available buttons |
|---|---|---|
|  | Displays "o" without blinking.<br><br>The adjustment has been successful. | Function button: Displays screen T82 and writing the correction value in EEPROM is available.<br>Send to button: Terminates this mode and returns to screen T04. |

After the Function (△ or ▽) button is pressed, Screen T82 is displayed. To write the adjustment result, press the Scan and the Function buttons simultaneously. The writing operation begins. Screen T83 is displayed during operation, and T84 is displayed when writing has completed.

Screen T82

| Function No. Display | Scanner status | Available buttons |
|---|---|---|
|  | "o" (lower half) blinks.<br><br>Confirming whether the correction value is written to EEPROM or not. | Scan + Function button: Begin writing the white level correction value into EEPROM. During the writing operation, screen T83 displayed. Screen T84 is displayed when writing is complete.<br>Send to button: Terminates this mode and returns to screen T04. |

Screen T83

| Function No. Display | Scanner status | Available buttons |
|---|---|---|
|  | "L" lights without blinking.<br><br>Correction value is being written to EEPROM. | All buttons are disabled. |

Screen T84

| Function No. Display | Scanner status | Available buttons |
|---|---|---|
|  | "o" (upper half) lights without blinking.<br><br>The value has been written successfully. | Send to button: Terminates this mode and returns to screen T04. |

Press the Send to button to terminate this mode and return to screen T04.

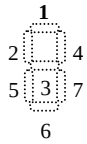
(5) When the ultra sonic sensor adjustment fails

When the ultra sonic sensor adjustment fails, Screen T85 appears. Press the Function (△ or ▽) button to see what error has occurred. After checking the error, press the Send to button to return to Screen T04.

Screen T85

| Function No. Display | Scanner status | Available buttons |
|---|---|---|
|  | Displays "c" without blinking.<br><br>The adjustment has failed. | Function button: Displays error information (screen T86)<br>Send to button: Terminates this mode and returns to screen T04. |

Screen T86

| Function No. Display | Description | Countermeasure when abnormal termination frequently occurs |
|---|---|---|
|  | 1: Adjustment failed because of incorrect sensor output.. | The US sensor or US PCA is defective. |

Send to button: Terminates this mode and return to screen T04.

## 7.2 Saving EEPROM Data

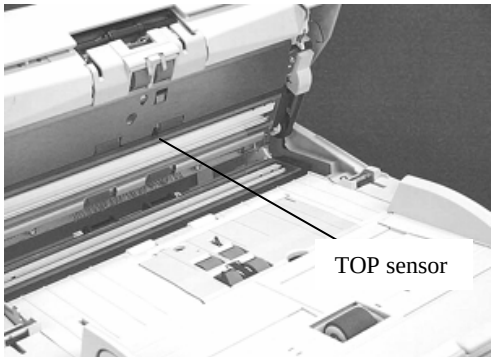
The EEPROM data on the Panel PCA can be saved on the flash memory of the Control PCA. This operation is required when replacing the Panel PCA. Since this operation is performed when the Panel PCA is malfunctioning, the following procedure was designed to save the EEPROM data without the use of the operator panel.

**NOTICE**

**- Do not perform this procedure unless the Panel PCA is malfunctioning.**
**- The Panel PCA from which the data was saved to the Control PCA cannot be used again.**
**- Make sure to have a new Panel PCA before saving the EEPROM data.**

[How to save the EEPROM data onto the Control PCA]

1. Open the ADF cover. While pressing the TOP sensor lever (ON), power on the scanner. "P" -> "H " are displayed.
   If there is data saved in the Control PCA already, go to step 5.
2. Let go of the TOP sensor and the Empty sensor levers. Press the TOP sensor longer than 1 second twice.
3. Close the ADF cover. "L" is displayed when the Function No. Display is working normally.
4. After more than 5 seconds elapse, open the ADF cover.
5. When the EEPROM data is successfully saved, the ADF front lamp blinks 3 times and 0 is displayed on the Function No. Display. In case the EEPROM data is not successfully saved, the lamp does not blink and 6 is displayed on the Function No. Display.




**NOTICE**

If EEPROM data is saved in the Control PCA successfully, the scanner writes some information on the Panel PCA that disables the usage of it. The replacement of the Panel PCA is required after saving the EEPROM data to the Control PCA. If the scanner is turned on without replacing the panel PCA, "E" and "6" are displayed alternately on the Operator panel which signifies an error.

## 7.3 Emulations

With the fi-5750C, you can change the emulation of the scanner to the scanner listed below..
In emulation mode, this scanner responds as is it was the scanners listed.

- fi-4750C
- M4097D
- fi-4640S
- fi-4750L

(1) How to activate the Emulation mode

Open the ADF cover and turn the scanner ON while holding down the Function (△ or ▽) button. Continue holding the Function button down until Screen B below is displayed. Screen C appears when entering this mode. Let go of the Function button. In this mode, the scanner interface is off-line.
The following display appears during initial processing in Emulation mode.

Screen A

| Function No. Display | Power LED | Scanner status |
|---|---|---|
|  | ON | Initializing |

After the initial processing, the display changes as follows.

Screen B

| Function No. Display | Power LED | Scanner status |
|---|---|---|
|  | ON | Maintenance mode |

 Let go of the Function button

Screen C

| Function No. Display | Power LED | Scanner status |
|---|---|---|
|  | ON | Initial status of emulation switching mode |

[How to start]
(1) When  is displayed, press the Scan button to show the model selection screen.

A number is shown on the Function No. Display indicating the model to be emulated.

| Function No. Display | Model | Remarks |
|---|---|---|
| 0 | fi-5750C | Default (standard) |
| 1 | fi-4750C | Emulation (The scanner returns the Product ID “fi-4750Cdjm” to the host) |
| 2 | fi-4640S | Emulation (The scanner returns the Product ID “fi-4640Sm” to the host) |
| 3 | fi-4750L | Emulation (The scanner returns the Product ID “fi-4750Ldm” to the host) |
| 4 | M4097D | Emulation (The scanner returns the Product ID “M4097Ddm” to the host) |

(2) Change the selection by pressing the Function (△ or ▽) button.

(3) Press the Scan button, and confirm that the numbers of the selected model appears on the Function No. Display as shown in Note A.

Function button: Displays Screen E11 and moves to confirmation whether EEPROM is changed.
Send to button: Returns to the initial display of the emulation mode.

Screen E11

| Function No. Display | Power LED | Scanner status | Available buttons |
|---|---|---|---|
|  | ON | Confirming emulation change<br><br>“o” (lower half) blinks. | Scan + Function button: Writes the selected model into EEPROM. Screen E12 is displayed during writing. If writing to the EEPROM is completed successfully, screen E13 is displayed. If If writing to the EEPROM fails, screen E14 is displayed.<br>Send to button: Returns to the initial display of the emulation mode. |

Screen E12

| Function No. Display | Scanner status | Available buttons |
|---|---|---|
|  | Writing data into EEPROM.<br><br>“L” lights without blinking. | All buttons are disabled. |

Screen E13

| Function No. Display | Scanner status | Available buttons |
|---|---|---|
|  | Selecting the emulated model has succeeded.<br><br>Displays “o” (upper half) without blinking. | Send to button: Returns to the intial emulation mode display. |

Screen E14

| Function No. Display | Scanner status | Available buttons |
|---|---|---|
|  | Selecting the emulated model has fails.<br><br>Displays “c” without blinking. | Send to button: Returns to the intial emulation mode display. |

Note A) The selected model is displayed as below.

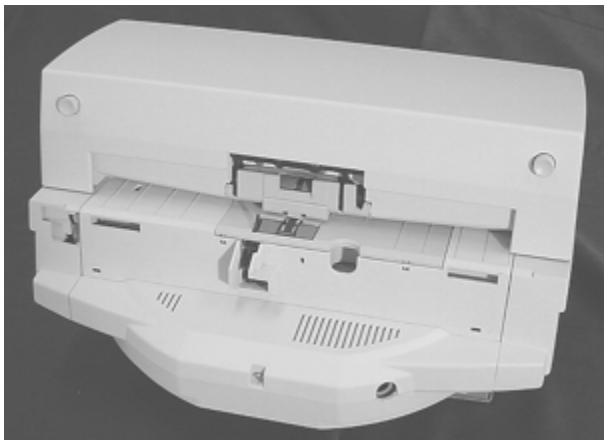
| Emulation mode | How to display |
|---|---|
| fi-5750C | Starting with “-“, “5750” is indicated as follows:<br>“-”→”5”→”7”→”5”→”0”<br>The display changes every 0.5 second. |
| fi-4750C | Starting with “-“, “4750” is indicated as follows:<br>“-”→”4”→”7”→”5”→”0”<br>The display changes every 0.5 second. |
| M4097D | Starting with “-“, “4097” is indicated as follows:<br>“-”→”4”→”0”→”9”→ ”7”<br>The display changes every 0.5 second. |
| fi-4640S | Starting with “-“, “4640” is indicated as follows:<br>“-” → ”4”→”6” → ”4” → ”0”<br>The display changes every 0.5 second. |
| fi-4750L | Starting with “-“, “4750L” is indicated as follows:<br>“-” → ”4” → ”7” → ”5” → ”0” → ”L”<br>The display changes every 0.5 second. |

# Chapter 8 Maintenance Parts

| POS | Description | Part Number | Quantity | Reference | Remarks |
|---|---|---|---|---|---|
| 1 | ADF UNIT | ~~PA03338-D900~~ PA03338-D810 03 | 1 | 8.1 | Including #37, 38 04 |
| 2 | BACKGROUND UNIT F | ~~PA03338-D901~~ PA03338-D811 03 | 1 | 8.2 | |
| 3 | BACKGROUND UNIT B | ~~PA03338-D903~~ PA03338-D813 03 | 1 | 8.3 | |
| 4 | INVERTER | ~~PA03338-D905~~ PA03338-D815 03 | 3 | 8.4 | |
| 5 | US SENSOR | PA03334-F902 | 2 | 8.5 | |
| 6 | US PCA | ~~PA03334-K902~~ PA03334-K906 03 | 1 | 8.6 | |
| 7 | SENSOR | ~~PA03338-D906~~ PA03338-D816 03 | 4 | 8.7 | |
| 8 | PICK SENSOR | ~~PA03338-D935~~ PA03338-D845 03 | 1 | 8.8 | |
| 9 | DF SENSOR | ~~PA03338-D907~~ PA03338-D817 03 | 1 | 8.9 | 2 pieces per set |
| 10 | GUIDE S ASSY | PA03338-D908 | 1 | 8.10 | |
| 11 | PICK MOTOR | ~~PA03338-D909~~ PA03338-D819 03 | 1 | 8.11 | |
| 12 | HK RING ME | PA03338-D941 | 1 | 8.12 | 4 pieces per set |
| 13 | BW MOTOR | ~~PA03338-D912~~ PA03338-D822 03 | 2 | 8.13 | |
| 14 | ADF JUNCTION PCA | ~~PA03338-D913~~ PA03338-D823 03 | 1 | 8.14 | |
| 15 | FEED MOTOR | PA03338-D914 | 1 | 8.15 | |
| 16 | BELT ADF | PA03338-D915 | 1 | 8.16 | |
| 17 | TOP SENSOR | ~~PA03338-D916~~ PA03338-D826 03 | 1 | 8.17 | |
| 18 | SENSOR OP | PA03338-D917 | 2 | 8.18 | |
| 19 | OPTICAL UNIT ADF | ~~PA03338-D910~~ PA03338-D820 03 | 2 | 8.19 | |
| 20 | FB UNIT | ~~PA03338-D918~~ PA03338-D828 03 | 1 | 8.20 | |
| 21 | FB MOTOR | ~~PA03338-D919~~ PA03338-D829 03 | 1 | 8.21 | Including belt |
| 22 | PANEL UNIT | ~~PA03338-D921~~ PA03338-D831 03 | 1 | 8.22 | |
| 23 | PANEL PCA | ~~PA03338-D922~~ PA03338-D832 03 | 1 | 8.23 | |
| 24 | CCD CABLE FB | PA03338-D924 | 2 | 8.24 | |
| 25 | LAMP FB | PA03338-D925 | 1 | 8.25 | |
| 26 | FB JUNCTION PCA | ~~PA03338-D926~~ PA03338-D836 03 | 1 | 8.26 | |
| 27 | OPTICAL UNIT FB | ~~PA03338-D923~~ PA03338-D833 03 | 1 | 8.27 | |
| 28 | DOCUMENT COVER | ~~PA03338-D927~~ PA03338-D837 03 | 1 | 8.28 | |
| 29 | HINGE UNIT | ~~PA03338-D928~~ PA03338-D848 03 | 2 | 8.29 | |
| 30 | CONTROL PCA | ~~PA03338-D929~~ PA03338-D839 03 | 1 | 8.30 | |
| 31 | POWER SUPPLY | ~~PA03338-D930~~ PA03338-D840 03 | 1 | 8.31 | |
| 32 | STACKER ASSY | PA03338-D931 | 1 | 8.32 | |
| 33 | CHUTE ASSY | ~~PA03338-D932~~ PA03338-D842 03 | 1 | 8.33 | |
| 34 | CHUTE ROLLER | PA03338-D933 | 1 | 8.34 | |
| 35 | ADF CABLE | ~~PA03338-D934~~ PA03338-D844 03 | 1 | 8.35 | |
| 36 | FAN ASSY 02 | ~~PA03338-D940~~ PA03338-D847 03 | 1 | 8.36 | |
| 04 37 | ADF BASE UNIT | PA03338-D967 | 1 | 8.37 | |
| 04 38 | ADF UPPER UNIT | PA03338-D969 | 1 | 8.38 | |

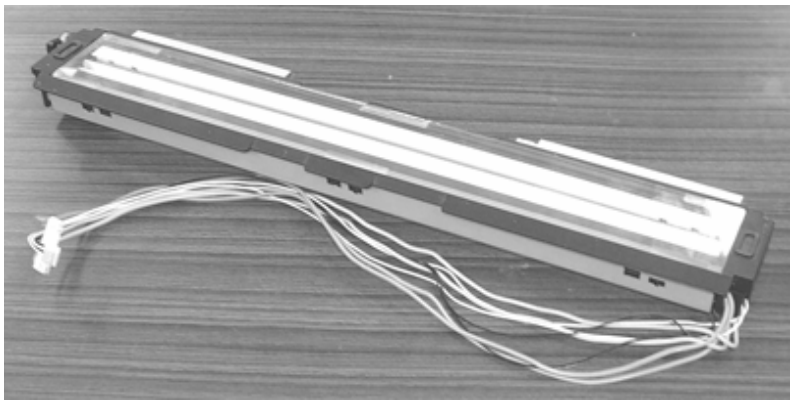
## 8.1 ADF Unit

| Description | Parts No. | Remarks |
|---|---|---|
| ADF Unit | ~~PA03338-D900~~<br>PA03338-D810<br>03 | ADF Base unit and ADF Upper unit are included. 04 |



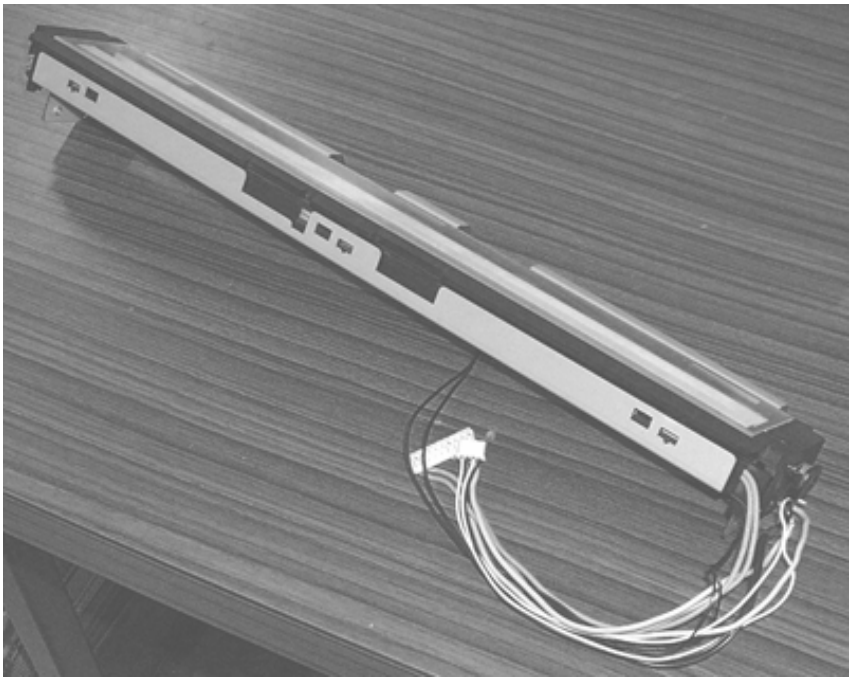
## 8.2 Background Unit F

| Description | Parts No. | Remarks |
|---|---|---|
| Background unit F | ~~PA03338-D091~~<br>PA03338-D811 03 | Includes the lamp for front side scanning and the background for backside scanning. 06<br>White level adjustment sheet is enclosed. |



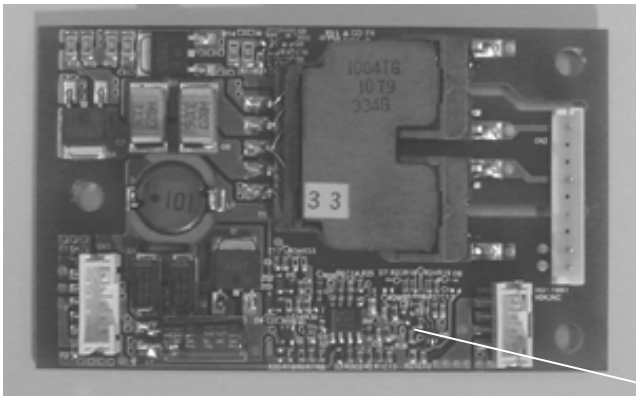
## 8.3 Background Unit B

| Description | Parts No. | Remarks |
|---|---|---|
| Background Unit B | ~~PA03338-D903~~<br>PA03338-D813 03 | Includes the lamp for backside scanning and the background for front side scanning. 06<br>White level adjustment sheet is enclosed. |



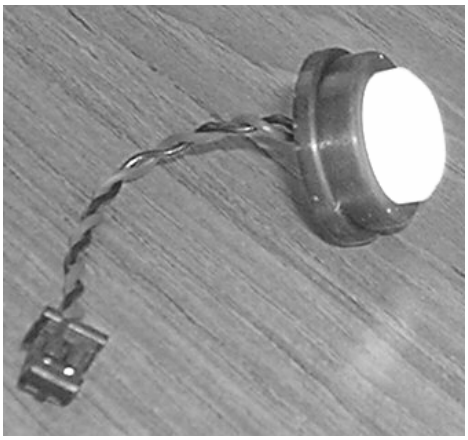
## 8.4 Inverter

| Description | Parts No. | Remarks |
|---|---|---|
| Inverter | PA03338-D905 | |



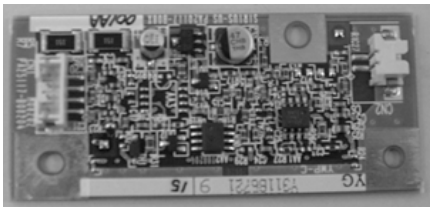
## 8.5 US Sensor

| Description | Parts No. | Remarks |
|---|---|---|
| US sensor | PA03334-F902 | |



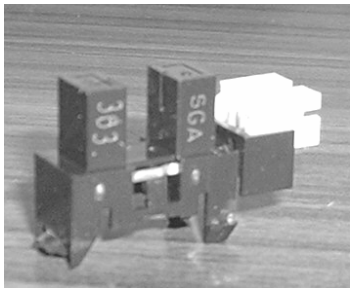
## 8.6 US PCA

| Description | Parts No. | Remarks |
|---|---|---|
| US PCA | ~~PA03334-K902~~<br>PA03334-K906 03 | |



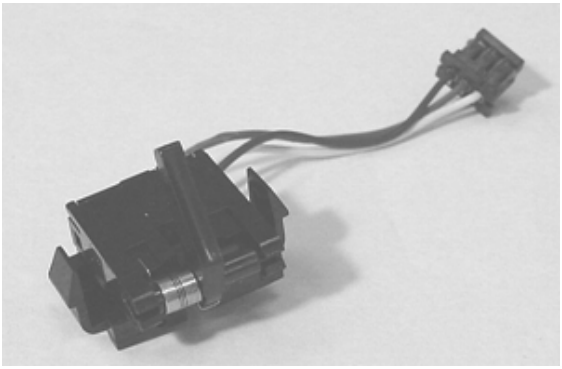
## 8.7 Sensor

| Description | Parts No. | Remarks |
|---|---|---|
| Sensor | ~~PA03338-D906~~<br>PA03338-D816 03 | |



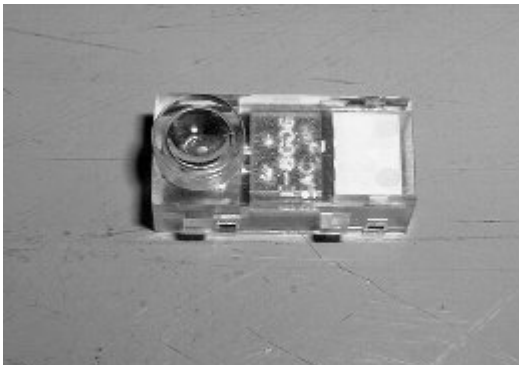

## 8.8 Pick Sensor

| Description | Parts No. | Remarks |
|---|---|---|
| Pick sensor | ~~PA03338-D935~~<br>PA03338-D845 03 | |



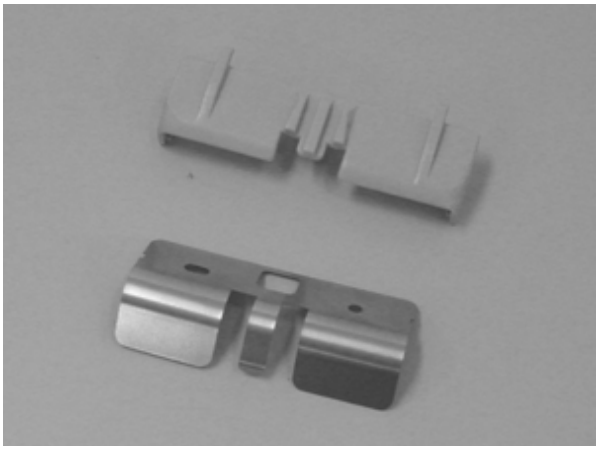
## 8.9 DF Sensor

| Description | Parts No. | Remarks |
|---|---|---|
| DF sensor | ~~PA03338-D907~~<br>PA03338-D817 03 | 2 pieces per set |



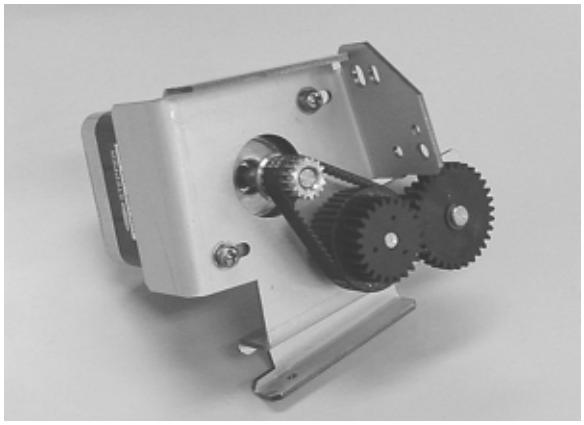
## 8.10 Guide S ASSY

| Description | Parts No. | Remarks |
|---|---|---|
| Guide S ASSY | PA03338-D908 | |



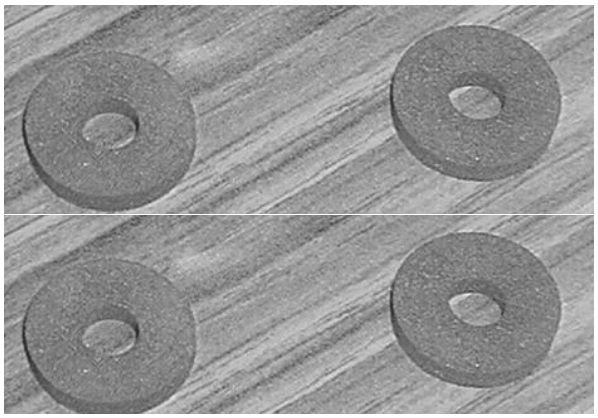
## 8.11 Pick Motor Unit

| Description | Parts No. | Remarks |
|---|---|---|
| Pick motor unit | ~~PA03338-D909~~<br>PA03338-D819 03 | |



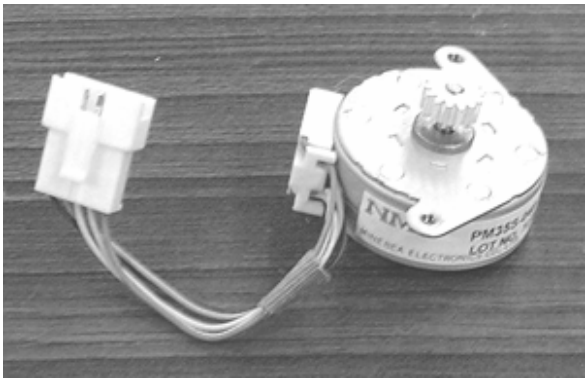
## 8.12 HK Ring ME

| Description | Parts No. | Remarks |
|---|---|---|
| HK Ring ME | PA03338-D941 | 4 pieces per set |



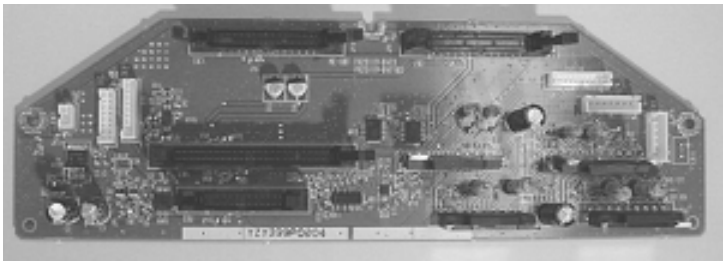
## 8.13 BW Motor

| Description | Parts No. | Remarks |
|---|---|---|
| BW motor | ~~PA03338-D912~~<br>PA03338-D822 03 | |



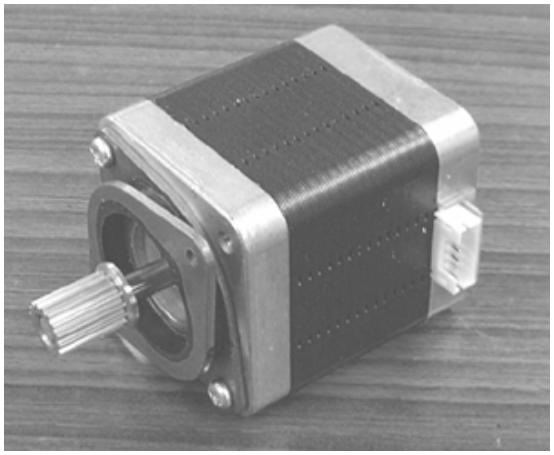
## 8.14 ADF Junction PCA

| Description | Parts No. | Remarks |
|---|---|---|
| ADF junction PCA | ~~PA03338-D913~~<br>PA03338-D823 03 | |



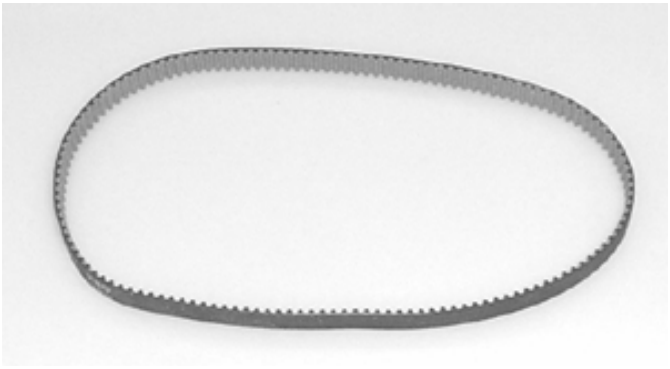
## 8.15 Feed Motor

| Description | Parts No. | Remarks |
|---|---|---|
| Feed motor | PA03338-D914 | |



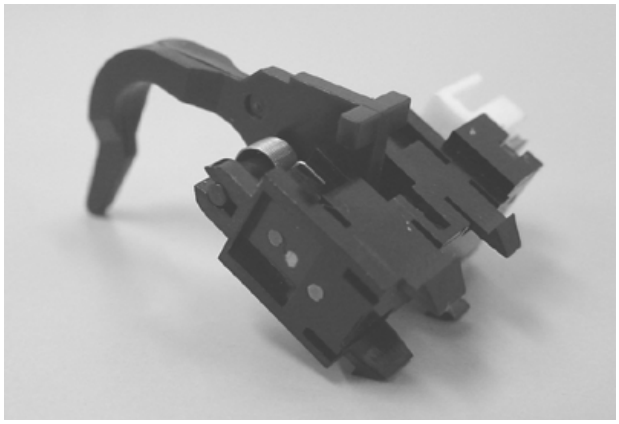
## 8.16 Belt ADF

| Description | Parts No. | Remarks |
|---|---|---|
| Belt ADF | PA03338-D915 | |



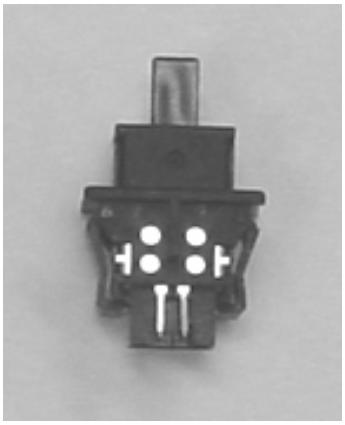
## 8.17 TOP Sensor

| Description | Parts No. | Remarks |
|---|---|---|
| TOP sensor | P03338-D916 | |



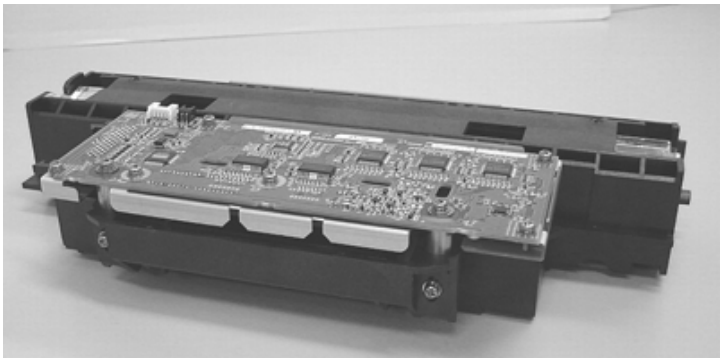
## 8.18 Sensor OP

| Description | Parts No. | Remarks |
|---|---|---|
| Sensor OP | PA03338-D917 | |



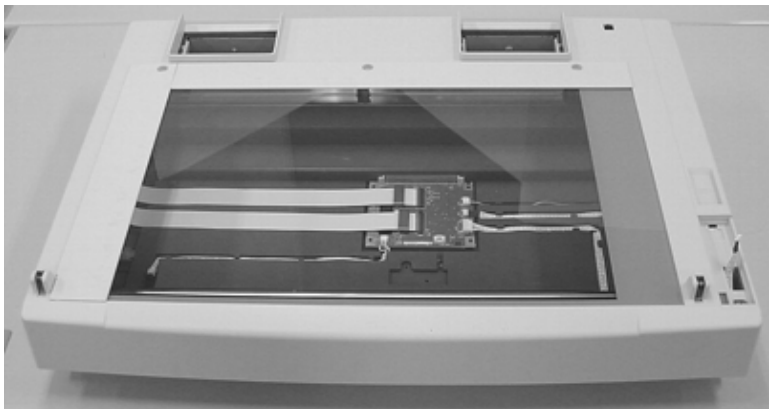
## 8.19 Optical Unit ADF

| Description | Parts No. | Remarks |
|---|---|---|
| Optical unit ADF | ~~PA03338-D910~~<br>PA03338-D820 03 | White level adjustment is enclosed. |



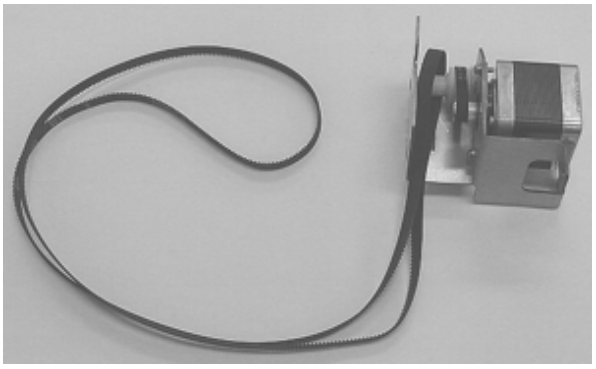
## 8.20 FB Unit

| Description | Parts No. | Remarks |
|---|---|---|
| FB Unit | ~~PA03338-D918~~<br>PA03338-D828 03 | The following parts are included:<br>FB junction PCA, Sensor OP (for detecting document cover open), Sensor (for detecting home position), CCD cable FB, FB motor<br>The following parts are not included:<br>Panel unit, Optical unit FB, bracket of PCA unit<br>White level adjustment sheet is enclosed. |



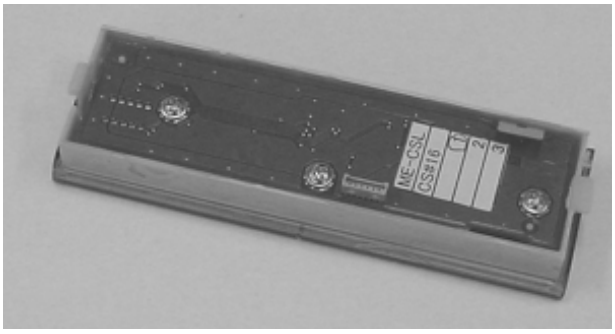
## 8.21 FB Motor

| Description | Parts No. | Remarks |
|---|---|---|
| FB motor | ~~PA03338-D919~~<br>PA03338-D829 03 | The belts and pulleys are included. |



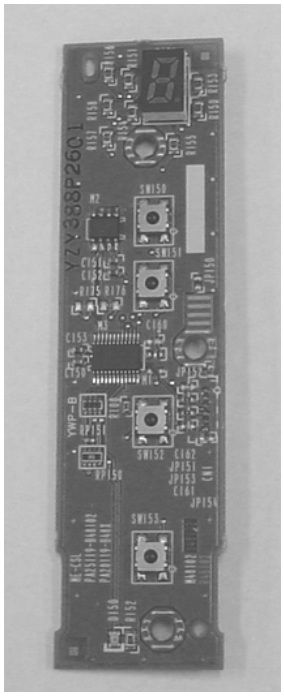
## 8.22 Panel Unit

| Description | Parts No. | Remarks |
|---|---|---|
| Panel unit | ~~PA03338-D921~~<br>PA03338-D831 03 | Including Panel PCA |



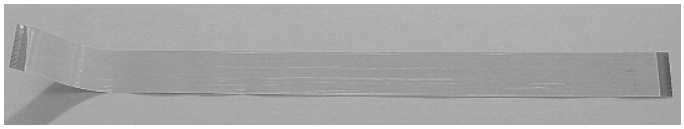
## 8.23 Panel PCA

| Description | Parts No. | Remarks |
|---|---|---|
| Panel PCA | ~~PA03338-D922~~<br>PA03338-D832 03 | |



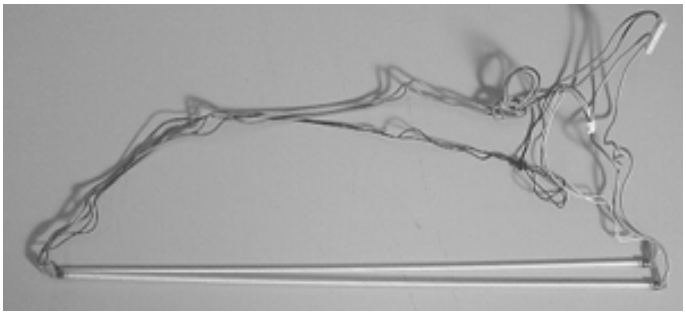
## 8.24 CCD Cable FB

| Description | Parts No. | Remarks |
|---|---|---|
| CCD cable FB | PA03338-D924 | |



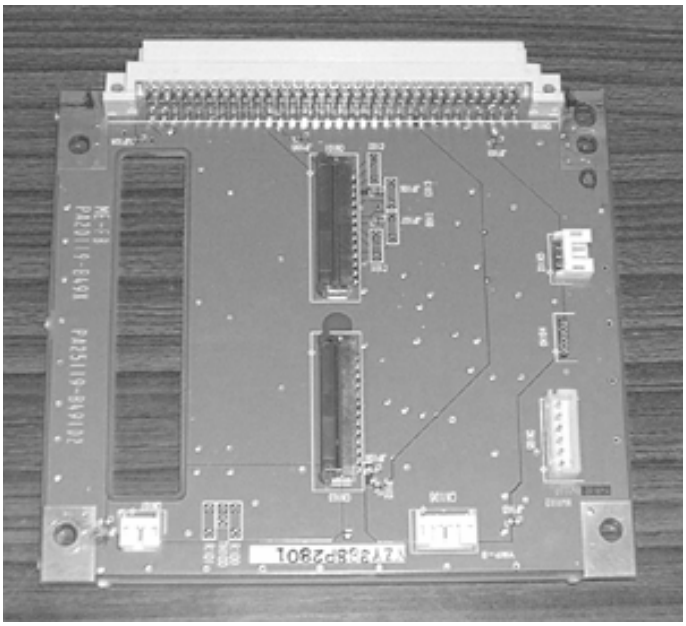
## 8.25 Lamp FB

| Description | Parts No. | Remarks |
|---|---|---|
| Lamp FB | PA03338-D925 | White level adjustment sheet is enclosed. |



## 8.26 FB Junction PCA

| Description | Parts No. | Remarks |
|---|---|---|
| FB Junction PCA | ~~PA03338-D926~~<br>PA03338-D836 03 | |

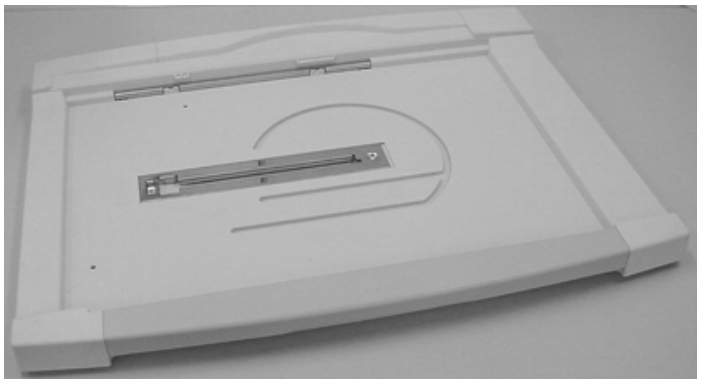


## 8.27 Optical unit FB

| Description | Parts No. | Remarks |
|---|---|---|
| Optical unit FB | ~~PA03338-D923~~<br>PA03338-D833 03 | Including Lamp FB and Inverter.<br>White level adjustment sheet is enclosed. |

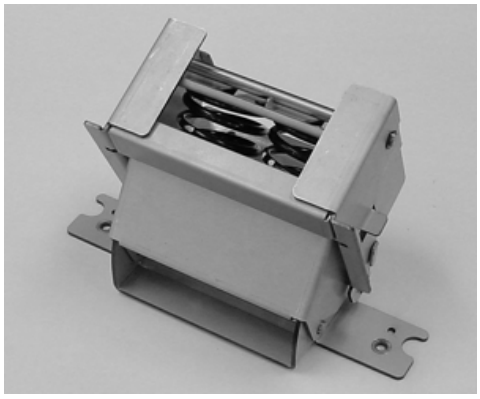
## 8.28 Docment Cover

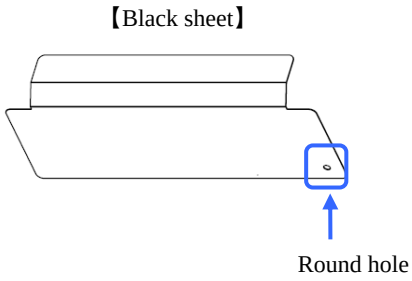
| Description | Parts No. | Remarks |
|---|---|---|
| Document cover | ~~PA03338-D927~~<br>PA03338-D837 03 | Two black sheets required for assembly are enclosed. |



## 8.29 Hinge Unit

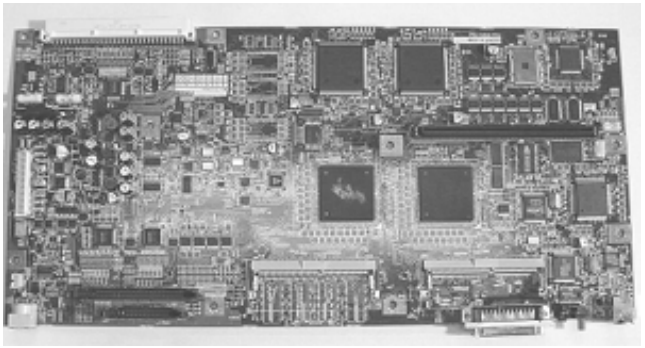
| Description | Parts No. | Remarks |
|---|---|---|
| Hinge Unit | ~~PA03338-D928~~<br>PA03338-D848 03 | A black sheet required for assembly is enclosed.<br>There is a round hole on the black sheet. 04 |





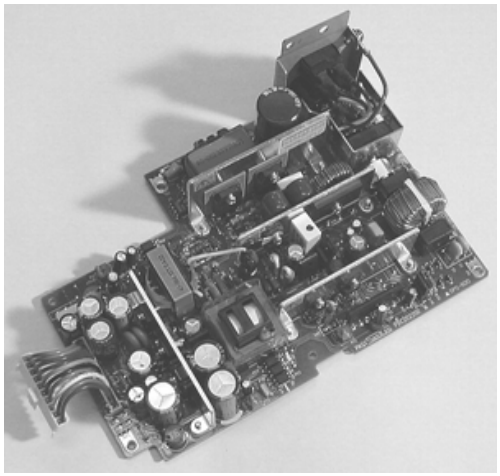

## 8.30 Control PCA

| Description | Parts No. | Remarks |
|---|---|---|
| Control PCA | ~~PA03338-D929~~<br>PA03338-D839 03 | |



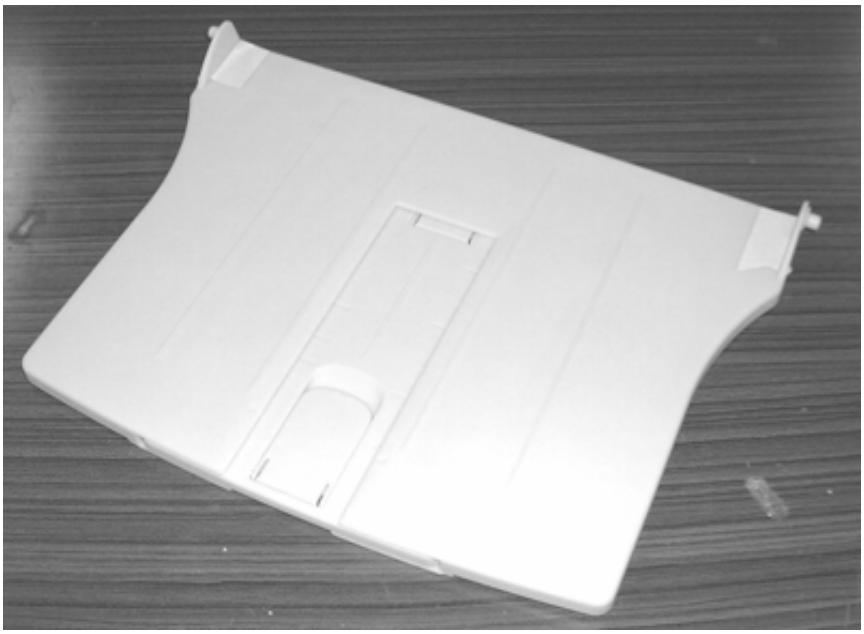
## 8.31 Power Supply

| Description | Parts No. | Remarks |
|---|---|---|
| Power Supply | ~~PA03338-D930~~<br>PA03338-D840 03 | |



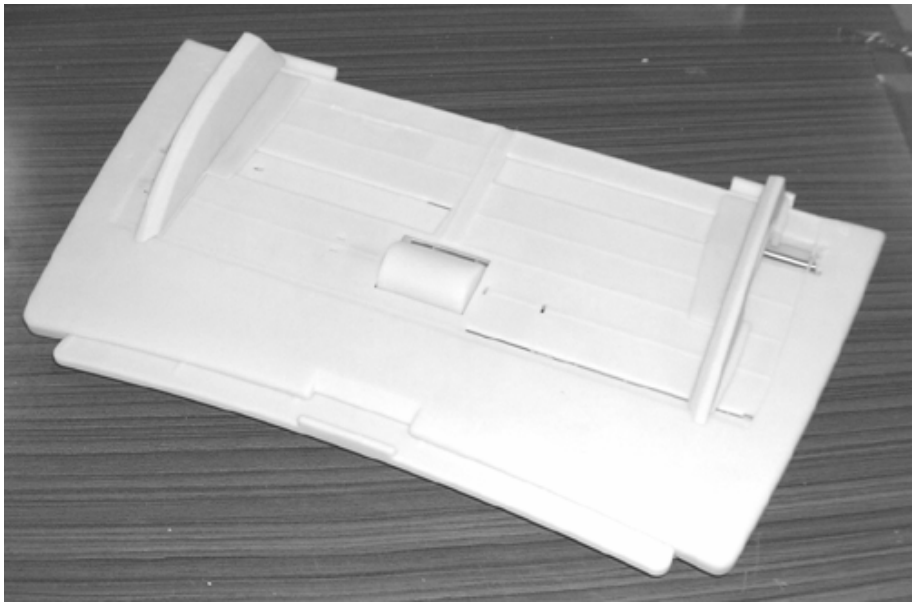
## 8.32 Stacker ASSY

| Description | Parts No. | Remarks |
|---|---|---|
| Stacker ASSY | PA03338-D931 | |



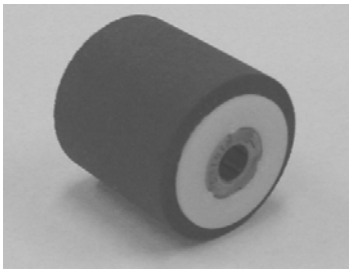
## 8.33 Chute ASSY

| Description | Parts No. | Remarks |
|---|---|---|
| Chute ASSY | ~~PA03338-D932~~<br>PA03338-D842 03 | Including Chute roller |



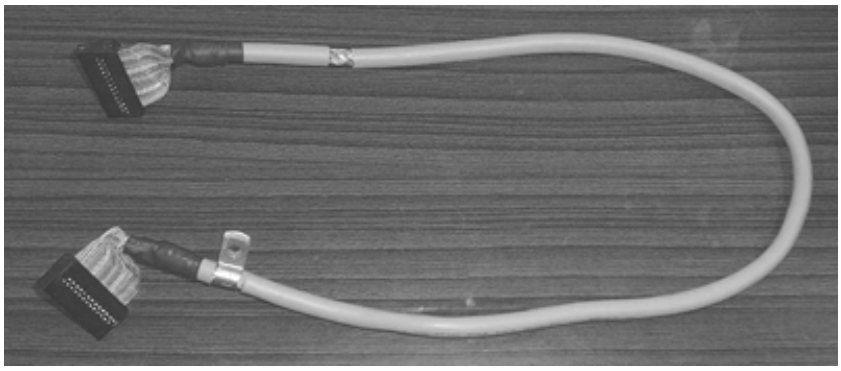
## 8.34 Chute Roller

| Description | Parts No. | Remarks |
|---|---|---|
| Chute roller | PA03338-D933 | |



## 8.35 ADF Cable

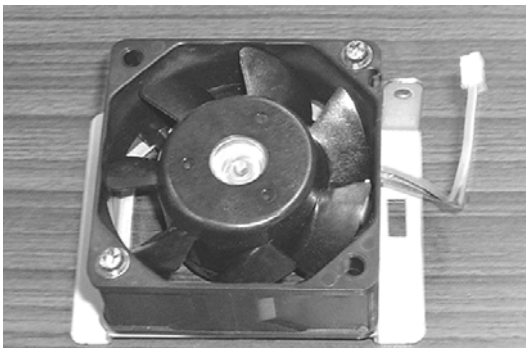
| Description | Parts No. | Remarks |
|---|---|---|
| ADF cable | ~~PA03338-D934~~<br>PA03338-D844 03 | |



## 8.36 Fan ASSY

02

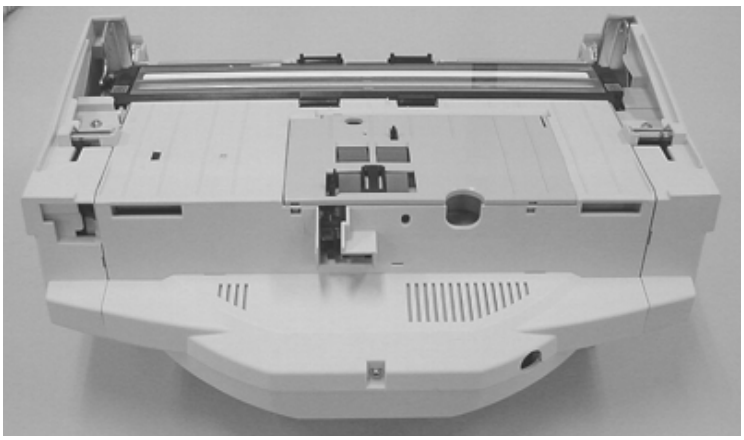
| Description | Parts No. | Remarks |
|---|---|---|
| Fan ASSY 02 | ~~PA03338-D940~~<br>PA03338-D847 03 | |



04

## 8.37 ADF Base Unit

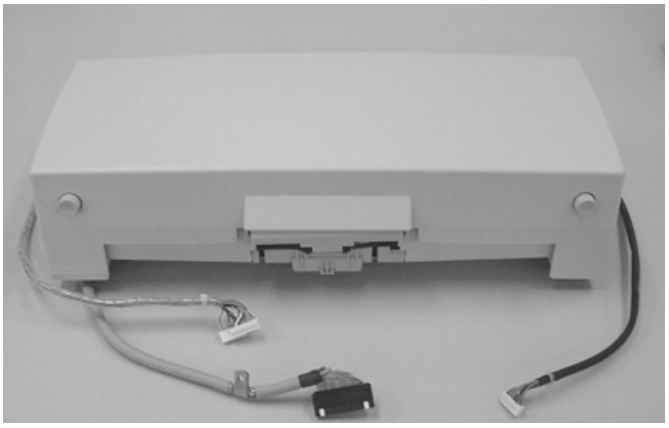
| Description | Parts No. | Remarks |
|---|---|---|
| ADF Base unit | PA03338-D967 | The following parts are included:<br>Optical unit ADF, Background unit F, Inverter, US sensor, US PCA, Sensor (for detecting hopper empty), Pick sensor, DF sensor, Pick motor unit, HK Ring ME, ADF junction PCA<br>White level adjustment sheet and Ultra sonic sensor adjustment sheet are enclosed. |



04

## 8.38 ADF Upper Unit

| Description | Parts No. | Remarks |
|---|---|---|
| ADF Upper unit | PA03338-D969 | The following parts are included:<br>Optical unit ADF, Background unit B, Inverter, US sensor, US PCA, Sensor (for detecting pick arm position and background position), DF sensor, Guide S ASSY, BW motor, Feed motor, Belt ADF, TOP sensor, Sensor OP<br>White level adjustment sheet and Ultra sonic sensor adjustment sheet are enclosed. |



# Appendix A Scanner and Camera Properties

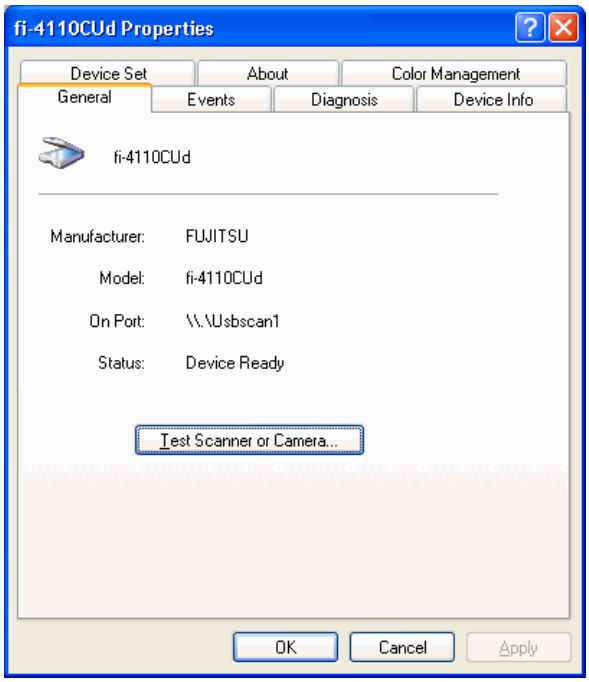
The following describes the scanner driver settings for the ST1 TWAIN driver.

## A.1 Displaying Scanner and Camera Properties

Select the [Scanner and Camera] icon on the [Control Panel] to display the corresponding properties dialog box shown below. If the scanner driver has been properly installed, the icon of your scanner is displayed. Select the model name. And double-click the icon or select the [Properties...] by using right-click. The Properties dialog box shown below is displayed. In this dialog box, the scanner can be checked and information related to different kinds of devices can be confirmed. An explanation of each tab folder and its use is below.

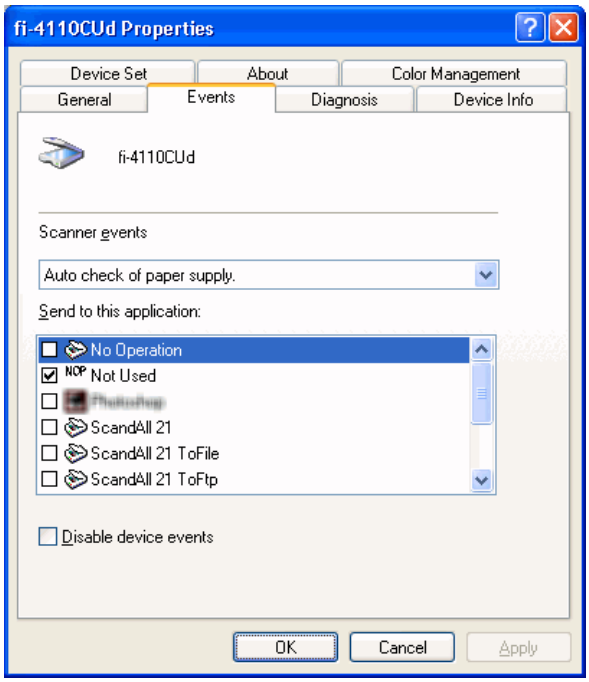
## A.2 General Tab

General information on the driver for the connected scanner are displayed. The scanner/host communications can be tested at this screen.



## A.3 Events Tab

On the [Events] tab, an application can be specified to automatically by “Scanner events” such as “pushing buttons on the scanner” or “placing documents on the paper chute”.




**<Scanner events>**

Select a “scanner event” from the list box to begin an application. Please select the item to Set up from the following events.

**"Auto check of paper supply":** When placing paper on the paper chute.
**"Scan button":** When pressing the Scan button on the scanner.
**"Send to 1-9":** When pressing the Send to button on the scanner.

**<Send to this application>**

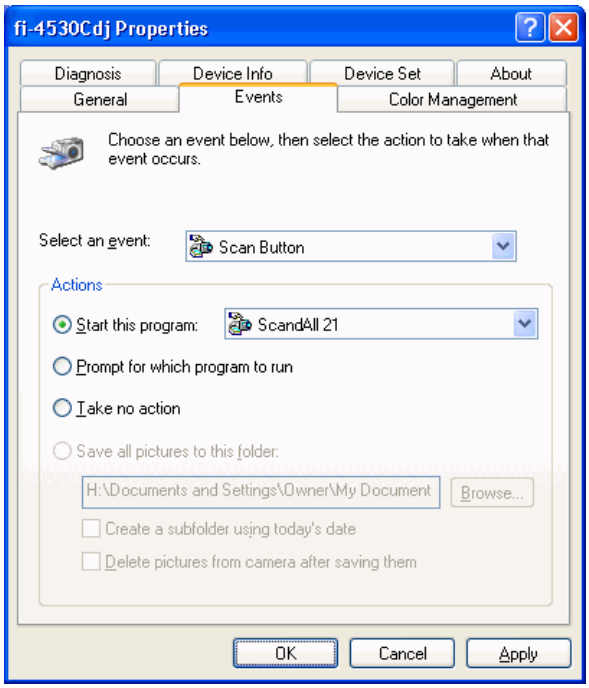
Mark on the check box of an application to be started by the operation specified in the above [Scanner events]. Multiple applications can be specified. When two or more applications are specified, a dialog box appears to select one to be started by the operation.

**<Disable device events>**

Check this box if events are not used.

* If the above settings are not activated by clicking [OK] or [Apply], reboot the PC.

In Windows XP, the following “Events” screen may be displayed.
(*This screen has the same function as the above screen.)




**<Select an event>**

Select a “scanner event” from the list box to start an application. Please select the item to set up from the following events.

**"Feeder loaded with paper ":** When placing paper on the paper chute.
**"Scan button":** When pressing the Scan button on the scanner.
**"Send to 1-9":** When pressing the Send to button of the scanner.

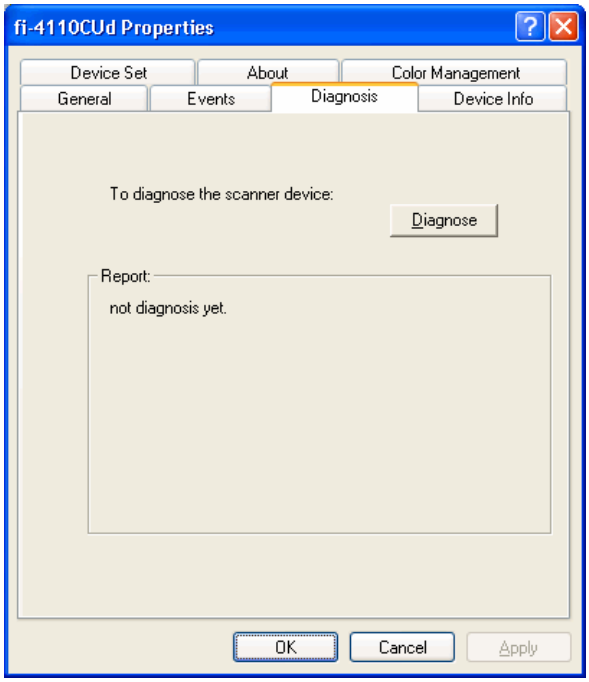
**<Actions>**

Select an action when the event selected on [Select an event] occurs.

- Start this program:
  The application selected from the list box to the right starts when the event occurs.
- Prompt for which program to run
  The window for selecting application appears when the event occurs.
- Take no action
  Nothing starts even if the event occurs.
  Select if events are not used.

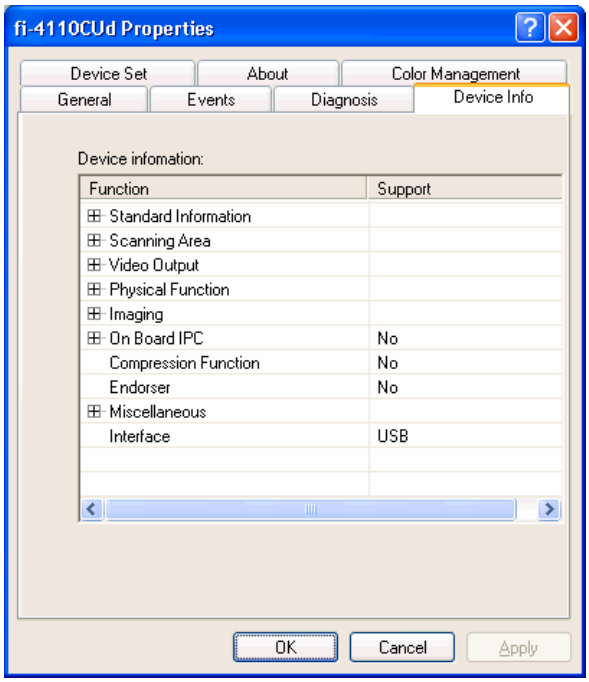
## A.4 Diagnosis Tab

To perform more detailed diagnostic tests than those provided in the general tab folder, click the [Diagnose] button.
In Windows 2000 or Windows XP, only a user who has administrator rights can run these tests.



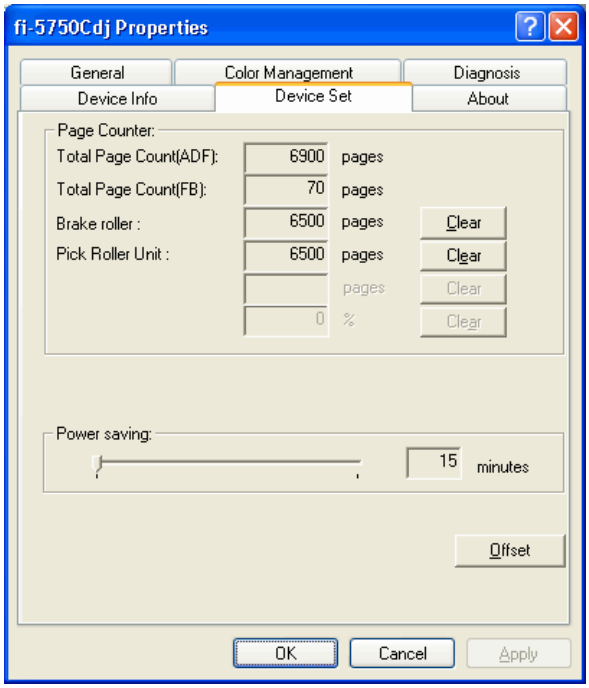

## A.5 Device Information Tab

A list of the functions compatible with the selected scanner driver are displayed. The items displayed depend on the selected scanner model. Only hardware functions are displayed. The functions controlled by software are not displayed in this tab folder. Therefore, the displayed content may not match the content specified during scanning. The contents of this tab folder are not displayed if the scanner driver is either currently in use or the scanner is not connected to the computer. If they are not displayed, stop the application being used by the scanner driver or check the connection. Then, select this tab folder again to display the contents.



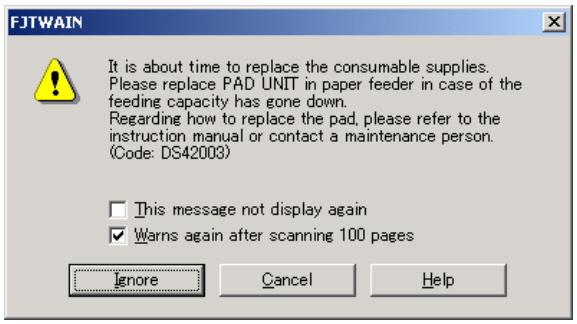
## A.6 Device Set Tab

Information related to the operation and maintenance of the scanner driver can be displayed and set up. For some scanner models, this tab may not be displayed, or some items cannot be set up (grayed out). Changing the setup activates the [Apply] button. The changed setup is reflected on the device only if the [Apply] button or [OK] button is clicked. The contents of this tab folder are not displayed if the scanner driver is either currently in use or the scanner is not connected to the computer. If they are not displayed, stop the application being used by the scanner driver or check the connection. Then, select this tab folder again to display the contents.
In Windows 2000 or Windows XP, only a user who has administrator rights can change the setup from this tab folder.




**<Page counters>**
An approximate total numbers of pages that the ADF and flat bed (FB) have scanned are displayed. A count of the pages scanned after consumables are replaced is also displayed. To set the consumables counter to zero after replacing consumables, click the [Clear] button.
* Reset of the counters can be executed using the operator's panel of the device as well. (Refer to section 7.1.6.)

When using a scanner, the following message may be displayed.




If this message appears, replace consumables following the instructions below.

<If replacing consumables immediately>

1 Check [This message not display again]*.
2 In cases where consumables are replaced after completing all documents being scanned, click [Ignore]. In cases where scanning is stopped for an immediate replacement, click [Cancel].
3 Following the operator's guide, replace the consumables.
4 Select [Page counter] from [Device setup], click the [Clear] button to reset the consumables counter.

<If replacing later (immediate replacement is impossible)>

1 If you do not want to display the message again, check [This message not display again]*. If it is necessary to display this message again after scanning xxx pages, check [Warns again after scanning xxx pages].
2 If scanning is continued, click [Ignore] and close the message. If scanning is stopped, click [Cancel] and close the message.
3 Replace the consumables as soon as possible or when this message appears next.
4 After replacement, click [Clear] of the [Page Counter] under [Device Setup] to reset the consumables counter.

(* If [This message not display again] is checked, this message will not appear before the consumables counter is reset.)

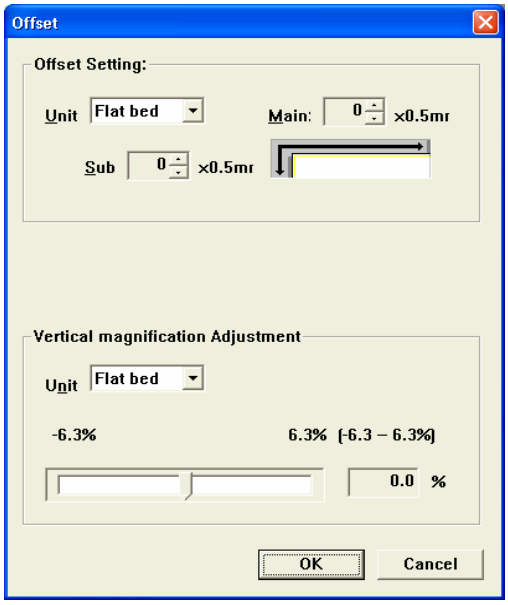
**<Power saving>**

When scanning operation is not performed for a certain period of time, the scanner goes into the Sleep mode. You can specify the time on this screen.

**<[Offset] button>**

When this button is clicked, the following dialog box is displayed.

Using this dialog box, the offset of the leading edge and magnification for the sub-scanning direction can be changed.




**- Offset Setting:**

If the position of the scanned image shifts from the original document, fine adjustment is possible.

At shipment, the offset has been adjusted to an optimum value within a certain range. Therefore, adjustment is not generally required.

*The adjustable offset range is-–2 to 3mm.

**- Vertical magnification Adjustment**

The Vertical magnification correction value of the sub-scanning direction can be changed.

For ADF scanning, the image is expanded or shrunk in the paper feeding direction based on the setting value at shipment.

For FB scanning, the image is expanded or shrunk in the direction to which the scan head moves based on the setting value at shipment.

This function is used to adjust the image whose ratio of length and width seems different from the original document.

*The settable value range is –6.3 to 6.3%.

**- [OK] button**

The adjusted value is written into the EEPROM.

* Offset and vertical magnifications of ADF and FB can be adjusted.
Changing this setting affects the position and size of the scanned images greatly.
Care must be taken when changing.

## A.7 About Tab

The version of the driver and a link to the Fujitsu home page are displayed.

## A.8 Color Management Tab

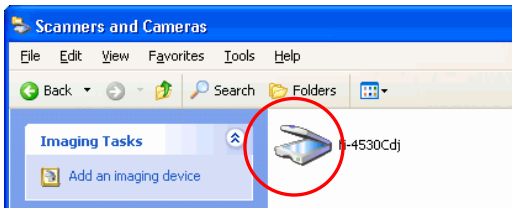
Color profiles assigned to the device can be added or deleted from this folder.
"sRGB Color Space Profile.icm" is the default assigned to this driver.

## A.9 Scanning by using “Scanner and Camera Wizard”

In case of Windows XP, you can scan by using “Scanner and Camera Wizard”.
Follow below procedure to scan:

On the [Start] menu, select [Control Panel] – [Scanners and Cameras].

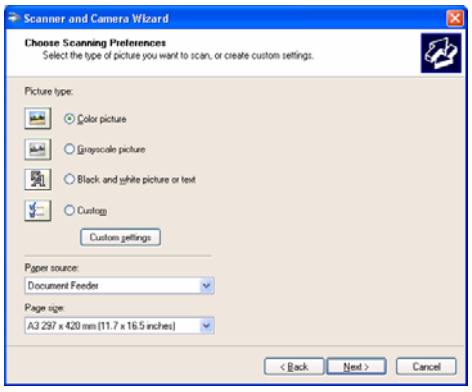
1. Double-click on your scanner’s icon.




2. Click [Next] button when Scanner and Camera Wizard appears.


(Example of display)

3. Specify the scan settings and click [Next] button on the following window.

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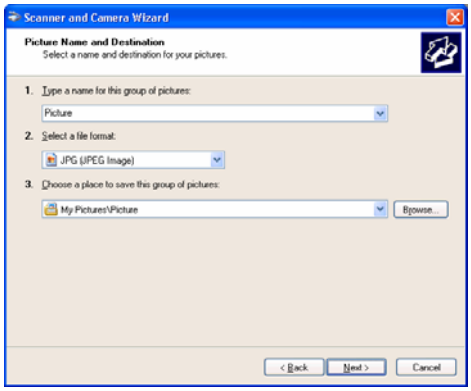
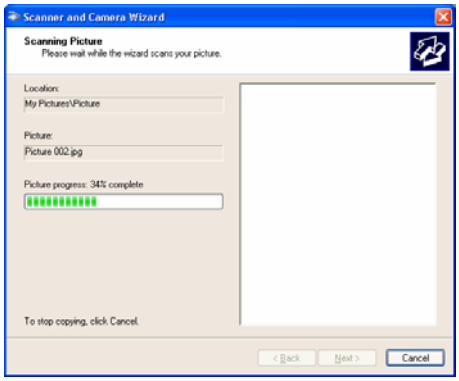
|---|---|---|---|---|---|---|---|---|---|
| 09 | May 19, 2009 | T.Yoshimoto | A.Miyoshi | I.Fujioka | See page 2. | | TITLE | fi-5750C IMAGE SCANNER MAINTENANCE MANUAL | |
| 08 | Jan. 7, 2009 | K.Okada | T.Anzai | I.Fujioka | See page 2. | | | | |
| | | | | | | | DRAW. No. | P1PA03338-B00X/6 | CUST. |
| 10 | July 13, 2009 | K.Okada | A.Miyoshi | I.Fujioka | See page 2. | | | | |
| Rev | DATE | DESIG. | CHECK | APPR. | DESCRIPTION | | PFU LIMITED | | PAGE 199/200 |
| DESIG | Dec. 15, 03 | T.Anzai | CHECK | T.Anzai | Y.Takashima | APPR. H.Hasegawa | | | |

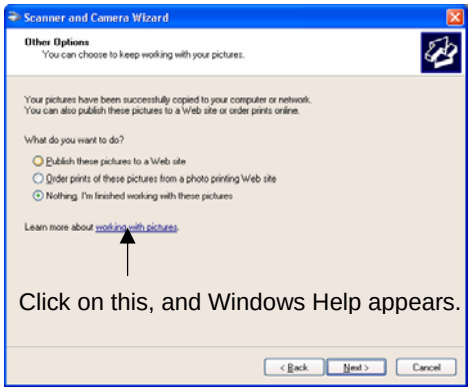
4. Specify a file name, a format and a location to save the scanned images. And click [Next] button.




=> Scanning begins. (The following window is displayed during scanning.)




5. Select an item from “What do you want to do?” to keep working with your picture. And click [Next] button.




* Refer to Windows Help for detail.

6. Select “Nothing” if finished working with these pictures when you want to finish. And click [Next] button.
7. Click [Finish] button to finish this wizard.


| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
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| | | | | | | DRAW. No. | P1PA03338-B00X/6 | | CUST. |
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| Rev | DATE | DESIG. | CHECK | APPR. | DESCRIPTION | PFU LIMITED | | PAGE | 200/200 |
| DESIG | Dec. 15, 03 | T.Anzai | CHECK | T.Anzai | Y.Takashima | APPR. | H.Hasegawa | | |