fi-6110, Image Scanner
Maintenance Manual

									Name	fi-6110 Maintenance Manual	
03	Dec 20, 11	Yashima	Ueda	Maki	Refer to Revision Record on page 2.				Drawing No.	P1PA03607－B00X/6	
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D01	July 13, 2010	Draft 01 issued.
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02	Aug. 2, 2010	Changes in the entire manual. Section 4.1 : Correct the Revolve Unit (TOP COVER ASSY). Section 6.8.4, 6.9 : Note added.
03	Dec 20, 2011	Modify Device Specification Section 1.1.2 No.25 Image memory remarks changed.

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-6110 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-6110 Image Scanner Operator's Guide	P3PC-3012-xxENZ0
2	fi-6110 Image Scanner Getting Started	P3PC-3002-xxEN
4	[Important] Read Before Using VRS	P3PC-3032-xxENZ0
5	fi-6110 Illustrated Parts Catalog	P4PA03607-B00X/6

* xx represents revision number of the manuals.

Convention

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

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

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

NOTICE indicates "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

The operating systems and products in this manual are indicated as follows:

Windows XP: Windows® XP Home Edition (Service Pack 2 or later)
Windows® XP Professional (Service Pack 2 or later)
Windows® XP Professional ×64 Edition

Windows Server 2003: Windows Server® 2003 Standard Edition
Windows Server® 2003 Standard ×64 Edition
Windows Server® 2003 R2 Standard Edition
Windows Server® 2003 R2 Standard ×64 Edition

Windows Vista: Windows Vista® Home Basic (32/64-bit)
Windows Vista® Home Premium (32/64-bit)
Windows Vista® Business (32/64-bit)
Windows Vista® Enterprise (32/64-bit)
Windows Vista® Ultimate (32/64-bit)

Windows Server 2008: Windows Server® 2008 Standard Edition (32/64-bit)
Windows Server® 2008 R2 Standard ×64 Edition

Windows 7: Windows® 7 Home Premium (32/64-bit)
Windows® 7 Professional (32/64-bit)
Windows® 7 Enterprise (32/64-bit)
Windows® 7 Ultimate (32/64-bit)

Microsoft SharePoint Server: Microsoft® Office SharePoint® Portal Server 2003
Microsoft® Office SharePoint® Portal Server 2007

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

Adobe Acrobat: Adobe® Acrobat®
All the descriptions in this manual assume the usage of Adobe Acrobat bundled with this product. However, Adobe Acrobat may be upgraded without notice. If the descriptions differ from the actual displayed screens, refer to the Adobe Acrobat Help.

Contents

Chapter 1 Overview

1.1 Scanner Overview

1.1.1 Features

The fi-6110, image scanner has the following features:

(1) Realizes high scanning speed on the desk side (20 ppm)

The scanner can achieve a cost-effective scanning speed of up to 20 ppm/40 ipm (200/300dpi) with A4/Letter size color documents.

Furthermore, you can load up to 50 sheets of mixed batch documents for continuous scanning which allows you to quickly digitalize a large volume of documents.

(2) Reliable “intelligent functions” developed through the fi-series scanners

The reliable “intelligent functions” that have been accumulated in the fi-series scanner development support the customer’s operational efficiency improvement.

(3) Reliable “intelligent functions” developed through the fi-series scanners

The scanner’s automatic page size detection function which is newly introduced as well as automatic page orientation correction/blank page skip functions realize efficient scanning operation by automatically checking the size, single-sided/double-sided and orientations of the documents.

(4) Reduced work loss caused by multifeeds

The scanner mounts an ultrasonic multifeed sensor that accurately detects “multifeed” errors where two or more sheets are fed through the scanner at once.

This multifeed detection and fi-series’ unique feeding mechanism avoid potential work loss caused by feeding errors.

(5) Capable of scanning documents larger than A4/Letter size

The bundled "Carrier Sheet" allows you to scan documents that are larger than A4/Letter size.

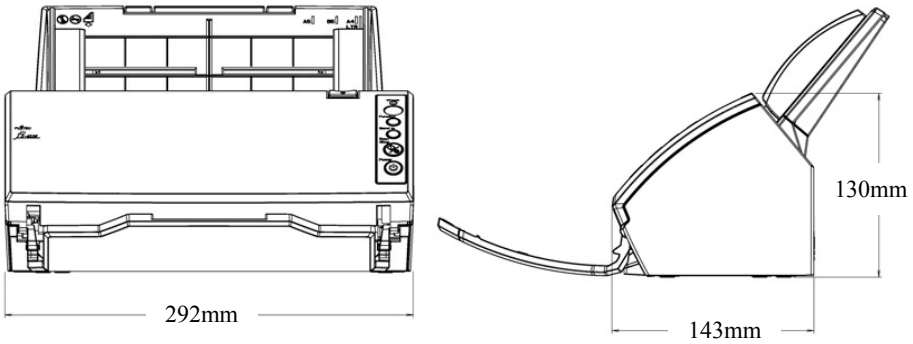
Mixed batch scanning with paper smaller than A4 size or continuous feeding of the Carrier Sheets meets the customer’s business needs.

1.1.2 Device Specification

No.	Item			Specification			Remarks
1	Operating method			Automatic Document Feeder (ADF)			
2	Image sensor			Color CCD (Charge-coupled device) x 2			ADF front/back
3	Light source			White cold cathode discharge lamp			
4	Resolution	Optical resolution		600dpi			
		Output resolution	Binary	50-600 dpi, 1200 dpi			50-600 dpi is incremented by 1. 1200 dpi is generated by the device driver.
			Grayscale	50-600 dpi, 1200 dpi			
			Color	50-600 dpi, 1200dpi			
5	Internal video processing			1024 levels (10bit)			
6	Video output format	Monochrome		1 bit/pixel			
		Grayscale		8 bit/pixel			4 bit/pixel is generated by the device driver
		Color		24 bit/pixel, 8 bit/pixel			
7	Scanning speed (A4 Portrait)				Simplex (ppm)	Duplex (ipm)	
		200 dpi		B&W, Gray	20	40	The actual scanning speed may be slower due to the system environment process other than the scanner. Scanning speed for color is calculated with USB High-Speed (USB 2.0) interface.
				Color	20	40	
		300 dpi		B&W, Gray	20	40	
				Color	20	40	
8	Paper size			Minimum: A8 (52 x 74 mm), Portrait/Landscape Maximum: Legal (216 x 355.6 mm), Landscape Note) 216 x 3048 mm (120 in) Long page scanning available			A8-size paper shall be 127 g/m^2 or 34 lb paper weight. Feeding error rate with the paper longer than A4 or Legal size is not guaranteed described in Section 1.2. If the paper size is longer than 864 mm (34 in.), resolution must be specified as 200dpi or less.
9	Paper weight			0.06 to 0.15 mm (52 to 127 g/m^2, 14 to 34 lb.)			Business card cannot be fed. A8 size: 0.15mm only
10	Capacity of ADF			Maximum: 60 sheets at A4, 17 lb or 64g/m^2 50 sheets at A4, 20 lb or 80 g/m^2			Replenishable
11	ADF Paper Chute type			Aligned at center			
12	Multifeed detection			Overlapping and paper length monitoring			Ultrasonic sensor x 1 (Ultrasonic sensor & Paper detection sensor)
13	iMMF			Yes			Documents cannot be ejected when multifeed is detected.
14	Paper separation			Brake pad method			
15	Sheet setting			Taper set, square set			
16	Sheet setting direction			Front side down			
17	Paper protection			N/A			
18	Background			White			No background changeover function
19	Interface			USB 2.0 (x1)			USB1.1 is also available.
20	Input power			AC100 to 240V 10% (Single phase), 50/60Hz			
21	Power consumption			Refer to Section 1.1.3 “Environmental Specification (Power consumption)”.			
22	Ambient condition			Refer to Section 1.1.3 “Environmental Specification (Ambient condition)”.			
23	Dimensions			Refer to Section 1.1.3 “Environmental Specification (Outer dimension)”.			
24	Weight			Refer to Section 1.1.3 “Environmental Specification (Weight)”.			
25	Image memory			64 MB (common for front/back)			No additional memory available
26	Energy Star			Yes			Automatically enters energy saving mode.

No.	Item	Specification	Remarks
27	Image processing functions (standard)	[Hardware] Image emphasis Error diffusion Dither simplified DTC Moire removal (smoothing) Dropout color (R, G, B, None, specified color)	[Driver] Multi image Blank page skip Advanced-DTC sRGB Automatic color recognition Automatic size detection Vertical split
28	Supported Operating Systems	Windows XP (32bit/64bit) Windows Vista (32bit/64bit) Microsoft Windows 7 (32bit/64bit) Server 2003 (32bit/64bit) Server 2008 (32bit/64bit)	
29	Bundled software	FJ TWAIN ISIS ScandAll PRO Adobe Acrobat Standard QuickScan Pro (Trial) Image Processing Software option (Trial) Error Recovery Guidance (ERG) Software Operator Panel (SOP)	
30	Options	Network connector exclusively for fi-series scanner (fi-5000N) iSwitch (fi-600SW) Image processing software option (fi-SIPC2) Fujitsu Scanner Control SDK(FI-SSDK2)	

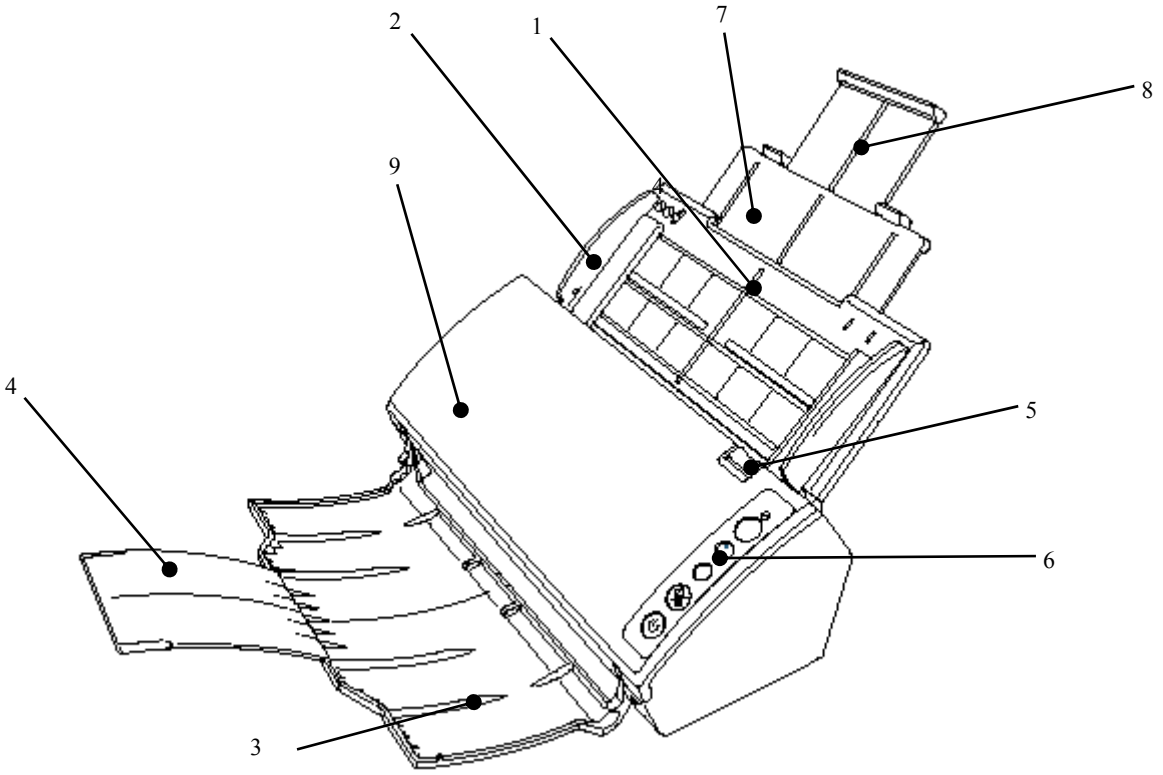
1.1.3 Environmental Specification

No.	Item		Specification	Remarks
1	Outer dimension	Height	130 mm	Protrusions not included.
		Width	292 mm	
		Depth	143 mm	
				

No.	Item	Specification		Remarks
2	Weight	3.0 kg or less (6.62 lb.)		AC adapter not included.
3	Input power	AC 100 to 240V, 50/60Hz		AC adapter input rating
4	Power consumption	Operating	28 W or less	
		Sleep mode	5.36W or less	International Energy Star V1.1: 5.36 W or less
		Power off	1 W or less	
5	Calorific value (Kcal/Hr)	Operating	24.1 or less	
		Sleep mode	4.61 or less	
		Power off	0.86 or less	
6	Noise	Operating	Sound pressure level: 50dB(A)or less Sound power level: 6.2B(A) or less Significant discrete frequency noise: None (margin value: +5dB)	Excludes operator position "Peripheral device" of "Office I installation" Conforms to ISO9296 Conforms to ECMA74: 2005
		Not operating	Sound pressure level: 45dB(A) or less Sound power level: 5.7B(A) or less	
7	Ambient condition	Temperature (°C, °F)	Operating: 5 ~ 35°C, 42 ~ 95°F	Temperature gradient (no condensation): 15 °C/hr or less
			Not operating: -20 ~ 60°C, -4 ~ 140 °F	
			Stored/Transported: -20 ~ 60°C, -4 ~ 140 °F	
		Humidity (%RH)	Operating: 20~80%	Humidity gradient (no condensation): 30 %/hr or less
			Not operating: 8~95%	
			Stored/Transported: 8~95%	
8	Inclination (degrees)	The scanner shall operate normally with 5 degrees of inclination. The scanner shall not tip over with 10 degrees of inclination. No anomaly with 60 degrees of inclination		
9	altitude	Operating	0 ~ 3,000 m	
		Not operating	0 ~ 12,000 m	

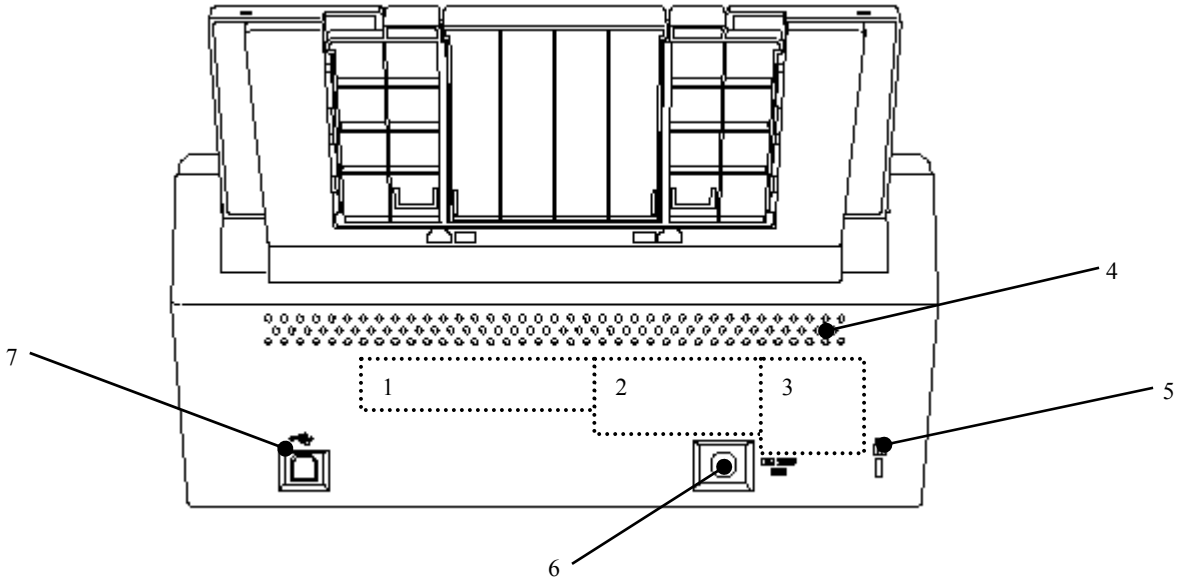
1.1.4 Appearance

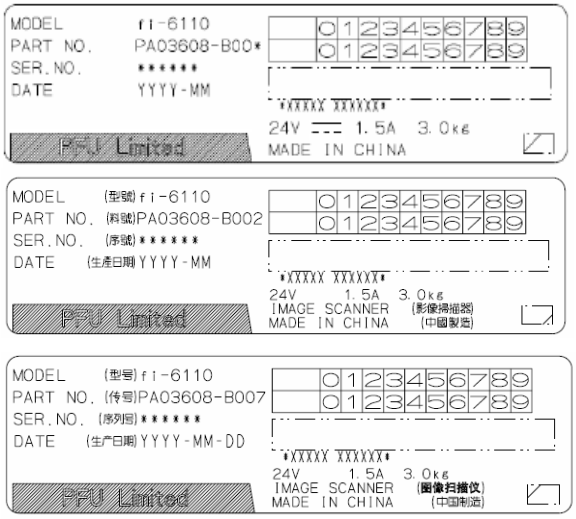
[Front]



No	Part name	Function
1	ADF Paper Chute (Chute ASSY)	Place documents to be scanned.
2	Side Guide	Guides the documents in width direction as they are fed into the scanner.
3	Stacker	Stacks up the ejected documents.
4	Stacker Extension	Lift up to adjust to the paper length
5	ADF Release Tab	Pull this tab to open the ADF.
6	Operator Panel	Can be used to operate the scanner or check the status.
7	Chute Extension 1	Pull out to adjust to the paper length.
8	Chute Extension 2	
9	ADF (Automatic Document Feeder)	Pulls and feeds the documents one sheet at a time from the ADF paper chute. Open to replace consumables or clean the inside do the scanner.

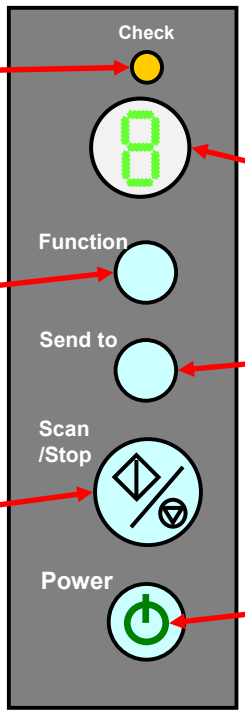
[Rear]



No.	Parts name	Function
1	Manufacturing Label	 For Europe For North America For China
2	Certification label	 For Europe For North America For China
3	Book Label	
4	Ventilation Port	Holes for ventilating hot air from inside the scanner.
5	Security Cable Slot	Used to connect an anti-theft security cable (commercially available)
6	Power Connector	Used to connect the power cable. Power cable refers to the AC cable and AC adapter connected together.
7	USB Connector	Used to connect a USB cable.

1.1.5 Operator Panel

[English panel]



Check LED (orange)
Lights when an error occurs.

Function Number Display
Indicates the status of the scanner.
Switches off when the scanner enters power saving mode.

[Function] button
Switches the number (1 to 9/C) assigned to the application launched by the [Send to] button.

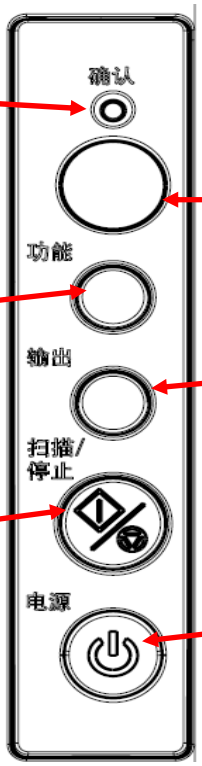
[Send to] button
Launches the linked application software.
Clears the displayed error indication.

[Scan/Stop] button
Launches the linked application software.
Clears the displayed error indication.
Cancels the scan during scanning.

Power LED (green)
Lights when the [Power] button is pressed and while the scanner is turned on.

[Power] button/
Press to turn the power ON/OFF.

[Chinese panel]



Check LED (orange)
Lights when an error occurs.

Function Number Display
Indicates the status of the scanner.
Switches off when the scanner enters power saving mode.

[Function] button
Switches the number (1 to 9/C) assigned to the application launched by the [Send to] button.

[Send to] button
Launches the linked application software.
Clears the displayed error indication.

[Scan/Stop] button
Launches the linked application software.
Clears the displayed error indication.
Cancels the scan during scanning.

Power LED (green)
Lights when the [Power] button is pressed and while the scanner is turned on.

[Power] button/
Press to turn the power ON/OFF.

1.2 Document Specification

The following shows the paper size, weight and quality required for the appropriate operation.

1.2.1 Paper Size and Weight

The paper sizes that can be scanned are as follows:

- Maximum: 85" x 14" (Portrait)

  Long page scanning supports scanning of documents up to 216 x 3048 mm (120 in.).
- Minimum: 52 x 74 mm (Portrait, Landscape)

Paper weight	Paper size			
	A8 (52 x 74mm)	A7 to A5	A4/Letter (8.5 x 11 in.)	Legal (8.5 x 14 in.)
127g/m^2 (34 lb.)	Supported	Supported	Supported	Supported
52 to 127g/m^2 (14 to 34 lb.)	NOT supported	Supported	Supported	Supported

The document smaller than A6 (105 x 148 mm / 4.13 x 5.83 in.) is excluded from the error rate regulation of skew, offset, jam and magnification.

1.2.2 Paper Type

Recommended paper types for scanning are as follows:
- Wood-free paper
- Wood containing paper
- PPC paper (recycled)

When using paper types other than the above, make sure to test with the same type of paper and see if it can be scanned before you start scanning the actual document.

- **Precautions**

The following types of documents may not be scanned successfully:

- Documents of non-uniform thickness (e.g. envelopes, documents with photographs attached)
- Wrinkled or curled documents
- Folded or torn documents
- Tracing paper
- Coated paper
- Carbon paper
- Photosensitive paper
- Perforated documents
- Documents that are neither square nor rectangular
- Very thin documents
- Photographs (photographic paper)

The following types of documents must not be scanned:

- Paper-clipped or stapled documents
- Documents on which the ink is still wet
- Documents smaller than A8 size
- Documents wider than 216 mm (8.5 in.)
- Documents other than paper such as fabric, metal foil and OHP film.
- Important documents such as certificates and cash vouchers which must not be damaged

1.2.3 Loading Capacity

ADF loading capacity varies as shown in the table below depending on paper weight.

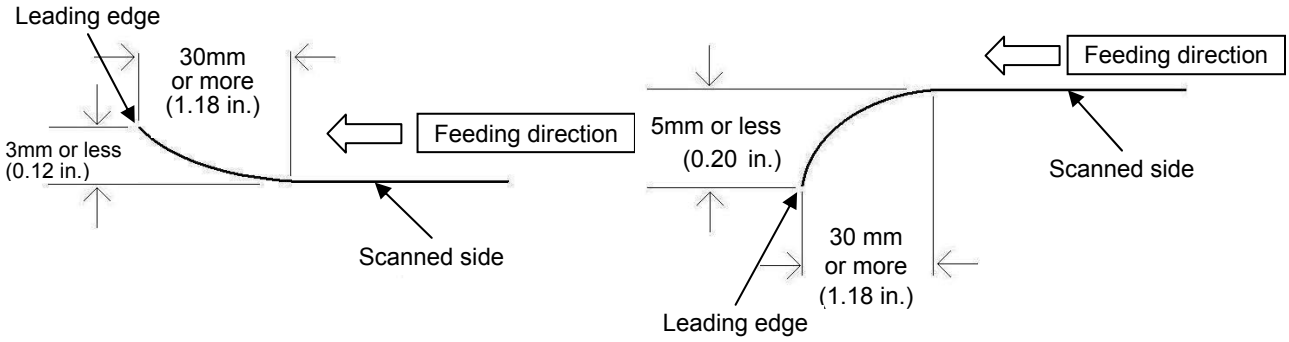
Paper weight	(g/m^2)	52	64	80	90	128
	(lb.)	14	17	21	24	34
Capacity (sheets)		60	60	50	45	31

1.2.4 Stacker Capacity

Paper weight	(g/m^2)	52	64	80	90	128
	(lb.)	14	17	21	24	34
Capacity (sheets)			60	50		

1.2.5 Document Warpage Condition

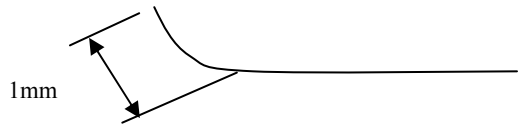
Documents may be scannable when their curl is within as follows:



1.2.6 Document Curling/Damage on Leading Edge

(1) Definition of curling and leading edge damage

■ Curling: Curled up height is 1mm or more.



■ Damage on leading edge: The leading edge is torn 0.5 mm or more. Or the document surface is peeled off.

(2) Curling and damage definition excludes the following:

Curling is easily influenced by paper condition. The paper of the same lot shall be used, and hatchelling direction and cutting burr shall be the same direction to compare the paper. If the glued paper is peeled before used, paper with glue residue on its leading edge or curled paper are excluded. Paper with perforations on its leading edge is also excluded. Paper once curled before it is fed is excluded before evaluation. Feeding shall be 5 times or less.

1.2.7 Mixed Batch Scanning

■ Conditions for mixed batch scanning

- Difference between leading edges of two sheets is 40 mm or less.
- Do not set the document edge within the area of 50 mm width of the center (minimum scanning width: business card).
- Paper is recommended to be aligned at the center.
- Move the paper guides to width of the maximum paper size.

Maximum size		LT	A4	B5	A5	B6	A6	B7	A7	B8	A8
	Width (mm)	216	210	182	149	129	105	91	74.3	64.3	53
Minimum size	LT 216										
	A4 210										
	B5 182										
	A5 149										
	B6 129										
	A6 105										
	B7 91										
	A7 74.3										
	B8 64.3										
	A8 53										

■ Conditions for mixed paper type scanning (including paper weight)

(1) Paper within specification is mixed : Available
- Woodfree paper, OCR paper, PPC paper, Recycled paper
- 52 to 128 g/m^2 (14 to 34 lb.)

(2) Paper including special media is mixed: NOT available
Check the actual value.
- NCR paper, Bond paper, Perforated document, Thermal paper, Carbon-backed paper, Carrier Sheet, OHP paper, Tracing paper

(3) Friction coefficient between different types of paper:
Paper friction coefficient Maximum: 0.35
Minimum: 0.6

(4) Multifeed detection for mixed batch of documents:
Overlapping detection is recommended at mixed batch scanning.
Detection by length may fail.

■ Error rate for mixed batch scanning

Error rate: The following specification is recommended including jam, multifeed, Miss-picking, fold, torn, wrinkled, and curl.

Normal temperature/humidity (20 to 25°C / 68 to 77°F, 40 to 60%RH): 1/250 or less
Low temperature/humidity (5°C / 4°F, 20%RH): 1/125 or less
High temperature/humidity (35°C / 95°F, 80%RH): 1/125 or less

1.2.8 Conditions for Multifeed Detection

This scanner detects multifeed in either way of the following:
(a) Check overlapping
(b) Check length
(c) Check overlapping and length
Overlapping is detected by the Ultrasonic sensor.
Length is detected by the Lever-type sensor.
The following conditions are required for an accurate detection.

Detection by overlapping

- Paper weight: 52 to 127 g/m^2 (14 to 34 lb)
- Do not punch holes within 35 mm (1.38 in.) of the vertical center line of the document.
- Do not attach other documents within 35 mm (1.38 in.) of the vertical center line of the document.

Detection by length

- Variance in document length: 1 % or less
- Do not punch holes within 35 mm (1.38 in.) of the vertical center line of the document.

Detection by overlapping and length

- Paper weight: 52 ~ 127 g/m^2 (14 ~ 34 lb)
- Variance in document length: 1 % or less
- Do not punch holes within 35 mm (1.38 in.) of the vertical center line of the document.
- Do not attach other documents within 35 mm (1.38 in.) of the vertical center line of the document.

[Soecifications]

• Multifeed is detected in the under the conditions described above.
• Multifeed cannot be detected within 30 mm from the leading edge of the document.

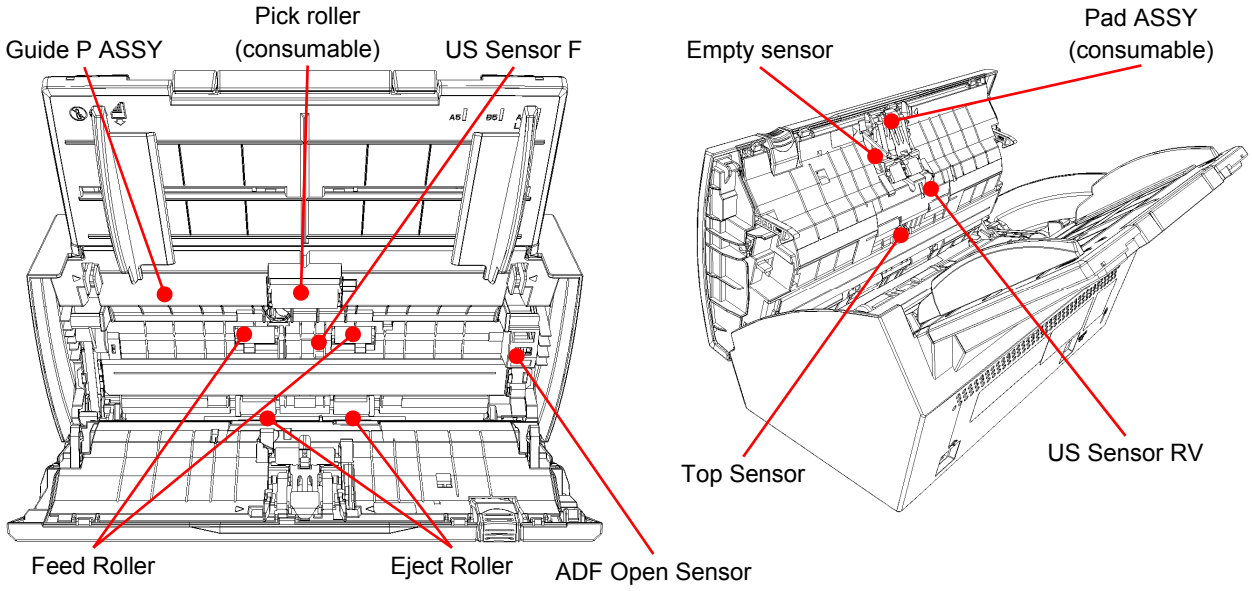
Chapter 2 Scanner Configuration

2.1 Scanner Configuration

This section describes the operation of each unit.

2.1.1 Description of ADF Section

2.1.1.1 Inside of ADF



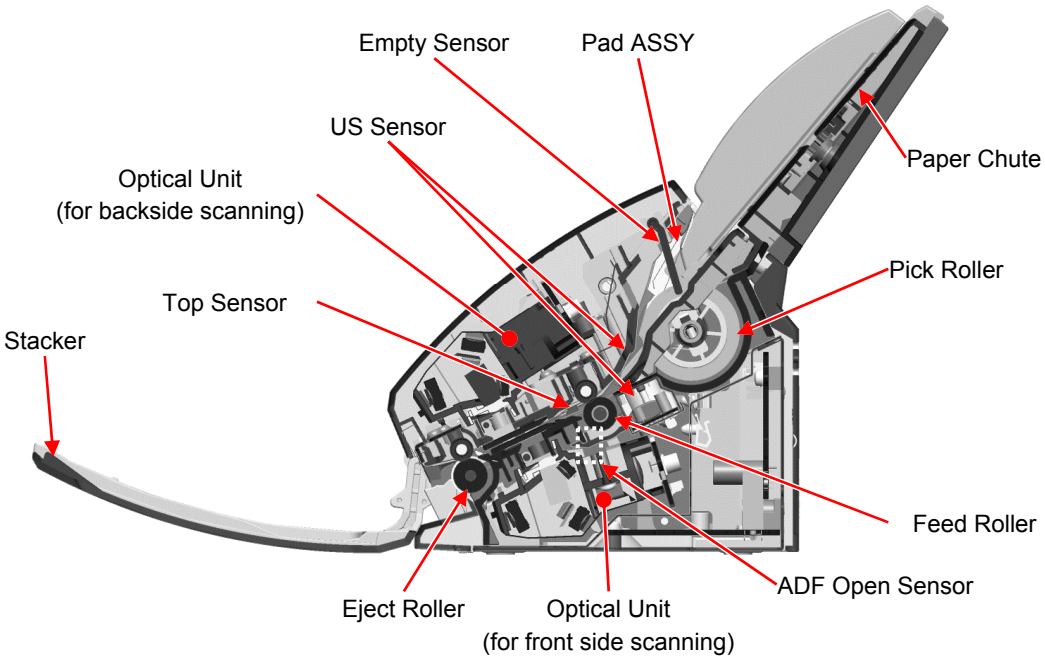
2.1.1.2 Paper Separation/Paper Feed

When the Empty sensor detects that documents are loaded on the ADF paper chute, the PC starts scanning, and the Pick roller and Pad ASSY separate the sheet one by one.

The Top sensor detects the leading edge of the document during transportation. If the trailing edge is not detected after a certain period passed, multifeed is detected due to overlaps of sheets.

The Feed roller sends the documents at the speed that corresponds to the specified scanning resolution, the Optical unit scans them and then the Eject roller ejects them to the Stacker.

The scanner has an Empty Sensor, Top Sensor, ADF Open Sensor and the US Sensors.



2.1.1.3 Driving Unit

The Pick roller, Feed roller and Eject roller are driven by the Feed Motor.
ADF drive circuit and Motor fuse are located in the Control PCA and Analog PCA. If abnormal current has flowed, the Motor fuse in the Control PCA/Analog PCA cuts off the current.

2.1.2 Reading Station

2.1.2.1 Optical System

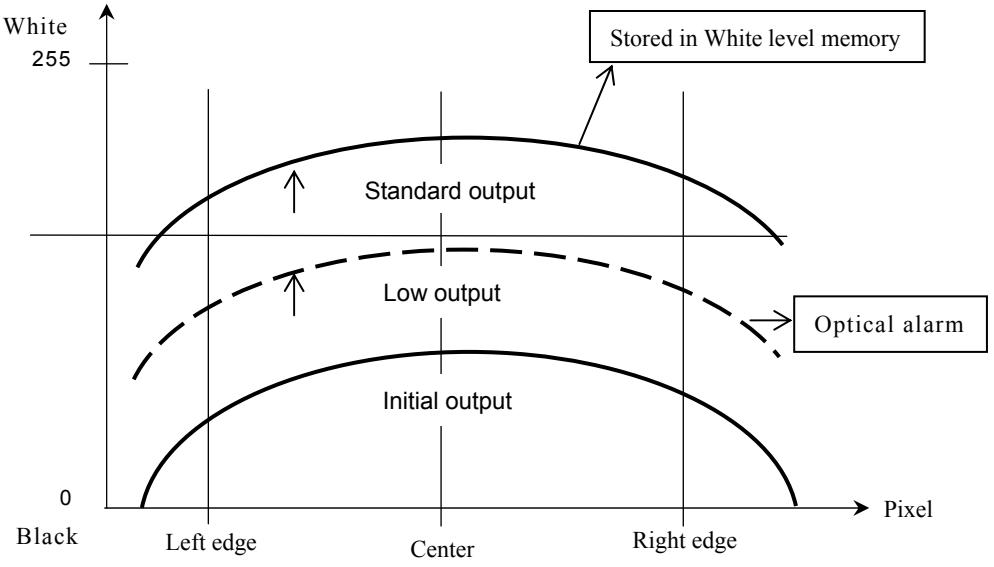
Documents shall be set in the ADF paper chute, front side face down. The front side of the document is scanned by the Optical unit in the Revolve Unit, and the backside of the document is scanned by the Optical unit in the Fixed Unit. These two Optical units are the same parts number.
The image on the 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 configured resolution.

2.1.2.2 Light Source

The scanner uses two lamps (White cold cathode discharge lamp) which light the scanning areas in order to get sufficient CCD output. The lamp is turned ON or OFF by an inverter that is controlled by the Control PCA.

2.1.2.3 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.



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), and the scanner starts scanning the image.

2.1.3 Controllers

2.1.3.1 Control PCA

The Control PCA controls each unit with the firmware.

It includes the following connectors. (Refer to Back side view in Section 1.1.4 “Appearance”.)

- USB connector (1)
- DC voltage input connector (1)

2.1.3.2 Analog PCA

The Analog PCA has the mechanical control circuit for motor drive circuit.

2.1.3.3 Panel PCA

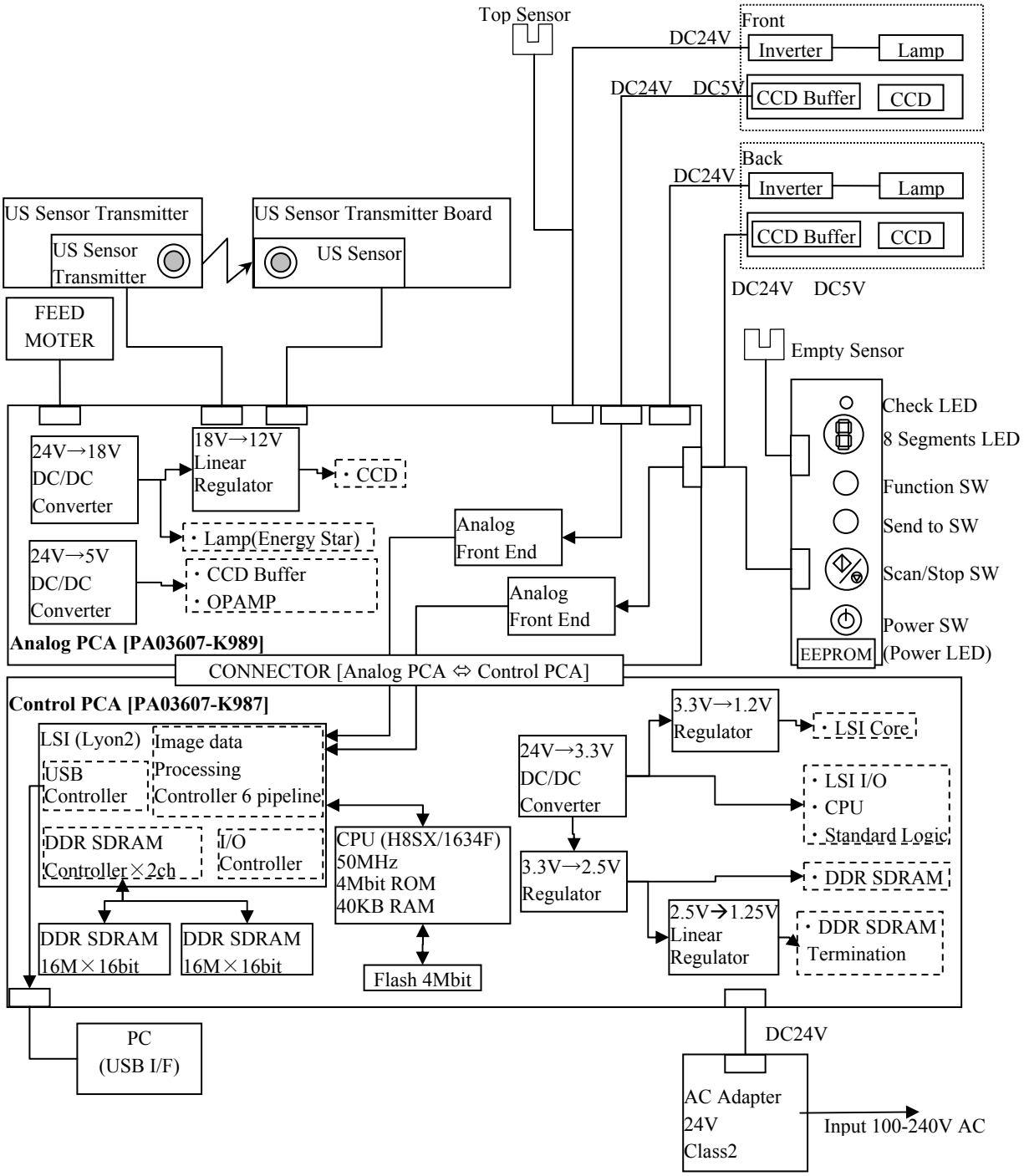
The Panel PCA on the Operator Panel has the buttons and LEDs introduced in Section 1.1.5 “Operator Panel” as well as the EEPROM that records the information below.

When replacing the Panel PCA, you need to back up all the data stored in the EEPROM to the Control PCA temporarily (Section 7.2). Then you need to restore the EEPROM in the Control PCA to the new Panel PCA after replacing the Panel PCA (Section 7.1.8).

[Information in the EEPROM]

- ADF front/back magnification correction value for main/sub-scan direction
- ADF front/back offset correction value for main/sub-scan direction
- White level correction value
- Total number of sheets scanned by ADF
- Consumable counter [Pad ASSY]
- Consumable counter [Pick Roller]
- Ship date
- First day of use
- Error codes that occurred in the past
- Scanner serial number

2.1.3.4 Circuit Block Diagram



Chapter 3 Installation

3.1 Unpacking

3.1.1 Unpacking the Scanner

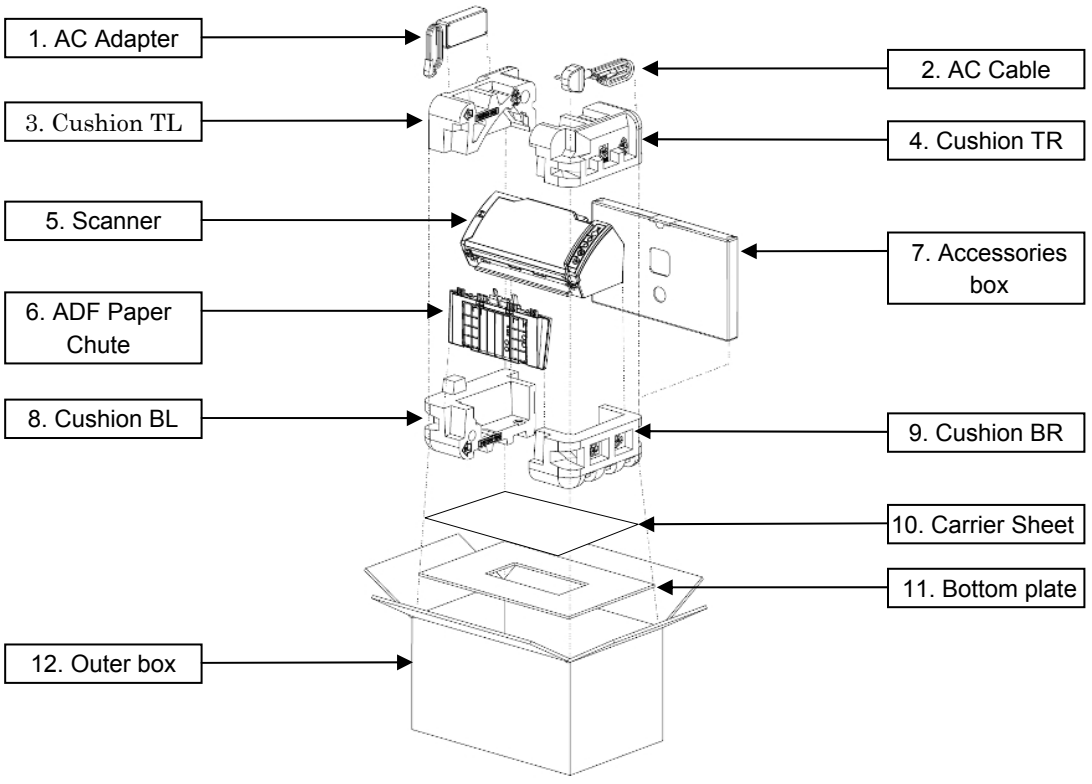
⚠CAUTION

1. This scanner weighs 3.0 kg / 6.62 lb. (Packaged weight: 5.5 kg / 12.14 lb.)
2. The packaging box and packaging materials are required for storage or transportation of the product. Ask the customers not to discard the packaging box and materials.

Follow the procedure below to unpack the scanner.
(1) Remove the AC adapter, AC cable, and then Cushion s TL/TR.
(2) Remove the scanner, accessories box and the ADF Paper Chute.
(3) Remove the Cushions BL/BR, and then the Carrier Sheet.
(4) Remove the scanner and ADF Paper Chute from the polyethylene bags, and then the protective tapes for transportation.

The following table lists the packaging configuration.

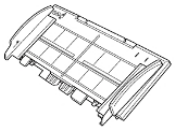
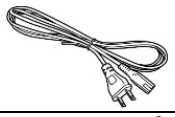
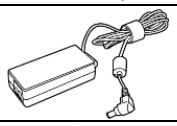
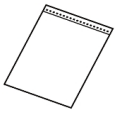
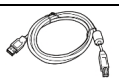
No.	Item	Quantity	Remarks
1	AC Adapter	1	In the polyethylene bag
2	AC Cable	1	In the polyethylene bag
3	Cushion TL	1	
4	Cushion TR	1	
5	Scanner	1	fi-6110 in the polyethylene bag
6	ADF Paper Chute	1	In the polyethylene bag
7	Accessories box	1	Check the appended goods by referring to Section 3.1.2.
8	Cushion BL	1	
9	Cushion BR	1	
10	Carrier Sheet	1	In the polyethylene bag
11	Bottom plate	1	
12	Outer box	1	Box size: 397(W) x 265(D) x 233(H) mm / 15.6(W) x 10.4(D) x 9.2(H) in.



3.1.2 Checking the Appearance and Accessories

Check the following points for the components in the package.

- No stain and scratch that disfigures the scanner
- No missing part in the accessories
- No damage on the cables and connectors
- No damage on the brochures and discs

No.	Package	Name of Component	Quantity	Appearance	Remarks
1	Scanner		1		
2	ADF Paper Chute		1		
3	AC Cable		1		
4	AC Adapter		1		Rated voltage: 24V (output voltage within standards: 22.8 to 26.4V) Rated current: 2.65A
5	Carrier Sheet		1		
6	In the accessories box	USB Cable	1		
7		Getting Started	1		
8		Safety Precautions	1		
9		QuickScan™ Pro brochure	1		
10		SETUP DISK DVD-ROM	1		
11		Adobe Acrobat DVD-ROM	1		

3.2 Installing the Scanner

3.2.1 For Safety Installation

Before installing the scanner, read the following precautions carefully to avoid scanning trouble.
Refer to Section 1.1.3 “Environmental Specification” for information on input power and outer 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 attached AC Cable, and use proper AC voltage.
- Make sure the rubber pads on the bottom of the scanner are level on the table or desk.

3.2.2 Software

This product includes the SETUP DISK DVD-ROM which contains software and the Adobe Acrobat DVD-ROM which contains Adobe Acrobat. The following is a list of software that is enclosed in each disk.

The SETUP DISK DVD-ROM includes the following software.

No.	Software name	Description
1	FUJITSU TWAIN32 [TWAIN driver] *1	Conforms to the TWAIN standard. Used when you operate the scanner using TWAIN-compliant applications.
2	ISIS [ISIS driver] *1	Conforms to the ISIS standard. Used when you operate the scanner using ISIS-compliant applications.
3	Software Operation Panel	Configures settings for scanning behavior and consumables management. Installed together with the scanner drivers (FUJITSU TWAIN 32/ISIS).
4	Error Recovery Guide	Shows the error status and the action to take when an error occurs. Can be installed together with the scanner drivers (FUJITSU TWAIN 32/ISIS). Note this guide will not work if you use Kofax VRS.
5	Image Processing Software Option	A software option featuring advanced binarization of scanned images. Can be installed together with the scanner drivers (FUJITSU TWAIN 32/ISIS).
7	ScandAll PRO	A TWAIN/ISIS-compliant image scanning software (recommended). You can define scanning settings as batch profiles, to suit your various operation requirements. By defining scanning settings as batch profiles, you can easily perform scans in accordance with various operation requirements.
8	Scan to Microsoft SharePoint	A software program that allows you to upload your files easily from ScandAll PRO to a SharePoint site. Can be installed together with ScandAll PRO.
9	QuickScan Pro Trial version	A software program for scanning that conforms to the ISIS standard. By using an ISIS scanner driver, you can read scanned documents and create their images. This is a trial version, and can be executed 30 times before it is disabled. You will need to purchase the full product version if you wish to continue using it.
10	Manuals	Includes the Getting Started, Operator's Guide, How to Use ScandAll PRO, FUJITSU TWAIN 32 User's Guide, Image Processing Software Option User's Guide, and Read Before Using VRS.

*1: Where the product name and installation name are different, square brackets are used to indicate the [Installation Name].

The Adobe Acrobat DVD-ROM includes the following software.

No.	Software name	Description
1	Adobe Acrobat Standard	The de-facto standard application used for creating, editing, managing, and making use of digitalized documents in PDF format.

3.2.3 Installing the Bundled Software

This section describes how to install (recommended) the scanner drivers that are used when scanning documents by the scanner, and software for image scanning. Confirm [Installed Software] and [System Requirements] before starting installation.

[Installed Software]

The following table shows software to install in the selected method.

Supported Operating System / Software (Y: Supported, N: Not supported, ---: To be selected)	INSTALL (Recommended)	INSTALL (Custom) (*1)		Remarks
		TWAIN	ISIS	
FUJITSU TWAIN32	Y	Y	—	
FUJITSU ISIS	N	—	Y	
Software Operation Panel	Y	Y (*2)	Y (*2)	
Error Recovery Guide	Y	Y (*2)	Y (*2)	
Image Processing Software Option	Y	—	—	
ScandAll PRO	Y	Y (*3)	Y (*3)	
Scan to Microsoft Share Point	Y	—	—	
QuickScan Pro (Trial)	N	—	—	
Operator's Guide	Y	—	—	

*1: At custom installation, you need to select a driver and install the software.

*2: [FUJITSU TWAIN32] or [FUJITSU ISIS] are installed at the same time.

*3: [ScandAll PRO] is recommended to install for confirming the scan operation.
[FUJITSU ISIS] driver needs to be installed by custom installation to scan in ISIS standard.

[System Requirements (1/2)]

Supported Operating System / Software (Y: Supported, N: Not supported)	Windows XP		Windows Vista (32bit/64bit)	Windows 7 (32bit/64bit)
	- Home Edition - Professional	Professional x64 Edition	- Home Premium - Home Basic - Business - Enterprise - Ultimate	- Home Premium - Professional - Enterprise - Ultimate
FUJITSU TWAIN32	Y	Y	Y	Y
FUJITSU ISIS	Y	Y	Y	Y
Software Operation Panel	Y	Y	Y	Y
Error Recovery Guide	Y	Y	Y	Y
Image Processing Software Option	Y	Y	Y	Y
ScandAll PRO	Y	Y	Y	Y
Scan to Microsoft Share Point	Y	Y	Y	Y
QuickScan Pro (Trial)	Y	N	Y(*1)	Y(*1)
Operator's Guide	Y	Y	Y	Y

*1: 64-bit operating system is not supported.

[System Requirements (2/2)]

Supported Operating System / Software (Y: Supported, N: Not supported)	Windows Server					
	2003 Standard Edition	2003 Standard x64 Edition	2003 R2 Standard Edition	2003 R2 Standard x64 Edition	2008 Standard (32/64bit)	2008 R2 Standard 64bit
FUJITSU TWAIN32	Y	Y	Y	Y	Y	Y
FUJITSU ISIS	Y	Y	Y	Y	Y	Y
Software Operation Panel	Y	Y	Y	Y	Y	Y
Error Recovery Guide	Y	Y	Y	Y	Y	Y
Image Processing Software Option	Y	Y	Y	Y	Y	Y
ScandAll PRO	N	N	Y	Y	Y	Y
Scan to Microsoft Share Point	Y	Y	Y	Y	Y	Y
QuickScan Pro (Trial)	Y	N	Y	N	Y(*1)	N
Operator's Guide	Y	Y	Y	Y	Y	Y

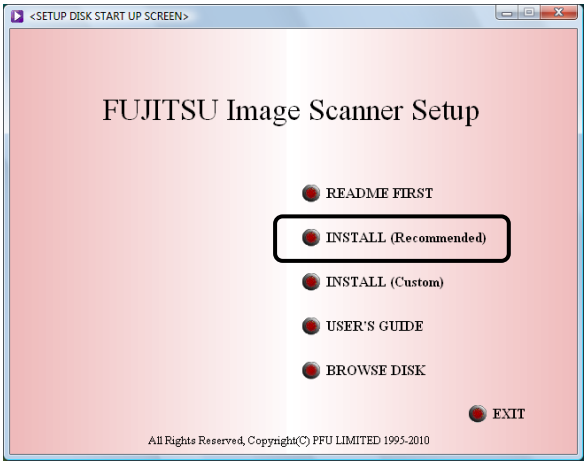
*1: 64-bit operating system is not supported.

[Recommended Installation Method]

NOTICE

Uninstall the older version of software.

(1) Log in as a user with “Administrator” privileges.
(2) Insert the SETUP DISK DVD-ROM into the DVD drive.
(3) On the [FUJITSU Image Scanner Setup] screen that appears automatically, click [fi-6110], and click the [Next] button on the displayed screen.



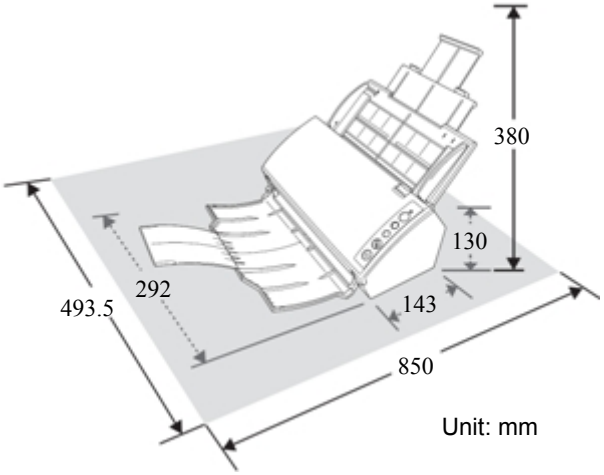
(4) Click the [INSTALL (Recommended)] button.

(5) Install the software, following the onscreen instruction.

(6) Restart your computer by following the message after installation.

3.2.4 Installing the Scanner

(1) Place the scanner at its installation site.



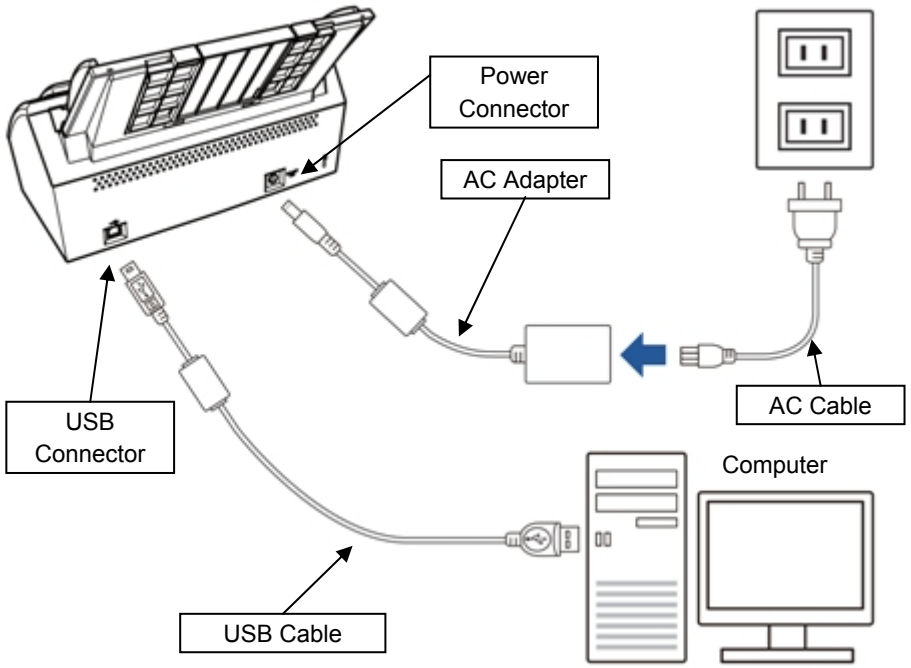
Clear the following space for installing the scanner.

Width: 493.5 mm (1.62 ft.)
Depth: 850 mm (2.79 ft.)

(2) Attach the ADF Paper Chute.
(3) Make sure that the computer is turned off, and connect the scanner and the computer with the USB cable.
(4) Connect the AC cable with the AC adapter (hereinafter referred to as "the power cable").
(5) Connect the power cable to the power connector of the scanner and to the AC outlet.
(6) Press the [Power] button on the control panel of the scanner.

➔ The power is turned on, and the Power LED lights in green.
During initialization, the Function Number Display of the operator panel changes as follows:
"8" → "P" → "0" → "1"
The scanner is ready when "1" is displayed.

Note: If "1" is not shown in the Function Number Display, refer to Chapter 5 "Troubleshooting".



Chapter 4 Maintenance Parts

4.1 Maintenance Parts List

No.	Description	Part Number	Quantity		Appearance	Maintenance Procedure	AFR *1	Remarks
1. Control board								
1-1	CONTROL PCA	PA03607-K987	1		4.2.1	6.7.1	225	
1-2	ANALOG PCA	PA03586-K989	1		4.2.2	6.7.1	225	
2. Outer Covers / Operator Panel								
2-1	CHUTE ASSY	PA03607-E951	1		4.2.3	6.8.1	305	
2-2	STACKER ASSY	PA03607-E941	1		4.2.4	6.8.2	415	
2-3	GUIDE P ASSY	PA03607-E981	1		4.2.5	6.8.3	396	
2-4	GUIDE A	PA03607-E961	1		4.2.6	6.8.5	396	
3. Revolve Unit								
3-1	REVOLVE UNIT	PA03607-D991	1		4.2.8	6.9	364	- For Europe and North America - Includes Pad ASSY *2
		PA03607-D997						-For China - Includes Pad ASSY *2
3-2	LAMP	PA03586-K946		1	4.2.9	6.10.5	114	
3-3	INVERTER	PA03586-K940		1	4.2.10	6.10.4	114	
3-4	OPTICAL UNIT	PA03607-E911		1	4.2.11	6.10.3	115	
3-5	TOP COVER ASSY	PA03607-D981		1	4.2.7	6.8.4	115	- For Europe and North America
		PA03607-D987						-For China
3-6	US SENSOR RV	PA03484-K905		1	4.2.13	6.10.6	236	
3-7	SENSOR ASSY B3	PA03586-F917		1	4.2.14	6.10.7	176	
3-8	EMPTY SENSOR	PA03607-K944		1	4.2.15	6.10.2	236	
3-9	EMP-HARNESS	PA03607-K945		1		6.10.2	166	
3-10	PANEL PCA	PA03607-K980	1		4.2.12	6.10.1	246	
4. Fixed Unit								
4-1	FIXED UNIT	PA03607-D971	1		4.2.17	6.9	634	Includes Pick Roller *2
4-2	FEED ROLLER	PA03586-K984		1	4.2.18	6.11.7	123	
4-3	EXIT ROLLER	PA03586-K983		1	4.2.19	6.11.8	123	
4-4	HK RING	PA03360-K941		1	4.2.20	6.11.8	745	
4-5	LAMP	PA03586-K946		1	4.2.9	6.11.4	114	
4-6	INVERTER	PA03586-K940		1	4.2.10	6.11.3	114	
4-7	OPTICAL UNIT	PA03607-E911		1	4.2.11	6.11.2	115	
4-8	MOTOR	PA03586-K981		1	4.2.21	6.11.6	345	
4-9	PICK SHAFT ASSY	PA03586-K943		1	4.2.22	6.11.1	305	
4-10	US SENSOR F	PA03586-K942		1	4.2.23	6.11.5	714	
4-11	AC ADAPTER	PA03586-K931	1		4.2.24	6.6	205	
4-12	AC CABLE E	PA63112-2001	1		4.2.25	6.6	205	For Europe
	AC CABLE UK	PA63118-2001						For UK
	AC CABLE U	PA63113-2001						For North America
	AC CABLE C	PA63115-1831						For China
4-13	USB CABLE	PA61001-0171	1		4.2.26	6.6	205	

Maintenance Parts Lists (Cont'd)

No.	Description	Part Number	Quantity		Appearance	Maintenance Procedure	AFR *1	Remarks
5. Adjustment sheet/Others								
5-1	ADJ-CHART-KIT	PA03607-D960	1				---	
5-2	TEST CHART (W)	PA03277-Y123		1			---	
5-3	ADJUST-CHART-A4	PA93010-Y790		1			---	
5-4	ADJ-SPRING-2	PA03607-K990	1				---	

*1: AFR = Annual Failure Rate

*2: Pad ASSY and Pick Roller are not registered as maintenance parts as they are consumables (supplied part).

4.1.1 Adjustments after Maintenance Parts Replacement

No.	Maintenance Part	Adjusted Item						Reference Section
		Paper Feeding Test						7.1.2
			Magnification Adjustment (Main/Sub-scanning) *1					7.1.3
				Offset Adjustment *1				7.1.4
					White Level Adjustment *1			7.1.5
						EEPROM Backup/Restore		7.2 7.1.8
							Remarks	
1	Control PCA	✓						
2	Analog PCA	✓						
3	Chute ASSY	✓						
4	Stacker ASSY	✓						
5	Guide P ASSY	✓						
6	Guide A	✓						
7	Top Cover ASSY	✓						
8	Revolve Unit	✓	✓	✓	✓			
9	Fixed Unit	✓	✓	✓	✓			
10	Lamp	✓			✓			
11	Inverter	✓						
12	Optical Unit	✓	✓	✓	✓			
13	Panel PCA	✓	▲ *2	▲ *2	▲ *2	✓	Be sure to replace the Panel PCA after backing up the EEPROM.	
14	US Sensor RV	✓						
15	Sensor ASSY B3	✓						
16	Empty Sensor	✓						
17	EMP-Harness	✓						
18	Feed Roller	✓	✓	✓				
19	Exit Roller	✓	✓	✓				
20	HK Ring	✓						
21	Motor	✓	✓	✓				
22	Pick Shaft ASSY	✓						
23	US Sensor F	✓						

*1: The following charts are required when performing the following adjustments.

Adjustment	Chart
Main/Sub-scan magnification	ADJUST-CHART-A4 (A4 PPC paper is substitutable)
Offset	ADJUST-CHART-A4 (A4 PPC paper is substitutable)
White level	TEST CHART (W) (art paper)

*2: If the EEPROM cannot be backed up, the adjustment marked with ▲ are required.

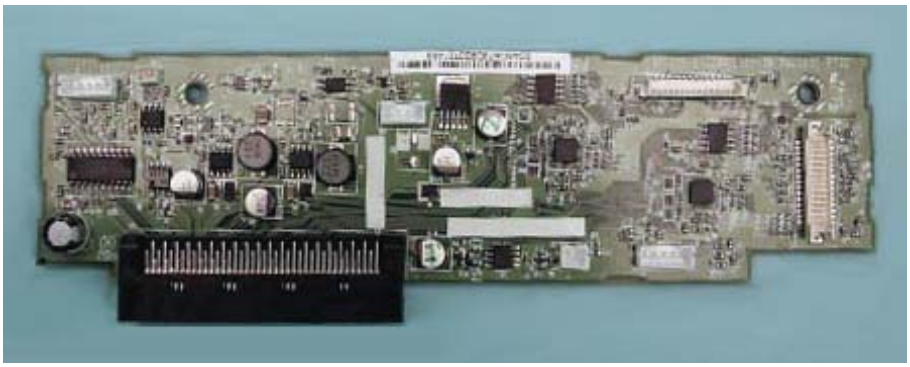
4.2 Specifications / Appearances of Maintenance Parts

4.2.1 Control PCA

Description	Parts No.	Replacement Procedure	Remarks
CONTROL PCA	PA03607-K987	6.7.1	Adjustment is not required after replacement.

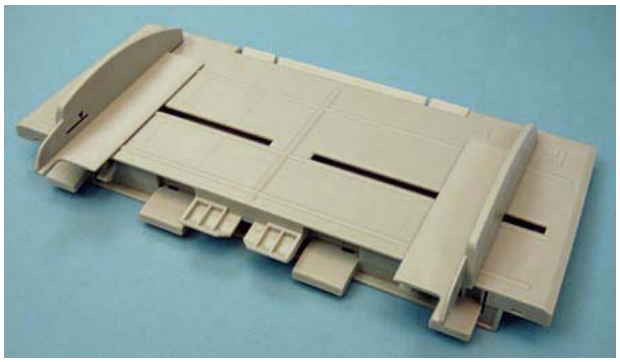
4.2.2 Analog PCA

Description	Parts No.	Replacement Procedure	Remarks
ANALOG PCA	PA03586-K989	6.7.1	Adjustment is not required after replacement.



4.2.3 Chute ASSY (ADF Paper Chute)

Description	Parts No.	Replacement Procedure	Remarks
CHUTE ASSY	PA03607-E951	6.8.1	

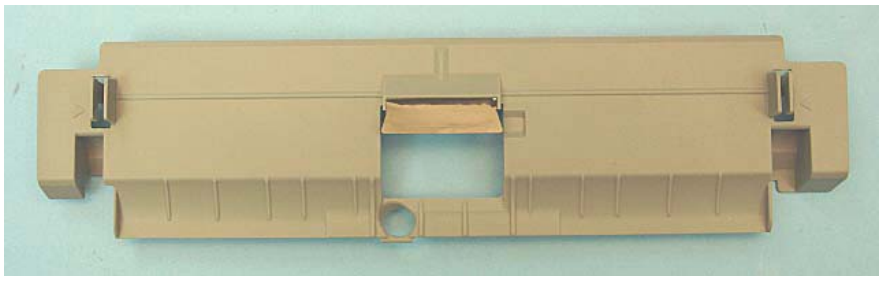


4.2.4 Stacker ASSY

Description	Parts No.	Replacement Procedure	Remarks
STACKER ASSY	PA03607-E951	6.8.2	

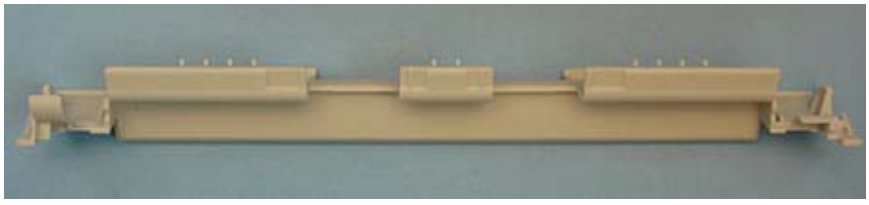
4.2.5 Guide P ASSY

Description	Parts No.	Replacement Procedure	Remarks
GUIDE P ASSY	PA03607-E981	6.8.3	



4.2.6 Guide A

Description	Parts No.	Replacement Procedure	Remarks
GUIDE A	PA03607-E961	6.8.5	

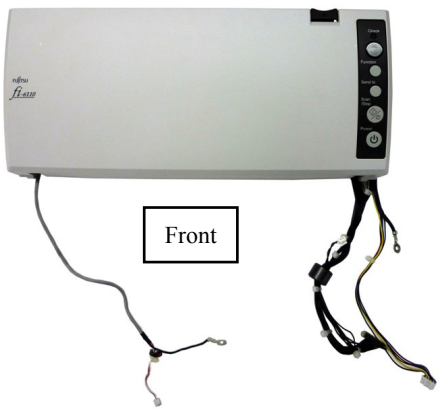


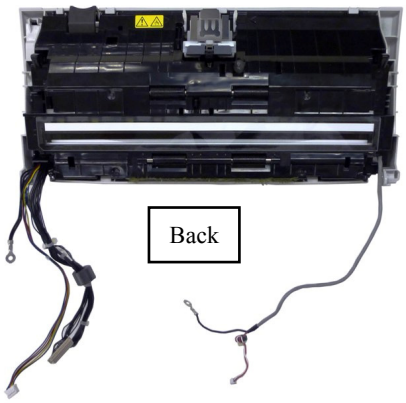
4.2.7 Top Cover ASSY

Description	Parts No.		Replacement Procedure	Remarks
TOP COVER ASSY 02	PA03607-D981	For Europe and North America	6.8.4	Includes the Operator Panel cover ASSY. Note: Panel PCA is not included.
	PA03607-D987	For China		

4.2.8 Revolve Unit

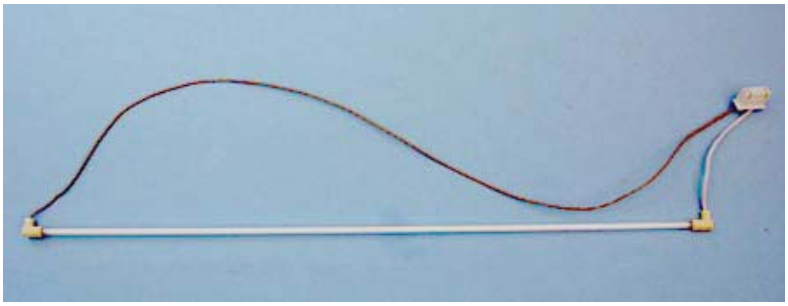
Description	Parts No.		Replacement Procedure	Remarks
REVOLVE UNIT	PA03607-D991	For Europe and North America	6.9	The following adjustments are required after replacement: - Main/Sub-scan magnification (Section 7.1.3) - Offset (Section 7.1.4.) - White level (Section 7.1.5) Includes the following parts: - Lamp - Inverter - Optical Unit - Empty Sensor - US Sensor RV - Sensor ASSY B3 - Empty Harness - Top Cover ASSY Note: Panel PCA is not included. Also includes the Pad ASSY (consumable). Reset the counter after replacing the Revolve Unit. When the consumable is worn away, do not replace the Revolve Unit but the Pad ASSY.
	PA03607-D997	For China		





4.2.9 Lamp

Description	Parts No.	Replacement Procedure	Remarks
LAMP	PA03586-K946	Revolve Unit: 6.10.5 Fixed Unit: 6.11.4	The following adjustment is required after replacement: - White level (Section 7.1.5)

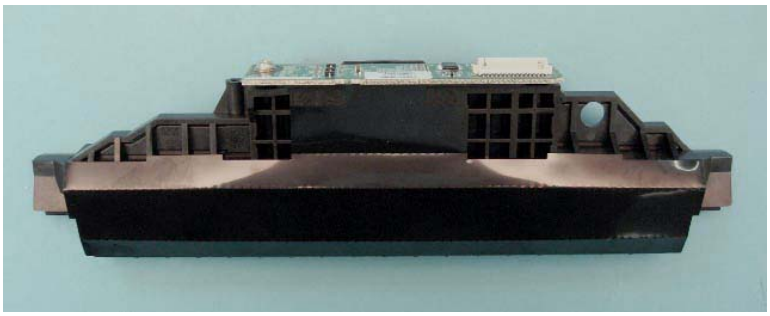


4.2.10 Inverter

Description	Parts No.	Replacement Procedure	Remarks
INVERTER	PA03586-K940	Revolve Unit: 6.10.4 Fixed Unit: 6.11.3	Adjustment is not required after replacement.

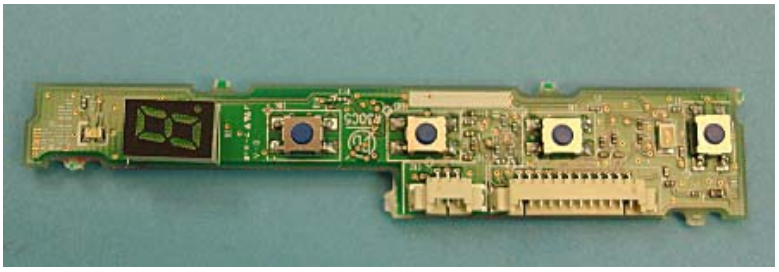
4.2.11 Optical Unit

Description	Parts No.	Replacement Procedure	Remarks
OPTICAL UNIT	PA03607-E911	Revolve Unit: 6.10.3 Fixed Unit: 6.11.2	The following adjustments are required after replacement: - White level (Section 7.1.5) - Main/Sub-scan magnification (Section 7.1.3) - Offset (Section 7.1.4.)



4.2.12 Panel PCA

Description	Parts No.	Replacement Procedure	Remarks
PANEL PCA	PA03607-K980	6.10.1	EEPROM data needs to be backed up and restored before and after replacement. Save (back up) data: Section 7.2 Restore data: Section 7.1.8

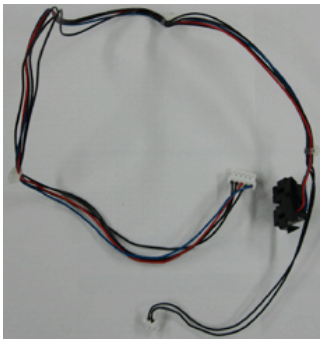


4.2.13 US Sensor RV

Description	Parts No.	Replacement Procedure	Remarks
US SENSOR RV	PA03484-K905	6.10.6	Adjustment is not required after replacement.

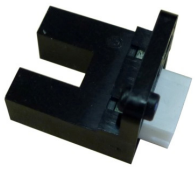
4.2.14 Sensor ASSY B3

Description	Parts No.	Replacement Procedure	Remarks
SENSOR ASSY B3	PA03586-F917	6.10.7	



4.2.15 Empty Sensor

Description	Parts No.	Replacement Procedure	Remarks
EMPTY SENSOR	PA03607-K944	6.10.2	

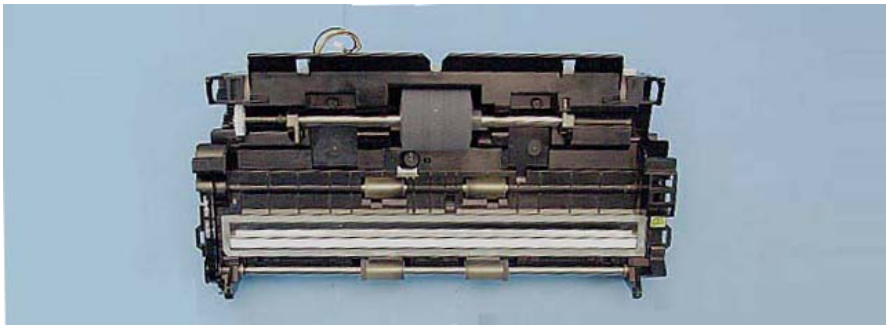


4.2.16 Empty Harness

Description	Parts No.	Replacement Procedure	Remarks
EMP-HARNESS	PA03607-K945	6.10.2	

4.2.17 Fixed Unit

Description	Parts No.	Replacement Procedure	Remarks
FIXED UNIT	PA03607-D971	6.9	The following adjustments are required after replacement: - Main/Sub-scan magnification (Section 7.1.3) - Offset (Section 7.1.4.) - White level (Section 7.1.5) Includes the following parts: - Feed Roller - Exit Roller - HK Ring - Lamp - Inverter - Optical Unit - Motor - Pick Shaft ASSY - US Sensor F Also includes the Pick Roller (consumable). Reset the counter after replacing the Fixed Unit. When the consumable is worn away, do not replace the Fixed Unit but the Pick Roller.



4.2.18 Feed Roller

Description	Parts No.	Replacement Procedure	Remarks
FEED ROLLER	PA03586-K984	6.11.7	Adjust the belt tension after replacing the Feed Roller. (Refer to Section 6.12.) The following adjustments are required after replacement: - Main/Sub-scan magnification (Section 7.1.3) - Offset (Section 7.1.4.)

4.2.19 Exit Roller

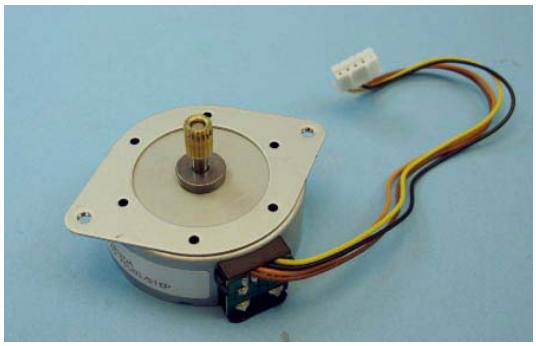
Description	Parts No.	Replacement Procedure	Remarks
EXIT ROLLER	PA03586-K983	6.11.8	The Exit Roller does not include the HK Ring. Adjust the belt tension after replacing the Exit Roller. (Refer to Section 6.12.) The following adjustments are required after replacement: - Main/Sub-scan magnification (Section 7.1.3) - Offset (Section 7.1.4.)

4.2.20 HK Ring

Description	Parts No.	Replacement Procedure	Remarks
HK RING	PA03360-K941	6.11.8	

4.2.21 Motor

Description	Parts No.	Replacement Procedure	Remarks
MOTOR	PA03586-K981	6.11.6	Adjust the belt tension after replacing the Motor. (Refer to Section 6.12.)

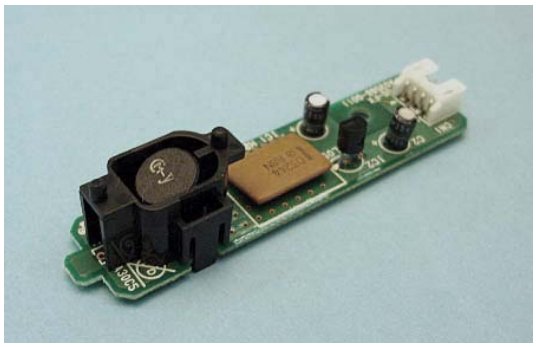


4.2.22 Pick Shaft ASSY

Description	Parts No.	Replacement Procedure	Remarks
PICK SHASFT ASSY	PA03586-K943	6.11.1	The Pick Shaft ASSY does not include the Pick Roller.

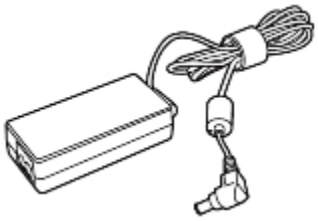
4.2.23 US Sensor F

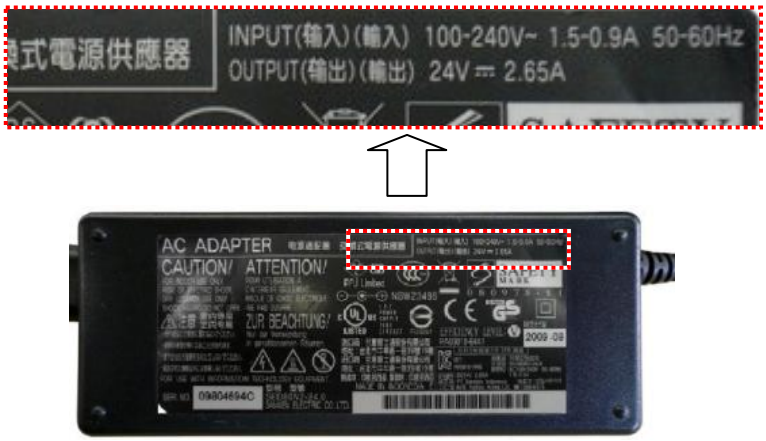
Description	Parts No.	Replacement Procedure	Remarks
US SENSOR F	PA03586-K942	6.11.5	Adjustment is not required after replacement.



4.2.24 AC Adapter

Description	Parts No.	Replacement Procedure	Remarks
AC ADAPTER	PA03586-K931	---	Rated voltage: 24V (output voltage within standards: 22.8 to 26.4V) Rated current: 2.65A





4.2.25 AC Cable

Description	Parts No.	Replacement Procedure	Remarks
AC CABLE E	PA63112-2001	---	
AC CABLE UK	PA63118-2001		
AC CABLE U	PA63113-2001		
AC CABLE C	PA63115-1831		

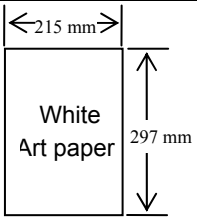
4.2.26 USB Cable

Description	Parts No.	Replacement Procedure	Remarks
USB CABLE	PA61001-0171	---	

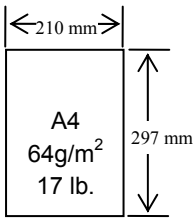
4.2.27 (Reserved)

4.2.28 Adjustment Sheet(s)

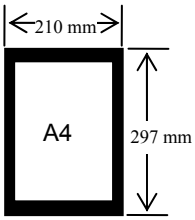
Description	Parts No.	Remarks
ADJ-CHART-KIT	PA03607-D960	The following adjustment sheets are included. The charts in ADJ-CHART-KIT cover any adjustments to be performed after maintenance part replacement. ・TEST CHART(W) (white reference sheet): 1 (for white level) ・ADJUST-CHAR-A4 (64g/m^2, 17 lb.): 1 (for magnification/offset) ・ADJUST CHART (black frame): Not used for this scanner. ADH-CHART-KIT is required when the following maintenance parts are replaced. - Revolve Unit - Optical Unit - Fixed Unit - Lamp - Inverter - Feed Roller - Exit Roller - Motor



TEST CHART(W)
PA03277-Y123



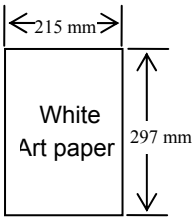
ADJUST-CHART-A4
PA93010-Y790



ADJUST CHART
(black frame)

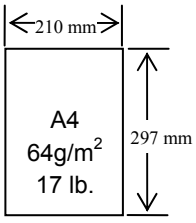
4.2.29 Test Chart (W)

Description	Parts No.	Remarks
TEST CHART (W)	PA03277-Y123	



4.2.30 Adjust-Chart-A4

Description	Parts No.	Remarks
ADJUST-CHART-A4	PA93010-Y790	



4.2.31 Adjustment Spring 2

Description	Parts No.	Remarks
ADJ-SPRING-2	PA03607-K990	

Chapter 5 Troubleshooting

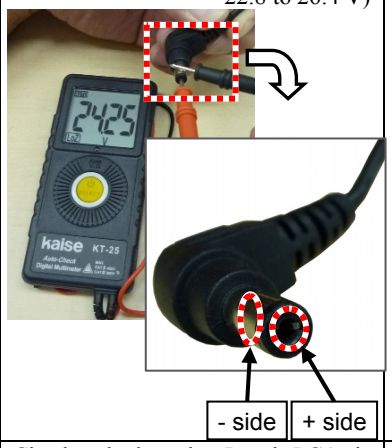
5.1 Troubleshooting Procedure

If an error occurs on the scanner, its details and code are displayed on the Function Number Display. The error for TWAIN driver or Error Recovery Guide may appear depending on system configuration.
Specify where the error occurs by following the procedures below.

Trouble category		Refer to (Title)
Scanner does not turn on		Power is not turned on
Malfunction after power on		Scanning does not start
		"No paper on the Hopper" appears
		Multifeed occurs frequently
Error code appears	J1	Paper jam
	J2	Multifeed
	U4	Cover open
	E2	Optical error (ADF front)
	E3	Optical error (ADF back)
	E6	Operator panel error
	E7	EEPROM error
	E9	Image memory error
	C0	LSI error
	H0	Motor error
	L6	US Sensor error
Scanned image is abnormal		Scanned image is distorted
		Resolution is not satisfactory or tone error is too large
		Too much jitter on scanned image
		Scanned image is misaligned
		Scan magnification error is too large
		Vertical streaks appear in scanned image
		White area of scanned image is not correct

5.1.1 Scanner does not turn ON

If the power is not supplied to the scanner, troubleshoot in the following procedure.

Item No.	Check items	Result	How/where to check
1	Is the power cable (AC adapter and AC cable) is connected properly?	Yes	Go to step 2.
		No	Reconnect properly, and see if the error is resolved. If the error persists, go to step 2.
2	Is the supply voltage appropriate? Refer to Section 1.1.2 "Device Specification".	Yes	Go to step 3.
		No	Measure the supply voltage with a tester, and try plugging the power cable into the other outlet if the supply voltage is not appropriate. If the error persists, go to step 3. If an improper outlet is found, report it to the customer.
3	Measure the voltage of the AC adapter. ・ Is the AC adapter a proper one which is enclosed with the scanner? ・ Is the output voltage of the AC adapter appropriate? Rated voltage: 24 V (output voltage within standard: 22.8 to 26.4 V)  	Yes	If the AC adapter is a proper one and the measured voltage is within standard, go to step 4. * Check the label on the AC adapter to see if the AC adapter is a proper one. (Refer to Section 4.2.24.)
		No	If the measured voltage is within standard, check the following: ・ Is the AC adapter a proper one? ・ Is the AC adapter or AC cable broken? ・ Replace the AC adapter or AC cable, and see if the error is resolved. ・ If the error persists, go to step 4. * Be careful not to have the tester short-circuited.
4	Check whether the Panel PCA is abnormal. ・ Button depression ・ Connector damage / Contact failure	Yes	Replace the Panel PCA and see if the error is resolved. If the error persists, go to step 5.
		No	If any error is found on the Panel PCA, replace it. If the error persists, to step 5.
5	Check whether the Control PCA is abnormal. ・ AC adapter slot damage	Yes	Replace the Control PCA and see if the error is resolved.
		No	If any error is found on the Control PCA, replace it.

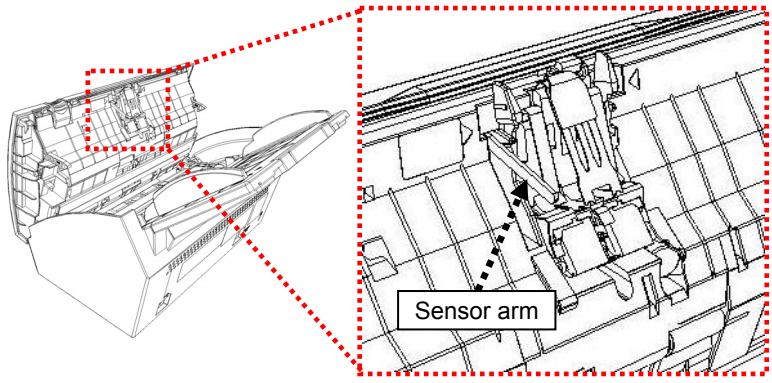
5.1.2 Malfunction after power on

5.1.2.1 Scanning does not start

Power is supplied, but scanning does not start

Item No.	Check items		How/where to check
1	Is any error code displayed on the Operator panel?	Yes	If an error code is displayed on the Operator panel, refer to Section 5.2.3 and follow the instruction.
		No	If no error code is displayed on the Operator panel, go to step 2.
2	Check the items on the right.	Yes	・ Interface cable (USB cable) connection ・ ADF is completely closed ・ Paper loading status on the ADF Paper Chute. ・ AC adapter voltage - Rated voltage: 24 V (output voltage within standard: 22.8 to 26.4 V) If no problem is found among the above, go to step 3.
3	Turn on the power again and see if the error is resolved.	Yes	Press the [Power] button for more than two seconds to turn off, and press it again after more than two seconds to turn on. If the error persists, go to step 4.
4	Is the scanner recognized correctly?		Check the scanner on the Control Panel or Device Manager. Device Manager Connector position: Scanner side (USB) — Twain driver: fi-6110dj — ISIS driver: fi-6110 If the scanner is not recognized properly, replace the Control PCA and see if the error is resolved.
5	Is each sensor operating normally?		Perform Sensor test in the Maintenance Mode and check if the following sensors operate properly: ・ Empty sensor ・ ADF open sensor

5.1.2.2 “No Paper on the Hopper”

Item No.	Check items	How/where to check
1	Does the sensor arm move smoothly?	If the Sensor arm is abnormal, replace the Revolve Unit. 
2	Is the Empty Sensor functioning effectively?	Perform Maintenance mode to check the Empty sensor operation. If the Empty Sensor or Empty Harness is abnormal, replace it.

5.1.3 Error Codes

When an error occurs on this scanner, the error code and error item are displayed on the Function Number Display. (Refer to the table below.)
The displayed error code determines the abnormal part. The error codes are categorized. Refer to the table below.

Display	Error
J1	Paper jam
J2	Multifeed
U4	Cover open error
E2	Optical errors (ADF front)
E3	Optical errors (ADF back)
E6	Operator panel error
E7	EEPROM error
E9	Image memory error
C0	LSI error
H0	Motor error
L6	Sensor error

5.1.3.1 Paper Jam: J1

Error code	Check LED	Error message	Occurrence Conditions/Countermeasure
J1	ON	Paper jam	**<<Occurrence Condition>>** This error is detected under the following conditions: 1) Miss-picking ⇨ The Top sensor is not turned ON when paper is transported for a certain amount after feeding operation starts. 2) Trailing edge detection timeout ⇨ The Top sensor is not turned OFF when it is turned ON and paper is transported for a specified amount. 3) Gap between paper is too close 4) Encoder jam detection ⇨ When the Pick roller detects that the paper moves more than a specified amount. **<<Countermeasure>>** Open the ADF, and remove the jammed documents. If paper jam is detected while no paper jam actually occurs, perform Sensor test in the Maintenance mode and check that each sensor moves properly.

5.1.3.2 Multifeed: J2

Error code	Check LED	Error message	Occurrence Conditions/Countermeasure
J2	ON	Multifeed detected	**<<Occurrence Condition>>** This scanner has two methods of multifeed detection. (1) Detection by overlapping (2) Detection by length (Top sensor/Empty sensor) -Length of the first sheet is a reference length. If difference between the reference length and length of the second sheet is 10 mm or more, multifeed is detected. -Difference of the length ±10mm is a default value. You can select the length among ±10mm ±15mm, and ±20mm in Software Operation Panel. * For mixed batch scanning, select "detection by overlapping". * Refer to Section 1.2.8 "Condition for multifeed detection" for details. **<<Countermeasure>>** (1) Has multifeed occurred? -If multifeed has occurred, go to step (2). -If multifeed is detected while it has not occurred, go to step (5). (2) Does the sheet satisfy the document specification? -Use the sheet that specifies the specification. (Refer to Section 1.2.) -If the sheet does not satisfy the document specification, scan the sheet that specifies the specification, and see if the error is resolved. (3) Is the sheet loaded properly? -Check if the sheet is loaded properly. (Refer to Section 8.1.4.) (4) Check the statuses of the Pad ASSY and Pick Roller. -Does the number of the sheets scanned by each consumable unit (Pad ASSY/Pick Roller) exceed the specified number? (Refer to Section 8.4.) -Clean the consumables if dirty. -Check if the parts are not slanted. (5) Check the US Sensor operation. [Detection by overlapping] -Perform Sensor test and check that the US Sensor is operating properly. (Refer to Section 7.1.2.) -If the US Sensor is not operating properly, check that the sensor cable has no damage and replace the US Sensor RV or US Sensor F. (6) Are the lengths of the sheets the same? [Detection by length] -At multifeed detection by length, if difference of the length between the first and second sheet is 10 mm or more, multifeed is detected. If the lengths of the sheets are not the same, do not detect multifeed by length.

5.1.3.3 Cover Open: U4

Error code	Check LED	Error message <Detail>	Occurrence Conditions/Countermeasure
U4	ON	Cover open	**<<Occurrence Condition>>** This error occurs when the ADF is open. **<<Countermeasure>>** Close the ADF. If the error occurs in spite of ADF closed, perform Sensor test in the Maintenance Mode to see if the ADF open sensor reacts. Check the cable between the ADF open sensor and Control PCA. If no error is found on the cable such as connector damage or disconnection, replace the Fixed unit and Control PCA, and see if the error is resolved.

5.1.3.4 Optical error (ADF front): E2

Error code	Check LED	Error message <Detail>	Occurrence Conditions/Countermeasure
E2	ON	Optical error (ADF Front)	**<<Occurrence Condition>>** This error occurs when CCD output level does not reach the reference level at Optical Unit in the Fixed Unit. **<<Countermeasure>>** Check the following: ・Lamp for front side lights (Fixed Unit) ⇨ If the lamp does not light, replace the Lamp/Inverter/Control PCA, and see if the error is resolved. ・Dirt on the scanning section (Fixed Unit) and white reference area (Revolved Unit) ⇨ Clean the dirty area. ・Optical Unit installed correctly ⇨ Reinstall it if not installed correctly. ・Cable damage between Optical Unit and Control PCA, connector defect ・AC adapter ⇨ Is the correct AC adapter used? ⇨ Rated voltage: 24V (output voltage: 22.8 to 26.4V) If the items above are not the cause, replace the corresponding Optical Unit, and see if the error is resolved. If the error persists, replace the Control PCA.

5.1.3.5 Optical error (ADF back): E3

Error code	Check LED	Error message <Detail>	Occurrence Conditions/Countermeasure
E3	ON	Optical error (ADF Back)	**<<Occurrence Condition>>** This error occurs when CCD output level does not reach the reference level at Optical Unit in the Revolve Unit. **<<Countermeasure>>** Check the following: ・Lamp for back side lights (Revolve Unit) ⇨ If the lamp does not light, replace the Lamp/Inverter/Control PCA, and see if the error is resolved. ・Dirt on the scanning section (Revolve Unit) and white reference area (Fixed Unit) ⇨ Clean the dirty area. ・Optical Unit installed correctly ⇨ Reinstall it if not installed correctly. ・Cable damage between Optical Unit and Control PCA, connector defect ・AC adapter ⇨ Is the correct AC adapter used? ⇨ Rated voltage: 24V (output voltage: 22.8 to 26.4V) If the items above are not the cause, replace the corresponding Optical Unit, and see if the error is resolved. If the error persists, replace the Control PCA.

5.1.3.6 Operator Panel error: E6

Error code	Check LED	Error message <Detail>	Occurrence Conditions/Countermeasure
E6	ON	Operator Panel error	**<<Occurrence Condition>>** Writing/Reading FLASH data failed. **<<Countermeasure>>** Replace the Control PCA.

5.1.3.7 EEPROM error: E7

Error code	Check LED	Error message <Detail>	Occurrence Conditions/Countermeasure
E7	ON	EEPROM error	**<<Occurrence Condition>>** This error occurs when the Panel PCA on which there is no EEPROM data is installed again and the power is supplied. **<<Countermeasure>>** Replace it with the new Panel PCA. **<<Note>>** Before replacing the Panel PCA, back up the EEPROM data from the Panel PCA to the Control PCA. And then restore the data to the new Panel PCA after replacement. The Panel PCA without the data is nonreusable. If it is reinstalled, E6 error occurs.

5.1.3.8 Image Memory error: E9

Error code	Check LED	Error message <Detail>	Occurrence Conditions/Countermeasure
E9	ON	Image memory error	**<<Occurrence Condition>>** This error occurs when the EEPROM (on the Panel PCA) does not respond. **<<Countermeasure>>** Check the connection between the Panel PCA and the Control PCA. If no error is found, the Panel PCA or Control PCA may be defect.

5.1.3.9 LSI error: C0

Error code	Check LED	Error message <Detail>	Occurrence Conditions/Countermeasure
E0	ON	LSI error	**<<Occurrence Condition>>** This error occurs when Write/Read comparison error occurred in the LSI RAM during firmware initialization process. The error code differs depending on the error occurrence side (front or backside). **<<Countermeasure>>** Replace the Control PCA, and see if the error is resolved.

5.1.3.10 Motor error: H0

Error code	Check LED	Error message <Detail>	Occurrence Conditions/Countermeasure
H0	ON	Motor circuit error	**<Operational Principle>>** The resettable fuse is automatic restoration type, which is mounted on the Analog PCA. A provisional overcurrent makes the resettable fuse block the circuit. Removing the cause of overcurrent recovers in ten seconds. **<<Occurrence Condition>>** This error occurs when overcurrent is allowed to the resettable fuse on the Analog PCA, which blocks each fuse. The following defects are assumed as occurrence conditions. ① Short circuit by the cable between the Analog PCA and corresponding motor/lamp caught ② Defect of corresponding motor or lamp ③ Defect of Analog PCA and Control PCA **<<Countermeasure>>** Check if the cable between the corresponding motor/lamp and Analog PCA is caught. If no damage is found on the cable, replace the corresponding motor/lamp, and see if the error is resolved. If the error persists, replace the Analog PCA and Control PCA.

5.1.3.11 US Sensor error: L6

Error code	Check LED	Error message <Detail>	Occurrence Conditions/Countermeasure
L6	ON	US sensor error	**<<Operating principle>>** The Ultrasonic sensor (US sensor) transmits the ultrasonic wave from the transmitter (Revolve unit), and the receiver (Fixed Unit) receives it. The error is detected as a result that the receiver of the US sensor checked the ultrasonic wave variance that passed the layer of air between papers when several pages of documents go through the sensor area. **<<Occurrence Condition>>** This error occurs when voltage other than specified value (0.5 ~ 1.2V) is received even though the Sensor transmission is halting state, or when the received voltage is specified voltage or lower (2.5V) even though the Sensor is transmitting the ultrasonic wave. The following defects are assumed as occurrence conditions. ① Cable damage between the sensor and Control PCA ② Faulty sensors ③ Faulty Control PCA **<<Countermeasure>>** Check the slant or foreign objects (paper strip) in the US Sensor RV and U Sensor FX. If no damage is found on the cable between the US Sensor RV and Control PCA, or the cable between US Sensor FX and Control PCA, perform Sensor test to specify a faulty sensor, and replace it. If the error persists, replace the Control PCA and see if the error is resolved.

5.1.4 Scanned image is abnormal

When the scanned image is abnormal, select the symptom from the list below.

Trouble category	Refer to
Scanned image is distorted	Section 5.1.4.1
Resolution is not satisfactory or tone error is too large	Section 5.1.4.2
Too much jitter on scanned image	Section 5.1.4.3
Scanned image is misaligned	Section 5.1.4.4
Scan magnification error is too large	Section 5.1.4.5, 5.1.4.6
Vertical streaks appear in scanned image	Section 5.1.4.7
White area of scanned image is not correct	Section 5.1.4.8

5.1.4.1 Scanned image is distorted

Item No.	Check items	How/where to check
1	Check the items listed in the right column.	・ Check the interface cable (USB) connection. ・ If any temporary error or alarm is indicated, follow the corresponding troubleshooting.
2	Check the cables.	Are the cables between the Control PCA and Optical Unit damaged? Is the connector connected correctly? If no anomaly is found on the cables and connection, replace the Optical Unit and see if the error is resolved.
3	Replace the Analog PCA/Control PCA and see if the error is resolved.	Refer to Section 6.7.1.

5.1.4.2 Resolution is not satisfactory or tone error is too large

Item No.	Check items	How/where to check
1	Check the items listed in the right column.	・ Does the document satisfy the paper specifications? ・ Are the scan settings (resolution/density) correctly specified for the application software used? ・ Check the interface cable (USB) connection. ・ If any temporary error or alarm is indicated, follow the corresponding troubleshooting.
2	Clean the scanning area (glass) and see if the error is resolved.	Cleaning the inside of Scanner: Refer to Section 8.3.2.
3	Clean the Feed rollers and Pinch rollers, and see if the error is resolved.	Cleaning the inside of Scanner: Refer to Section 8.3.2.
4	Is the Optical Unit and Lamp clean? Check damages and dirt on the cables for the Optical Unit and Lamp.	Cleaning the Optical Unit: Refer to Section 6.3.1.
5	Replace the Optical Unit, and see if the error is resolved.	Optical Unit Front side scanning: Refer to Section 6.11.2. Back side scanning: Refer to Section 6.10.3.
6	Replace the Lamp/Inverter, and see if the error is resolved.	Lamp Front side scanning: Refer to Section 6.11.4. Backside scanning: Refer to Section 6.10.5. Inverter Front side scanning: Refer to Section 6.11.3. Backside scanning: Refer to Section 6.10.4.
7	Replace the Analog PCA/Control PCA, and see if the error is resolved.	Refer to Section 6.7.1.

5.1.4.3 Too much jitter on scanned image

The following shows the sample of scanned image when "jitter" error occurs.
This error occurs when feeding around the scanning section is not smooth. Check the feeding.

Scanned image with jitter 

Normal scanned image 

Item No.	Check items	How/where to check
1	Does the document satisfy the paper specification?	Refer to Section 1.2.
2	Do any obstacles get inside and block paper feeding?	Remove obstacles if any, and see if the error is resolved.
3	Are any foreign obstacles stuck on the Feed rollers or Pinch rollers? Are these rollers distorted?	Clean or replace any faulty rollers, and see if the error is resolved.
4	Are the Pick rollers, Pad ASSY worn away or distorted?	Check the consumable counters on the Maintenance mode. Make sure that the values are within the specified number of sheets and rollers are not distorted. If any anomaly is found, clean or replace the rollers, and see if the error is resolved.
5	Check the installation of the Optical Unit that scanned abnormally.	Reinstall it if not installed correctly and see if the error is resolved. Optical Unit Front side scanning: Refer to Section 6.11.2. Back side scanning: Refer to Section 6.10.3.
6	Are the belts damaged? Are they installed correctly?	Motor Refer to Section 6.11.6.
7	Replace the Motor, and see if the error is resolved.	
8	Replace the Optical Unit, and see if the error is resolved.	Optical Unit Front side scanning: Refer to Section 6.11.2. Back side scanning: Refer to Section 6.10.3.

5.1.4.4 Scanned image is misaligned

Item No.	Check items	How/where to check
1	Check that the side guides are bilaterally symmetrical.	Replace the Chute ASSY if the side guides are not bilaterally symmetrical.
2	Does the document satisfy the paper specification?	Refer to Section 1.2.
3	Check if the user-specific offset adjustment is performed on the Software Operation Panel.	Refer to Software Operation Panel. (Section 8.5.1 ~ 8.5.3.3)
4	Clean the Feed rollers and Pinch rollers, and see if the error is resolved.	Cleaning the inside of Scanner: Refer to Section 8.3.2.
5	Perform Offset adjustment in Maintenance mode.	Maintenance mode – Test mode #3: Offset adjustment (Section 7.1.4)
6	Check the installation of the Optical Unit that scanned abnormally.	Reinstall it if not installed correctly and see if the error is resolved. Optical Unit Front side scanning: Refer to Section 6.11.2. Back side scanning: Refer to Section 6.10.3.

5.1.4.5 Scan magnification error is too large (Main scanning direction: Horizontal)

Item No.	Check items	How/where to check
1	Check the Optical Unit installation at the abnormal scanning side.	Optical Unit Front side scanning: Refer to Section 6.11.2. Back side scanning: Refer to Section 6.10.3.
2	Replace the Optical Unit, and see if the error is resolved.	

5.1.4.6 Scan magnification error is too large (Sub-scanning direction: Vertical)

Item No.	Check items	How/where to check
1	Check if the user-specific magnification adjustment is performed on the Software Operation Panel.	Refer to Software Operation Panel. (Section 8.5.1 ~ 8.5.3.3)
2	Clean the Feed rollers and Pinch rollers, and see if the error is resolved.	Cleaning the inside of Scanner: Refer to Section 8.3.2.
3	Do any foreign obstacles that may block feeding operation exist on the feeding path?	Examine peripheral part of the Feed rollers.
4	Are the belts damaged? Are they installed correctly?	Motor Refer to Section 6.11.6.
5	Replace the Motor, and see if the error is resolved.	
6	Is the Optical Unit installed correctly?	FX: Refer to Section 6.12.1. RV: Refer to Section 6.13.1.
7	Replace the Optical Unit, and see if the error is resolved.	

5.1.4.7 Vertical streaks appear in scanned image

Item No.	Check items	How/where to check
1	Check the item in the right column.	Interface cable connection
2	Check if the scanning area and white reference area are dirty or have damages.	Clean if dirty. If the scanning section/white reference is damaged, replace the Revolve Unit and Fixed Unit. --- The front side scanning area and the white reference area is separated into two; Revolve Unit and Fixed Unit. For **front side**, vertical streaks and cleaning position are **on the same side:** Vertical streaks on the left: Clean the left side. Vertical streaks on the right: Clean the right side. For **backside**, vertical streaks and cleaning position are **left-right reversal:** Vertical streaks on the left: Clean the right side. Vertical streaks on the right: Clean the left side.
3	Check that the cables between the Optical Unit and Control PCA are connected correctly and not damaged.	
4	Check if there are any dirt or damages on the scanning area of the Optical Unit that generates vertical streaks.	If the scanning area is dirty, clean the Optical Unit. If there are damages on the scanning area or inside is dirty, replace the Optical Unit.
5	Replace the Control PCA/Analog PCA, and see if the error is resolved.	Refer to Section 6.7.1.

5.1.4.8 White area of scanned image is not correct

Item No.	Check items	How/where to check
1	Check the items listed in the right column.	・ Are the scan settings (density/colors) correctly specified for the application software used? ・ The white reference area on the ADF scanning section is not dirty.
2	Perform White level adjustment in Maintenance mode.	Maintenance mode – Test mode #4: White level adjustment (Section 7.1.5)

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

Read this page carefully before disassembling or assembling.

⚠WARNING **Electric shock**

Turn the power switch off, and unplug the AC power source from the outlet before disassembling or assembling. Otherwise, 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 or dielectric mat 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.

- You may accidentally drop screws or springs into the scanner. To avoid this, covering the scanner with paper or cloth before disassembling/assembling is recommended.
- Be careful to avoid the parts from dropping into the lower paper path while you are replacing the parts in the Revolve Unit (inside of ADF).
- Be careful not to damage the glasses.
- Wipe any dirt and fingerprints on the entire of the paper path (stainless parts, glass parts and sensor parts). (Refer to Section 8.3.)
- Refer to Appendix 1 for the screw names used in this manual.

6.2 Periodic Maintenance

Perform the periodic maintenance on the scanner by following the items below.

6.2.1 Periodic Maintenance Items

No.	Item			Remarks
1	Inquiry to the user	Check the scanner status ・Scanned image ・Status of use ・Errors	Check the scanned image status.	
2	Check	Clean the scanner ・Pad ASSY ・Ultrasonic Sensor ・Idler Roller ・Glass ・Pick Roller ・Feed Roller ・Eject Roller	Clean the scanner by referring to Section 8.3 “Cleaning”.	
		Check the operation (Maintenance Mode) ・Paper Feeding Test ・Sensor Test	Check each operation by referring to Chapter 7 “Adjustment/Settings”. ・Paper feeding operation is normal. ・Motor operation and sounds are normal. ・Sensors and lamps are normal.	

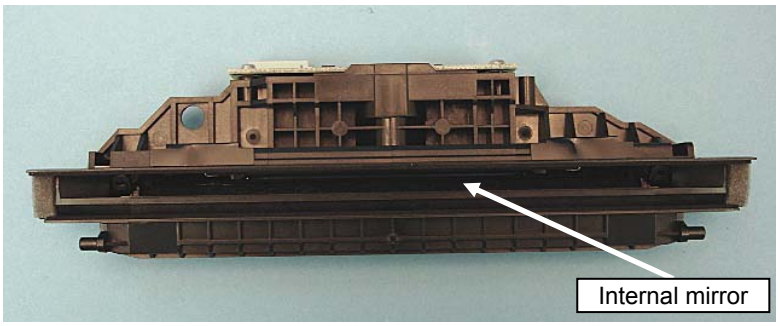
6.3 Cleaning

6.3.1 Optical Unit

Clean the Optical Unit in the following procedure.

(1) Remove the Optical Unit by referring to Section 6.9.3 (Revolve Unit) or Section 6.10.5 (Fixed Unit).

(2) Wipe the mirror inside of the Optical Unit with a soft dry cloth or blower brush. Make sure no fiber remains on the mirror surface.



(3) After cleaning, install the Optical Unit in the reverse procedure of removal.

NOTICE Note the following when cleaning the Optical Unit:

- If the mirror surface is cleaned with solvent such as paint thinner, residue may remain. Wipe it with a soft dry cloth or blower brush.
- The reflection surface of the mirror (evaporated surface) is located inside of the Optical Unit.
- Clean the Optical Unit at dust-free area.
- Do NOT remove the mirror from the Optical Unit.

6.4 Maintenance Tools

6.4.1 Maintenance Tool List

Special tools to maintain this scanner are shown in the table below.

No.	Tools	Remarks	Purpose
1	Phillips screwdriver	For M3 screws	
2	Small Phillips screwdriver	For M2, M2.5 screws	
3	Small flat-blade screwdriver		Removing the ADF Open sensor, E-rings and connectors
4	Longnose pliers		Installing E-ring
5	Spring gauge		Adjusting the belt tension
6	Alcohol	Ethyl alcohol	Cleaning glasses * Do not use for the outer covers and plastic parts.
7	Blower brush		Cleaning mirrors
8	Cloth	Bleached or nonwoven cloth	Cleaning

6.4.2 Test Chart List

Special charts to maintain this scanner are shown in the table below.

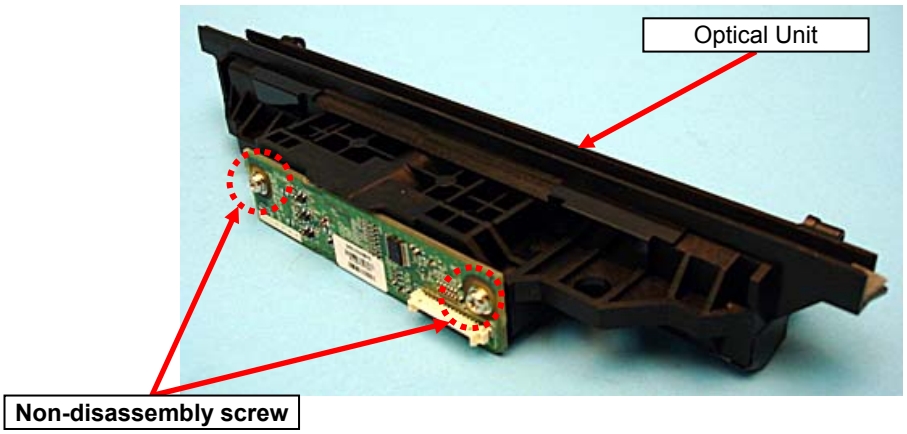
No.	Chart Name (Part Number)	Quantity	Remarks	Purpose
1	ADJUST-CHART-A4 (PA93010-Y790)	1	210 x 297 mm Refer to Section 4.1.1 for the maintenance parts for which adjustments are required.	Paper feeding test Main/Sub-scan magnification adjustment Offset adjustment
3	TEST CHART (W) (PA03277-Y123)	1	215 x 297 mm (A4 coated paper) Refer to Section 4.1.1 for the maintenance parts for which adjustments are required.	White level adjustment

6.5 Non-disassembly Parts

6.5.1 Non-disassembly Parts (Optical Unit)

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

* If you disassembled any non-disassembly parts by mistake, replace the Optical Unit with the new one.



6.6 Removing the Power Cable, USB Cable

NOTICE

Refer to the following sections for the part number and appearance of the maintenance parts:

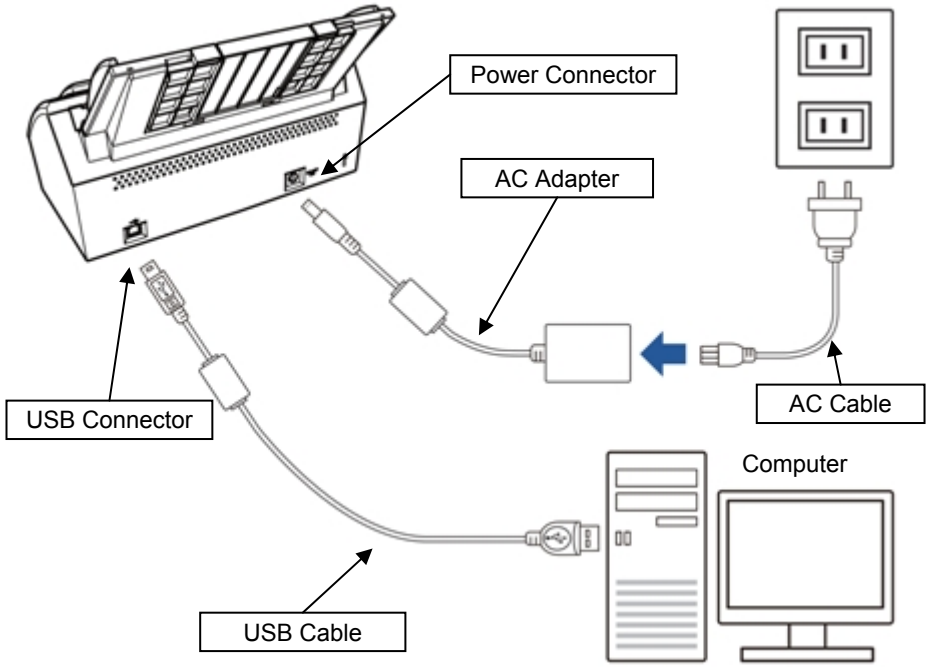
- AC adapter: Section 4.2.24
- AC cable: Section 4.2.25
- USB cable: Section 4.2.26

<Removal>

(1) Turn off the power of the scanner. (Refer to Section 8.1.1 “Turning the Power ON/OFF”.)

(2) Unplug the power cable (AC adapter and AC cable) that is connected to the scanner.

(3) Unplug the USB cable that is connected to the scanner.



<Installation>

Follow the above procedure in reverse.

6.7 Removing the Control Board

6.7.1 Control PCA / Analog PCA

NOTICE

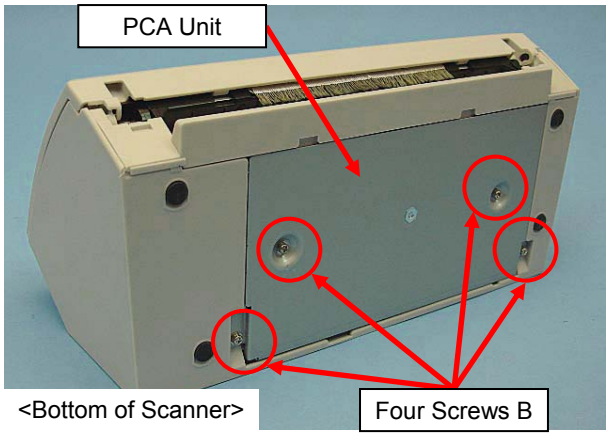
Refer to the following sections for the part number and appearance of the maintenance parts:

- Control PCA: Section 4.2.1
- Analog PCA: Section 4.2.2

<Removal>

(1) Remove the Chute ASSY. (Refer to Section 6.8.1.)

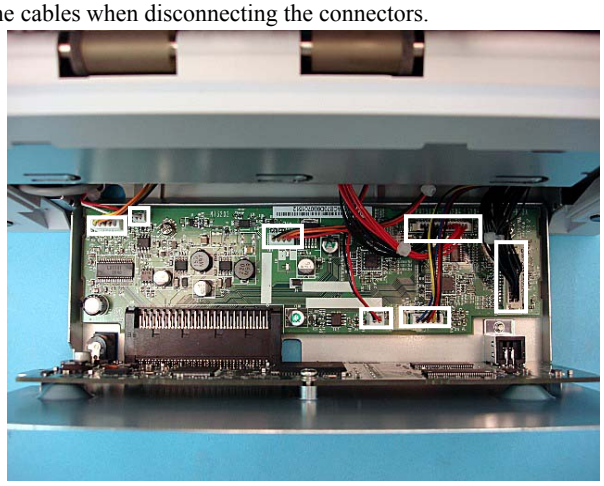
(2) Remove four screws B (circled) securing the PCA Unit at the bottom of the scanner.



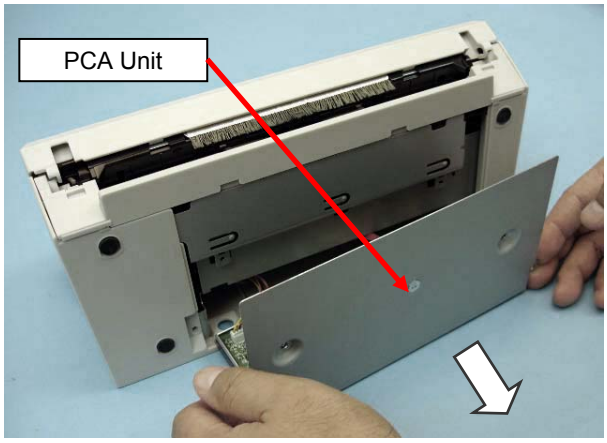
(3) Draw out the PCA Unit halfway, and disconnect all of seven connectors (enclosed with square) on the Analog PCA.

NOTICE

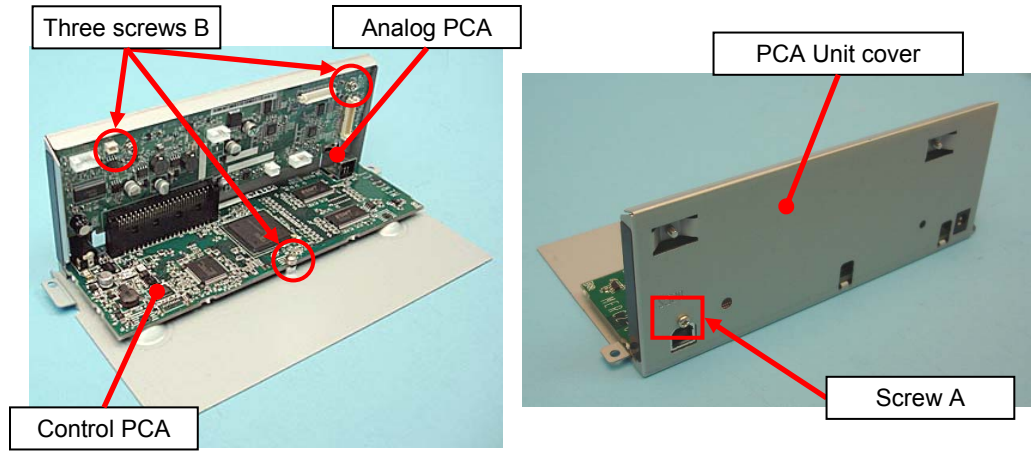
Be careful not to damage the cables when disconnecting the connectors.



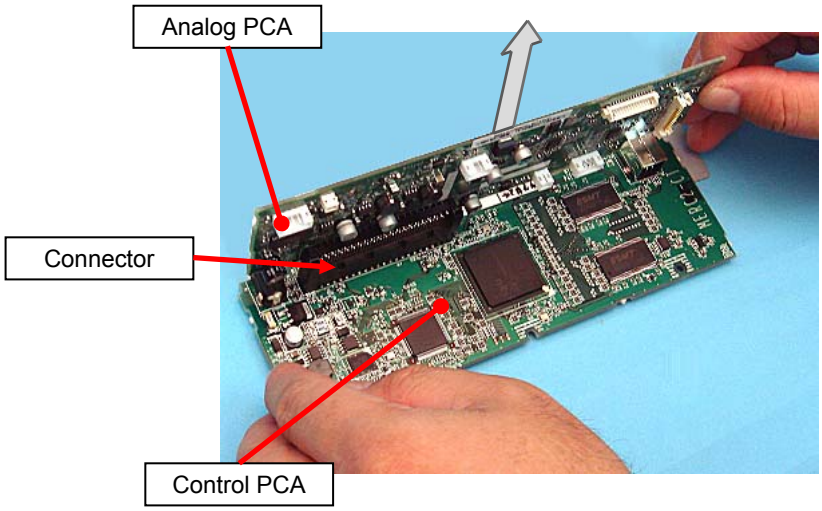
(4) Pull out the PCA Unit to remove.



(5) Remove three screws B (circled) and a screw A (enclosed with square) securing the Control PCA and Analog PCA, and then remove the Control PCA and Analog PCA from the PCA Unit cover.



(6) Disconnect the connector that connects the Control PCA and Analog PCA, and then separate these PCAs.



<Installation>

Follow the above procedure in reverse.

NOTICE

Note the following at installation:

- Check that the connector that connects the Control PCA and Analog PCA is securely inseted.
- Do not get the screw types confused.
- Refer to Section 6.13.2 “Cable Wiring at PCA Unit” when connecting the cable.

6.8 Replacing the Outer Covers

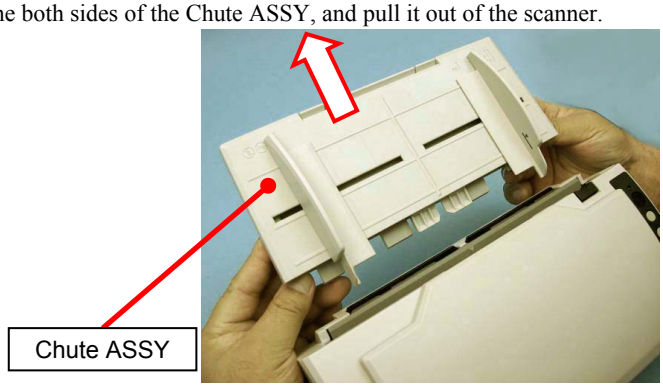
6.8.1 Chute ASSY

NOTICE

Refer to Section 4.2.3 for the part number and appearance of the Chute ASSY.

<Removal>

Raise the both sides of the Chute ASSY, and pull it out of the scanner.



<Installation>

Follow the above procedure in reverse.

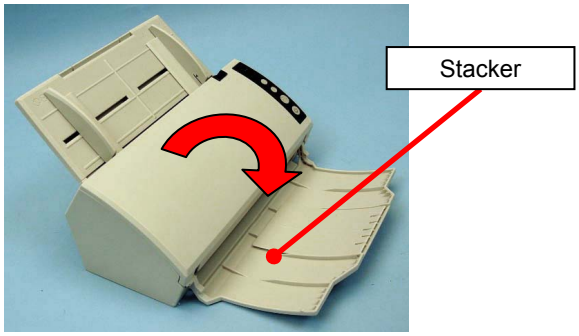
6.8.2 Stacker ASSY

NOTICE

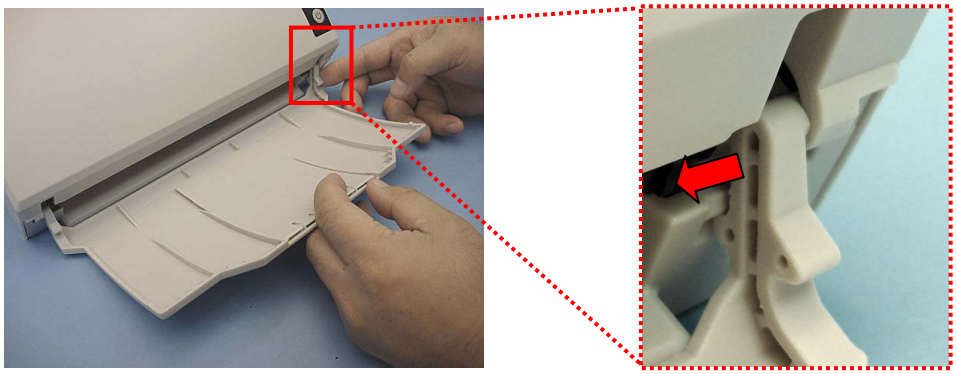
Refer to Section 4.2.4 for the part number and appearance of the Stacker ASSY.

<Removal>

(1) Open the Stacker.



(2) Detach the pin at right side from the installation hole to remove the Stacker.



<Installation>

Follow the above procedure in reverse.

6.8.3 Guide P ASSY

NOTICE

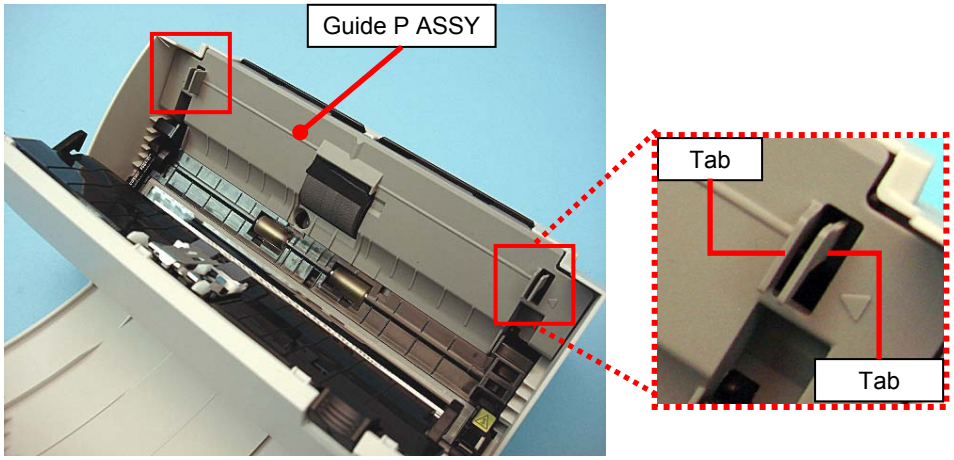
Refer to Section 4.2.5 for the part number and appearance of the Guide P ASSY.

<Removal>

(1) Remove the Chute ASSY. (Refer to Section 6.8.1.)

(2) Open the ADF. (Refer to Section 8.1.2.)

(3) Pinch the both sides of the Guide P ASSY, and push two tabs inward to remove.



<Installation>

Follow the above procedure in reverse.

6.8.4 Top Cover ASSY

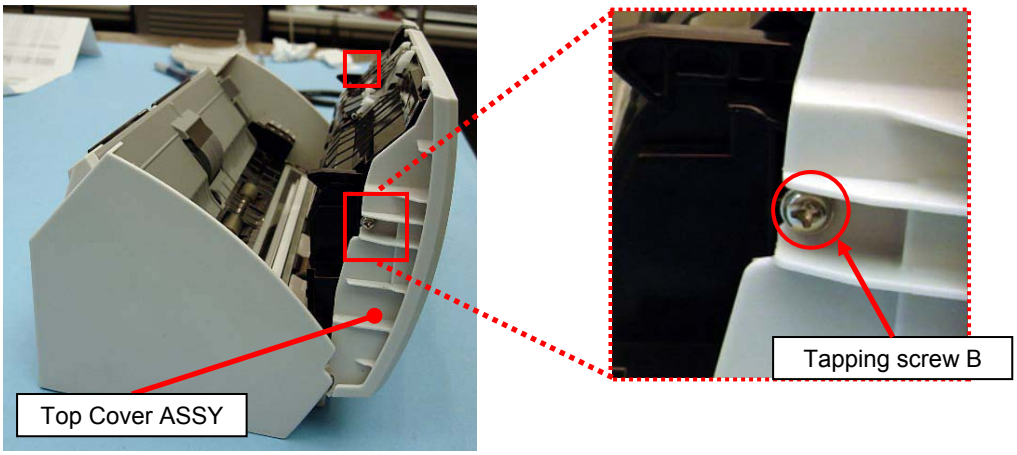
NOTICE

Refer to Section 4.2.7 for the part number and appearance of the Top Cover ASSY.
Panel PCA is not included in the Top Cover ASSY.

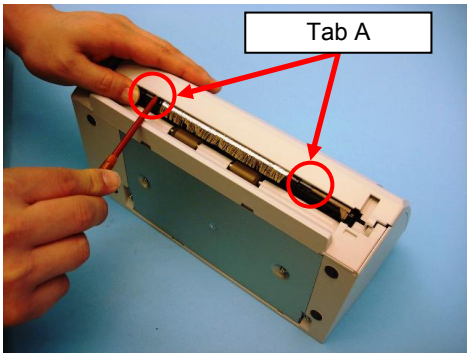
<Removal>

(1) Remove the following parts.
- Chute ASSY (Refer to Section 6.8.1.)
- Stacker ASSY (Refer to Section 6.8.2.)
- Panel PCA (Refer to steps (2) to (4) in Section 6.10.1.)

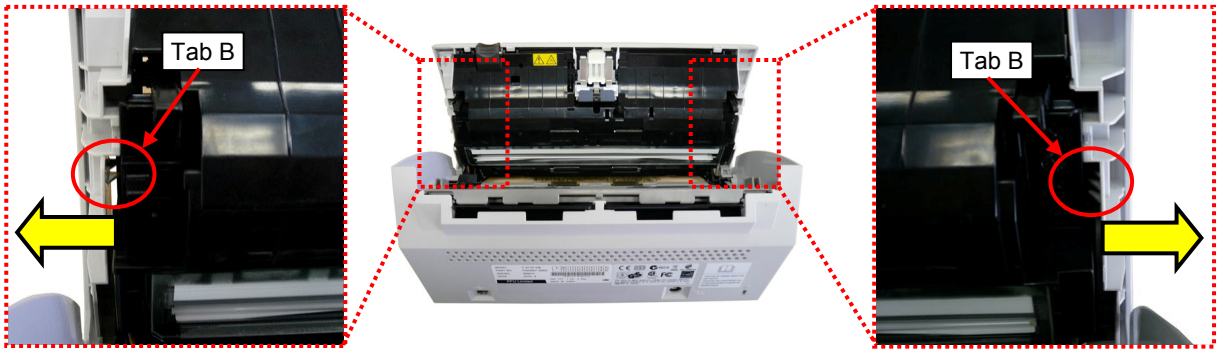
(2) Remove two tapping screws B at both sides of the Top Cover ASSY (enclosed with square).



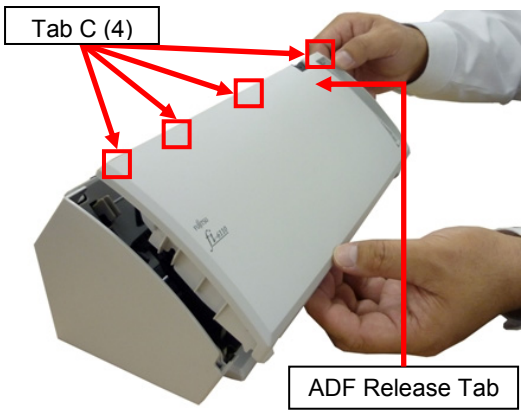
(3) Push two tabs A (circled) with a flat-blade screwdriver to unhook.
* Be careful not to damage the cover.

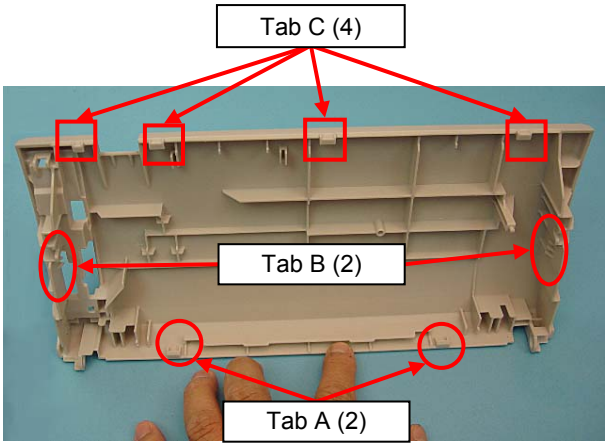


(4) Unhook two tabs B at right and left side of the Top Cover ASSY while widening them in the direction of the arrow.



(5) Lift up the Top Cover ASSY to unlock four tabs C (enclosed with square) while pushing the ADF Release Tab, and then remove the Top Cover ASSY.





<Back of Top Cover ASSY>

<Installation>

Follow the above procedure in reverse.

6.8.5 Guide A

NOTICE

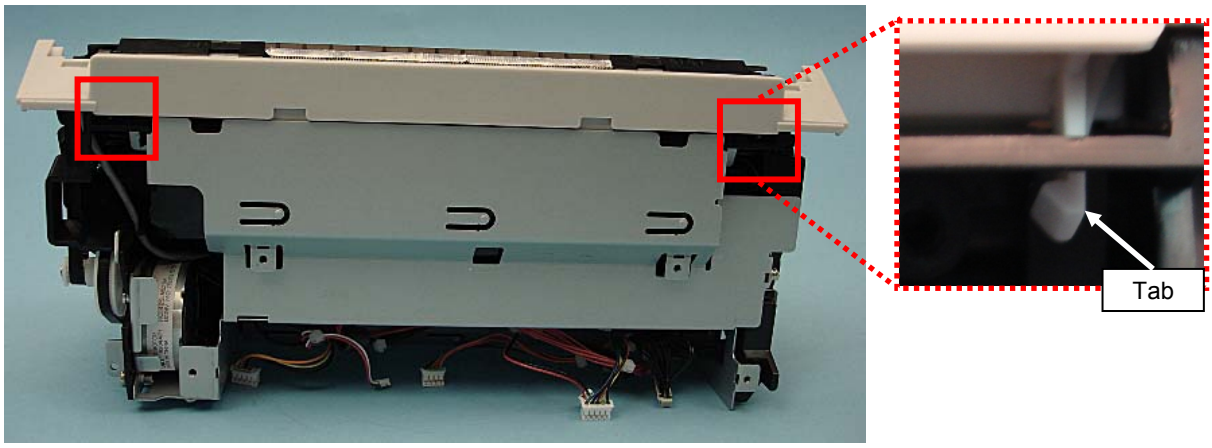
Refer to Section 4.2.6 for the part number and appearance of the Guide A.

<Removal>

(1) Remove the following parts.

- Chute ASSY (Refer to Section 6.8.1.)
- Stacker ASSY (Refer to Section 6.8.2.)
- Guide P ASSY (Refer to Section 6.8.3.)
- PCA Unit [in the removal procedure for Control PCA/Analog PCA] (Refer to steps (2) to (4) in Section 6.7.1.)
- Base Cover ASSY [in the removal procedure for Optical Unit (for front side scanning)] (Refer to step (2) in Section 6.11.2.)
- Panel PCA (Refer to steps (2) to (4) in Section 6.10.1.)
- Top Cover ASSY (Refer to steps (2) to (3) in Section 6.8.4.)

(2) Open two tabs at both sides of the Guide A to unlock, and remove the Guide A.



<Installation>

Follow the above procedure in reverse.

NOTICE

Note the following at installation:

- Refer to Section 6.13.2 “Cable Wiring at PCA Unit” when connecting the cable.

6.9 Replacing the Revolve Unit / Fixed Unit

NOTICE

Refer to the following sections for the part number and appearance of the maintenance parts:
- Revolve Unit: Section 4.2.8
- Fixed Unit: Section 4.2.17

Panel PCA is not included in the Revolve Unit.

<Removal>

(1) Remove the following parts.
- Chute ASSY (Refer to Section 6.8.1.)
- Stacker ASSY (Refer to Section 6.8.2.)
- Guide P ASSY (Refer to Section 6.8.3.)
- PCA Unit [in the removal procedure for Control PCA/Analog PCA] (Refer to steps (2) to (4) in Section 6.7.1.)
- Base Cover ASSY [in the removal procedure for Optical Unit (for front side scanning)] (Refer to step (2) in Section 6.11.2.)
- Panel PCA (Refer to steps (2) to (4) in Section 6.10.1.)
- Top Cover ASSY (Refer to steps (2) to (3) in Section 6.8.4.)
- Guide A (Refer to step (2) in Section 6.8.5.)

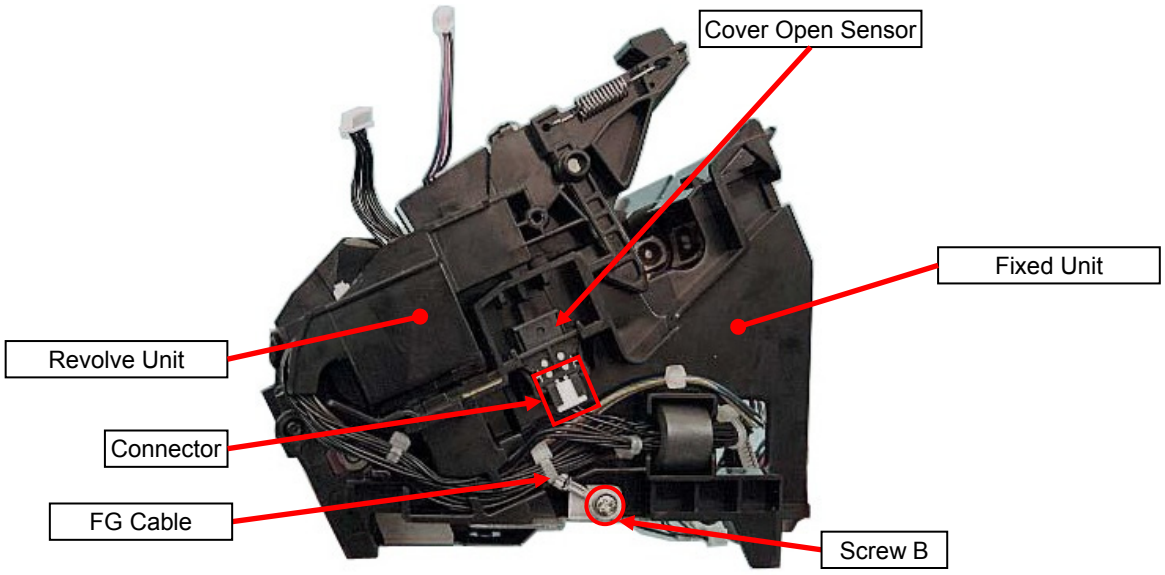
(2) Remove a screw B securing the FG Cable from side of the Fixed unit.

(3) Disconnect a connector on the Cover Open Sensor.

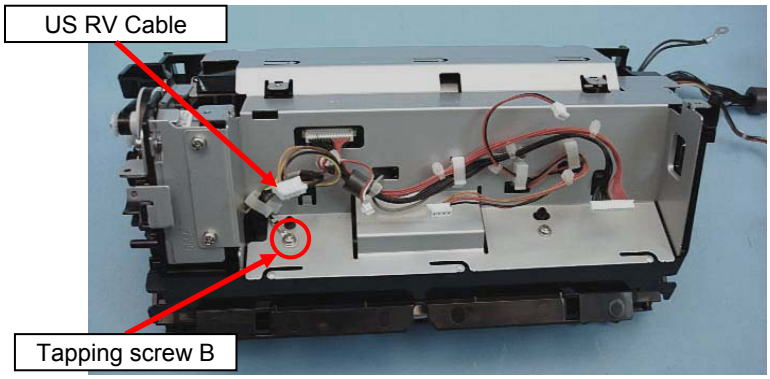
NOTICE

The connector cable on the Cover Open Sensor is easy to come off. Do not hold the cable when disconnecting it.

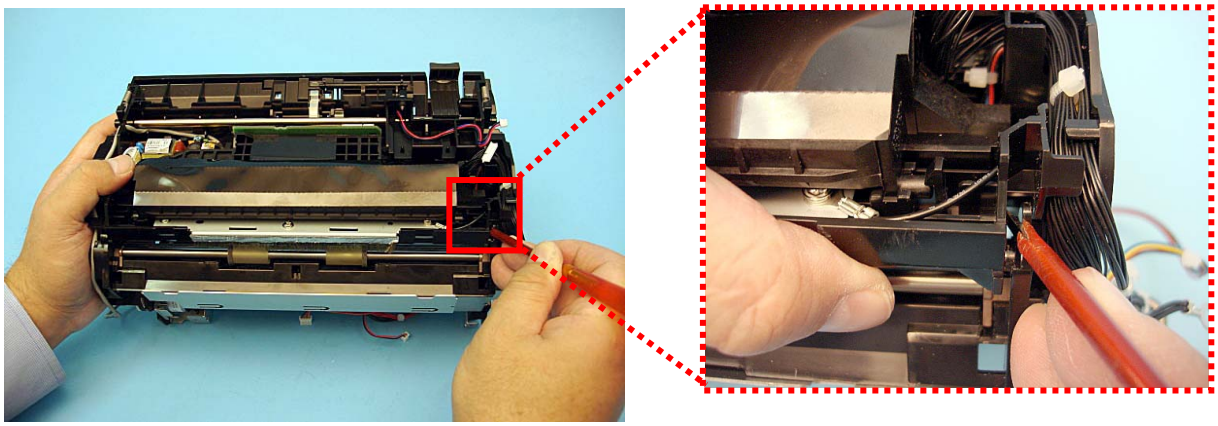
(4) Pull the cable at the side of the Revolve Unit out of the Fixed Unit.



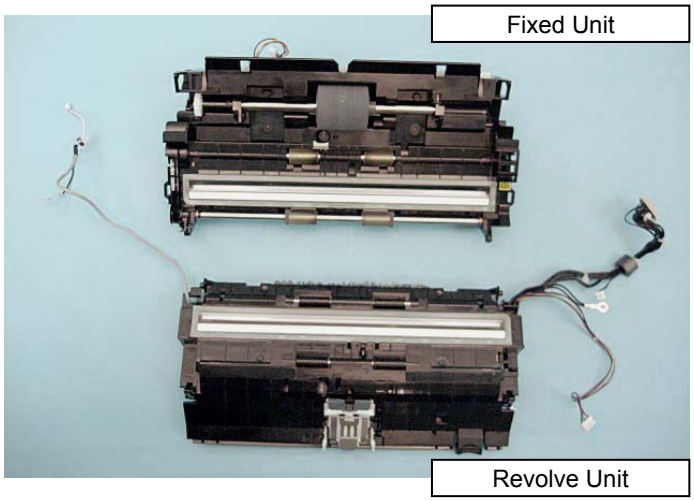
(5) Remove a tapping screw B securing the FG Cable from the bottom of the Fixed unit, and pull the US RV Cable out of the Fixed Unit.



(6) Insert a flat-blade screwdriver into the groove near the fulcrum pin (right side), unlatch the fulcrum pin at one side from the hole, and then unlatch another pin at the other side.



(7) Separate the Fixed Unit and Revolve Unit.



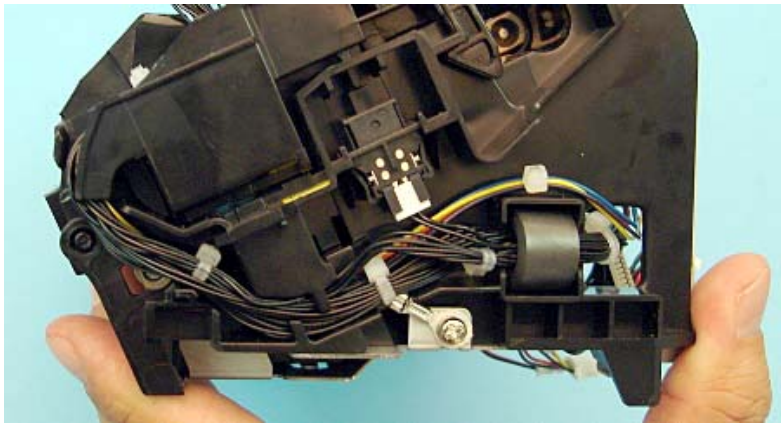
<Installation>

Follow the above procedure in reverse.

NOTICE

Note the following at installation:

- After replacing the parts, perform adjustments by referring to Section 4.1.1 “Adjsutments after Maintenance Parts Replacement”.
- Refer to Section 6.13.1 “Wiring and Clamping at Shield Cover” when connecting the cable at the Shield Cover.
- Refer to Section 6.13.2 “Cable Wiring at PCA Unit” when connecting the cable at the PCA Unit.
- Route the cables as shown in the photo below.



- The Revolve Unit includes the Pick Roller and Fixed Unit includes the Pad ASSY.
  After replacing the Fixed Unit, be sure to reset the Pick Roller counter. (Refer to Section 8.6.4.2.)
  After replacing the Revolve unit, be sure to reset the Pad ASSY counter. (Refer to Section 8.6.4.2.)

6.10 Replacing the Parts inside the Revolve Unit

6.10.1 Panel PCA

NOTICE

- Refer to Section 4.2.12 for the part number and appearance of the Panel PCA.

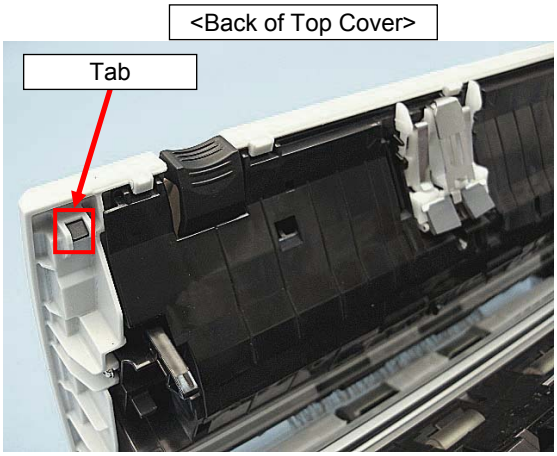
The Panel PCA includes the EEPROM. Back up the EEPROM data temporarily before replacing the Panel PCA. (Refer to Section 7.2 "Saving EEPROM Data".)

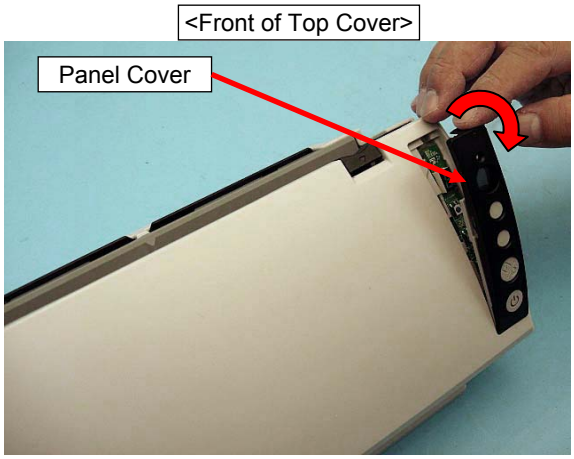
<Removal>

(1) Open the Stacker. (Refer to step (1) in Section 6.8.2.)

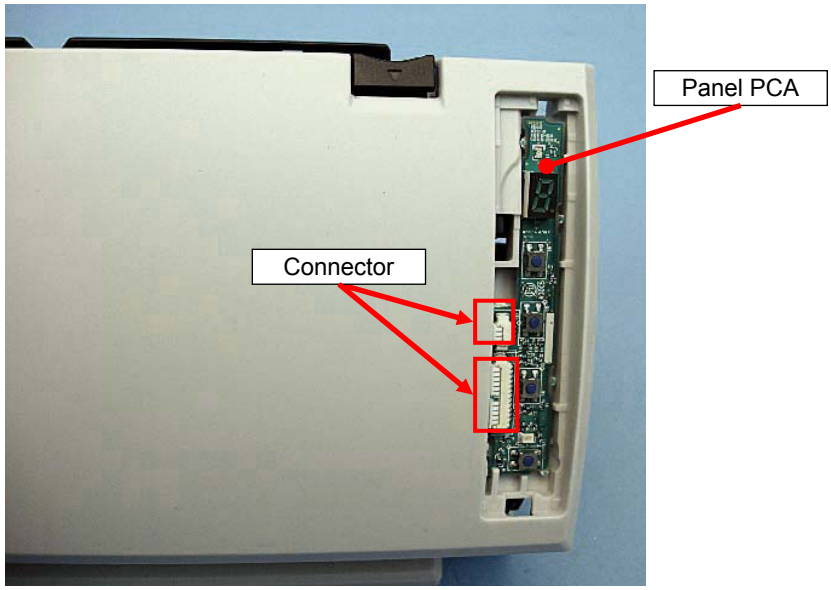
(2) Open the ADF. (Refer to Section 8.1.2.)

(3) Unlatch a tab (enclosed with square) securing the Panel Cover from back of the Top Cover, and then remove the Panel Cover from front of the Top Cover.





(4) Pull out the Panel PCA, disconnect two connectors (enclosed with square), and remove the Panel PCA.



<Installation>

Follow the above procedure in reverse.

NOTICE

Note the following at installation:

- After replacing the parts, perform adjustments by referring to Section 4.1.1 "Adjsutments after Maintenance Parts Replacement".

After replacing the Panel PCA, be sure to restore the EEPROM data from the Control PCA to the Panel PCA.

6.10.2 Empty Sensor / Empty Harness

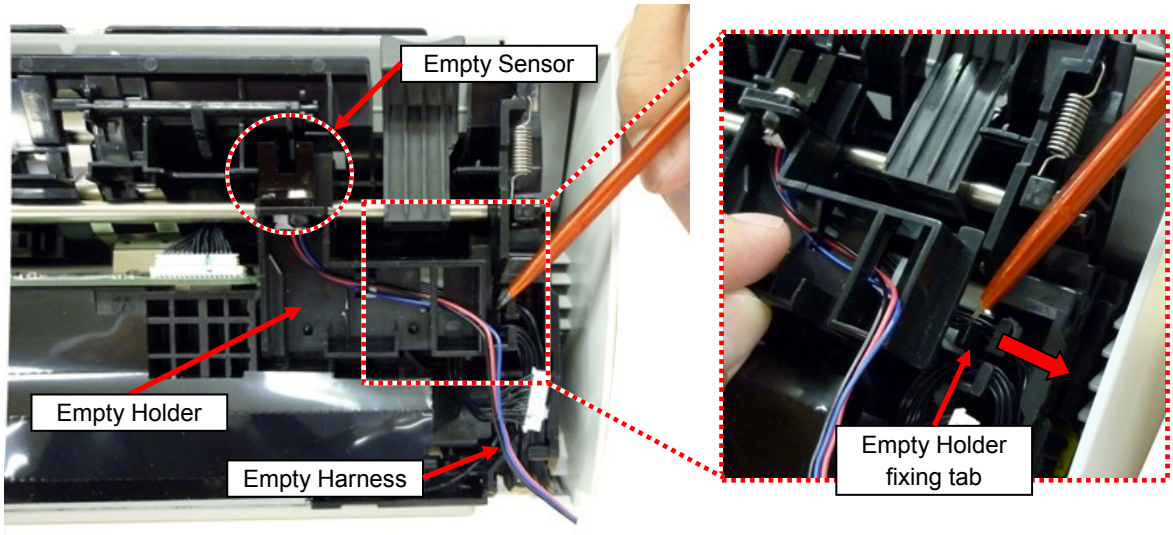
NOTICE

Refer to the following sections for the part number and appearance of the maintenance parts:
- Empty Sensor: Section 4.2.15
- Empty Harness: Section 4.2.16

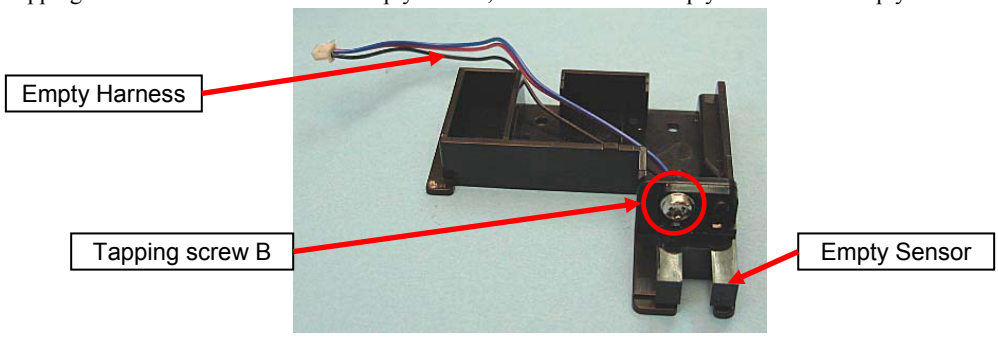
<Removal>

(1) Remove the following parts.
- Chute ASSY (Refer to Section 6.8.1.)
- Stacker ASSY (Refer to Section 6.8.2.)
- Panel PCA (Refer to steps (2) to (4) in Section 6.10.1.)
- Top Cover ASSY (Refer to steps (2) to (3) in Section 6.8.4.)

(2) Unlatch the Empty Holder from the Empty Holder fixing tab.



(3) Remove a tapping screw B from the removed Empty Holder, and remove the Empty Sensor with Empty Harness.



(4) Separate the Empty Sensor and Empty Harness

<Installation>

Follow the above procedure in reverse.

NOTICE

Note the following at installation:
- After replacing the parts, perform adjustments by referring to Section 4.1.1 “Adjsutments after Maintenance Parts Replacement”.

6.10.3 Optical Unit [for Backside Scanning]

NOTICE

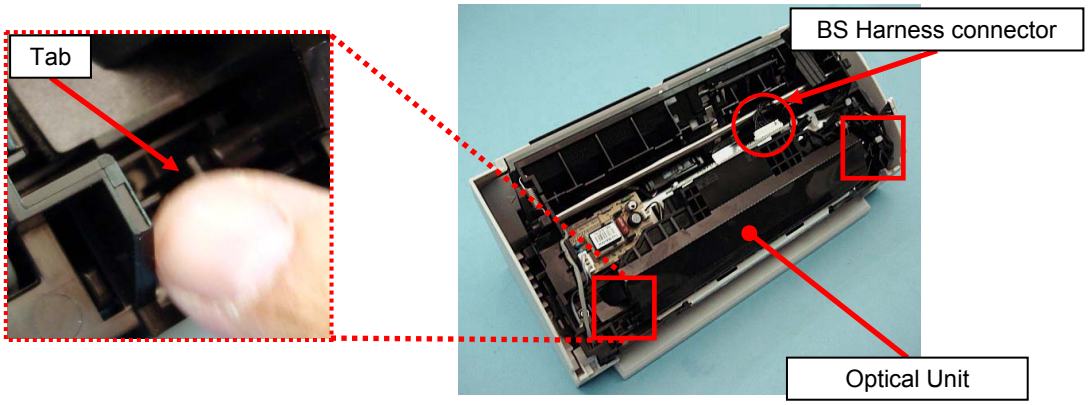
Refer to Section 4.2.11 for the part number and appearance of the Optical Unit.

<Removal>

(1) Remove the following parts.
- Chute ASSY (Refer to Section 6.8.1.)
- Stacker ASSY (Refer to Section 6.8.2.)
- Panel PCA (Refer to steps (2) to (4) in Section 6.10.1.)
- Top Cover ASSY (Refer to steps (2) to (3) in Section 6.8.4.)
- Empty Holder [in the removal procedure for Empty Sensor / Empty Harness] (Refer to step (2) in Section 6.10.2.)

(2) Disconnect the BS Harness connector (circled) from the Optical Unit.

(3) Unlatch the tabs (two at each side, enclosed with square) on the Revolve Unit, which secure the Optical Unit.

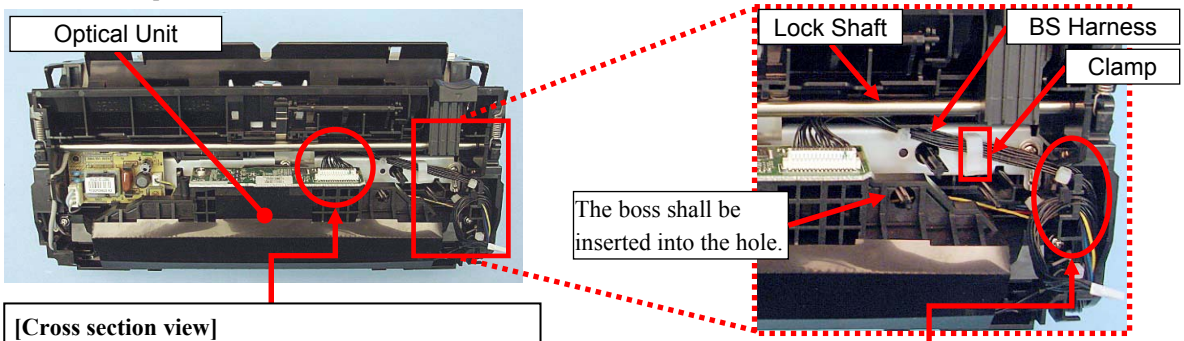


<Installation>

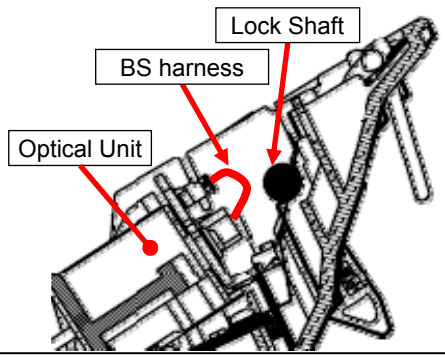
Follow the above procedure in reverse.

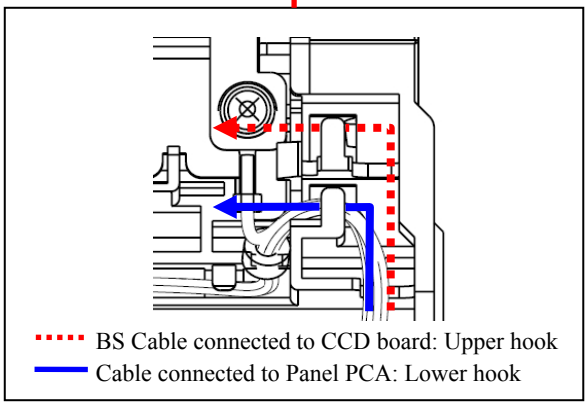
NOTICE

Note the following at installation:
- Check that the Optical Unit is securely latched to the two tabs on the Fixed Unit.
- Route the cables as shown in the photo below.
- After replacing the parts, perform adjustments by referring to Section 4.1.1 “Adjsutments after Maintenance Parts Replacement”.



[Cross section view]
[BS Harness] shall not touch the [Lock Shaft].





6.10.4 Inverter [for Backside Scanning]

NOTICE

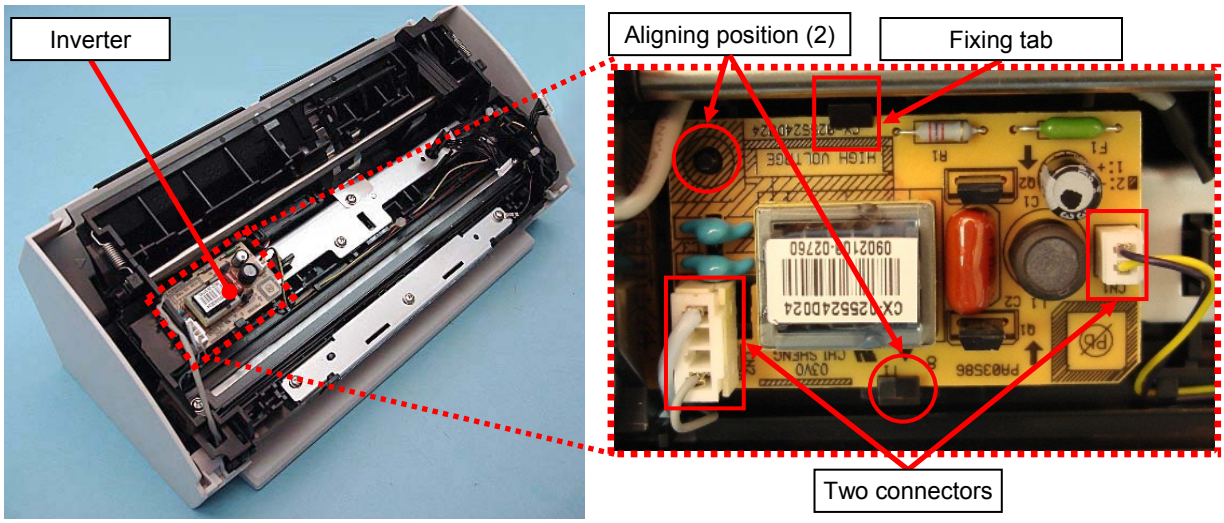
Refer to Section 4.2.10 for the part number and appearance of the Inverter.

<Removal>

(1) Remove the following parts.
- Chute ASSY (Refer to Section 6.8.1.)
- Stacker ASSY (Refer to Section 6.8.2.)
- Panel PCA (Refer to steps (2) to (4) in Section 6.10.1.)
- Top Cover ASSY (Refer to steps (2) to (3) in Section 6.8.4.)
- Empty Holder [in the removal procedure for Empty Sensor / Empty Harness] (Refer to step (2) in Section 6.10.2.)
- Optical Unit [for backside scanning] (Refer to steps (2) to (3) in Section 6.10.3.)

(2) Disconnect two connectors connected to the Inverter (enclosed with square).

(3) Unlatch an Inverter fixing tab (enclosed with square), and then remove the Inverter from two aligning positions (circled).



<Installation>

Follow the above procedure in reverse.

NOTICE

Note the following at installation:
- After replacing the parts, perform adjustments by referring to Section 4.1.1 “Adjsutments after Maintenance Parts Replacement”.

6.10.5 Lamp [for Backside Scanning]

NOTICE

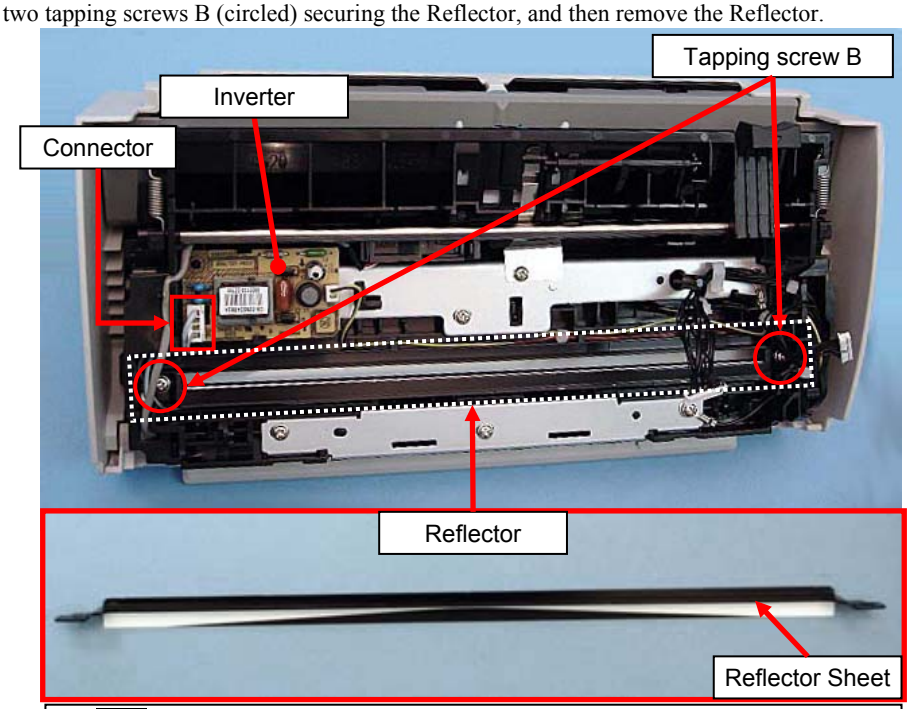
Refer to Section 4.2.9 for the part number and appearance of the Lamp.

<Removal>

(1) Remove the following parts.
- Chute ASSY (Refer to Section 6.8.1.)
- Stacker ASSY (Refer to Section 6.8.2.)
- Panel PCA (Refer to steps (2) to (4) in Section 6.10.1.)
- Top Cover ASSY (Refer to steps (2) to (3) in Section 6.8.4.)
- Empty Holder [in the removal procedure for Empty Sensor / Empty Harness] (Refer to step (2) in Section 6.10.2.)
- Optical Unit [for Backside scanning] (Refer to steps (2) to (3) in Section 6.10.3.)

(2) Disconnect a connector for the Lamp from the Inverter (enclosed with square).

(3) Remove two tapping screws B (circled) securing the Reflector, and then remove the Reflector.

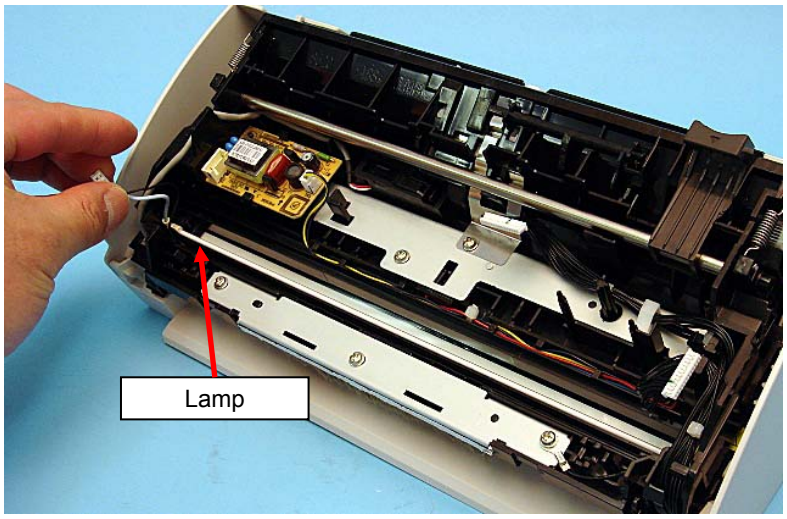


Note **Do not wipe the Reflector Sheet with alcohol because it is printed.**

(4) Disconnect a connector for the Lamp from the Inverter (enclosed with square).

NOTICE

A fluorescent tube (glass) is used for the Lamp. It will easily break which may cause injury. Handle it with care.



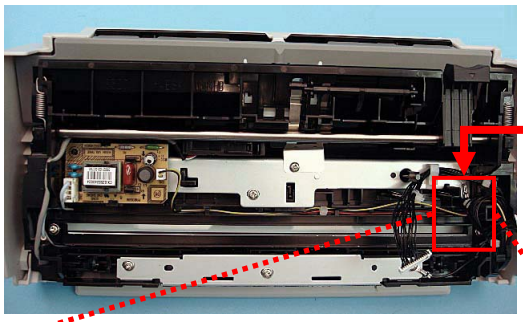
<Installation>

Follow the above procedure in reverse.

NOTICE

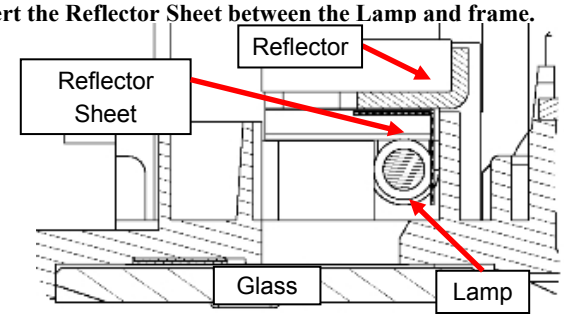
Note the following at installation:

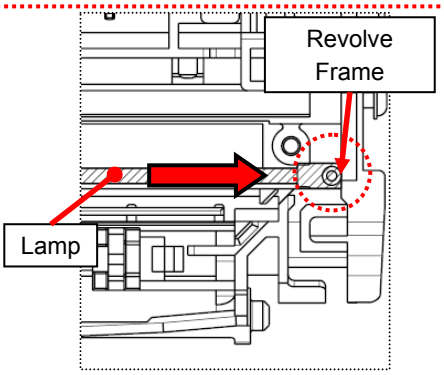
- **A fluorescent tube (glass) is used for the Lamp. It will easily break which may cause injury. Handle it with care.**
- Insert the Reflector sheet between the Lamp and frame.
- Bump the edge of the Lamp into the Revolve frame.



[Cross Section view]

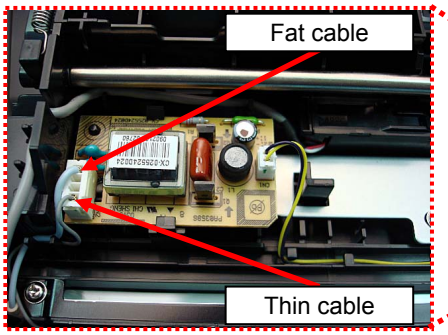
Insert the Reflector Sheet between the Lamp and frame.



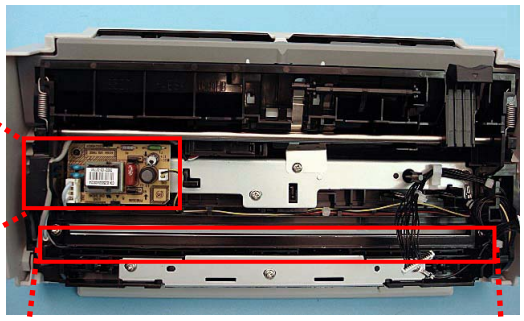


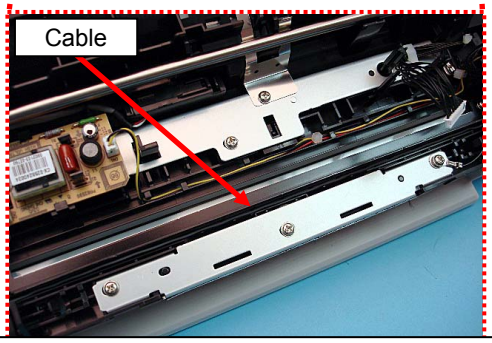
Bump the edge of the Lamp into the Revolve Frame.

- Route the Lamp cables through the groove on the Revolve frame as shown in the photos below.



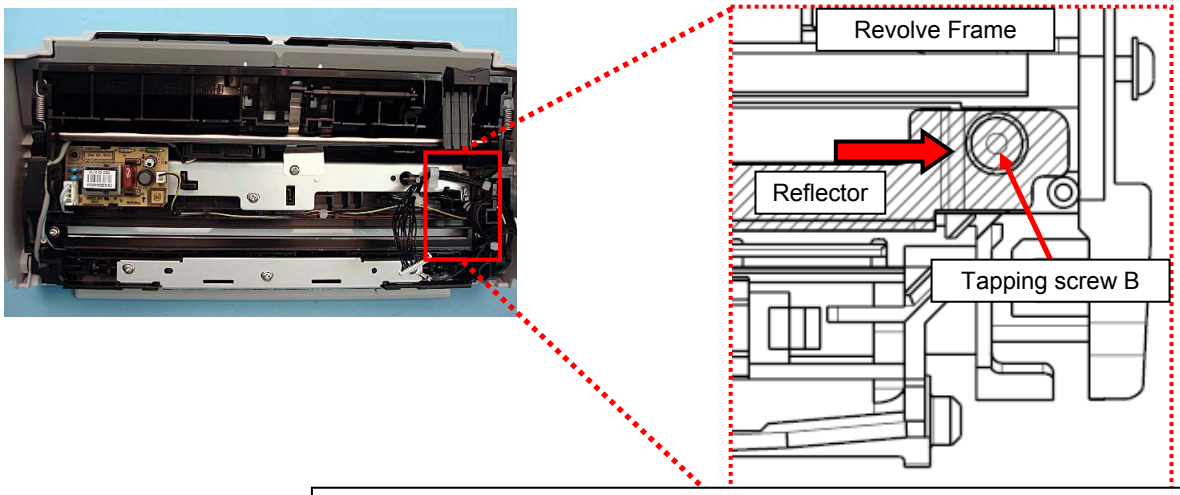
*** The fat cable must come above the thin cable when routing the cables in the gap on the Revolve frame.**





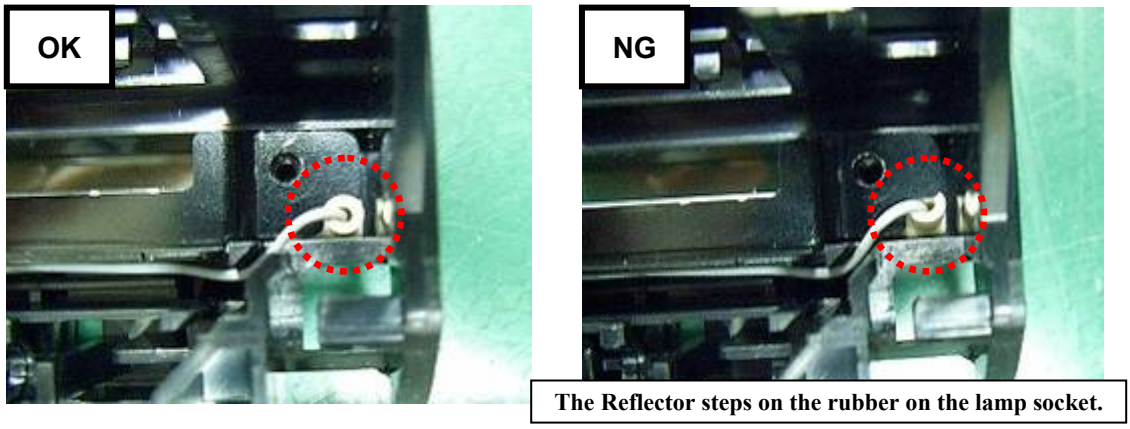
*** Tuck the cable in the gap on the Revolve frame.**

- When installaing the Reflector, bump it in the direction of the arrow, and tighten with the tapping screw B.



Bump the Reflector in the direction of the arrow, and fix with the tapping screw B.

- When installaing the Reflector, the Reflector should not step upon the rubber on the lamp soecket.



The Reflector steps on the rubber on the lamp socket.

- After replacing the parts, perform adjustments by referring to Section 4.1.1 “Adjsutments after Maintenance Parts Replacement”.

6.10.6 US Sensor RV

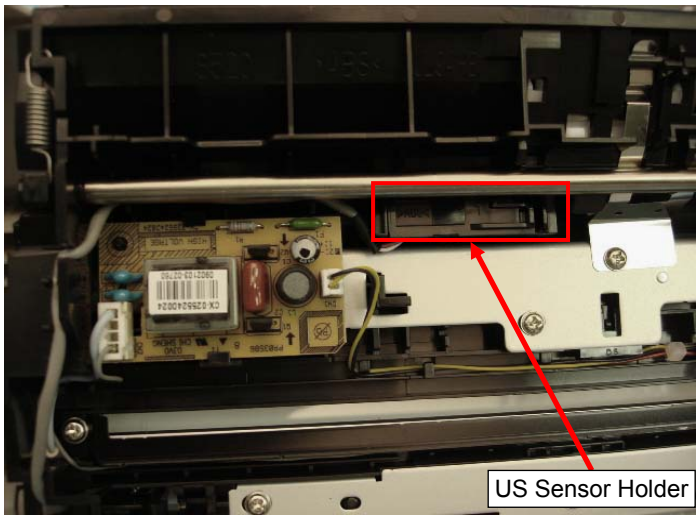
NOTICE

Refer to Section 4.2.13 for the part number and appearance of the US Sensor RV.

<Removal>

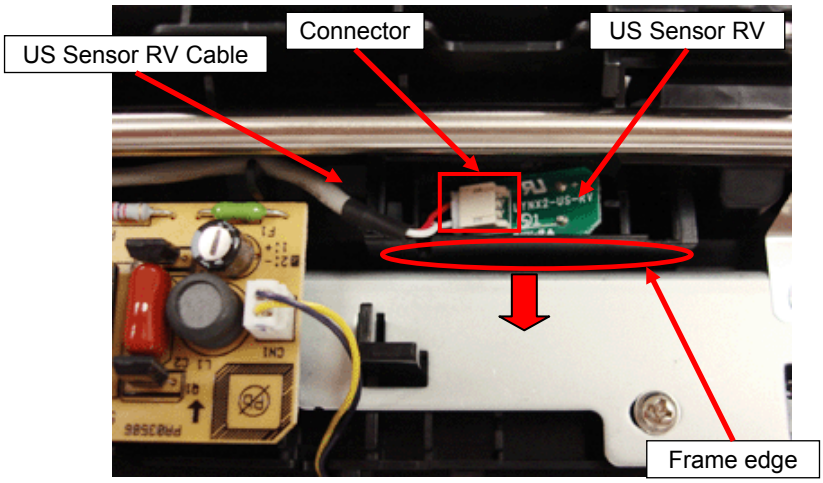
(1) Remove the following parts.
- Chute ASSY (Refer to Section 6.8.1.)
- Stacker ASSY (Refer to Section 6.8.2.)
- Panel PCA (Refer to steps (2) to (4) in Section 6.10.1.)
- Top Cover ASSY (Refer to steps (2) to (3) in Section 6.8.4.)
- Empty Holder [in the removal procedure for Empty Sensor / Empty Harness] (Refer to step (2) in Section 6.10.2.)
- Optical Unit [for Backside scanning] (Refer to steps (2) to (3) in Section 6.10.3.)

(2) Remove the US Sensor Holder.



(3) Pull out the cable connected to the US Sensor RV while expanding the frame edge in the direction of the arrow, and then remove the US Sensor RV.

(4) Disconnect a connector (enclosed with square) connected to the US Sensor RV..



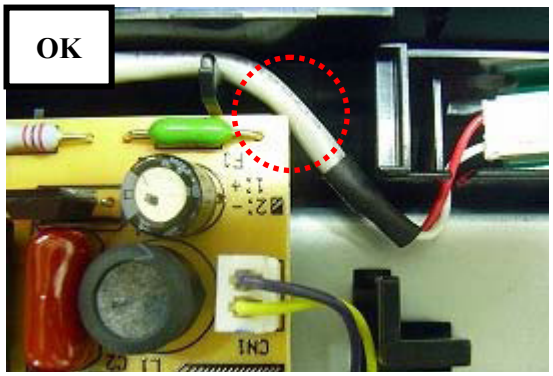
<Installation>

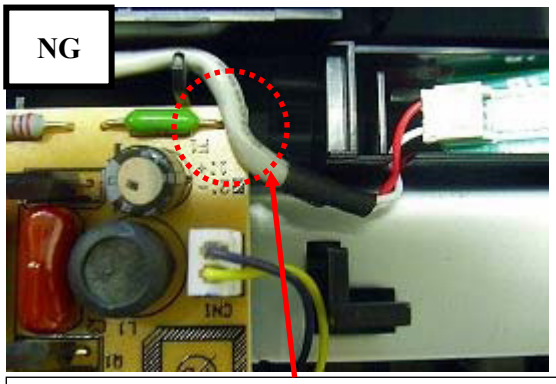
Follow the above procedure in reverse.

NOTICE

Note the following at installation:

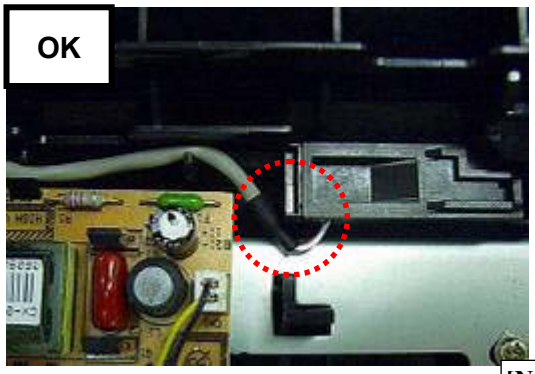
- Be sure a clicking sound is heard when installing the US Sensor RV.
- Be sure that the US Sensor RV cable is NOT routed above the Inverter.

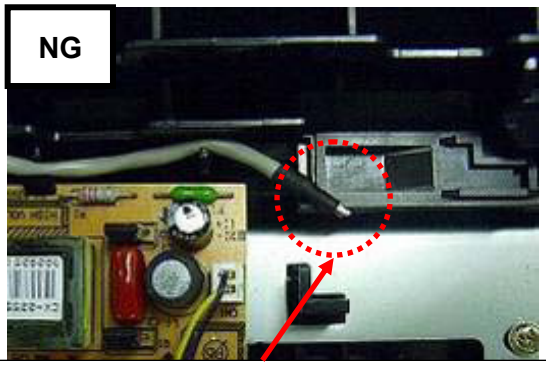




[No good!]
The [US Sensor RV cable] is routed above the [Inverter].

- Be sure that the US Sensor RV cable is NOT routed above or tacked by the US Sensor Holder





[No good!]
The [US Sensor RV cable] is routed above the [US Sensor Holder].

- After replacing the parts, perform adjustments by referring to Section 4.1.1 “Adjsutments after Maintenance Parts Replacement”.

6.10.7 Sensor ASSY B3

NOTICE

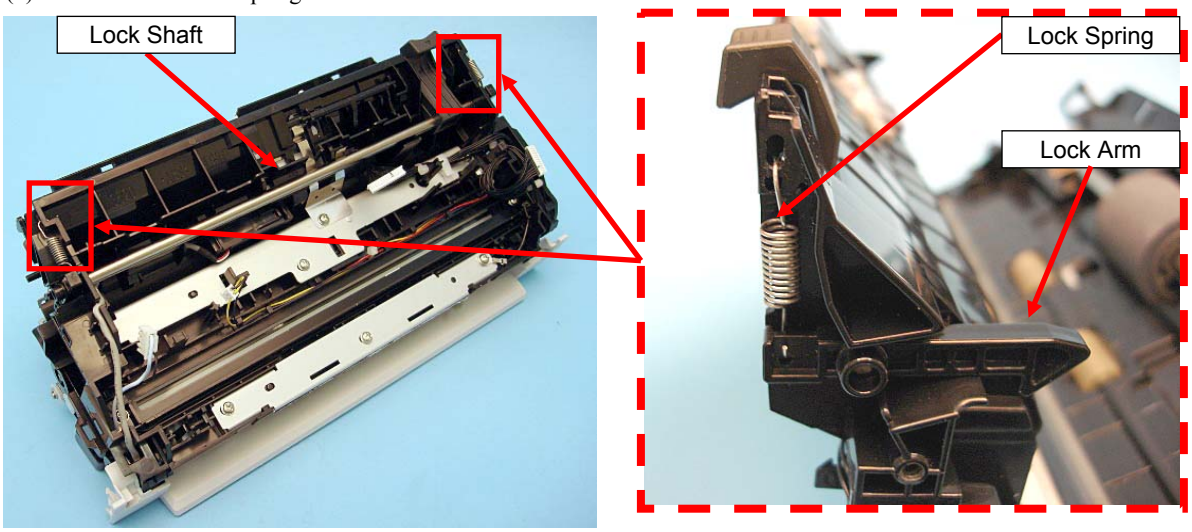
Refer to Section 4.2.14 for the part number and appearance of the Sensor ASSY B3.

When removing the Sensor ASSY B3, pulling out the [Feed FG Plate] forcibly may change its shape.
The deformed [Feed FG Plate] cannot be grounded properly, which may cause communication error or malfunction by static electricity. When removing/installing the Sensor ASSY B3, be sure to follow the removal procedure below to avoid the Feed FG Plate deformation.

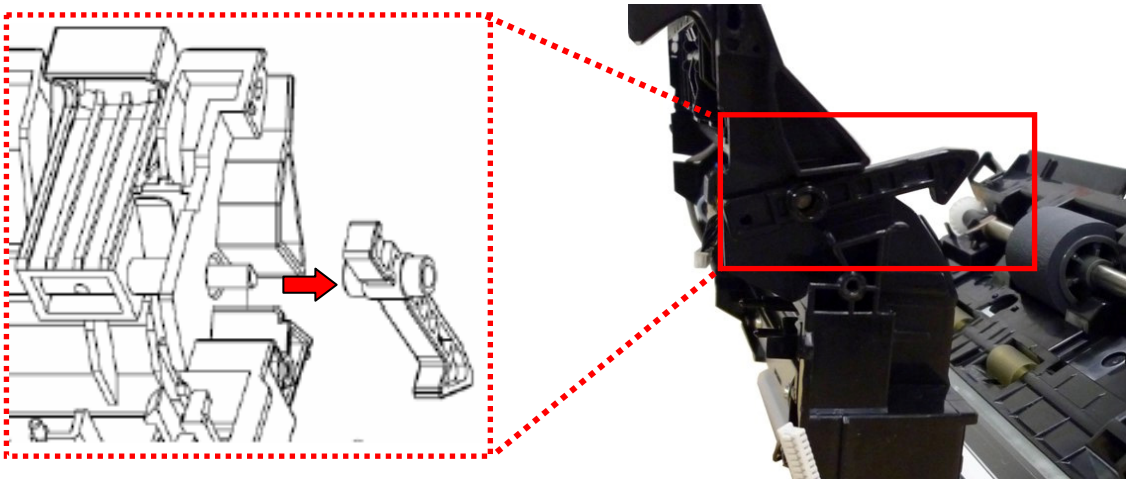
<Removal>

(1) Remove the following parts.
- Chute ASSY (Refer to Section 6.8.1.)
- Stacker ASSY (Refer to Section 6.8.2.)
- Guide P ASSY (Refer to Section 6.8.3.)
- PCA Unit [in the removal procedure for Control PCA/Analog PCA] (Refer to steps (2) to (4) in Section 6.7.1.)
- Panel PCA (Refer to steps (2) to (4) in Section 6.10.1.)
- Top Cover ASSY (Refer to steps (2) to (3) in Section 6.8.4.)
- Base Cover ASSY [in the removal procedure for Optical Unit (for front side scanning)] (Refer to step (2) in Section 6.11.2.)
- Empty Holder [in the removal procedure for Empty Sensor/Empty Harness] (Refer to step (2) in Section 6.10.2.)
- Optical Unit [for backside scanning] (Refer to steps (2) to (3) in Section 6.10.3.)
- Inverter [for backside scanning] (Refer to steps (2) to (3) in Section 6.10.4.)

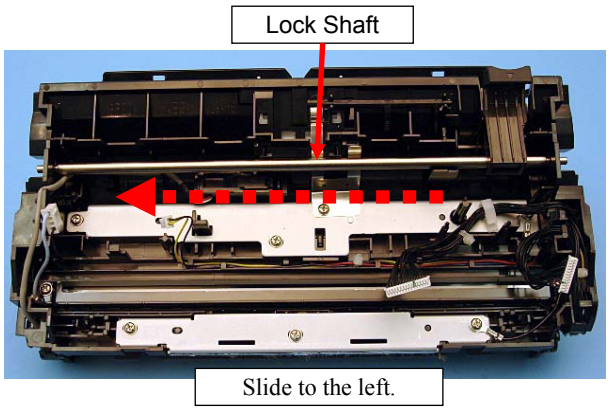
(2) Remove two Lock Springs at both sides of the Revolve Unit.

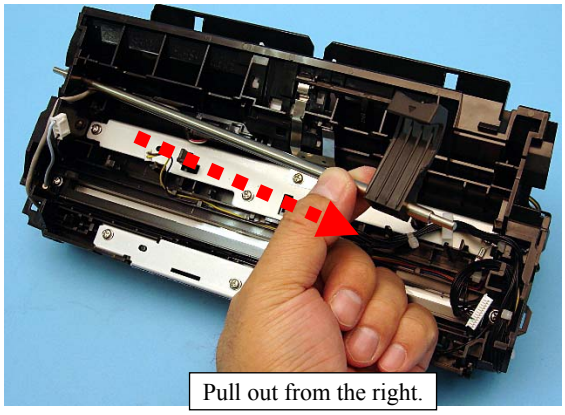


(3) Remove two Lock Arms at both sides of the Revolve Unit from the Lock Shaft.



(4) Slide the Lock Shaft to the left, and pull it out from the right side of the Revolve Unit.

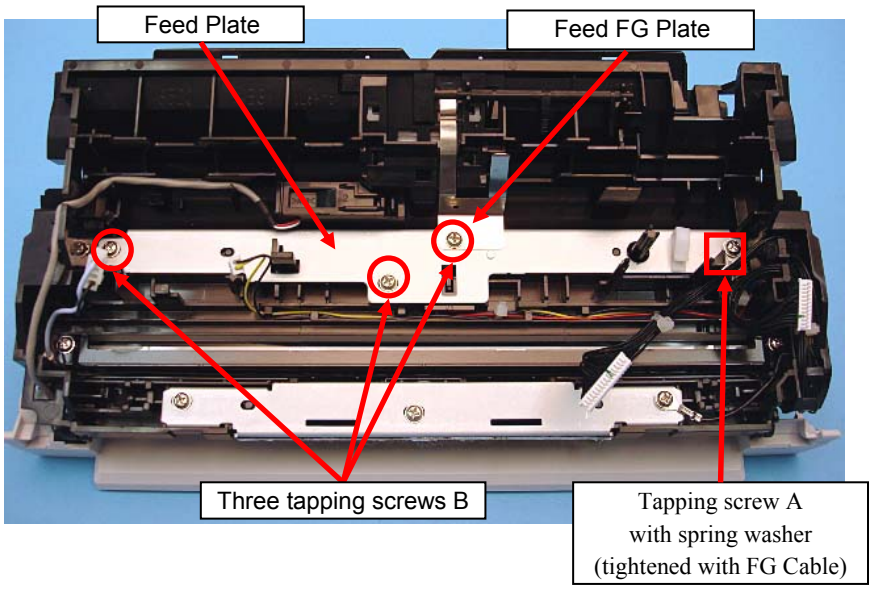




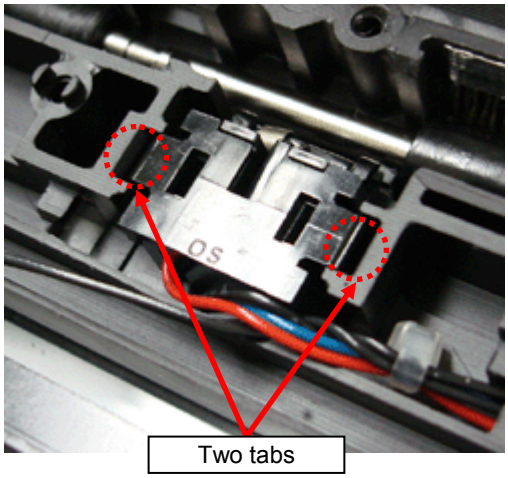
(5) Remove three tapping screws B (circled) and a tapping screw A (enclosed with square) securing the Feed FG Plate and Feed Plate, and then remove the Feed FG Plate and Feed Plate.

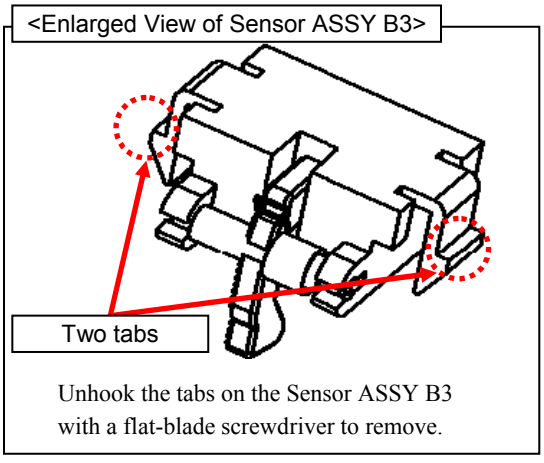
Reference

The tapping screw A at right side (tightened with the FG Cable) that secures the Feed Plate has a spring washer.

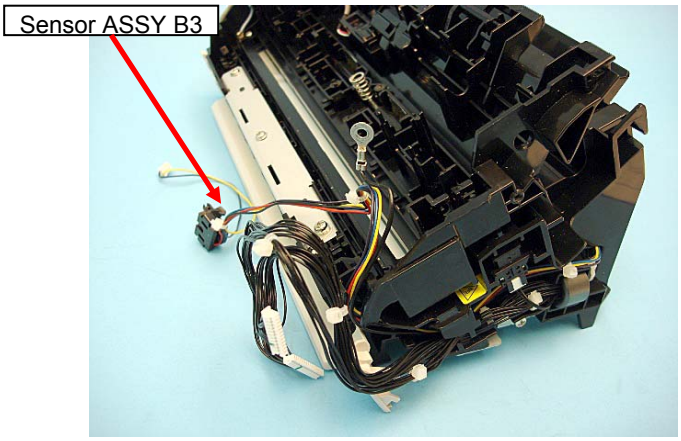


(6) Unhook two tabs (circled) with a flat-blade screwdriver, and remove the sensor section from the frame.





(7) Take the Sensor ASSY B3 cables out of each forming, and remove them completely from the Revolve Unit.



<Installation>

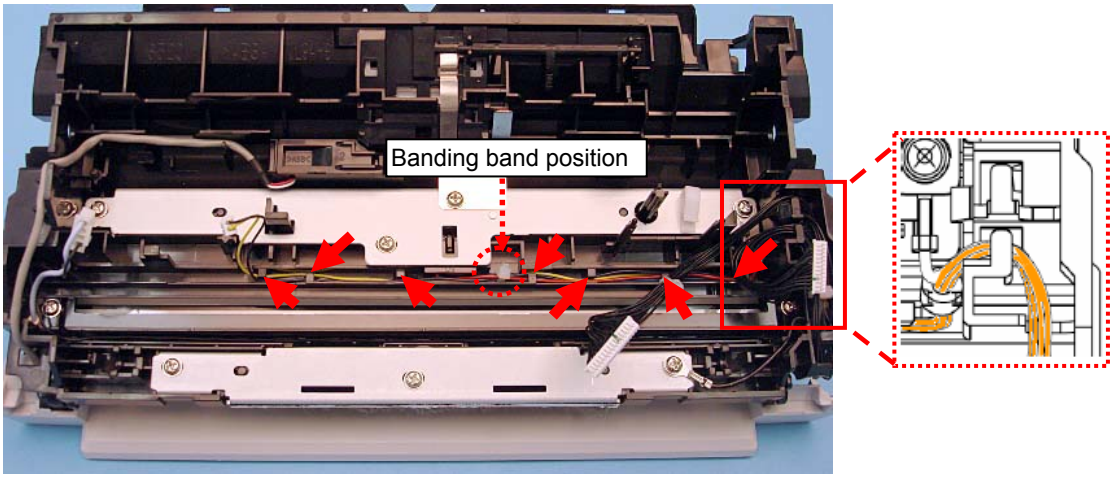
Follow the above procedure in reverse.

NOTICE

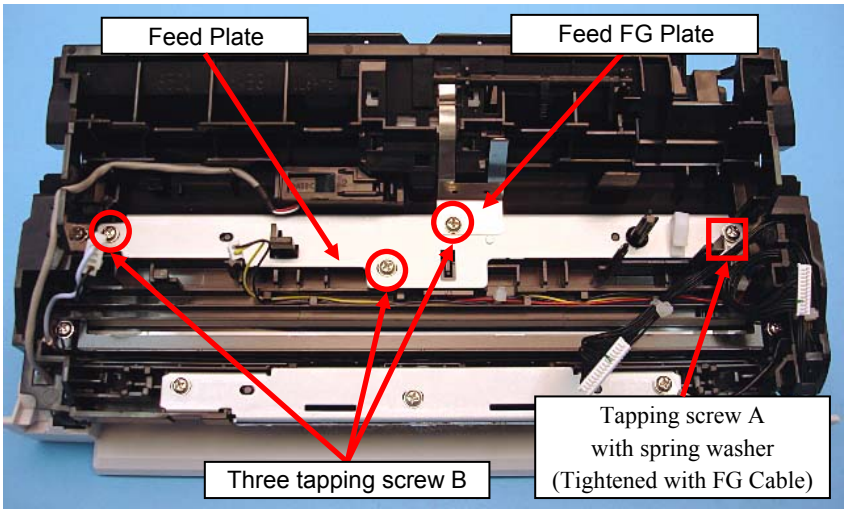
- The deformed [Feed FG Plate] cannot be grounded properly, which may cause communication error or malfunction by static electricity. When installing the Sensor ASSY B3, be sure to follow the procedure below to avoid the Feed FG Plate deformation.

- Note the following at installation:

・ Route the harness under the hooks shown with arrows in the photo below to secure the harness after installing the sensor ASSY B3.

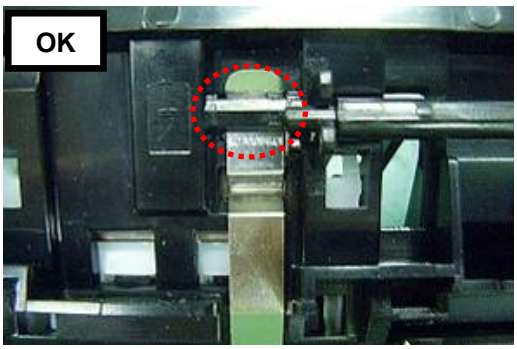


・ Install the Feed FG Plate after installing the Feed Plate and secure it with the three tapping screw B.
The tapping screw A at right side (tightened with the FG Cable) that secures the Feed Plate has a spring washer.

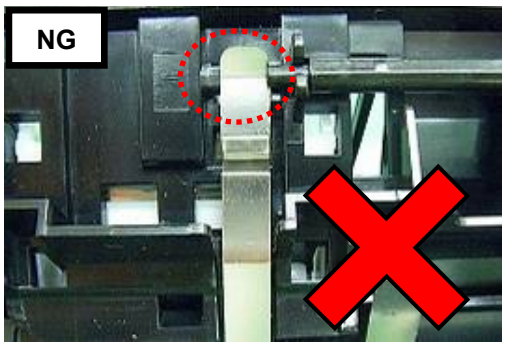


・ Install the Feed FG Plate after installing the Feed Plate and secure it with the three tapping screw B.

① The Feed FG Plate must be drawn through the Revolve frame.

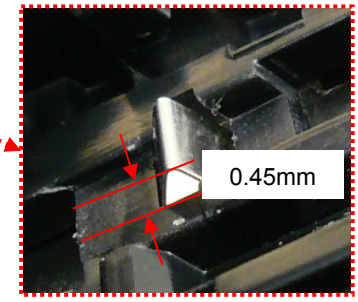


[Good!]
Drawn through the Revolve frame hole.



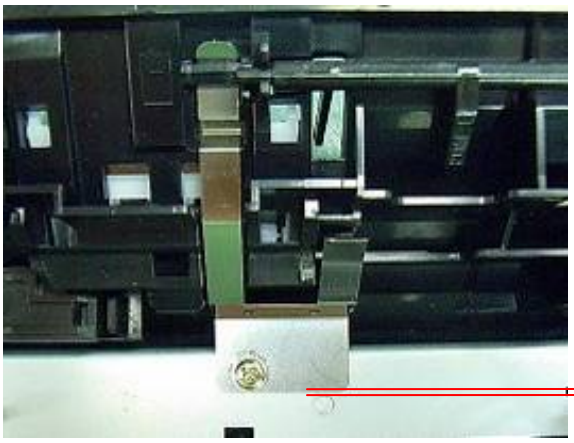
[No good!]
Not drawn through the Revolve frame hole.
Do not get holes confused when installing the Feed FG Plate.

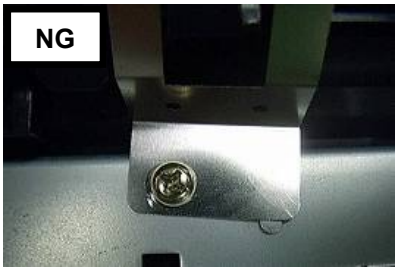
The photos on the left and below show that the Feed FG plate is installed properly,



Check visually that the Feed FG Plate sticks out.
(Amount of protrusion: 0.45mm or more)

② Align the Feed FG Plate with the aligning position of the Feed Plate. (The gap should be 1mm or less.)

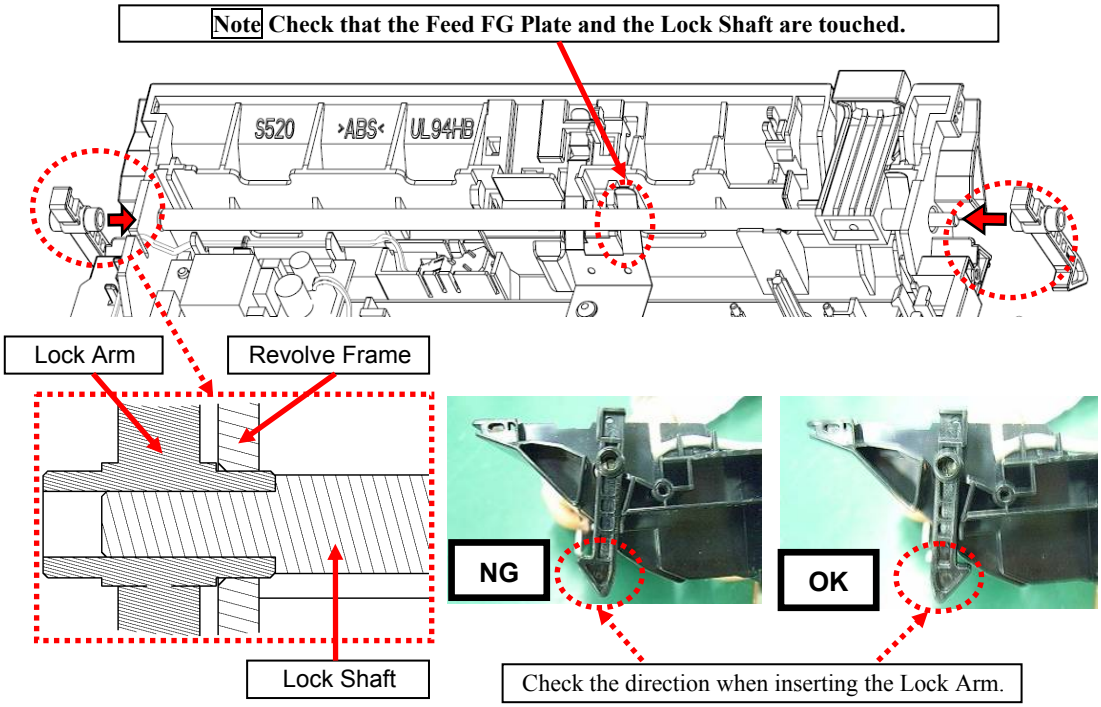




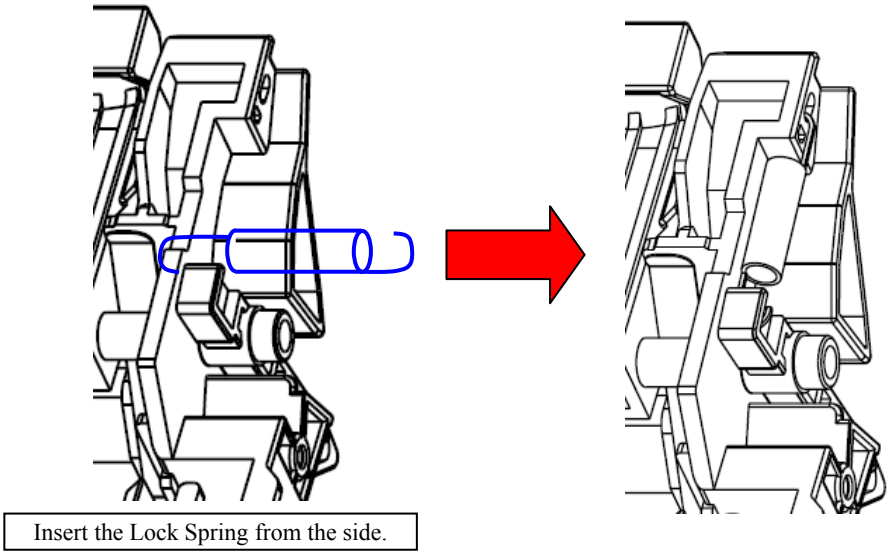
Gap between aligning position: 1mm or less

・ Insert the Lock Arm into the Lock Shaft. Be sure of the two notes below when installing them to fix to the Revolve Frame.

① Do not insert the Lock Arm in the wrong direction.



② Install the Lock Spring onto the Lock Arm and then to the Revolve Frame.

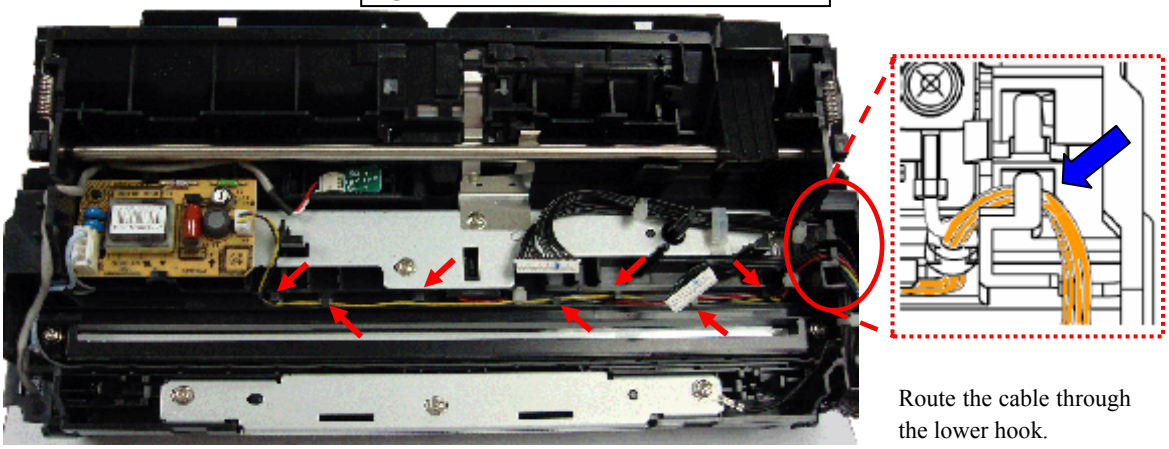


- After installing the Inverter, wire cables by routing them through ① and ② below:

① Cable route: Route the cables through the groove (hook) pointed by the arrows to fix.

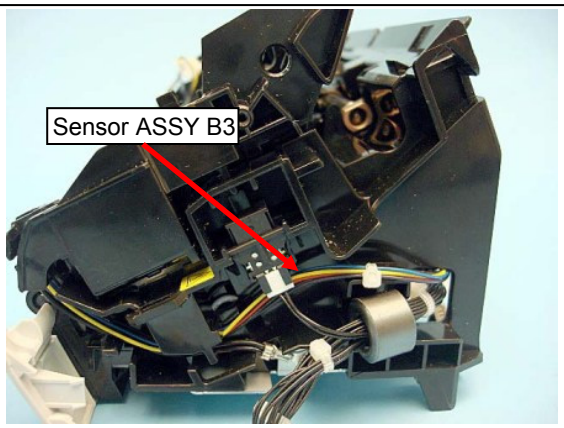
② Cable route: Route the cables through the groove (hook) on the frame to fix.

① Cable route: Front of Revolve Unit



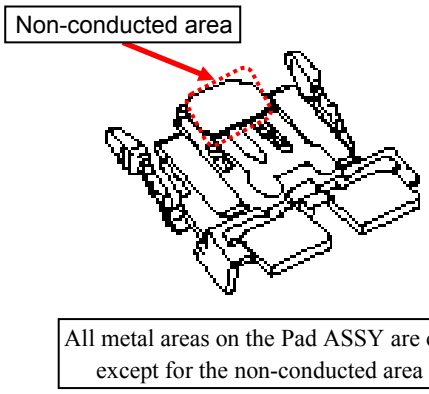
Route the cable through the lower hook.

② Cable route: Sides of Revolve Unit and Fixed Unit

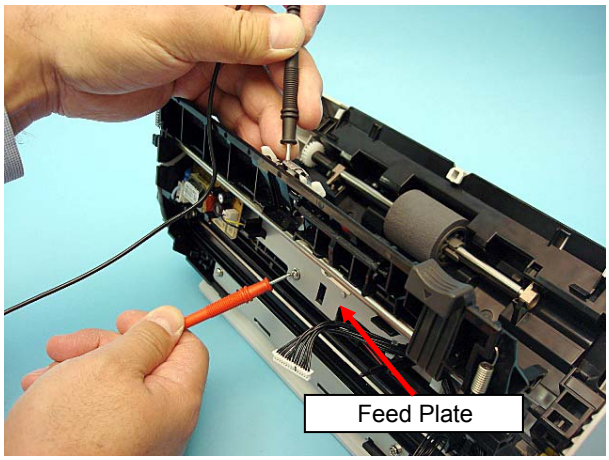


- After installation, perform continuity check.

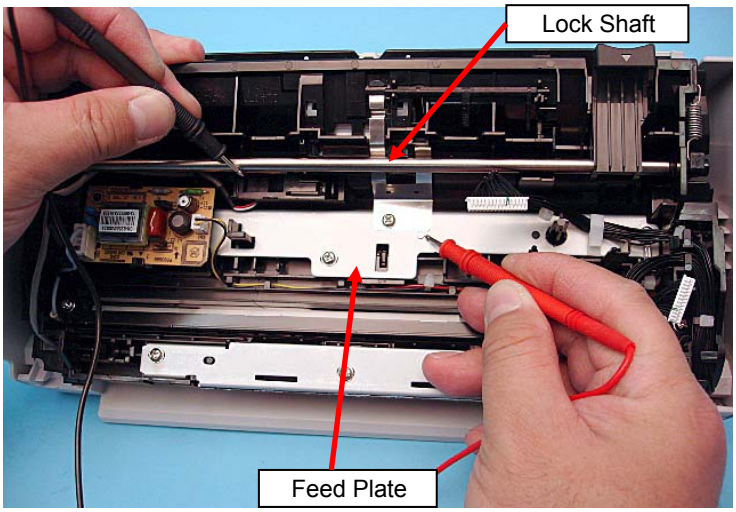
① Check the following conduction between the Pad ASSY and Feed Plate.
Pad ASSY ⇔ Feed FG Plate ⇔ Feed Plate
There is one part that is not conducted on the Pad ASSY. Refer to the figure below, and perform the continuity check between the conducted part of the Pad ASSY and Feed Plate with a tester.
If there is no conduction, check if there is deformation on the Feed FG Plate.
The Feed Plate is rust-proofed. If the continuity check is difficult, check it at the screws or edges on the Feed Plate.



All metal areas on the Pad ASSY are conducted except for the non-conducted area above.



② Check the following conduction between the Lock Shaft and FG Plate.
Lock Shaft ⇔ Feed FG Plate ⇔ Feed Plate
Refer to the photo below and perform the continuity check between the Lock Shaft and Feed Plate.
If there is no conduction, check if there is deformation on the Feed FG Plate.



- After replacing the parts, perform adjustments by referring to Section 4.1.1 “Adjsutments after Maintenance Parts Replacement”.

6.11 Replacing the Parts in the Fixed Unit

6.11.1 Pick Shaft ASSY

NOTICE

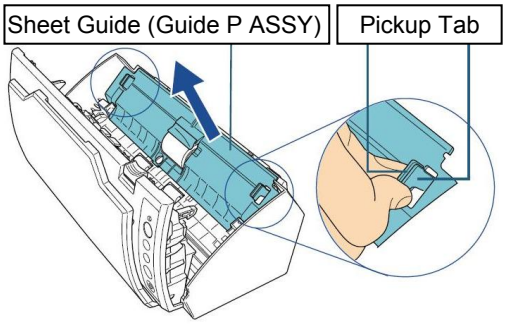
Refer to Section 4.2.22 for the part number and appearance of the Pick Shaft ASSY.

<Removal>

(1) Remove the Chute ASSY (Refer to Section 6.8.1.)

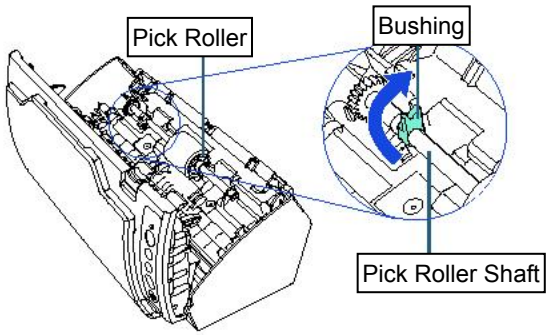
(2) Open the ADF.

(3) Remove the Sheet Guide (Guide P ASSY).



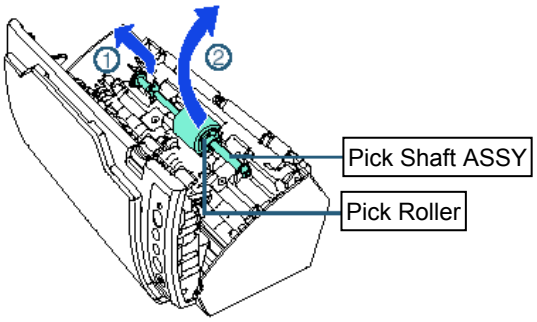
* Hold the pickup tabs on both ends of the sheet guide (Guide P ASSY) and pull it out as you push the tabs inwards.

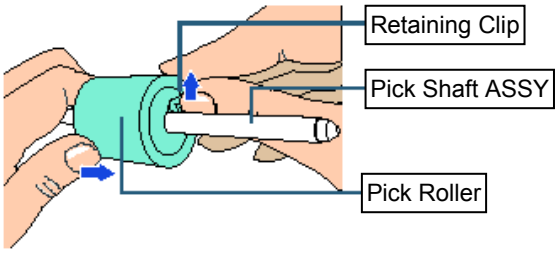
(4) Rotate the bushing (left) in the direction of the arrow.



(5) Slightly pull up the left part of the Pick Shaft ASSY (about 5 mm), move it towards the left side, and then lift it up.

(6) Remove the Pick Roller from its shaft by lifting the retaining clip.





<Installation>

Follow the above procedure in reverse.

NOTICE

Note the following at installation:

- After replacing the parts, perform adjustments by referring to Section 4.1.1 “Adjsutments after Maintenance Parts Replacement”.
- The Pick Shaft ASSY does not include the Pick Roller. Reuse the Pick Roller.
- After replacing the Pick Shaft ASSY, make sure that the Pick Shaft ASSY and the Roller are installed securely. Otherwise feeding errors such as paper jam may occur.

6.11.2 Optical Unit [for Front Side Scanning]

NOTICE

Refer to Section 4.2.11 for the part number and appearance of the Optical Unit.

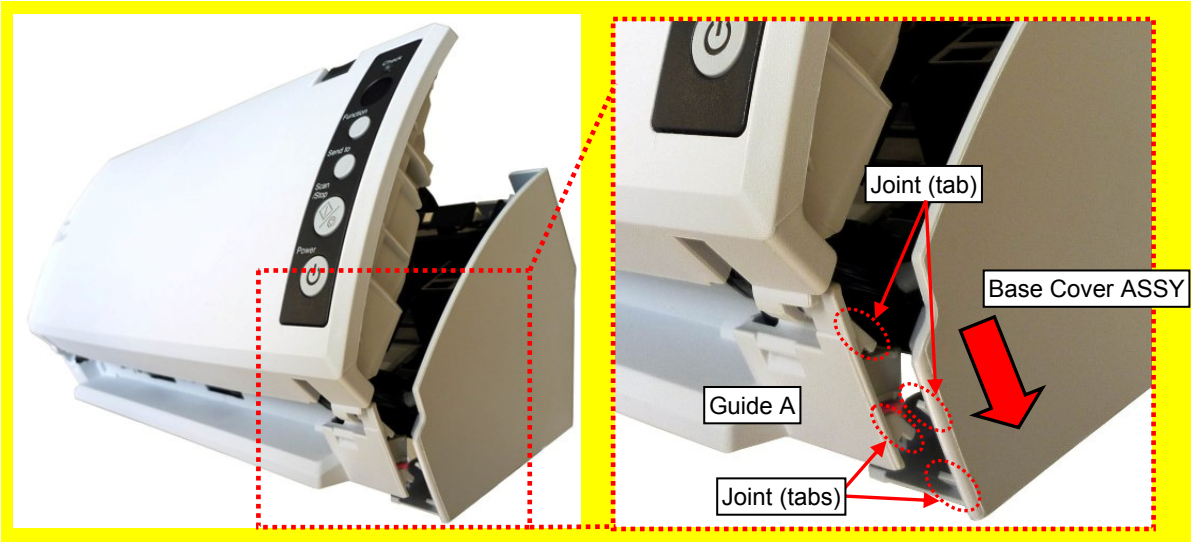
<Removal>

(1) Remove the following parts.

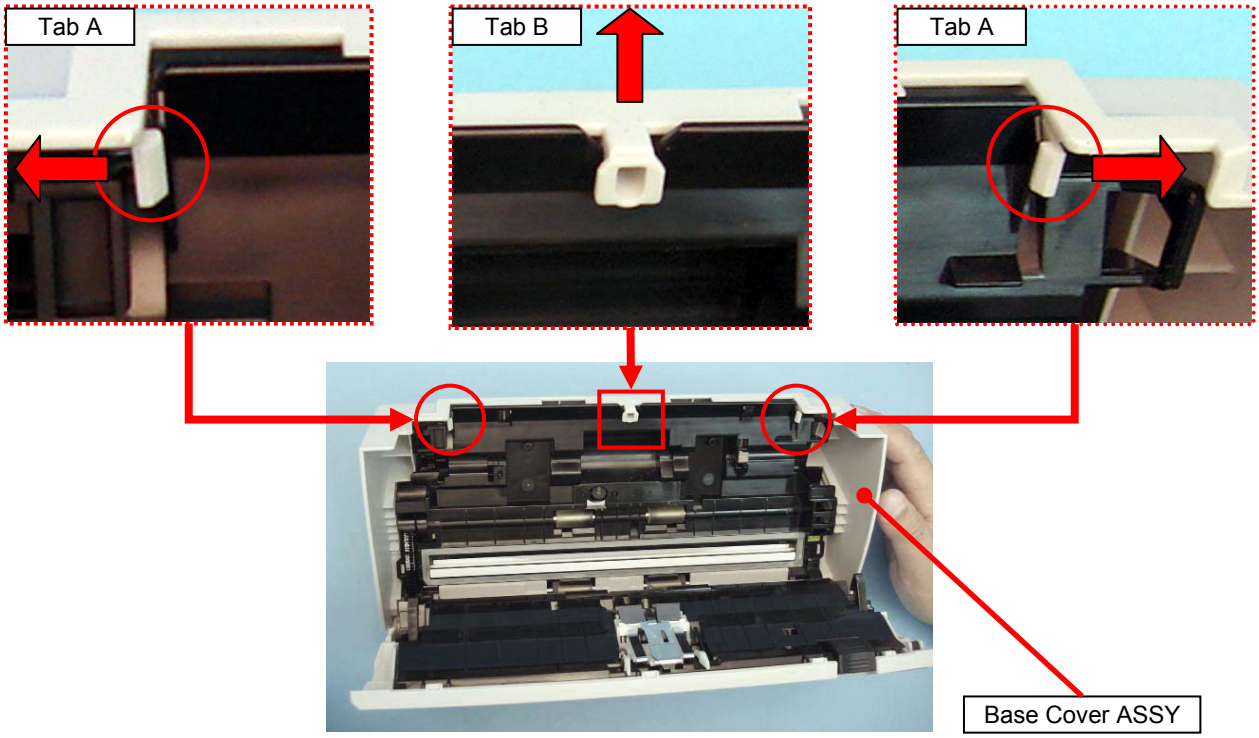
- Chute ASSY (Refer to Section 6.8.1.)
- Stacker ASSY (Refer to Section 6.8.2.)
- PCA Unit [in the removal procedure for Control PCA/Analog PCA] (Refer to steps (2) to (4) in Section 6.7.1.)
- Guide P ASSY (Refer to Section 6.8.3.)

(2) Remove the Base Cover ASSY in the direction of the arrow, and separate the joint (tabs) of the Guide A and Base Cover ASSY.

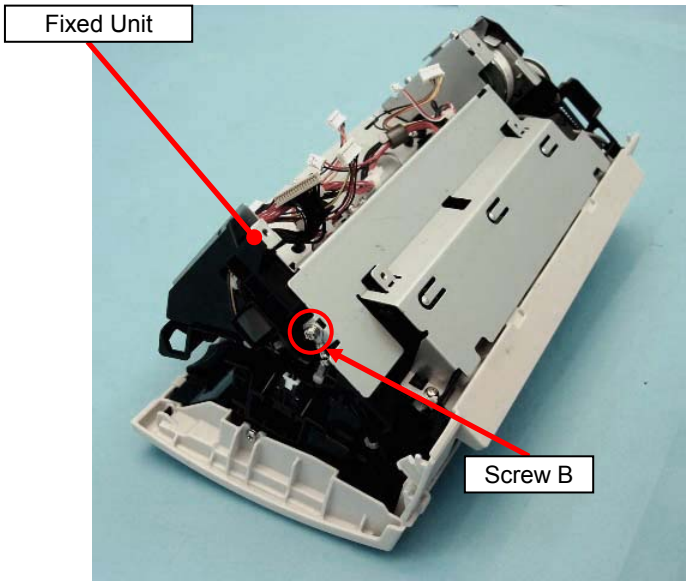
- Remove the left side in the same procedure.



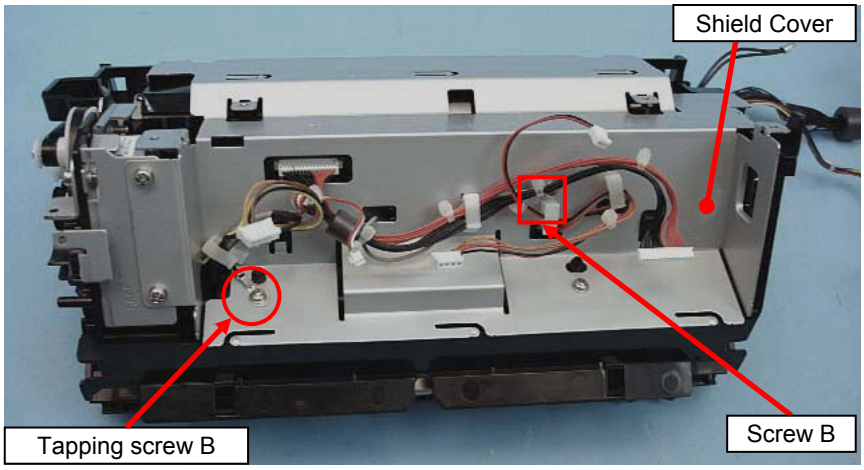
(3) Unlatch two tabs A at right and left sides (circled) in the directions of the arrows, and then unlatch one tab B (enclosed with square) upward to remove the Base Cover ASSY.



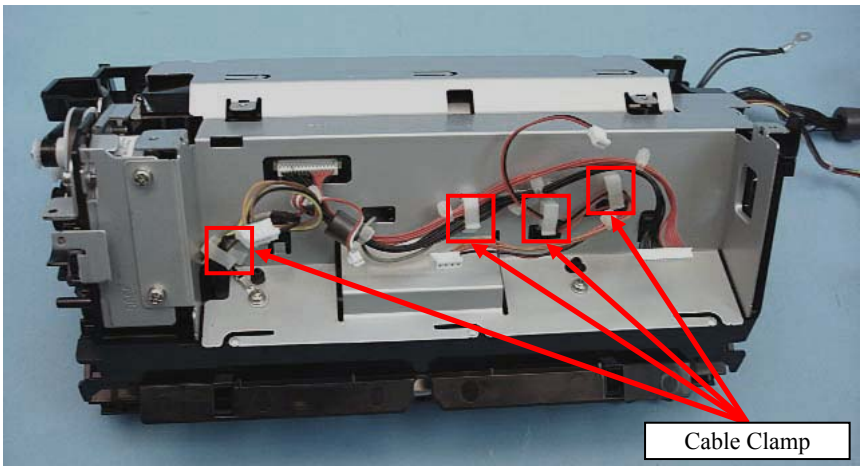
(4) Remove a screw B (circled) that secures the FG Cable from the side of the Fixed Unit.



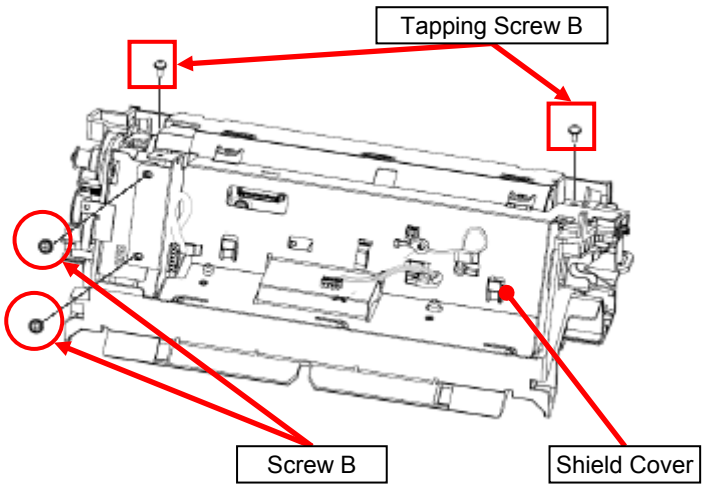
(5) Remove a tapping screw B (circled) and a screw B that secure the FG Cable fixed on the Shield Cover to remove the FG Cable.



(6) Remove all cables from four clamps (enclosed with squares) on the Shield Cover.



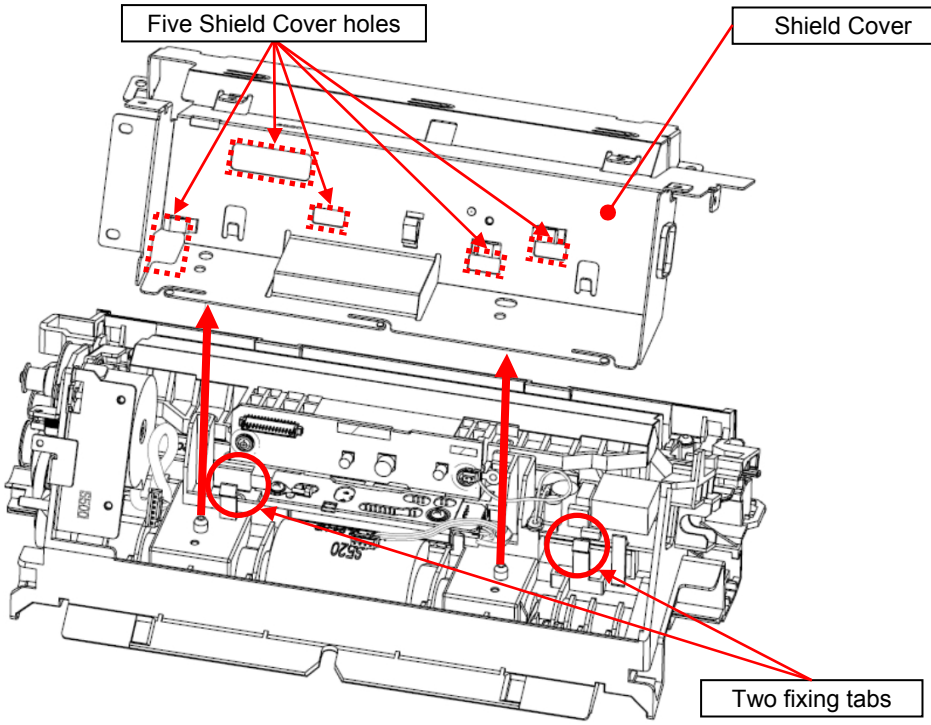
(7) Remove two screws B (circled) and two tapping screws B (enclosed with squares) that secure the Shield Cover.



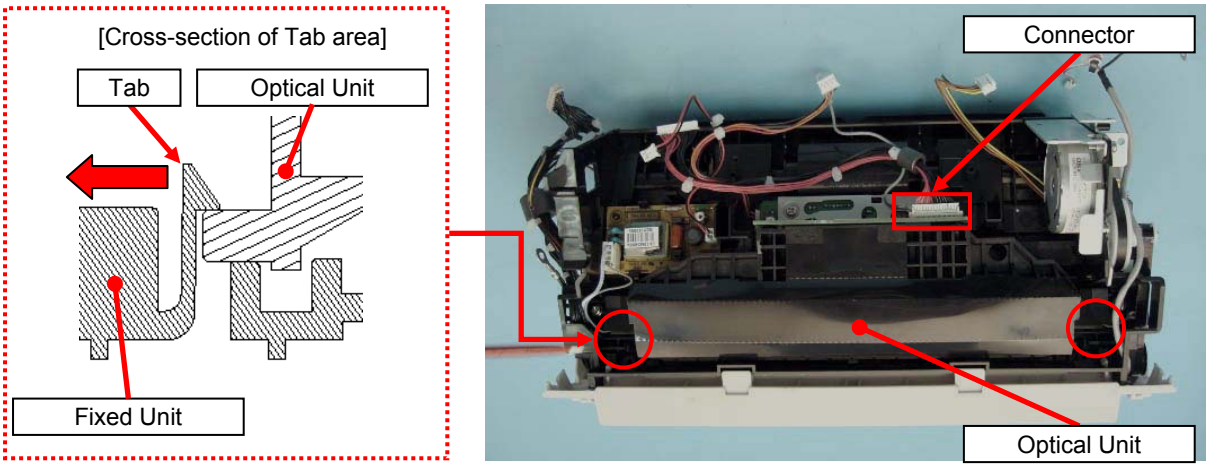
(8) Unlatch two fixing tabs (circled). Lifting five cables upward to pull out, remove the Shield Cover.

NOTICE

Be careful not to damage the cables when pulling them out of the five holes (enclosed with squares) on the Shield Cover.



(9) Disconnect a connector (enclosed with square) from the Optical Unit.
(10) Unlatch two tabs (circled) on the Fixed Unit, and then unhook the Optical Unit.



<Installation>
Follow the above procedure in reverse.

NOTICE

Note the following at installation:

- After replacing the parts, perform adjustments by referring to Section 4.1.1 “Adjsutments after Maintenance Parts Replacement”.
- Refer to Section 6.13.1 “Wiring and Clamping at Shield Cover” when connecting the cable at the Shield Cover.
- Refer to Section 6.13.2 “Cable Wiring at PCA Unit” when connecting the cable at the PCA Unit.
- Check that the Optical Unit is securely latched onto the two tabs on the Fixed Unit.

6.11.3 Inverter [for Front Side Scanning]

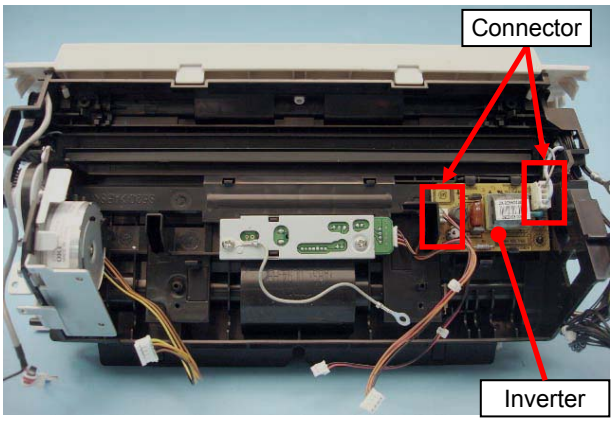
NOTICE

Refer to Section 4.2.10 for the part number and appearance of the Inverter.

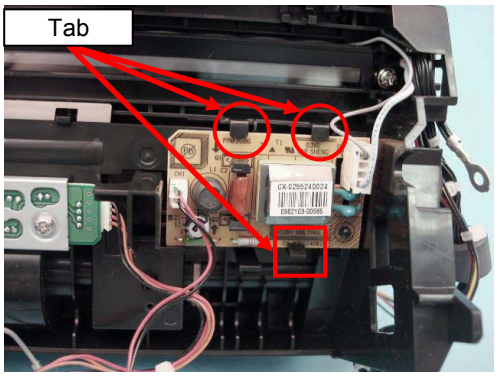
<Removal>

(1) Remove the following parts.
- Chute ASSY (Refer to Section 6.8.1.)
- Stacker ASSY (Refer to Section 6.8.2.)
- PCA Unit [in the removal procedure for Control PCA/Analog PCA] (Refer to steps (2) to (4) in Section 6.7.1.)
- Guide P ASSY (Refer to Section 6.8.3.)
- Optical Unit [for front side scanning] (Refer to steps (2) to (9) in Section 6.11.2.)

(2) Disconnect two connectors connected to the Inverter (enclosed with square).



(3) Unlatch the lower tab (enclosed with square) that secures the Inverter, raise the Inverter, and then unlatch two tabs (circled) to remove the Inverter.



<Installation>

Follow the above procedure in reverse.

NOTICE

Note the following at installation:
- After replacing the parts, perform adjustments by referring to Section 4.1.1 “Adjsutments after Maintenance Parts Replacement”.
- Refer to Section 6.13.1 “Wiring and Clamping at Shield Cover” when connecting the cable at the Shield Cover.
- Refer to Section 6.13.2 “Cable Wiring at PCA Unit” when connecting the cable at the PCA Unit.

6.11.4 Lamp [for Front Side Scanning]

NOTICE

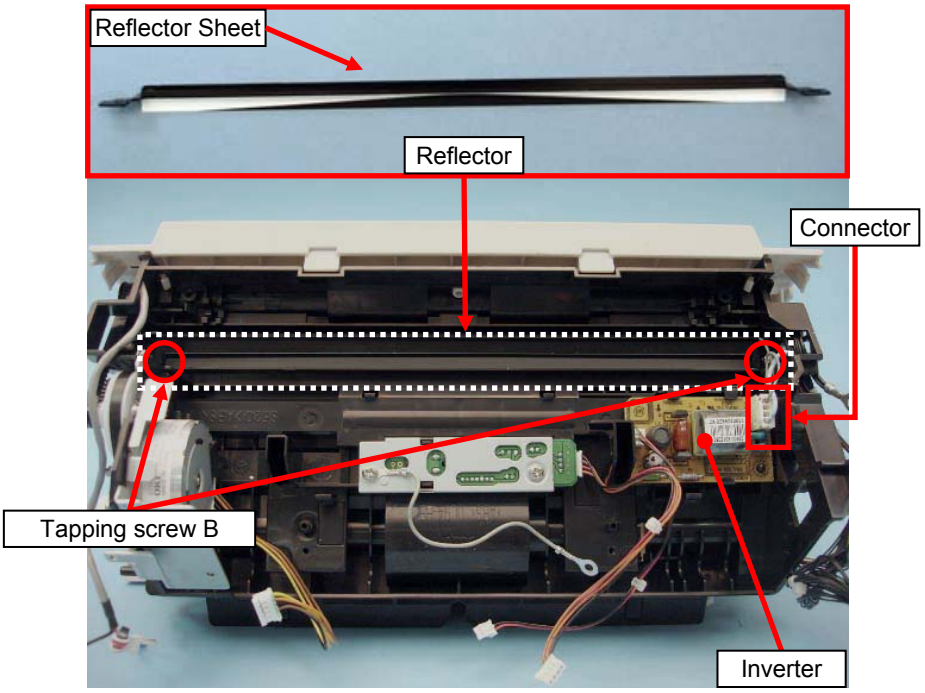
Refer to Section 4.2.9 for the part number and appearance of the Lamp.

<Removal>

(1) Remove the following parts.
- Chute ASSY (Refer to Section 6.8.1.)
- Stacker ASSY (Refer to Section 6.8.2.)
- PCA Unit [in the removal procedure for Control PCA/Analog PCA] (Refer to steps (2) to (4) in Section 6.7.1.)
- Guide P ASSY (Refer to Section 6.8.3.)
- Optical Unit [for front side scanning] (Refer to steps (2) to (9) in Section 6.11.2.)

(2) Disconnect a connector for the Lamp from the Inverter (enclosed with square).

(3) Remove two tapping screws B (circled) securing the Reflector, and then remove the Reflector.

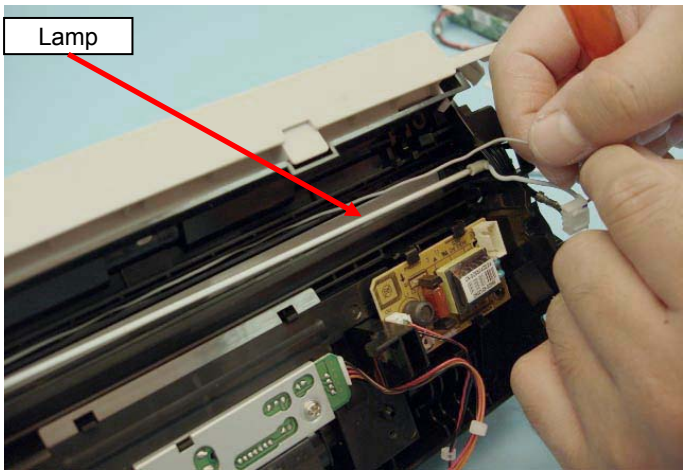


Note **Do not wipe the Reflector Sheet with alcohol because it is printed.**

(4) Remove the Lamp from the Fixed Unit frame to remove.

NOTICE

A fluorescent tube (glass) is used for the Lamp. It will easily break which may cause injury. Handle it with care.



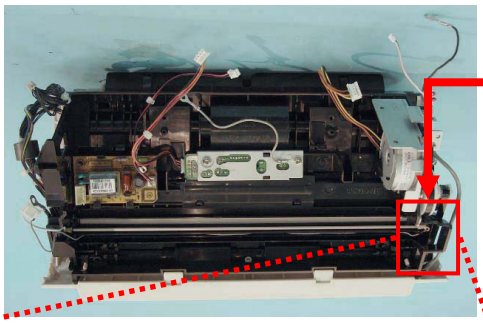
<Installation>

Follow the above procedure in reverse.

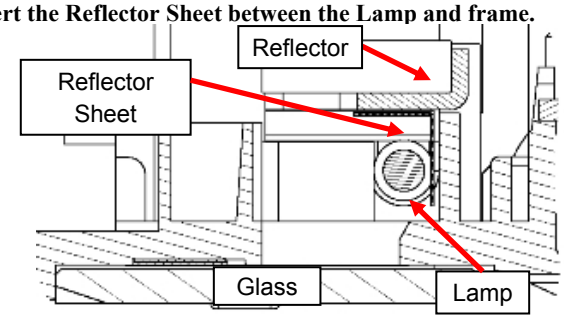
NOTICE

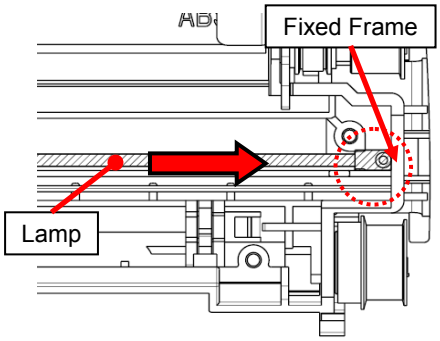
Note the following at installation:

- **A fluorescent tube (glass) is used for the Lamp. It will easily break which may cause injury. Handle it with care.**
- Insert the Reflector sheet between the Lamp and frame.
- Bump the edge of the Lamp into the Fixed frame.



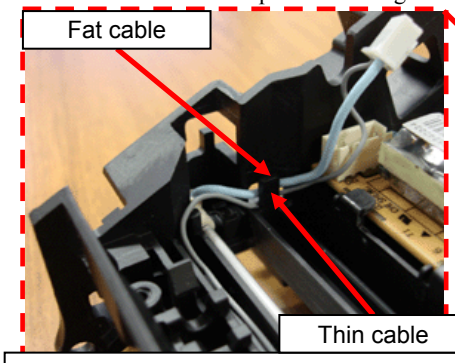
[Cross Section View]
Insert the Reflector Sheet between the Lamp and frame.



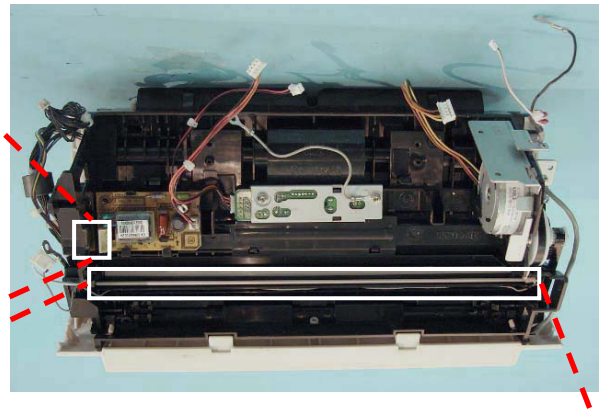


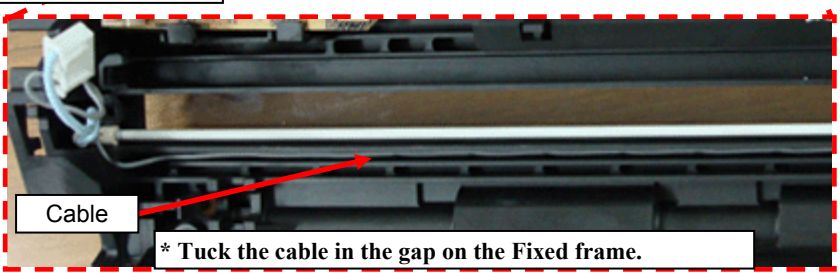
Bump the edge of the Lamp into the Fixed Frame.

- Route the Lamp cables through the groove on the Fixed frame as shown in the photos below.



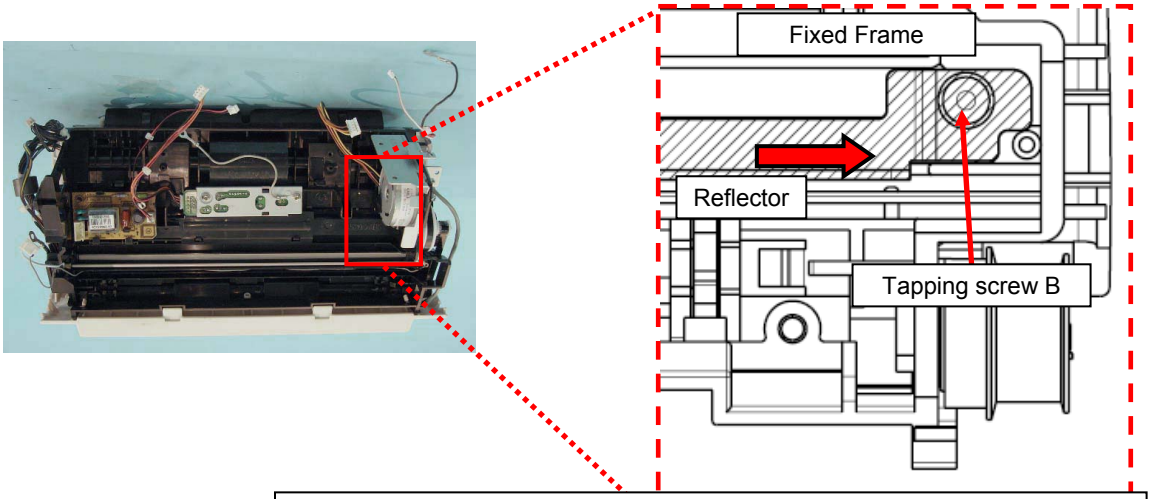
*** The fat cable must come above the thin cable when routing the cables in the gap on the Fixed frame.**





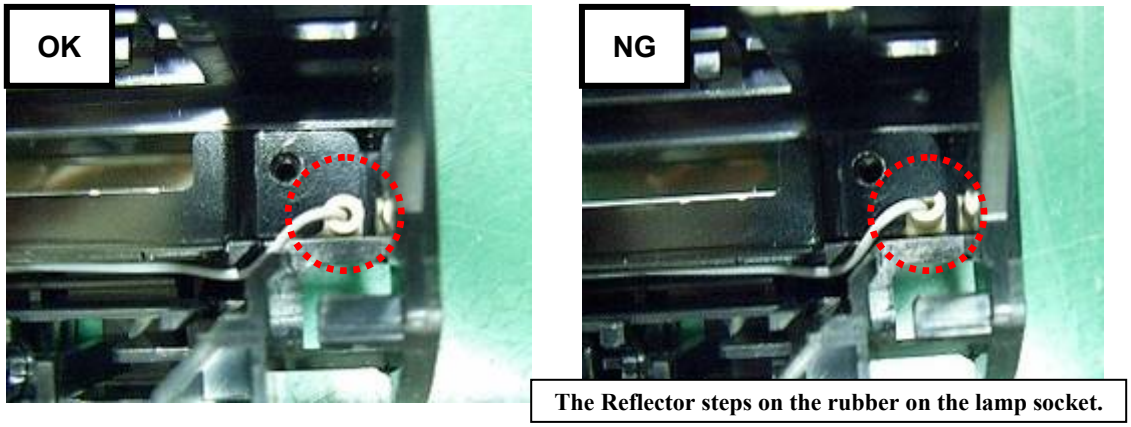
*** Tuck the cable in the gap on the Fixed frame.**

- When installaing the Reflector, bump it in the direction of the arrow, and tighten with the tapping screw B.



Bump the Reflector in the direction of the arrow, and fix with the tapping screw B.

- When installaing the Reflector, the Reflector should not step upon the rubber on the lamp soecket.



The Reflector steps on the rubber on the lamp socket.

- After replacing the parts, perform adjustments by referring to Section 4.1.1 “Adjsutments after Maintenance Parts Replacement”.
- Refer to Section 6.13.1 “Wiring and Clamping at Shield Cover” when connecting the cable at the Shield Cover.
- Refer to Section 6.13.2 “Cable Wiring at PCA Unit” when connecting the cable at the PCA Unit.

6.11.5 US Sensor F

NOTICE

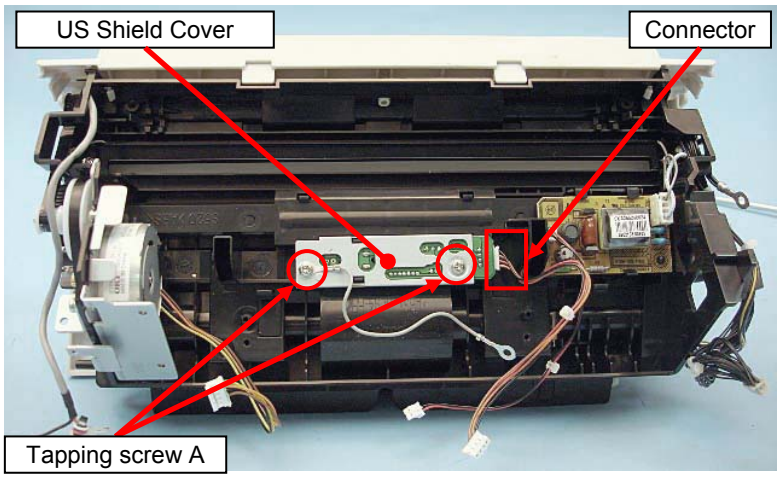
Refer to Section 4.2.23 for the part number and appearance of the US Sensor F.

<Removal>

(1) Remove the following parts.
- Chute ASSY (Refer to Section 6.8.1.)
- Stacker ASSY (Refer to Section 6.8.2.)
- PCA Unit [in the removal procedure for Control PCA/Analog PCA] (Refer to steps (2) to (4) in Section 6.7.1.)
- Guide P ASSY (Refer to Section 6.8.3.)
- Optical Unit [for front side scanning] (Refer to steps (2) to (9) in Section 6.11.2.)

(2) Remove two tapping screws A (circled) that secure the US Shield Cover to remove the US Shield Cover.

(3) Disconnect the cable from the connector (enclosed with square) and remove the US Sensor F.



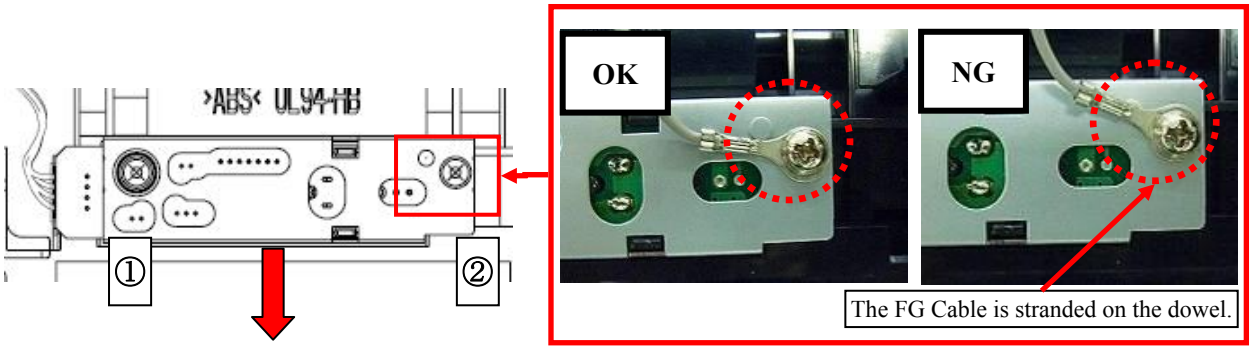
<Installation>

Follow the above procedure in reverse.

NOTICE

Note the following at installation:

- After replacing the parts, perform adjustments by referring to Section 4.1.1 “Adjustments after Maintenance Parts Replacement”.
- Refer to Section 6.13.1 “Wiring and Clamping at Shield Cover” when connecting the cable at the Shield Cover.
- Refer to Section 6.13.2 “Cable Wiring at PCA Unit” when connecting the cable at the PCA Unit.
- When installing the US Shield Cover, pull the US Shield Cover in the direction of the arrow and fix it with the tapping screws A in the order of ① then ②.
- Install the FG Cable so that its terminal touches the flat plate surface.
  (The FG Cable should not be stranded on the dowel.)



6.11.6 Motor

NOTICE

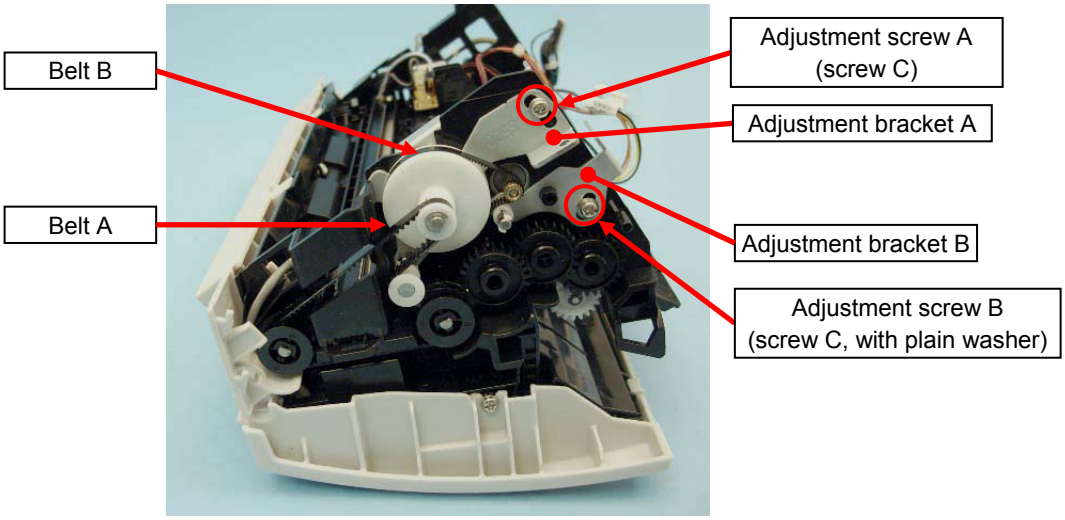
Refer to Section 4.2.21 for the part number and appearance of the Motor.

<Removal>

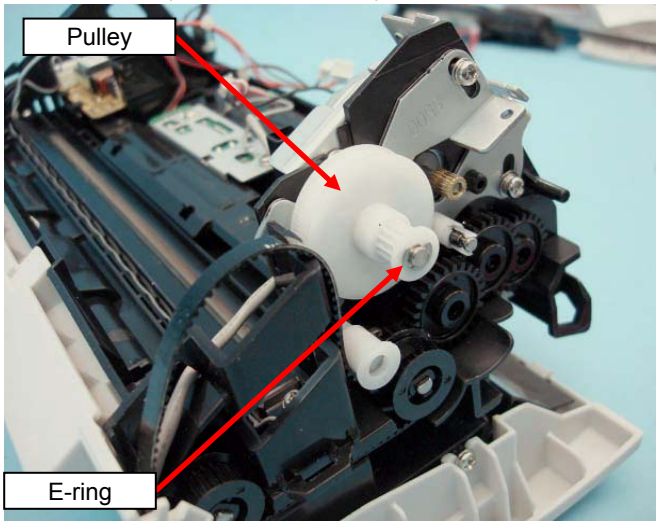
(1) Remove the following parts.
- Chute ASSY (Refer to Section 6.8.1.)
- Stacker ASSY (Refer to Section 6.8.2.)
- PCA Unit [in the removal procedure for Control PCA/Analog PCA] (Refer to steps (2) to (4) in Section 6.7.1.)
- Guide P ASSY (Refer to Section 6.8.3.)
- Optical Unit [for front side scanning] (Refer to steps (2) to (9) in Section 6.11.2.)

(2) Loosen the adjustment screw A (screw C) from the side of the Fixed Unit to remove the Belt A.

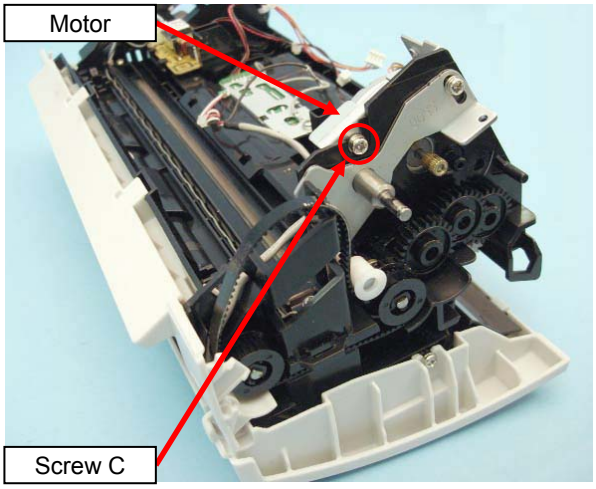
(3) Loosen the adjustment screw B (screw C, with plain washer), and remove the Belt B and the adjustment bracket B.



(4) Remove the E-ring that secures the Pulley to remove the Pulley.



(5) Remove a screw C (circled) that secures the Motor to remove the Motor.



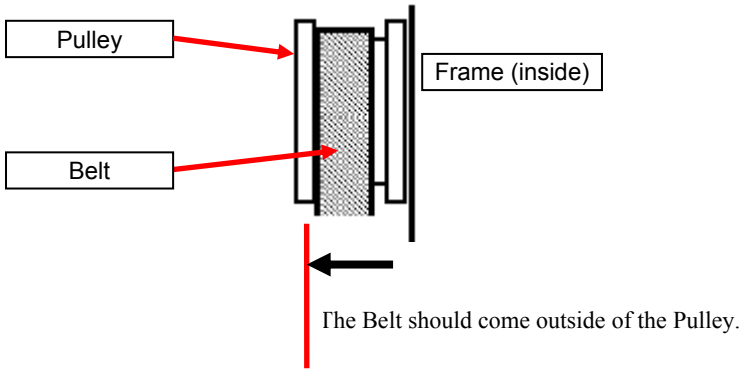
<Installation>

Follow the above procedure in reverse.

NOTICE

Note the following at installation:

- When installing the adjustment braket B, be sure to attach the plain washer with the adjsutment screw B.
- After replacing the parts, perform adjustments by referring to Section 4.1.1 “Adjsutments after Maintenance Parts Replacement”.
- Refer to Section 6.13.1 “Wiring and Clamping at Shield Cover” when connecting the cable at the Shield Cover.
- Refer to Section 6.13.2 “Cable Wiring at PCA Unit” when connecting the cable at the PCA Unit.
- Make sure that the Optical Unit is securely latched with the two tabs on the Fixed Unit.
- Tension adjustment with a spring gauge is required for the Belt installation (tightening the adjustment screw). (Refer to Section 6.12.)
- Set the Belt outside of the Pulley, and rotate the gear a few times to check the operation after belt installation.



6.11.7 Feed Roller

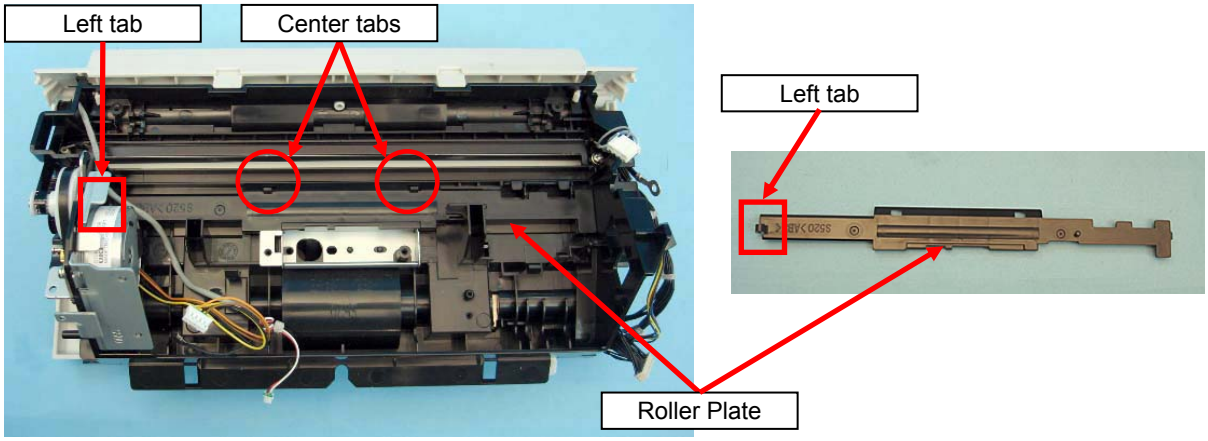
NOTICE

Refer to Section 4.2.18 for the part number and appearance of the Feed Roller.

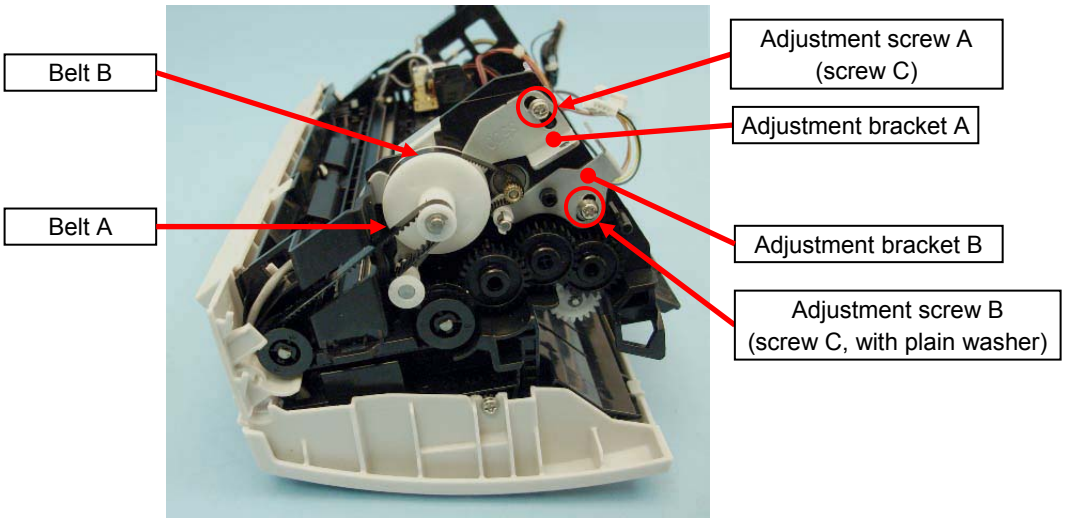
<Removal>

(1) Remove the following parts.
- Chute ASSY (Refer to Section 6.8.1.)
- Stacker ASSY (Refer to Section 6.8.2.)
- PCA Unit [in the removal procedure for Control PCA/Analog PCA] (Refer to steps (2) to (4) in Section 6.7.1.)
- Guide P ASSY (Refer to Section 6.8.3.)
- Optical Unit [for front side scanning] (Refer to steps (2) to (9) in Section 6.11.2.)
- Inverter [for front side scanning] (Refer to steps (2) to (3) in Section 6.11.3.)
- US Sensor F (Refer to steps (2) to (3) in Section 6.11.5.)

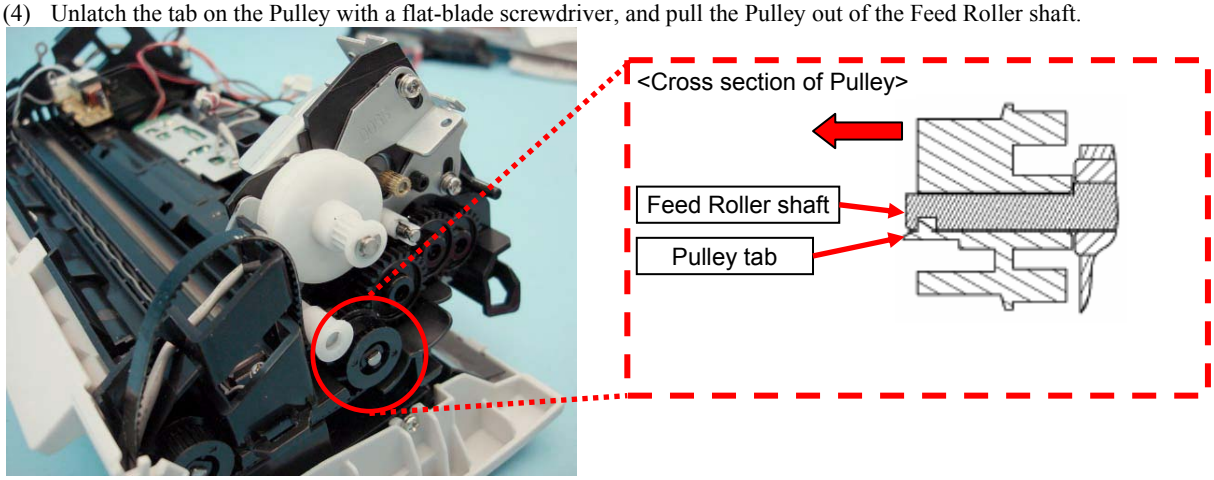
(2) Unlatch two tabs (circled) at the center that secure the Roller Plate and a tab (enclosed with square) at the left of the Roller Plate. Raise the Roller Plate, and pull it out of the frame.



(3) Loosen the adjustment screw A and adjustment screw B (two screws C, circled), and remove the Belt A and Belt B.

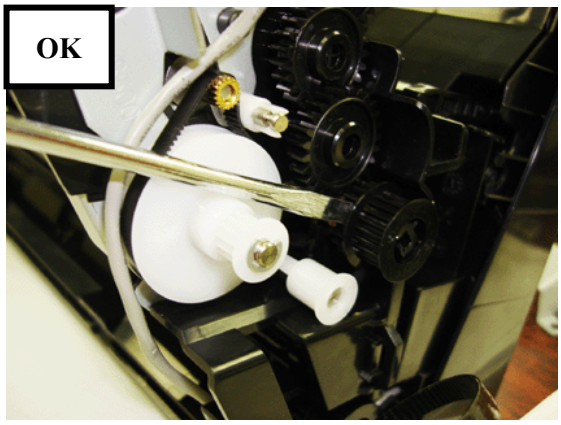


(4) Unlatch the tab on the Pulley with a flat-blade screwdriver, and pull the Pulley out of the Feed Roller shaft.



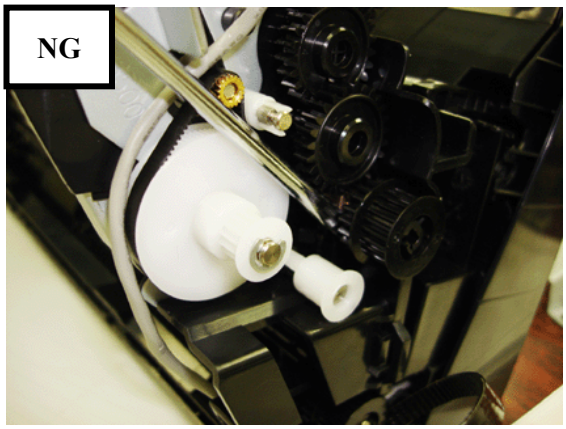
NOTICE

When pulling the Pulley out of the Feed Roller shaft with a flat-blade screwdriver, be careful not to damage the removed pulley or other pulleys around it.



Good!

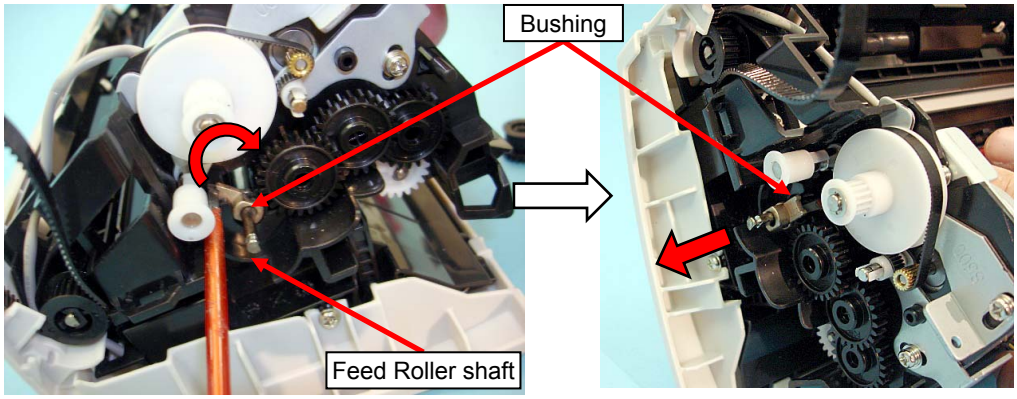
* Apply the screwdriver to the “center" of the Pulley at the front.



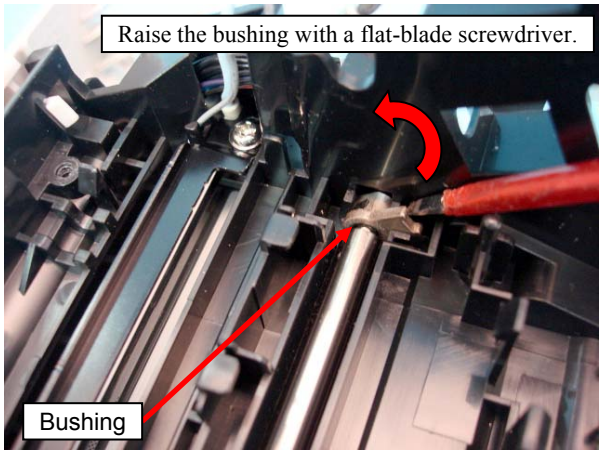
No Good!

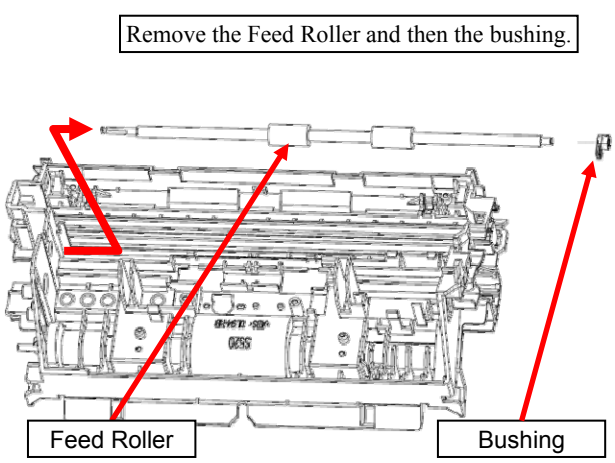
* If the driver touches the “edge” of the Pulley at the front, the Pulley may be damaged.

(5) Raise the bushing at the left side with a flat-blade screwdriver, and pull it out of the Feed Roller shaft to remove.



(6) Raise the bushing at the right side that secures the Feed roller with a flat-blade screwdriver.
(7) Remove the Feed Roller.
(8) Remove the bushing at the right side from the Feed Roller.





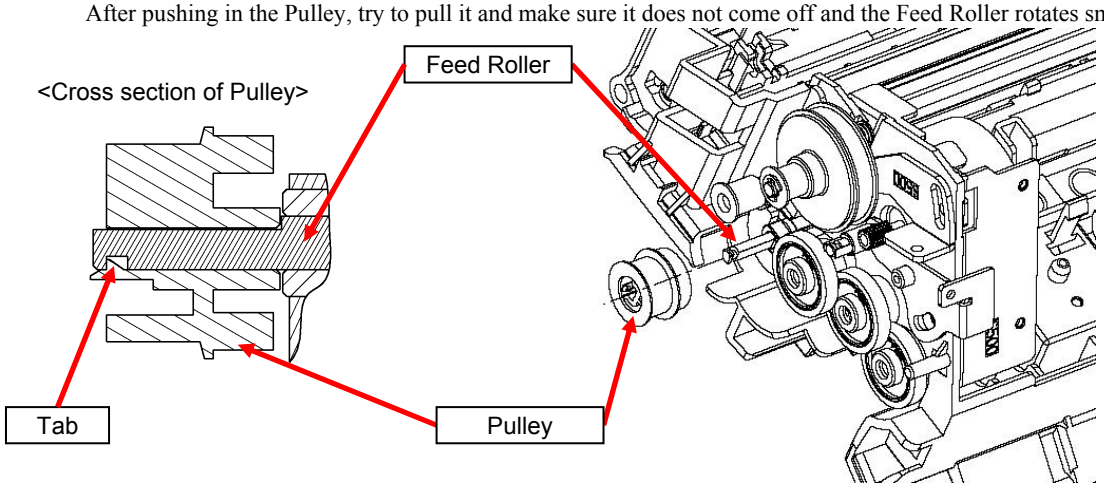
<Installation>

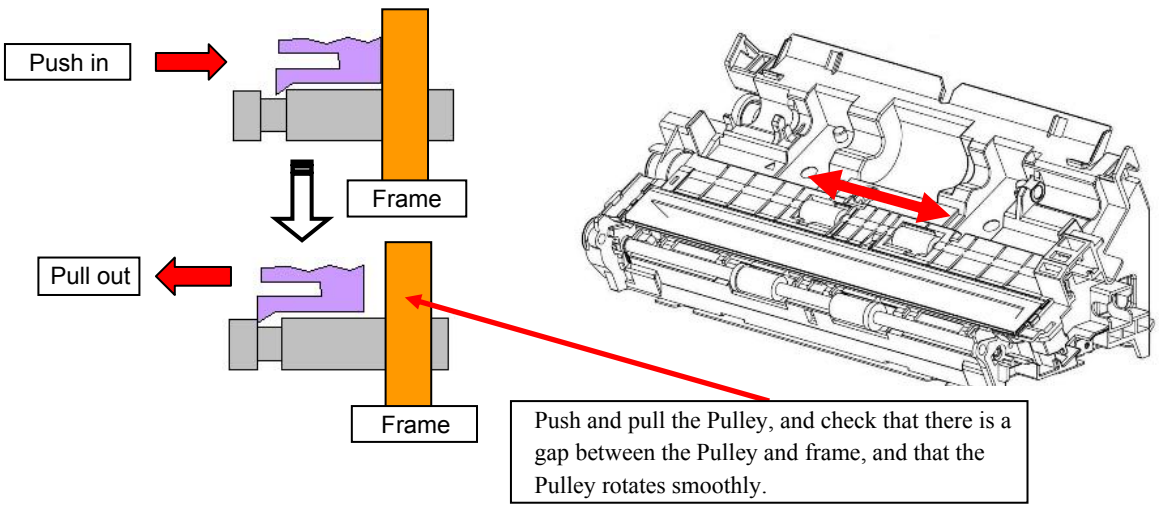
Follow the above procedure in reverse.

NOTICE

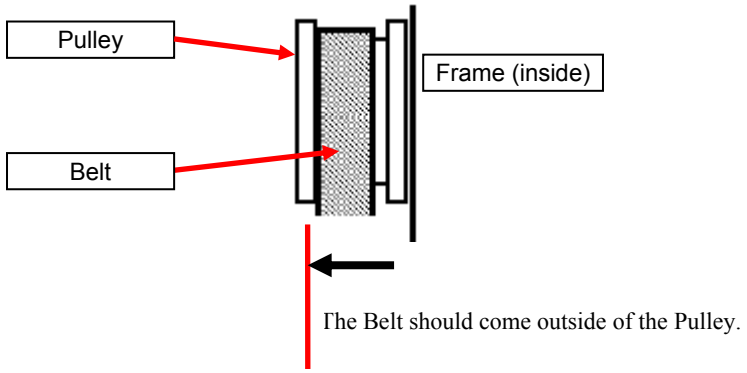
Note the following at installation:

- When installing the Pulley, check that the Pulley is set in the groove on the Feed Roller.
  After pushing in the Pulley, try to pull it and make sure it does not come off and the Feed Roller rotates smoothly.





- Tension adjustment with a spring gauge is required for the Belt installation (tightening the adjustment screw). (Refer to Section 6.12.)
- Set the Belt outside of the Pulley, and rotate the gear a few times to check the operation after belt installation.



- Refer to Section 6.13.1 “Wiring and Clamping at Shield Cover” when connecting the cable at the Shield Cover.
- Refer to Section 6.13.2 “Cable Wiring at PCA Unit” when connecting the cable at the PCA Unit.
- After replacing the parts, perform adjustments by referring to Section 4.1.1 “Adjsutments after Maintenance Parts Replacement”.

6.11.8 Exit Roller / HK Ring

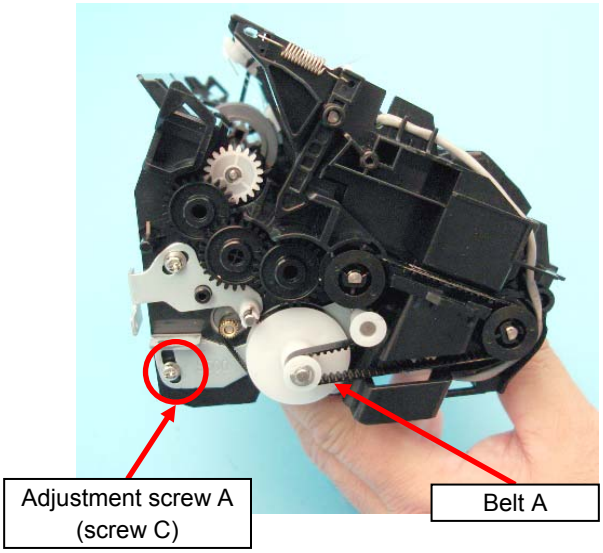
NOTICE

Refer to the following sections for the part number and appearance of the maintenance parts:
- Exit Roller: Section 4.2.19
- HK Ring: Section 4.2.20

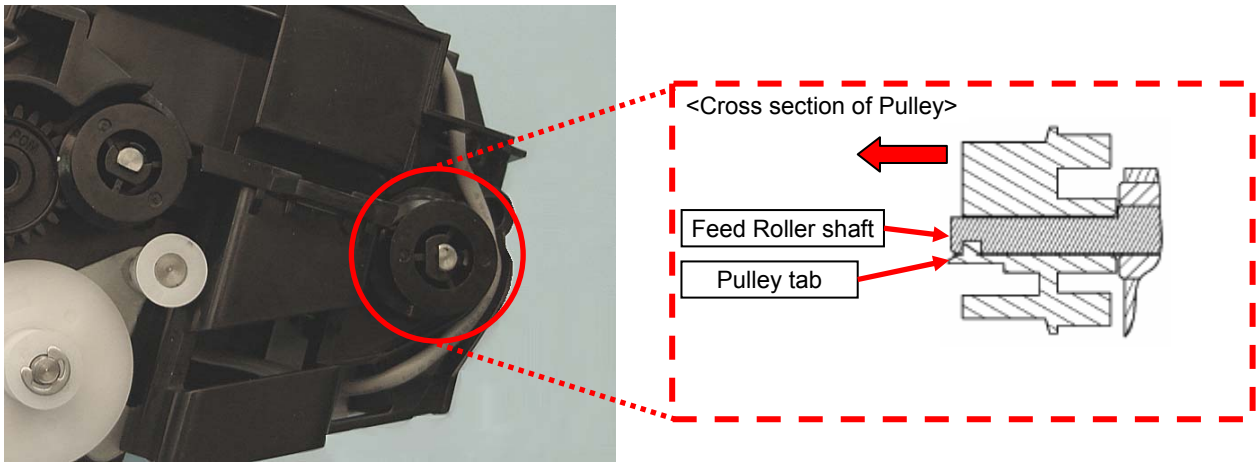
<Removal>

(1) Remove the following parts.
- Chute ASSY (Refer to Section 6.8.1.)
- Stacker ASSY (Refer to Section 6.8.2.)
- PCA Unit [in the removal procedure for Control PCA/Analog PCA] (Refer to steps (2) to (4) in Section 6.7.1.)
- Guide P ASSY (Refer to Section 6.8.3.)
- Base Cover ASSY [in the removal procedure for Optical Unit (for front side scanning)] (Refer to step (2) in Section 6.11.2.)
- Panel PCA (Refer to steps (2) to (4) in Section 6.10.1.)
- Top Cover ASSY (Refer to steps (2) to (3) in Section 6.8.4.)
- Guide A (Refer to step (2) in Section 6.8.5.)

(2) Loosen the adjustment screw A (screw C, circled), and then remove the Belt A.



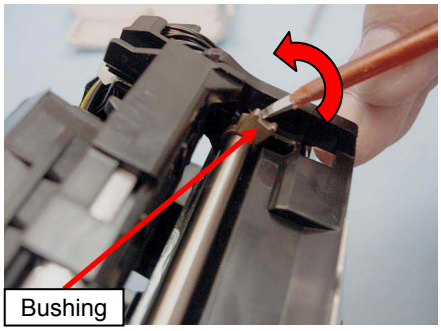
(3) Unlatch the tab on the Pulley with a flat-blade screwdriver, and pull the Pulley out of the Feed Roller shaft.



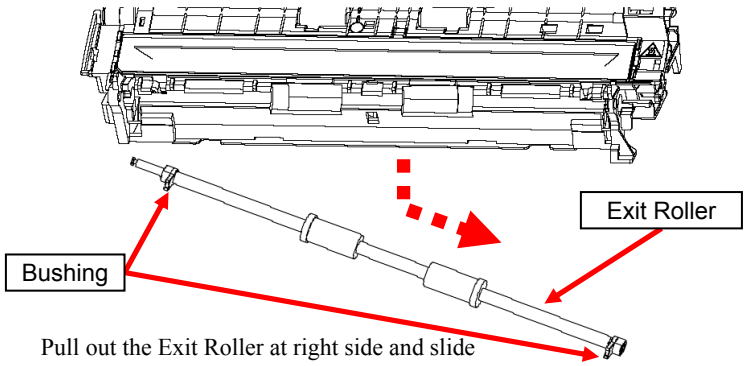
(4) Raise the bushings at right and left sides with a flat-blade screwdriver.

(5) Pull the Exit Roller at right side with the bushing, and slide it in the direction of the arrow to remove.

(6) Remove the bushings at right and left sides from the remove Exit Roller.



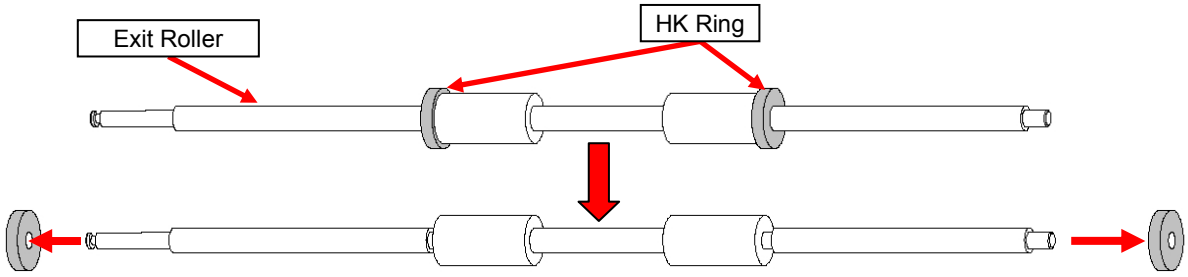
Raise the bushings at right and left sides with a flat-blade screwdriver.



Pull out the Exit Roller at right side and slide it in the direction of the arrow to remove.

<Replacing the HK Ring only>

(7) Remove the HK Rings from the Exit Roller.



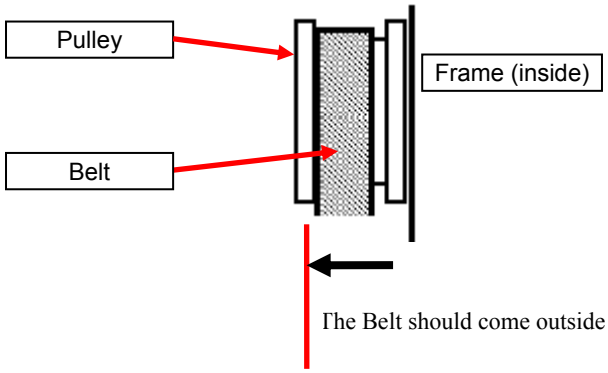
<Installation>

Follow the above procedure in reverse.

NOTICE

Note the following at installation:

- When installing the Pulley, check that the Pulley is set in the groove on the Exit Roller.
  After pushing in the Pulley, try to pull it and make sure it does not come off and the Exit Roller rotates smoothly.
- Tension adjustment with a spring gauge is required for the Belt installation (tightening the screw C). (Refer to Section 6.12.)
- Set the Belt outside of the Pulley, and rotate the gear a few times to check the operation after Belt installation.



The Belt should come outside of the Pulley.

- Refer to Section 6.13.1 “Wiring and Clamping at Shield Cover” when connecting the cable at the Shield Cover.
- Refer to Section 6.13.2 “Cable Wiring at PCA Unit” when connecting the cable at the PCA Unit.
- After replacing the parts, perform adjustments by referring to Section 4.1.1 “Adjsutments after Maintenance Parts Replacement”.

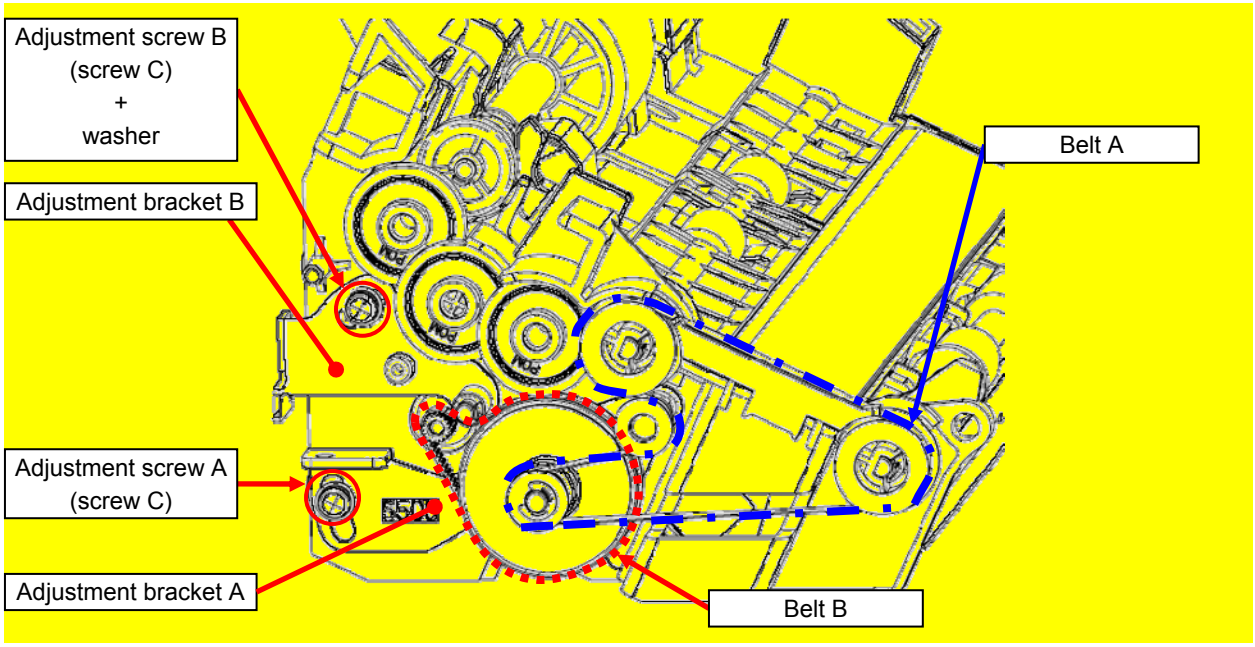
6.12 Belt Tension Adjustment

There are two tools for belt tension adjustment; with a spring gauge and the adjustment spring 2.
The same result can be obtained by either method.

6.12.1 Adjustment with a Spring Gauge

If any of the following parts is removed, belt tension adjustment is required after installation.
Perform adjustment by referring to the procedure below.

■ Parts for which belt needs to be removed:
- Feed Roller: Refer to Section 6.11.7
- Exit Roller: Refer to Section 6.11.8
- HK Ring: Refer to Section 6.11.8
- Motor: Refer to Section 6.11.6

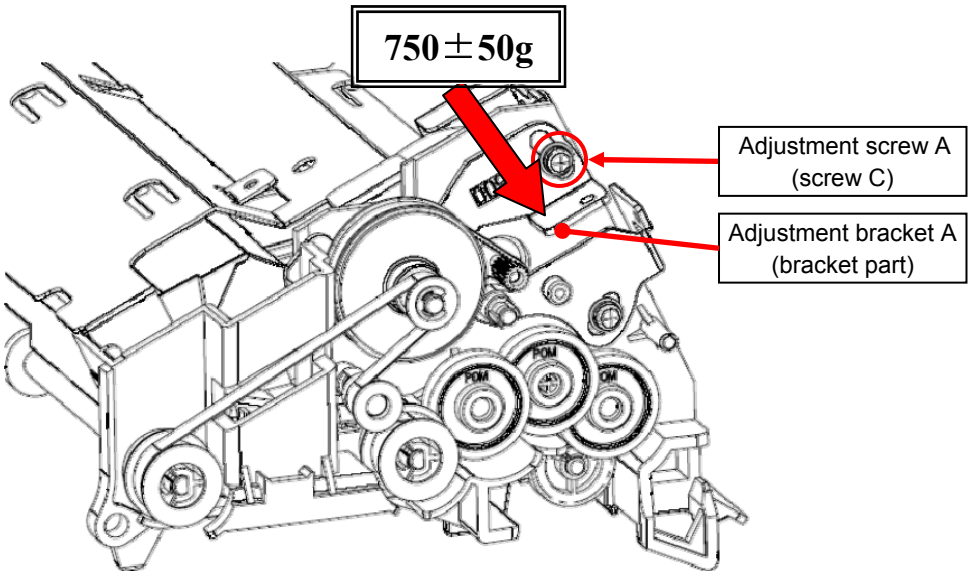


6.12.1.1 Tension Adjustment of Belt A (with Spring Gauge)

Perform the tension adjustment of the "Belt A" in the procedure below:

<<Adjustment Procedure>>

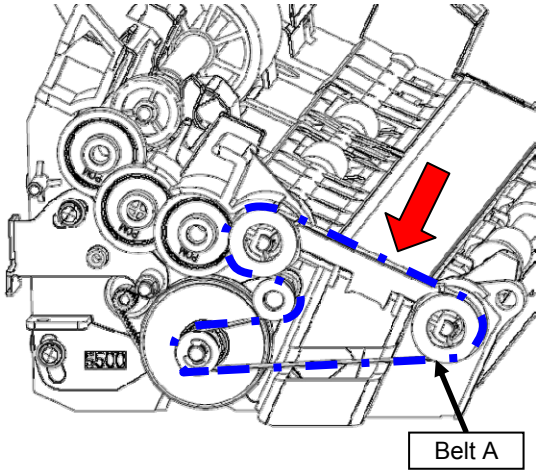
Pushing the spring gauge against the Adjustment bracket A (bracket part) with 750±50g, fix it with the adjustment screw A (screw C).

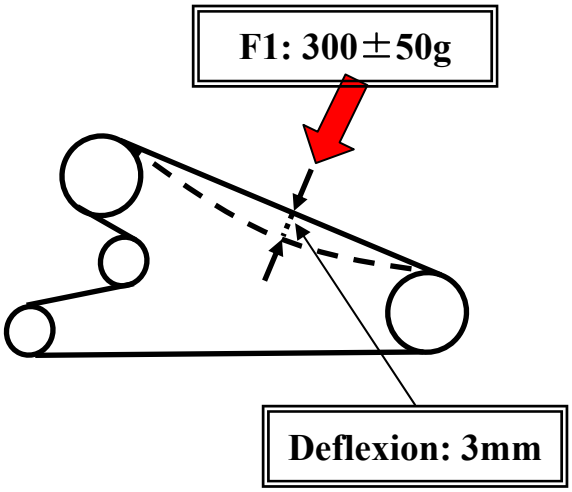


<<Confirmation Procedure>>

Check that the following value is obtained when pushing the Belt in the direction of the arrow (F1).
Follow the adjustment above again if the values are different.

- **Load (F1): 300g±50g**
- **Deflexion (Warp): 3mm**



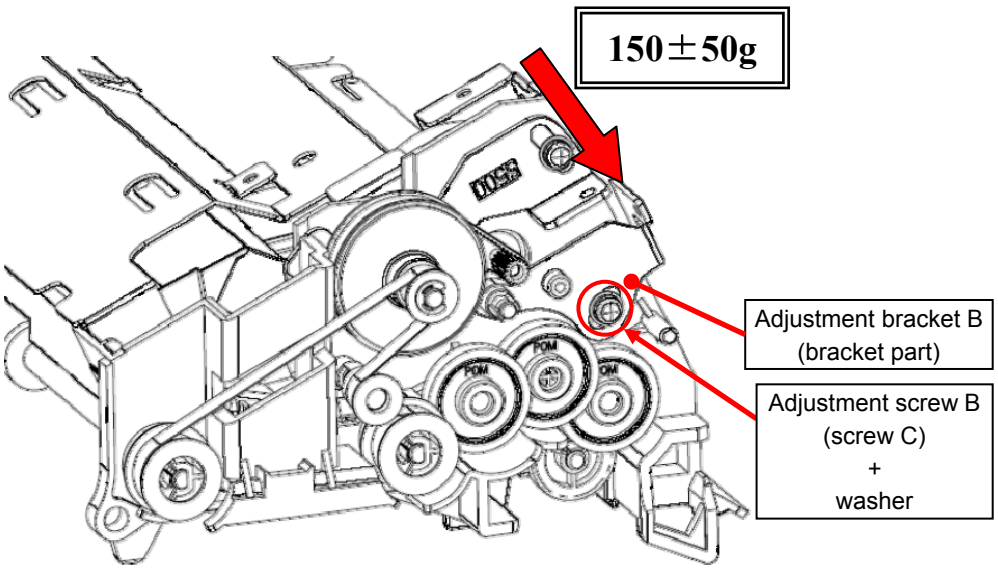


6.12.1.2 Tension Adjustment of Belt B (with Spring Gauge)

Perform the tension adjustment of the "Belt B" in the procedure below:

<<Adjustment Procedure>>

Pushing the spring gauge against the Adjustment bracket B (bracket part) with 150±50g, fix it with the adjustment screw B (screw C).

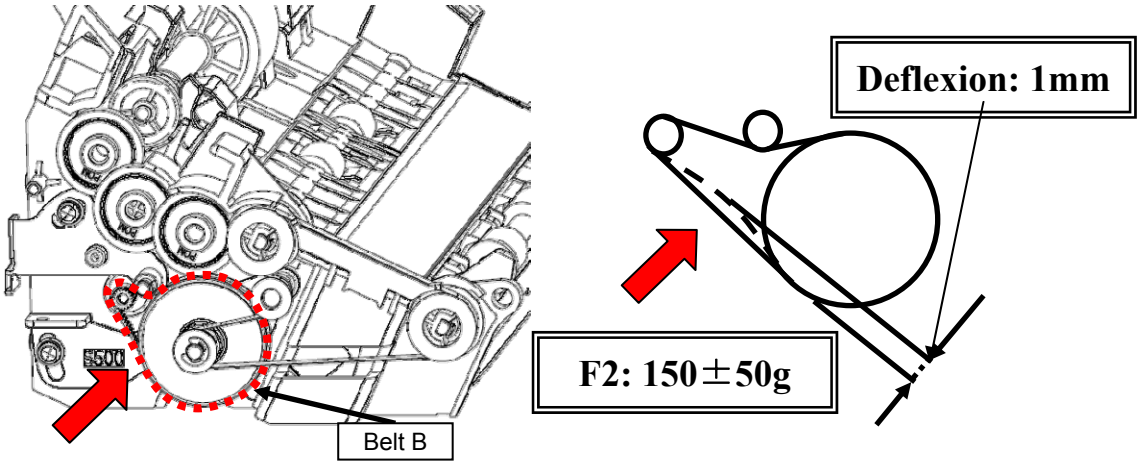


<<Confirmation Procedure>>

Check that the following value is obtained when pushing the Belt in the direction of the arrow (F2).

Follow the adjustment above again if the values are different.

- **Load (F2): 150g±50g**
- **Deflexion (Warp): 1mm**



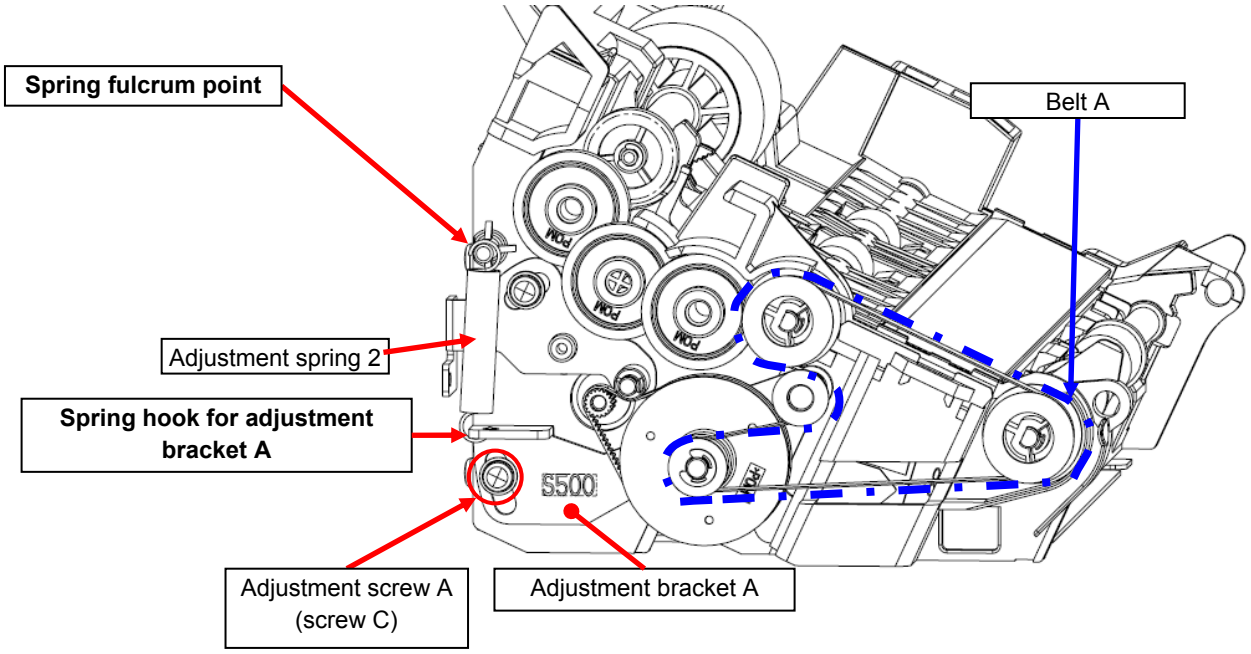
6.12.2 Adjustment with the Adjustment Spring 2

6.12.2.1 Tension Adjustment of Belt A (with Adjustment spring 2)

Perform the tension adjustment of the “Belt A” in the procedure below:

<<Adjustment Procedure>>

Hook the Adjustment Spring 2 on the spring hook for the adjustment bracket A and the spring fulcrum point, and fix it with the adjustment screw A (screw C).

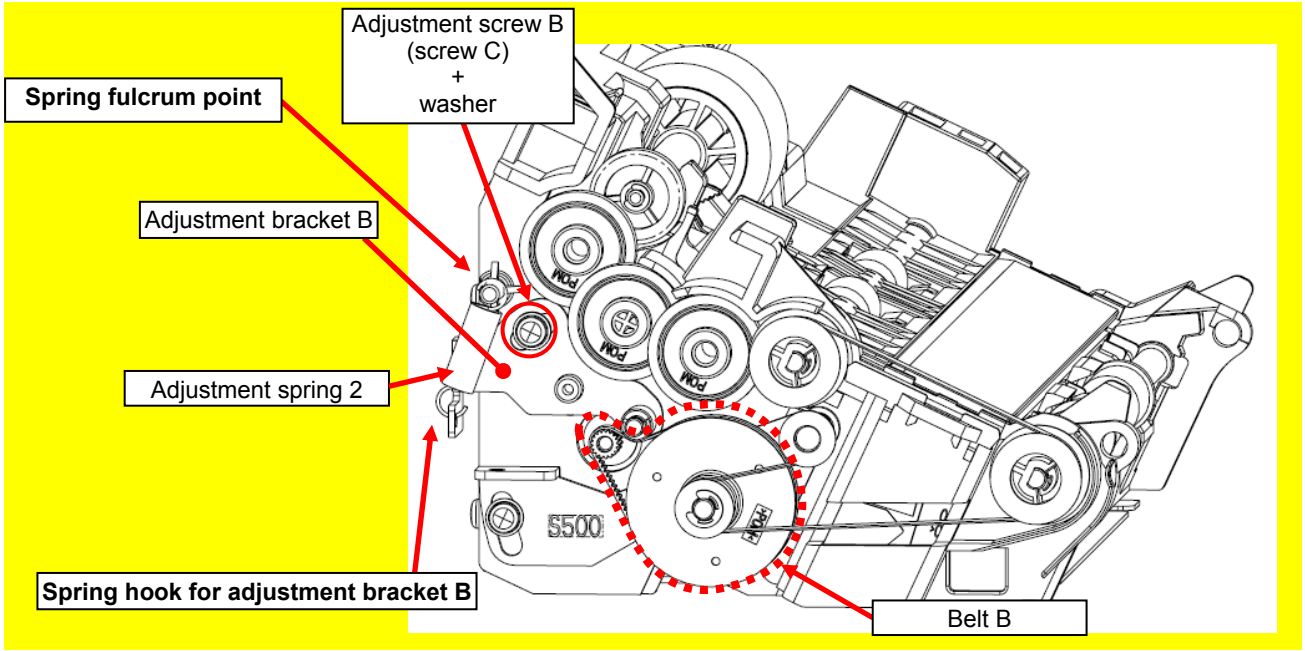


6.12.2.2 Tension Adjustment of Belt B (with Adjustment spring 2)

Perform the tension adjustment of the “Belt A” in the procedure below:

<<Adjustment Procedure>>

Hook the Adjustment Spring 2 on the spring hook for the adjustment bracket A and the spring fulcrum point, and fix it with the adjustment screw A.



6.13 Notes on Installation of Cables and Clamps

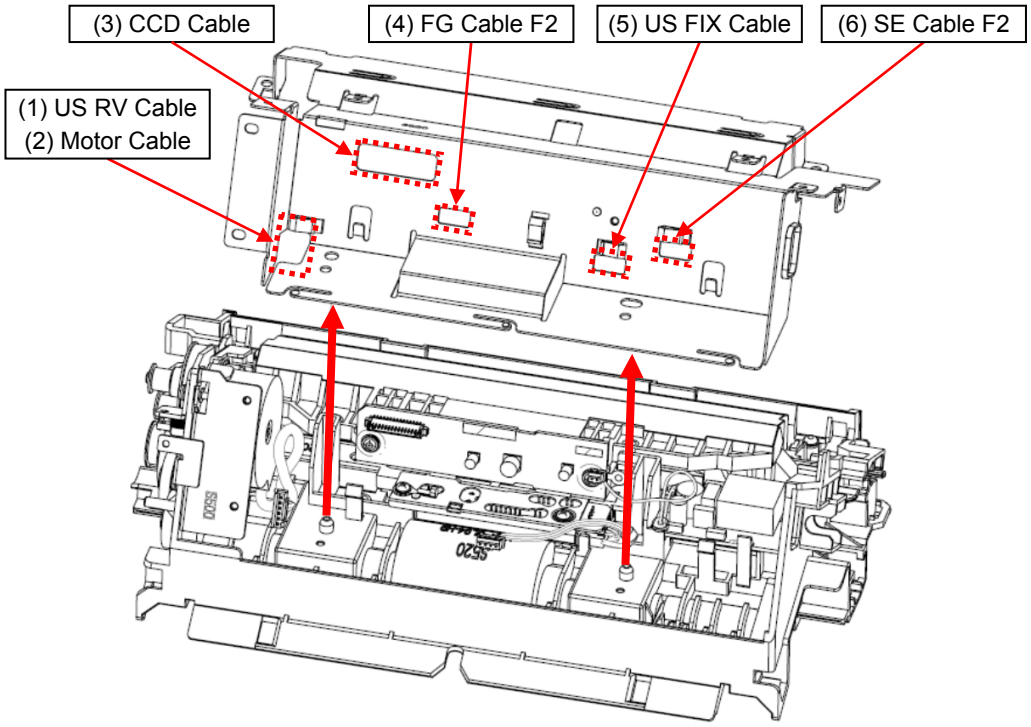
6.13.1 Wiring and Clamping at Shield Cover Section

Wrong cable connetion or clamping may not satisfy radio wave standard at installing the Shield Cover.
Follow the wiring and clamping procedure below at installation.

When installing the Shield Cover, route the following six cables through the five holes and follow the wiring procedures below:

No.	Cable name	Refer to	Cable connection route	Remarks
1	US RV Cable	(1)	Sensor RV ⇔ Analog PCA	The FG Cable is connected to the Shield Cover
2	Motor Cable	(2)	Motor ⇔ Analog PCA	
3	CCD Cable	(3)	Optical Unit ⇔ Analog PCA	
4	FG Cable F2	(4)	US Shield Cover ⇔ Shield Cover	
5	US FIX Cable	(5)	US Sensor F ⇔ Analog PCA	
6	SE Cable F2	(5)	Inverter ⇔ Analog PCA	

[Overview of Cable Route]

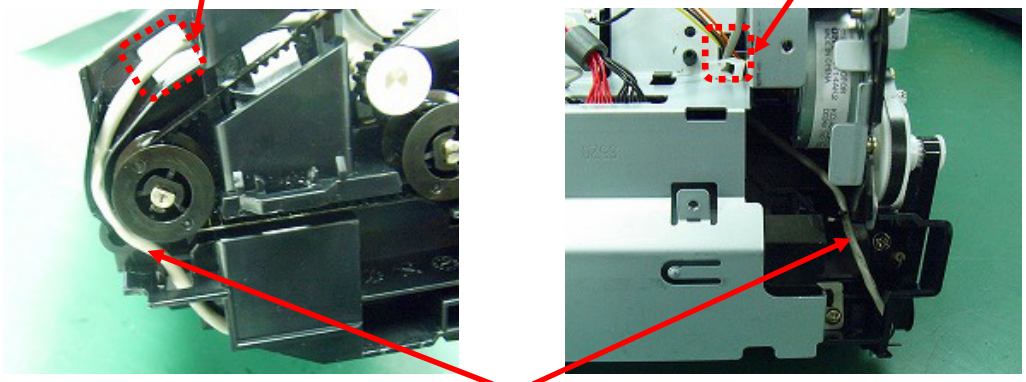


(1) Wiring and clamping the [US RV Cable]

- Route the US RV Cable along the goove of the Fixed frame.

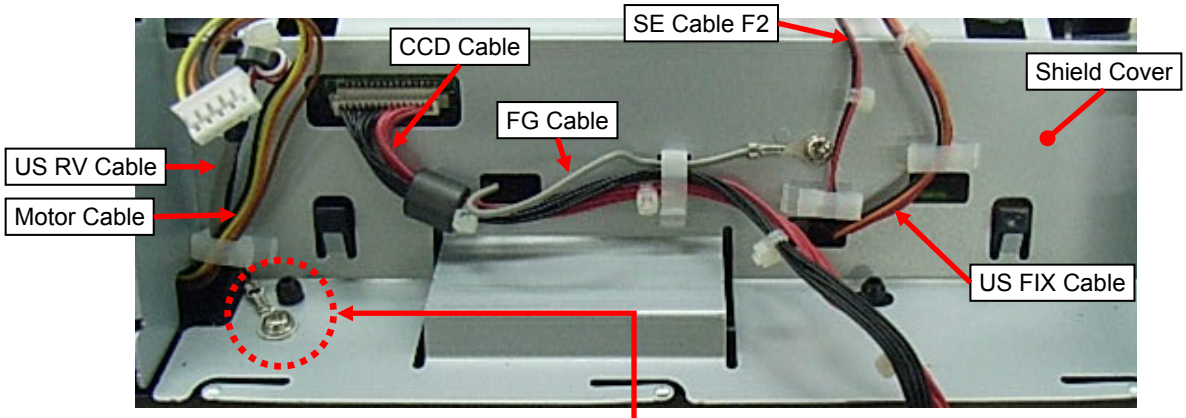
Draw the US RV Cable through the hole on the side of the Fixed frame.

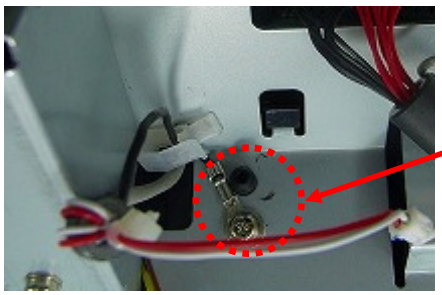
Thread the US RV Cable, and adjust the its excessive length to prevent it from sagging at the side of the Fixed frame.



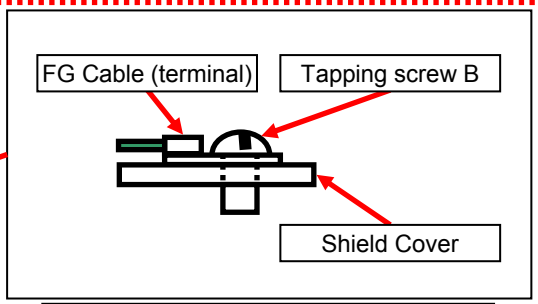
(2) Wiring in the Shield Cover

- Refer to the ohoto below how to wire the cables in the Shield Cover.
- Clamp the FG Cable of the US RV Cable, and fix it with the tapping screw B.





Fix the FG Cable of the US RV Cable at the position as shown in the photo above.



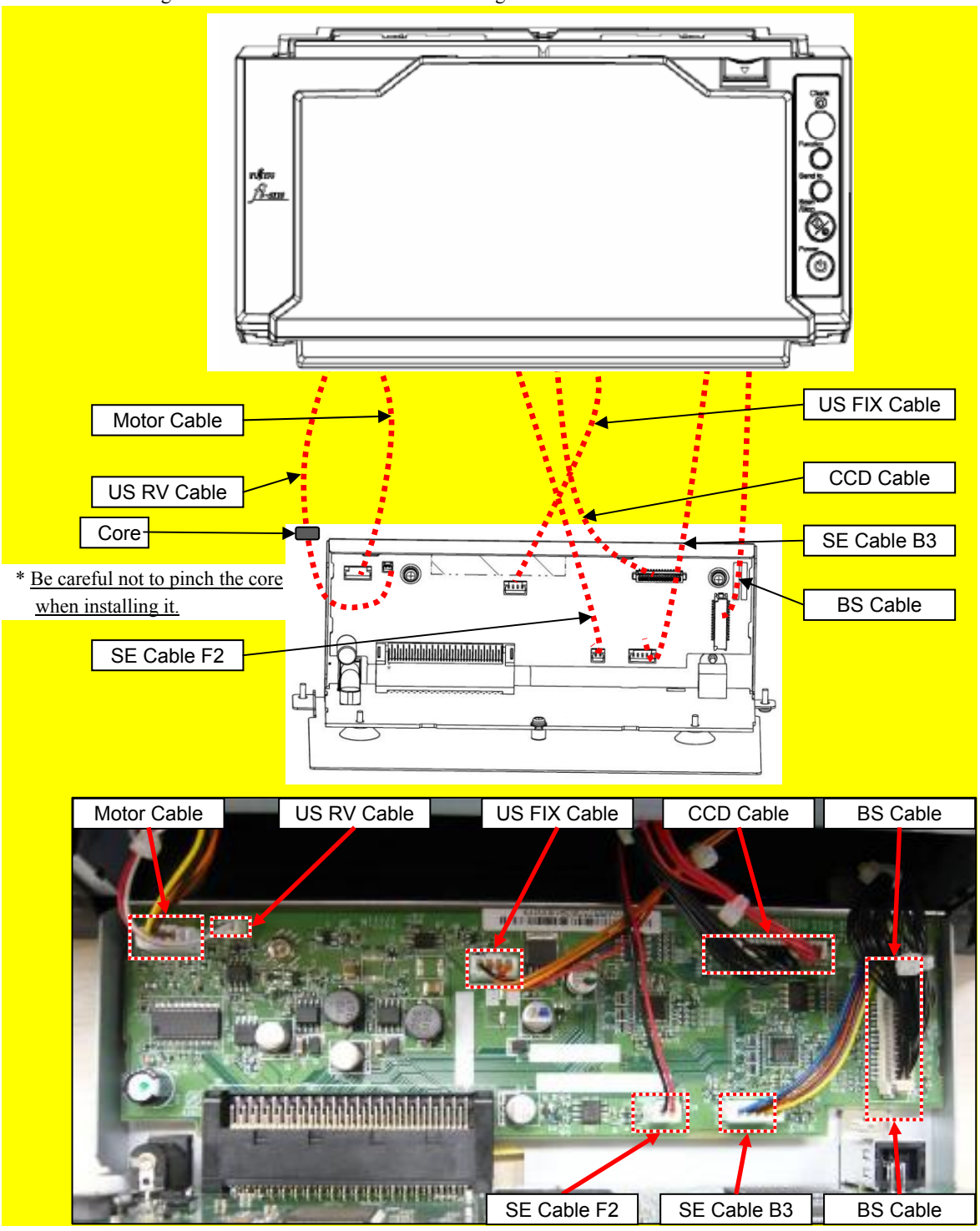
Clamp the FG Cable to ground the Shield Cover at first before fixing it.

6.13.2 Cable Wiring at PCA Unit

Wrong cable connetion or clamping may not satisfy radio wave standard at installing the PCA Unit.
Follow the wiring and clamping procedure below at installation.

(1) PCA Unit installation (Control PCA/Analog PCA)

Refer to the figure below for the cable connection configuration.



Chapter 7 Adjustment/Settings

7.1 Maintenance Mode

This chapter describes how to check the operation of each part and adjust them in the Maintenance Mode

Note: <u>Performing main scan/Sub-scan magnification adjustment or offset adjustment automatically clears "magnification setting" or "offset setting" that has been set by users.</u>

*** Refer to Section 8.5.3.2 "Device Info" for the user settings.**

7.1.1 Activating the Maintenance Mode and Mode Types

<<How to activate the Maintenance mode>>

(1) Open the ADF and press the [Power] button while holding down the [Scan/Stop] button to turn ON the power.

(2) The power is supplied to the scanner and initial processing starts. (Screen: T01)

Screen	Operation	Function No. Display	Scanner status	Remarks
T01	ADF opens. + Keep pressing [Scan/Stop] button + Press [Power] button to turn on the power	 (ON)	Initial processing in Maintenance mode	

(3) Make sure that  (Screen :T02) appears on the Function Number Display, let go of the [Scan/Stop] button and close the ADF.
(Keep pressing the [Scan/Stop] button until the screen T02 appears.)

Screen	Operation	Function No. Display	Scanner status	Remarks
T02	Check that  appears. + Let go of [Scan/Stop] button and close the ADF.	 (ON)	Maintenance mode #1 selected	Interface with host is disabled while Maintenance Mode is active.

<<How to change the Maintenance mode>>

To change the Maintenance modes (#1 ~ #7), press the [Function] button on the Maintenance Mode screen [T02].
Pressing the [Function] button changes the display as follows.

Screen	Mode No.	Operator Panel: Function No. Display	Operator Panel: Status transition	Mode name / Description	Refer to
T03	#1	(ON)		**Paper feeding / Sensor test** Performs the paper feeding test in the selected resolution and checks each sensor operation.	7.1.2
T04	#2	(ON)		**Main scan/Sub-scan magnification adjustment** Automatically calculates the correction value so that the main/sub-scanning magnification value becomes within standards and performs adjustment. If any of the related parts are replaced, adjustment is required. (Refer to Section 4.1.1)	7.1.3
T05	#3	(ON)		**Offset adjustment** Automatically calculates the correction value so that the main/sub-scanning offset value becomes within standards and performs adjustment. If any of the related parts are replaced, adjustment is required. (Refer to Section 4.1.1)	7.1.4
T06	#4	(ON)		**White level adjustment** Automatically calculates the correction value so that the white level correction value (white valance) becomes within standards and perform adjustment. If any of the related parts are replaced, adjustments is required.	7.1.5
T07	#5	(ON)		**Consumable counter display and reset** Displays and resets the consumable counter.	7.1.6
T08	#6	(ON)		**Miscellaneous information display** The following scanner information can be checked in this mode: • Firmware version • Starting date of the scanner • Accumulated number of paper scanned	7.1.7
T09	#7	(ON)		**EEPROM data restore** Restores the EEPROM data that have been saved before the Operator Panel replacement.	7.1.8
T10	#8	(ON)		(Reserved)	---

<<How to start the Maintenance mode>>
Select a Maintenance mode and press the [Scan/Stop] button. The scanner activates the selected Maintenance mode.

7.1.2 Maintenance Mode #1: Paper feeding and Sensor test

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

[How to operate]

(1) Select the Maintenance mode #1  (screen: T03) and press the [Scan/Stop] button. The item number is displayed on the Function No. Display.

(2) Pressing the [Function] button updates the number. Select the number corresponding to the operation mode you want to test.

[Item No.] and corresponding scanning speed (resolutions)/test mode is as shown in the table below.

Screen	Function No. Display [Item No.]	Scanning speed/test mode		Remarks
T15	0	Paper Feeding	Monochrome 600 dpi	Default when selecting the test mode
	1		Monochrome 300 dpi	
	2		Monochrome 240 dpi	
	3		Monochrome 200 dpi	
	4		Monochrome 100 dpi	
	5		Monochrome 150 dpi	
	6		Monochrome 400 dpi	
	7	Sensor test		

[Performing paper feeding test (Item No.: 0 to 6)]

Select an item number, place the paper on the ADF and press the [Scan/Stop] button. Paper feeding test will start.

Check the feeding operation.

Note: If documents are placed on the ADF Paper Chute (Empty sensor: ON), paper feeding test will start.

Reference During paper feeding operation, operation stops after all documents are fed and the test mode selection screen (Screen: T03) appears.

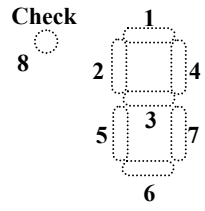
[Performing sensor test (Item No.: 7)]

Select the item number: 7, and press the [Scan/Stop] button. Sensor test will star

If documents are placed and the [Function] button is pressed, you can check the sensor status during feeding (motor rotating).

Check each sensor status.

Sensor status and Function Number Display

Screen	Function No. Display Check LED	Lighting position	Description	Status
T16		1	[Reserved]	—
		2	Empty sensor status	ON (paper exists) – Lights on
		3	[Reserved]	—
		4	Top sensor status	ON (paper exists) – Lights on
		5	ADF open sensor status	OFF (cover open) – Lights on
		6	[Reserved]	—
		7	Multifeed sensor status	ON (paper exists) – Lights on
		8	[Reserved]	—

[How to end]

Press the [Send to] button. The test stops and the test mode selection screen (T03) appears.

The test also terminates when no paper remains on the ADF paper chute.

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

In this mode, the magnification correction values for sub-scanning (vertical) are automatically calculated to satisfy the specification.

Note: Performing main scan/Sub-scan magnification adjustment or offset adjustment automatically clears "magnification setting" or "offset setting" that has been set by users.
*** Refer to Section 8.5.3.2 "Device Info" for the user settings.**

[How to operate]

(1) Select the Maintenance mode #2  (screen: T04) and press the [Scan/Stop] button. The item number is displayed on the Function No. Display.

(2) Pressing the [Function] button updates the number. Select the number corresponding to the operation mode you want to adjust.

Screen	Function No. Display [Item No.]	Adjustment mode (Adjusted position)	Required test chart	Remarks
T20	0	ADF sub-scan magnification adjustment	(1)	Default at test mode selected
	1	ADF front side main scan magnification adjustment		
	2	ADF backside main scan magnification adjustment		

(3) Place the ADJUST-CHART-A4 [PA93010-Y790] (A4 ppc paper is substitutable) on the ADF paper chute, and press the [Scan/Stop] button. Adjustment operation will start.

(4) If the adjustment has been performed successfully, "o" (screen: T21) appears on the Function Number Display.
Reference If the adjustment has not performed properly, "c" (screen: T25) appears on the Function Number Display.

(5) If the adjustment has been performed successfully, press the [Function] button to write the result into EEPROM.
[Function] button: Asks whether the adjustment result is written into EEPROM (screen: T22)
[Send to] button: Cancels the process and returns to the maintenance mode selection screen (screen: T04)

(6) Press the [Scan/Stop] + [Function] buttons to write the data into EEPROM. (The screen is changed to [T23]).

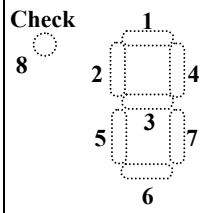
(7) If data has been written into EEPROM successfully, "o" (screen: T24) appears on the Function Number Display.
If the data has not been written into EEPROM, "c" (screen: T25) appears on the Function Number Display.

Screen	Operation	Function No. Display	Status	Remarks
T21	Place the test chart and press the [Scan/Stop] button to start adjustment.	 (ON)	Adjustment completed successfully	Displays "o" The selected [Item No.] blinks during adjustment.
T22	[Function] button: Asks whether to write into EEPROM [Send to] button: Cancels the process.	 (Blink)	Inquiry about writing into EEPROM	Blinks "o"(lower). Interval is 1.0 second. (Time between light on and off: 0.5 second)
T23	[Scan/Stop] button + [Function] button	 (ON)	Writing into EEPROM	Displays "L" * Button operation is disabled.
T24	Check that the result is written into EEPROM successfully, and press the [Send to] button.	 (ON)	Writing into EEPROM completed successfully	Displays "o"(upper)
T25	[Function] button: Displays error information. [Send to] button: Returns to test mode selection screen. Or restart the adjustment from the beginning.	 (ON)	Abnormal end or failed to write into EEPROM	Displays "c" Refer to [screen: T26] for details of the error information when the [Function] button is pressed.

[How to end]

Press the [Send to] button. The adjustment mode selection screen (T20) appears.

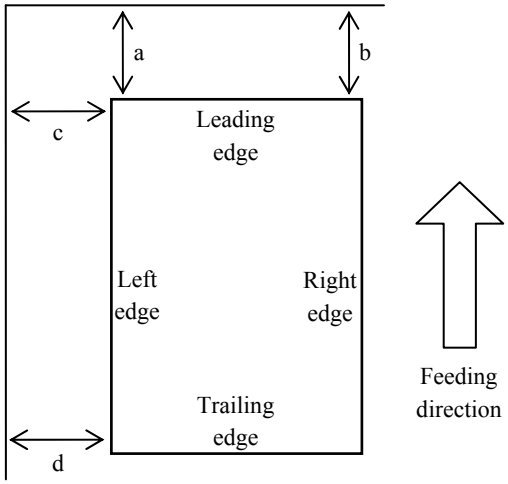
[Error Information Details at Main/Sub-scan Magnification Adjustment]

Screen	Function No. Display [Item No.]	Lighting position	Description	Status	Adjustment mode on which the error may occur [Item No.]		
					0	1	2
T26		1	Cannot detect the leading edge.	ON	Y		
		2	Cannot detect the left edge.	ON		Y	Y
		3	[Reserved]	—	—	—	—
		4	Cannot detect the right edge.	ON		Y	Y
		5	Excessive skew A	ON		Y	Y
		6	Cannot detect the trailing edge.	ON	Y		
		7	Excessive skew B	ON		Y	Y
		8	[Reserved]	—	—	—	—

Skew A and B are calculated by the following expression.

Skew A = a – b

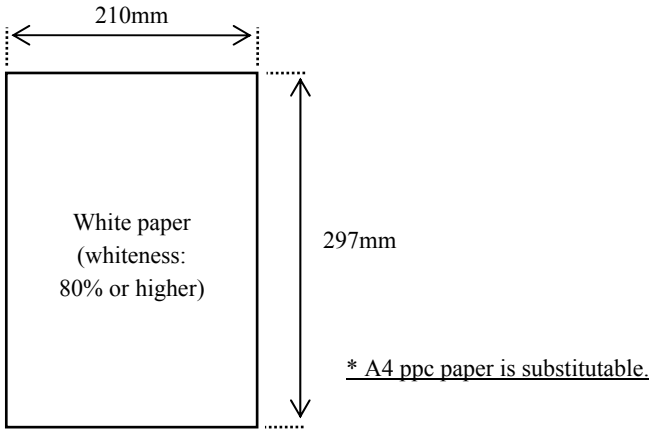
Skew B = c – d



[Test Chart 1]

Use the test sheet for main/sub-scan magnification adjustment that meets the following specification.

Chart name	Part number	Part name	Remarks
Test chart 1	—	—	A4-size paper



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 specification.

Note: Be sure to perform magnification adjustment before offset adjustment.
Performing main scan/Sub-scan magnification adjustment or offset adjustment automatically clears "magnification setting" or "offset setting" that has been set by users.
*** Refer to Section 8.5.3.2 "Device Info" for the user settings.**

[How to operate]

(1) Select the Maintenance mode #3  (screen: T05) and press the [Scan/Stop] button. The item number is displayed on the Function No. Display.

(2) Pressing the [Function] button updates the number. Select the number corresponding to the operation mode you want to adjust.

Screen	Function No. Display [Item No.]	Adjustment mode (Adjusted position)	Required test chart	Remarks
T30	0	ADF front	(1)	Default at test mode selected
	1	ADF back		

(3) Place ADJUST-CHART-A4 [PA93010-Y790] (A4 ppc paper is substitutable) on the ADF paper chute, and press the [Scan/Stop] button. Adjustment operation will start.

(4) If the adjustment has been performed successfully, "o" (screen: T31) appears on the Function Number Display.
Reference If the adjustment has not performed properly, "c" (screen: T35) appears on the Function Number Display.

(5) If the adjustment has been performed successfully, press the [Function] button to write the result into EEPROM.
[Function] button: Asks whether the adjustment result is written into EEPROM. (screen: T32)
[Send to] button: Cancels the process and returns to the maintenance mode selection screen. (screen: T05)

(6) Press the [Scan/Stop] + [Function] buttons to write the data into EEPROM. (The screen is changed to [T33]).

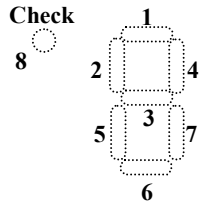
(7) If data has been written into EEPROM successfully, "o" (screen: T34) appears on the Function Number Display.
If the data has not been written into EEPROM, "c" (screen: T36) appears on the Function Number Display.

Screen	Operation	Function No. Display	Status	Remarks
T31	Place the test chart and press the [Scan/Stop] button to start adjustment.	 (ON)	Adjustment completed successfully	Displays "o" The selected [Item No.] blinks during adjustment.
T32	[Function] button: Asks whether to write into EEPROM [Send to] button: Cancels the process.	 (Blink)	Inquiry about writing into EEPROM	Blinks "o"(lower). Interval is 1.0 second. (Time between light on and off: 0.5 second)
T33	[Scan/Stop] button + [Function] button	 (ON)	Writing into EEPROM	Displays "L" * Button operation is disabled.
T34	Check that the result is written into EEPROM successfully, and press the [Send to] button.	 (ON)	Writing into EEPROM completed successfully	Displays "o"(upper)
T35	[Function] button: Displays error information. [Send to] button: Returns to test mode selection screen	 (ON)	Abnormal end	Displays "c" Refer to [screen: T37] for details of the error information when the [Function] button is pressed.
T36	Restart the adjustment from the beginning.	 (ON)	Failed to write into EEPROM	Displays "c".

[How to end]

Press the [Send to] button. The adjustment mode selection screen (T30) appears.

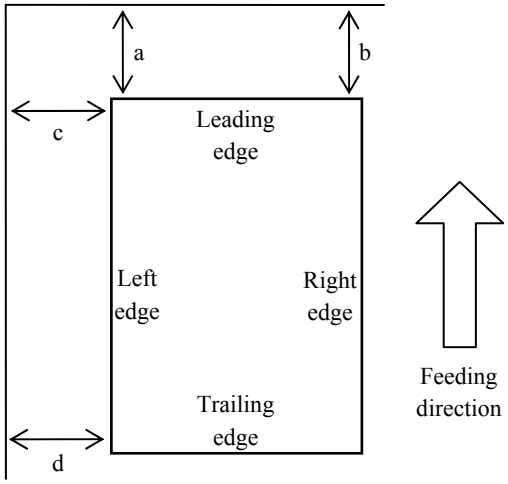
[Error Information Details at Offset Adjustment]

Screen	Function No. Display [Item No.]	Lighting position	Description	Status	Adjustment mode on which the error may occur [Item No.]	
					0	1
T37		1	Cannot detect the leading edge (black detection failed)	ON	Y	Y
		2	Cannot detect the left edge (black detection failed)	ON	Y	Y
		3	Cannot detect the leading edge (white detection failed)	ON	—	—
		4	Excessive skew A	ON	Y	Y
		5	Cannot detect the left edge (white detection failed)	ON	Y	Y
		6	[Reserved]	—	—	—
		7	Excessive skew B	ON	Y	Y
		8	[Reserved]	—	—	—

Skew A and B are calculated by the following expression.

Skew A = a – b

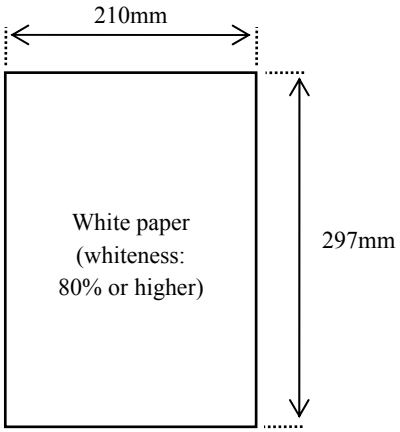
Skew B = c – d



[Test Chart 1]

Use the test sheet for offset adjustment that meets the following specification.

Chart name	Part number	Part name	Remarks
Test chart 1	—	—	A4-size paper



7.1.5 Maintenance Mode #4: White level adjustment

In this mode, the white level correction value is automatically calculated to satisfy the specification.

[How to operate]

(1) Select the Maintenance mode #4  (screen: T06) and press the [Scan/Stop] button. The item number is displayed on the Function No. Display.

(2) Pressing the [Function] button updates the number. Select the number corresponding to the operation mode you want to adjust.

Screen	Function No. Display [Item No.]	Adjustment mode (Adjusted position)	Required test chart	Remarks
T40	0	ADF front	(2)	Default at test mode selected
	1	ADF back		

(3) Place the TEST CHART (W) [PA03277-Y123] (white art paper) on the ADF paper chute, and press the [Scan/Stop] button. Adjustment operation will start.

(4) If the adjustment has been performed successfully, "o" (screen: T41) appears on the Function Number Display.
Reference If the adjustment has not performed properly, "c" (screen: T45) appears on the Function Number Display.

(5) If the adjustment has been performed successfully, press the [Function] button to write the result into EEPROM.
[Function] button: Asks whether the adjustment result is written into EEPROM. (screen: T42)
[Send to] button: Cancels the process and returns to the maintenance mode selection screen. (screen: T06)

(6) Press the [Scan/Stop] + [Function] buttons to write the data into EEPROM. (The screen is changed to [T43]).

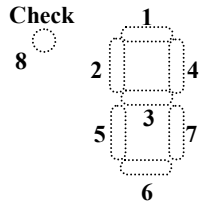
(7) If data has been written into EEPROM successfully, "o" (screen: T44) appears on the Function Number Display.
If the data has not been written into EEPROM, "c" (screen: T46) appears on the Function Number Display.

Screen	Operation	Function No. Display	Status	Remarks
T41	Place the test chart and press the [Scan/Stop] button to start adjustment.	 (ON)	Adjustment completed successfully	Displays "o" The selected [Item No.] blinks during adjustment.
T42	[Function] button: Asks whether to write into EEPROM [Send to] button: Cancels the process.	 (Blink)	Inquiry about writing into EEPROM	Blinks "o"(lower). Interval is 1.0 second. (Time between light on and off: 0.5 second)
T43	[Scan/Stop] button + [Function] button	 (ON)	Writing into EEPROM	Displays "L" * Button operation is disabled.
T44	Check that the result is written into EEPROM successfully, and press the [Send to] button.	 (ON)	Writing into EEPROM completed successfully	Displays "o"(upper)
T45	[Function] button: Displays error information. [Send to] button: Returns to test mode selection screen	 (ON)	Abnormal end	Displays "c" Refer to [screen: T47] for details of the error information when the [Function] button is pressed.
T46	Restart the adjustment from the beginning.	 (ON)	Failed to write into EEPROM	Displays "c".

[How to end]

Press the [Send to] button. The adjustment mode selection screen (T40) appears.

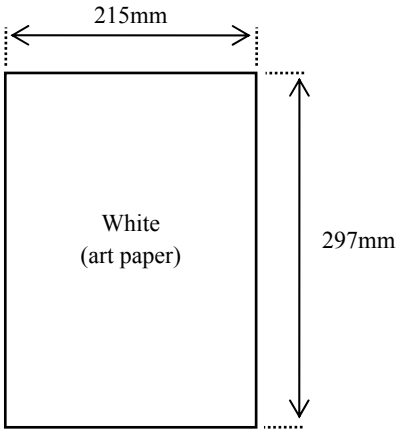
[Error Information Details at White Level Adjustment]

Screen	Function No. Display [Item No.]	Lighting position	Description	Status	Adjustment mode on which the error may occur [Item No.]	
					0	1
T47		1	Media error	ON	Y	Y
		2	No paper	ON	Y	Y
		3	[Reserved]	—	—	—
		4	[Reserved]	—	—	—
		5	[Reserved]	—	—	—
		6	[Reserved]	—	—	—
		7	[Reserved]	—	—	—
		8	[Reserved]	—	—	—

[Test Chart 2]

Use the test sheet for white level adjustment that meets the following specification.

Chart name	Part number	Part name	Remarks
Test chart 2	PA03277-Y123	TEST CHART (W)	White reference sheet



7.1.6 Maintenance Mode #5: Consumables counter display and Reset

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

- Pick Roller counter
- Pad ASSY counter

[How to operate]

(1) Select the Maintenance mode #5  (screen: T07) and press the [Scan/Stop] button. The item number is displayed on the Function No. Display.

(2) Pressing the [Function] button updates the number. Select the number corresponding to the operation mode you want to display.

Screen	Function No. Display [Item No.]	Displayed Counter	Remarks
T50	0	Pick Roller	Default at test mode selected
	1	Pad ASSY	

(3) Select an [Item No.] and press the [Scan/Stop] button. The current counter value is displayed as described below.

Screen	Counter	How Numbers are Displayed on Function Number Display
T51	Pick Roller	The counter is displayed in 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. eg. When the counter is "16,245", "-00016240" is displayed in the following order: "-" → "0" → "0" → "0" → "1" → "6" → "2" → "4" → "0" (Switching interval is 0.5 second.)
	Pad ASSY	

(4) If you press the [Function] button while the counter is displaying the number, you can proceed to reset the counter.
[Function] button: Asks whether to reset the counter (counter "0" is written into EEPROM). (screen: T52)
[Send to] button: Cancels the process and returns to the maintenance mode selection screen. (screen: T07)

(5) Press the [Scan/Stop] + [Function] buttons to write the data into EEPROM. (The screen is changed to [T53]).

(6) If data has been written into EEPROM successfully, "o" (screen: T54) appears on the Function Number Display.
If the data has not been written into EEPROM, "c" (screen: T55) appears on the Function Number Display.

Screen	Operation	Function No. Display	Status	Remarks
T52	[Function] button: Asks whether to write into EEPROM [Send to] button: Cancels the process.	 (Blink)	Inquiry about writing into EEPROM	Blinks "o"(lower). Interval is 1.0 second. (Time between light on and off: 0.5 second)
T53	[Scan/Stop] button + [Function] button	 (ON)	Writing into EEPROM	Displays "L" * Button operation is disabled.
T54	Check that the result is written into EEPROM successfully, and press the [Send to] button.	 (ON)	Writing into EEPROM completed successfully	Displays "o"(upper)
T55	Restart the counter reset procedure from the beginning.	 (ON)	Failed to write into EEPROM	Displays "c".

[How to end]

Press the [Send to] button. The adjustment mode selection screen (T50) appears.

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

[How to operate]

(1) Select the Maintenance mode #6  (screen: T08) and press the [Scan/Stop] button. The item number is displayed on the Function No. Display.

(2) Pressing the [Function] button updates the number. Select the number corresponding to the operation mode you want to display.

Screen	Function No. Display [Item No.]	Displayed Counter	Remarks
T60	0	Firmware version	Default at test mode selected
	1	Starting date of the scanner	
	2	The accumulated number of paper scanned by the ADF	

(3) Select an [Item No.] and press the [Scan/Stop] button. The current counter value is displayed as described below. Refer to the table below (screen: T61) for how to display the numbers.

Screen	Item	How Numbers are Displayed on Function Number Display
T61	Firmware version	The counter is displayed in 4 digits in total, 1 number at a time (1 blink), from left digit to right digit. "-" is displayed before the first number, indicating the counter display begins. * Alphabets are replaced with two-digit number. A to Z corresponds to 01 to 26. eg. If the firmware version is "0A00" "-" → "0" → "0" → "1" → "0" → "0" "A" is converted to "01" (Switching interval is 0.5 second.)
	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". "-" is displayed before the first number, indicating the counter display begins. You cannot reset the date. eg. When the starting date is January 31st, 2010, "100131" is displayed in the following order: "-" → "1" → "0" → "0" → "1" → "3" → "1" (Switching interval is 0.5 second.)
	The accumulated number of paper scanned by the ADF	The accumulated number of scanned by the ADF is displayed in 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. eg. When the accumulated number is "16,250", "00016250" is displayed in the following order: "-" → "0" → "0" → "0" → "1" → "6" → "2" → "5" → "0"

[How to end]

Press the [Send to] button. The adjustment mode selection screen (T60) appears.

7.1.8 Maintenance Mode #7: EEPROM data restore

When replacing the Panel PCA, the EEPROM data on the Panel PCA must be temporarily saved in the Control PCA. In this mode, the saved data is restored from the Control PCA to the Panel PCA.

[How to operate]

(1) Select the Maintenance mode #7 (screen: T09) and press the [Scan/Stop] button. The saved EEPROM data restore procedure will start. (screen: T70)

(2) Press the [Scan/Stop]+ [Function] buttons to start returning the saved EEPROM data to the Panel PCA. (screen: T71)

(3) When the data restoration is completed successfully, "o" (screen: T72) appears on the Function Number Display.
If there is no saved data, "c" (screen: T73) appears on the Function Number Display.

Screen	Operation	Function No. Display	Status	Remarks
T70	[Function] button: Asks whether to restore EEPROM [Send to] button: Cancels the process.	 (Blink)	Inquiry about restoring the saved EEPROM	Blinks "o"(lower). Interval is 1.0 second. (Time between light on and off: 0.5 second)
T71	[Scan/Stop] button + [Function] button	 (ON)	Restoring EEPROM	Displays "L" * Button operation is disabled.
T72	Check that the EEPROM data is restored successfully, and press the [Send to] button.	 (ON)	EEPROM restoration completed successfully	Displays "o"(upper)
T73	Displayed when there is no saved EEPROM data.	 (ON)	There is no EEPROM data	Displays "c".

[How to end]

Press the [Send to] button. The adjustment mode selection screen (T70) appears.

7.2 Saving EEPROM Data

The EEPROM data on the Panel PCA can be saved to the flash memory of the Control PCA. This operation is required before replacing the Panel PCA. Since this operation is performed when the Panel PCA is malfunctioning, the following procedure is designed to save the EEPROM data without the use of the operator panel.

NOTICE

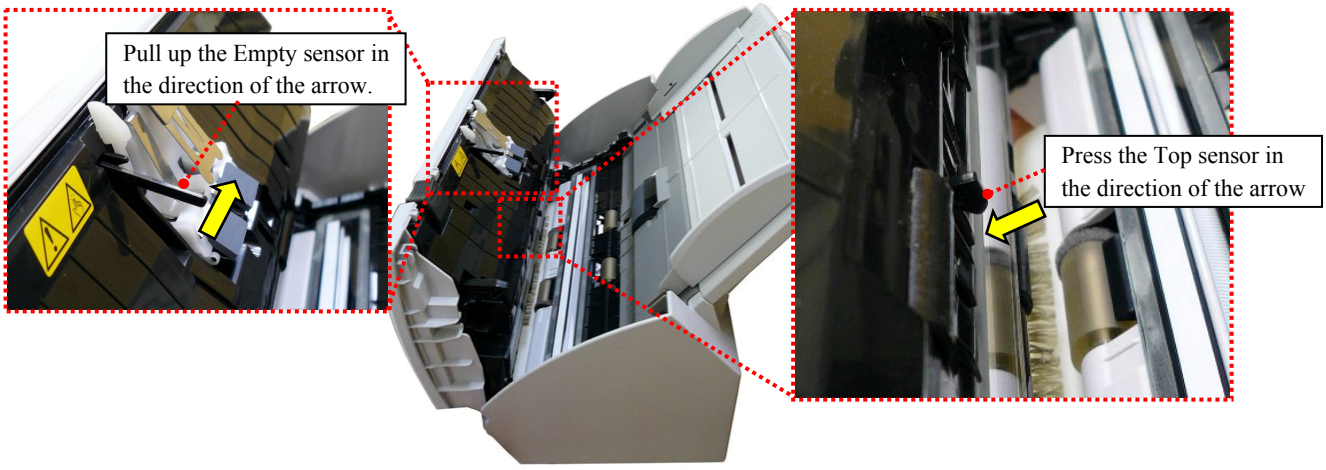
1. Do not perform this procedure unless the Panel PCA is malfunctioning.
2. The Panel PCA from which the data was saved to the Control PCA cannot be used again.
3. Make sure to have a new Panel PCA before saving the EEPROM data.
4. If EEPROM data cannot be saved, the device setting returns to the factory default. Explain your customer and ask to configure the device setting again. (See Notice 2.)

NOTICE

1. If EEPROM data is saved to the Control PCA successfully, the scanner writes the information on the Panel PCA that disables the usage of this Panel PCA. So the replacement of the Panel PCA is required. 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.
2. If EEPROM data cannot be saved/restored, the unique setting will not be taken over. The device setting will return to the factory default (initial setting).

[How to save the EEPROM data onto the Control PCA]

1. Open the ADF. While pressing the Top sensor (ON) and the Empty sensor pulled up, turn on the scanner.



2. Let go of levers of the Top sensor and the Empty sensor.
3. Press the Top sensor lever longer than 1 second and let go of it. And do it once again.
4. Close the ADF.
5. After more than 5 seconds elapse, open the ADF.
   When the EEPROM data is successfully saved, the ADF front lamp blinks 3 times.
   If the Function Number Display function is normal, "o" (upper) is displayed.

   In case the EEPROM data is not successfully saved, the lamp does not blink.
   If the Function Number Display function is normal, "c" is displayed.
6. Turn off the power.

   Refer to Section 7.1.8 "EEPROM data restore" to restore the data after replacing the Panel PCA.

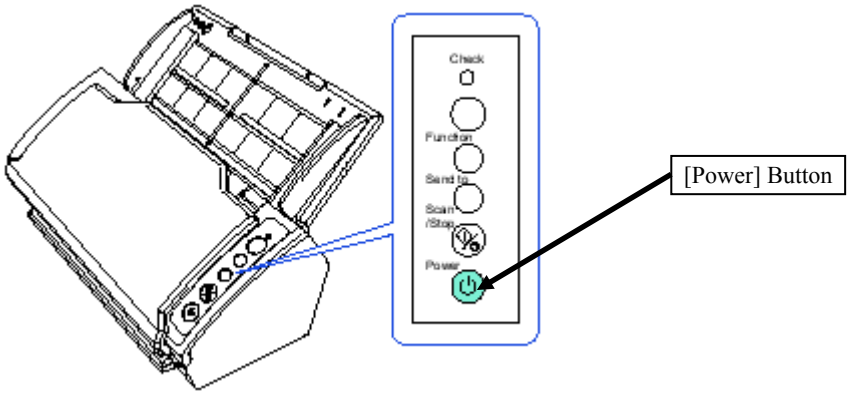
Chapter 8 Operation and Daily Maintenance

8.1 Basic Operation

8.1.1 Turning the Power ON/OFF

How to Turn the Power ON

(1) Press the [Power] button on the scanner's operator panel.
(2) The power is turned on, and the [Power] button lights in green.



(3) During initialization, the Function Number Display of the operator panel changes as follows: "8" → "P" → "0" → "1". The scanner is ready when "1" is displayed.

How to Turn the Power OFF

(1) Press the [Power] button on the operator panel for more than two seconds.
(2) The power is turned off, and the [Power] button switches off.

NOTICE

The method by which the scanner is powered ON/OFF can be specified from one of the following:

- Press the [Power] button on the operator panel
- Unplug the power cable then plug it back in
- Have the scanner turn ON/OFF in sync with the computer's power

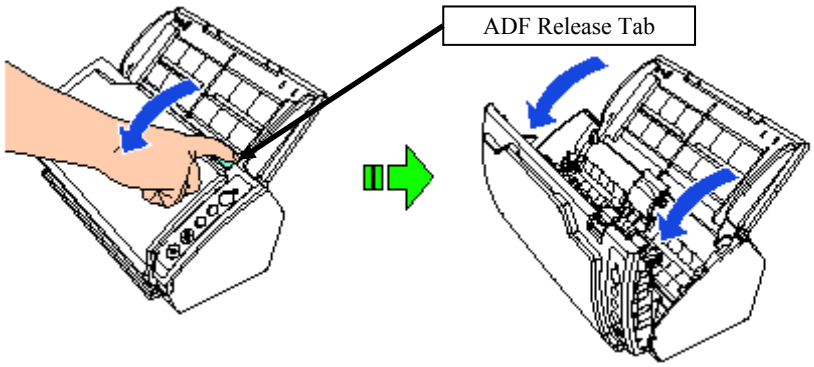
8.1.2 Opening/Closing the ADF

How to Open the ADF

(1) Remove all documents from the ADF paper chute.
(2) Pull the ADF release tab towards you to open the ADF.

NOTICE

Be careful not to have your fingers caught when the ADF closes.

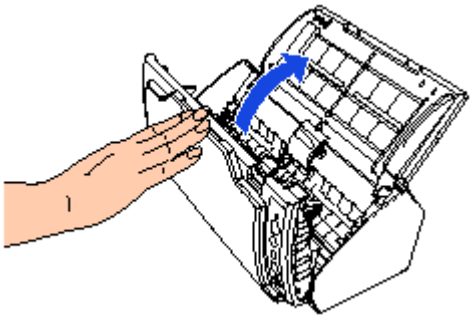


How to Close the ADF

NOTICE

- Make sure that there is no foreign matter inside the ADF.
- Be careful not to have your fingers caught.

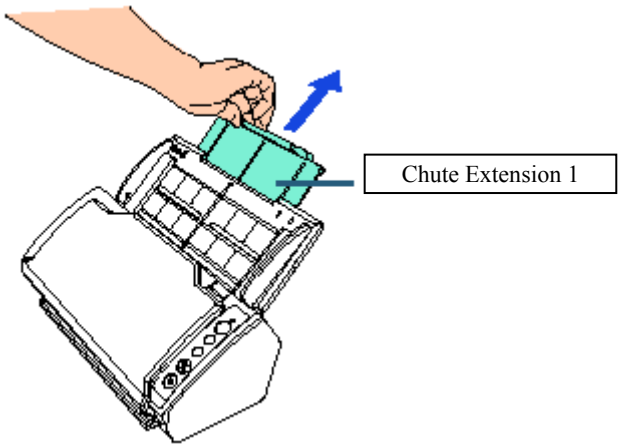
(1) Close the ADF.
(2) Push the center of the ADF until it locks in place.



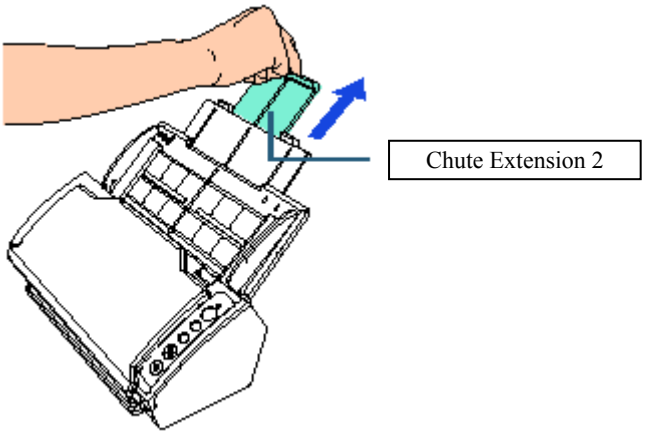
8.1.3 Setting Up the ADF Paper Chute (Chute ASSY)

Documents loaded in the ADF paper chute are fed into the scanner one by one.
Using the chute extension 1 and chute extension 2 as shows below will keep the documents straight and feed them smoothly.

(1) Pull out chute extension 1.



(2) Pull out chute extension 2.



8.1.4 Loading Documents

Preparation

NOTICE

For details about the paper size and quality required for normal operations, refer to Section 1.2 “Document Specification”.

(1) Check the documents.

① Check if the documents to be loaded are of the same width or different widths.
Ways to load documents differ depending on whether they are the same width or not.

② Check the number of sheets.
Up to 50 sheets can be loaded (with paper weight of 80 g/m^2 (20 lb) and thickness of the document stack under 5 mm).

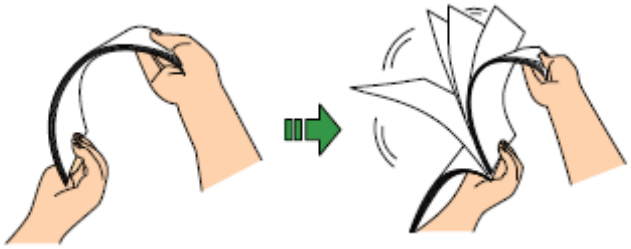
NOTICE

For details, refer to Section 8.2.2 “Scanning Documents of Different Widths”.

(2) Fan the documents.

① Grab a stack of documents, which should be 5 mm or less.

② Hold both ends of the documents and fan them a few times.



③ Rotate the documents by 90 degrees and fan them in the same manner.

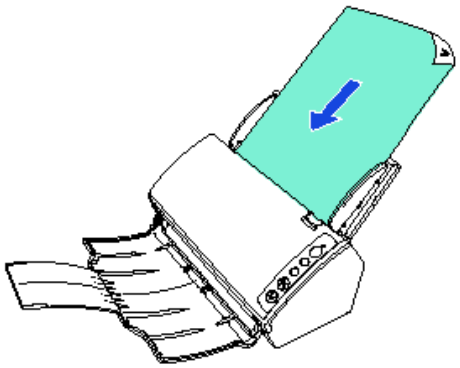
④ Perform steps 1 to 3 for all documents.

⑤ Align the edges of the documents.

How to Load Documents

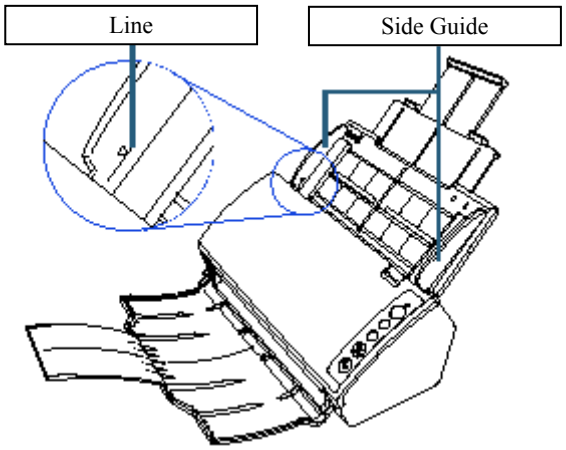
(1) Pull out the chute extension 1 and chute extension 2 according to the length of the document.

(2) Load the document in the ADF paper chute.
Set the document with its front side (scanning side) facing the ADF paper chute.

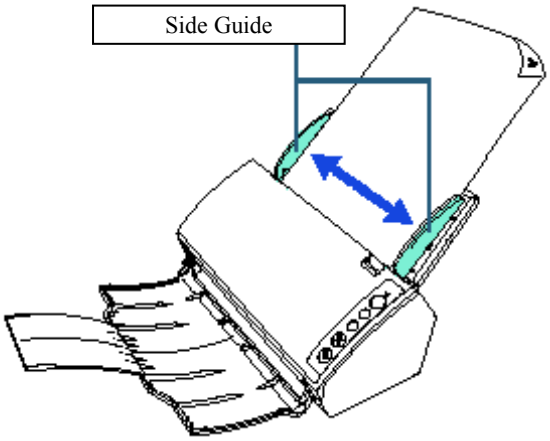


NOTICE

- Remove all paper clips and staples. Reduce the amount of documents if a multifeed or pick error occurs.
- Make sure to keep the documents within the limit which is indicated by the line on the side of each side guide.



(3) Adjust the side guides to the width of the document.
Set the side guides so that there is no space left between the side guides and the document.
Otherwise, the document may be fed skewed.

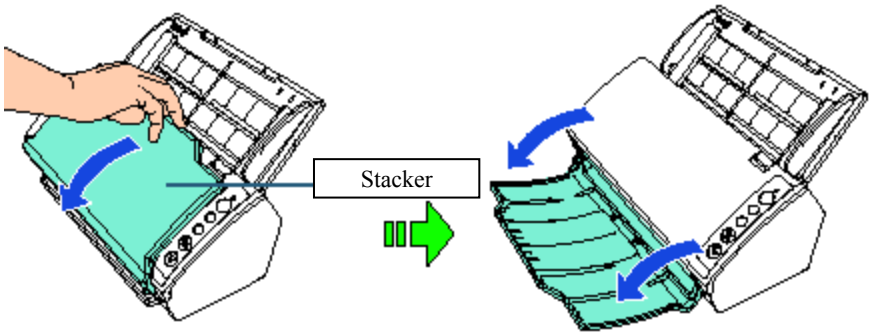


(4) Lift up the stacker and stacker extension according to the length of the document.
(5) Start up an application for scanning and perform a scan.

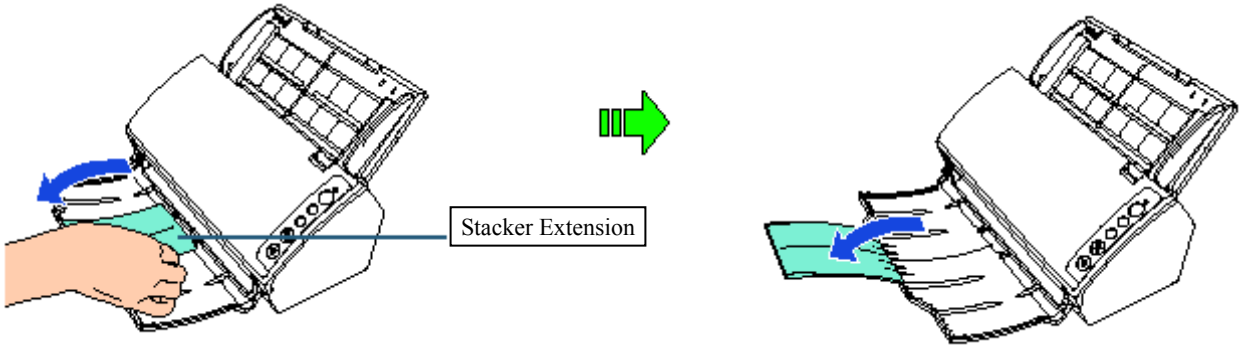
8.1.5 Setting up the Stacker

Documents loaded in the ADF paper chute are ejected onto the stacker one by one.
Using the stacker and stacker extension as follows will keep the documents straight and stack them neatly.

(1) Pull out the stacker from the top towards you.



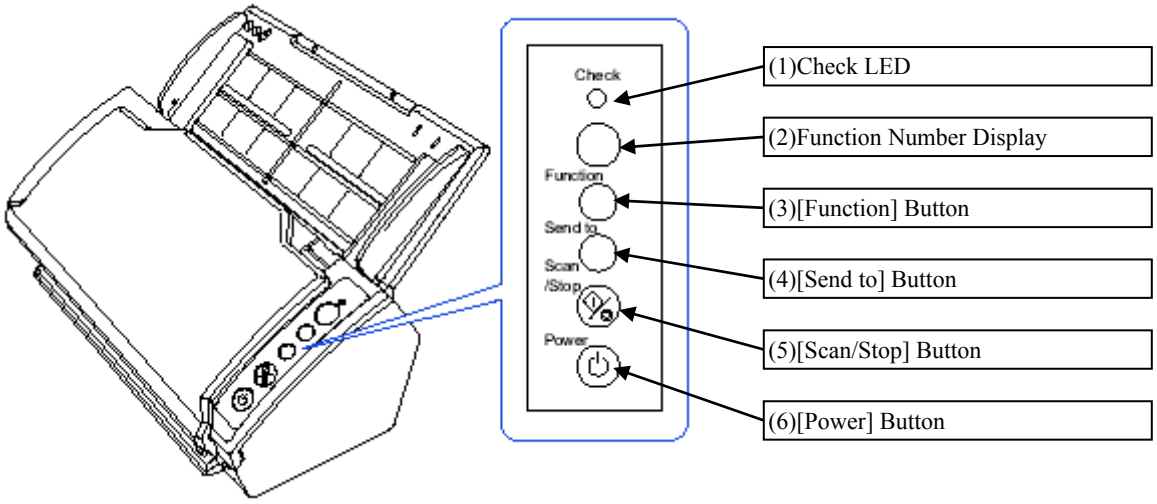
(2) Lift up the stacker extension.



8.1.6 How to Use the Operator Panel

8.1.6.1 Turning the Power ON/OFF

The operator panel consists of the Function Number Display, buttons, and Check LED.



No	Name	Function
(1)	Check LED	Lights in orange when an error occurs. Flashes when the ADF is open.
(2)	Function Number Display	Indicates the status of the scanner. Switches off when the scanner enters power saving mode.
(3)	[Function] Button	Switches the number (1 to 9/C) assigned to the application launched by the [Send to] button.
(4)	[Send to] Button	Launches the linked application software. Clears the displayed error indication.
(5)	[Scan/Stop] Button	Launches the linked application software. Clears the displayed error indication. Cancels the scan during scanning.
(6)	[Power] Button	Turns the power ON/OFF. Lights in green when the scanner is turned on.

8.1.6.2 Indications on Function Number Display

Indications on the Function Number Display are as follows.

Display	Description
8	Displayed when the scanner has just been powered on.
P	Processing initialization.
0	Initialization is almost complete.
1	Ready to start scanning. Indicates that the initialization was successfully completed. This state is referred to as “ready”.
Function number (flash)	A function number will flash after detecting a multifeed. This indication prompts whether or not to memorize the overlap pattern.
c (flash)	Indicates that the ADF was opened when the status was ready (“1”). Note that the Check LED will also flash. To return to ready (“1”) status, close the ADF by referring to Section 8 “How to Close the ADF”. If the display does not return to ready (“1) after closing the ADF, turn the power off then back on.
h	Indicates that the scanner is operating in protection mode. The scanner may enter this protection mode if it is used for many hours continuously under high room temperature. Note that the interval to feed the documents becomes longer in this mode, but it is not a malfunction. (The recommended operating environment is 35°C (95°F) or less) It will return to normal as you just continue scanning.
J U	Indicates that a device error (alarm) occurred during initialization or scanning. The display will switch between either “J” or “U”, and an “error number”. For information about the error details, refer to Chapter 5 “Troubleshooting”. The display will return to ready (“1”) if the [Scan/Stop] or [Send to] button is pressed.
Display	**Description**
E H L	Indicates that a device error (alarm) occurred during initialization or scanning. The display will switch between either “E”, “H” or “L”, and an “alarm” number. For information about the error details, refer to Chapter 5 “Troubleshooting”. The display will return to ready (“1”) if the [Scan/Stop] or [Send to] button is pressed. When this alarm occurs, turn the power off then back on.
None	The display switches off when the scanner enters power saving mode.

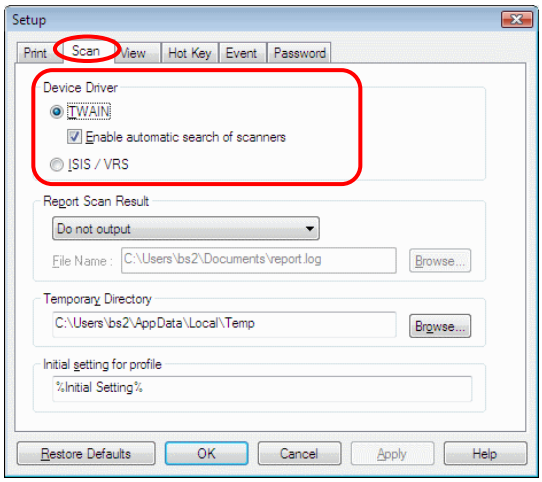
8.2 ADF Scanning

8.2.1 Document Scanning

(1) Press the [Power] button on the scanner's operator panel. (Refer to Section 8.1.1.)
(2) Turn on the computer.
(3) Load a document in the ADF paper chute. (Refer to Section 8.1.4.)
(4) Set the stacker. (Refer to Section 8.1.5.)
(5) Start up ScandAll PRO.
Select the [Start] menu → [All Programs] → [Fujitsu ScandAll PRO] → [ScandAll PRO]
(6) Select [Tool] → [Setup] to display the [Setup] screen.
⇒ The [Setup] screen appears.
(7) Select a scanner driver to use for scanning in the [Scan] tab and click the [OK] button.
- TWAIN driver: Select [TWAIN]
- ISIS driver: Select [ISIS/VRS]

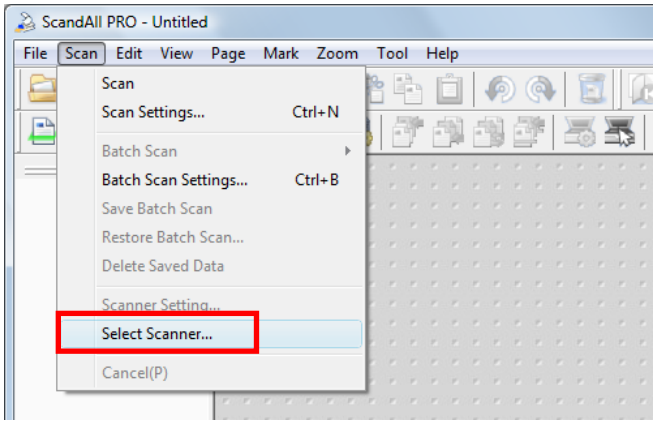
NOTICE

The scanner driver needs to be installed beforehand. (Refer to Section 3.2.3 "Installing the Bundled Software".)

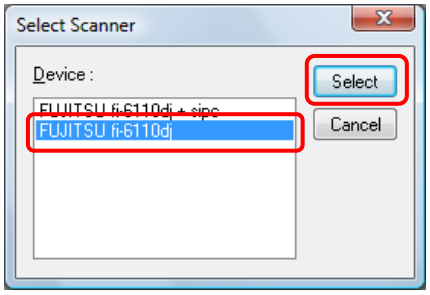


[ScandAll PRO setup dialog box ([Scan] tab)]

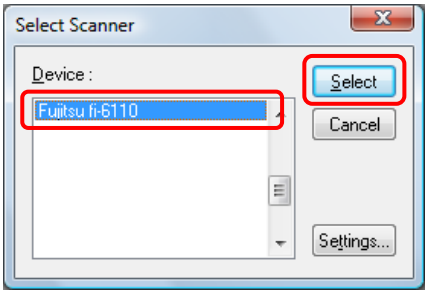
(8) Click [Scan] menu → [Select Scanner] to display the [Select Scanner] dialog box.



(9) In the [Select Scanner] dialog box, select a scanner and click the [Select] button.



[For FUJITSU TWAIN 32]



[For ISIS]

The scanner name displayed differs depending on the scanner driver you use.

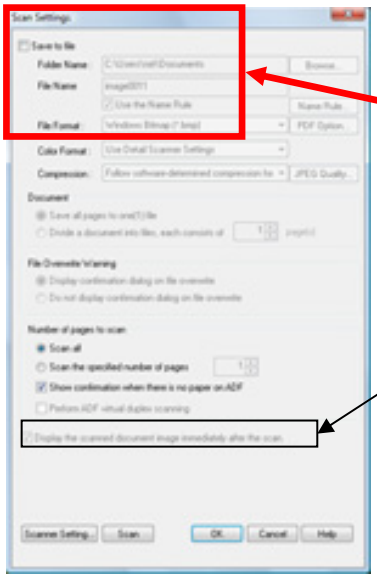
ScandAll PRO [Driver setting]	TWAIN	ISIS／VRS
Scanner driver	FUJITSU TWAIN32	FUJITSU ISIS
Displayed scanner name (device)	FUJITSU fi-6110dj	Fujitsu fi-6110

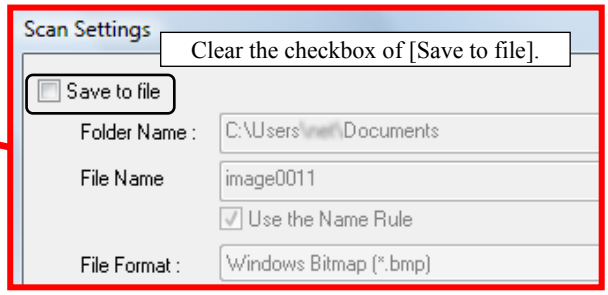
(10) Click [Scan] menu → [Scan Settings] to display the [Scan Settings] dialog box.
⇒[Scan Settings] dialog box appears.

(11) In the [Scan Settings] dialog box, clear the check box [Save to file].

NOTICE

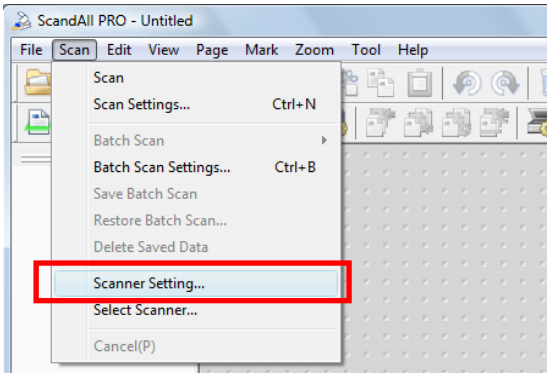
The user may configure specific destination folder and name rule. Therefore, the procedure described here is for when the image data is confirmed on the window (the data is not saved to file).





Reference If the [Display the scanned document image immediately after the scan] check box is cleared, the [Save to file] check box cannot be cleared.

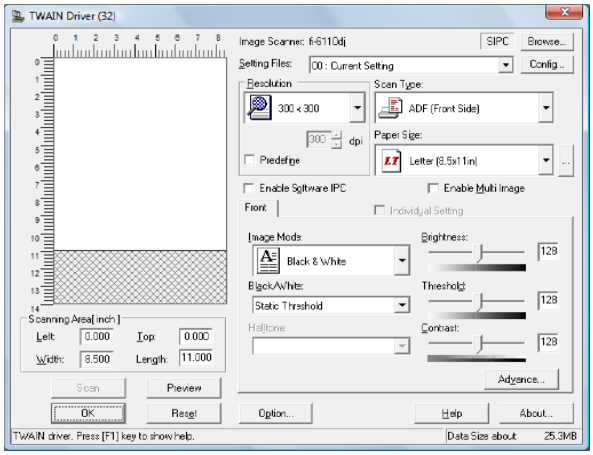
(12) In the [Scan Settings] dialog box, click the [Scanner Setting] button.
⇒Scanner driver setting dialog box appears.



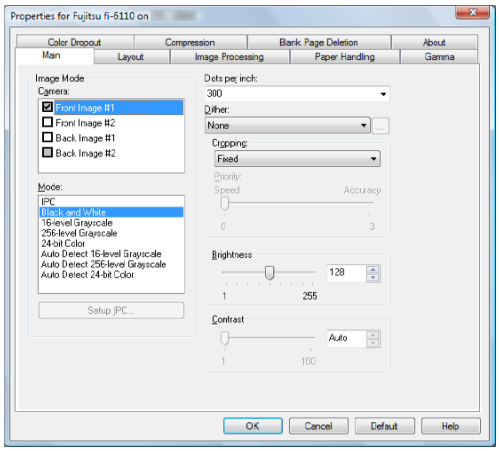
(13) Scan settings such as scan resolution and document size can be configured.
- For FUJITSU TWAIN32
  ⇒ Configure the scan settings and then click the [OK] button.

NOTICE

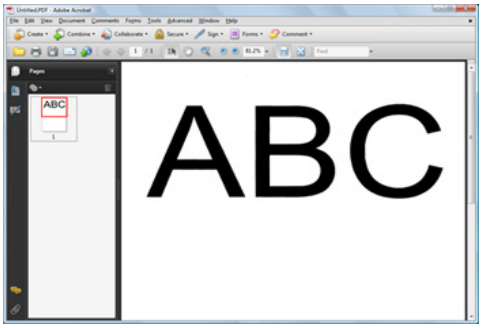
The scanner driver setting dialog box may appear again when you click the [OK] button.
- For ISIS
  ⇒ Configure the scan settings and then click the [OK] button.



[For FUJITSU TWAIN 32]



[For ISIS]



(14) In the [Scan Settings] dialog box, click the [Scan] button.
⇒The document is scanned and the image data is displayed on the ScandAll PRO screen.

NOTICE

When an error occurs, the Function Number Display alternates between either “J” or “U” and an “error number” for temporary errors, and either “E”, “H” or “L” and an “alarm number” for device errors.

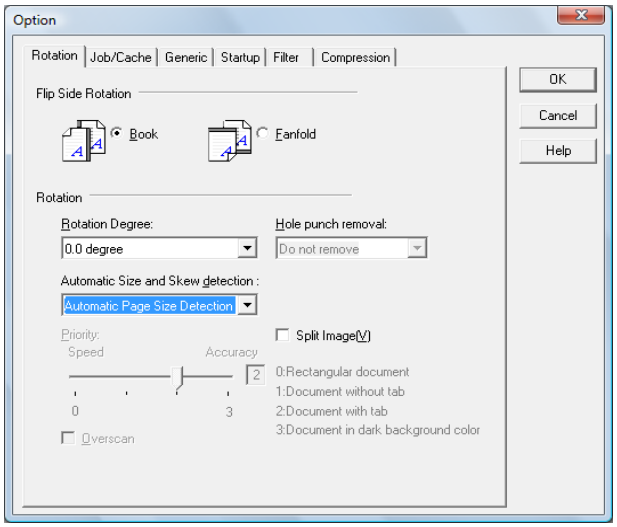
8.2.2 Documents with Different Widths

When you scan documents of different widths, load the documents in the following procedure:

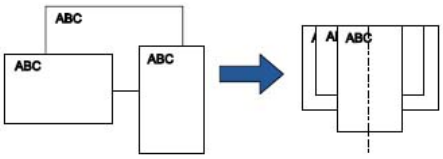
NOTICE

- When you scan documents of different widths at the same time, some of the smaller documents may be skewed or may not be fed into the scanner. Try to scan documents of the same width.
- For details about scanning a mixed batch of documents, refer to Section 1.2.7 “Mixed Batch Scanning”.

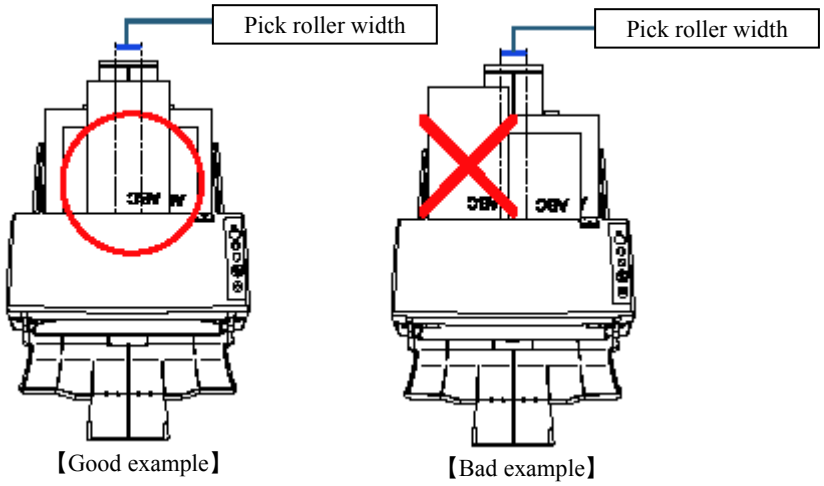
(1) To avoid skewed images and detect the paper size automatically, select [Automatic Page Size Detection] in [Automatic Size and Skew Detection].
(2) Start up ScandAll PRO and open the [TWAIN Driver (32)] dialog box.
(3) Click the [Option] button to display the [Options] dialog box.
(4) Click the [Rotation] tab and select [Automatic Page Size Detection] in the [Automatic Size and Skew detection] drop-down list.



(5) Click the [OK] button. It returns to the [TWAIN Driver (32)] dialog box.
(6) Click the [OK] button in the [TWAIN Driver (32)] dialog box. The settings are saved.
(7) Align the edges of the documents.



(8) Place the documents at the center of the ADF paper chute, and adjust the side guides to the widest document in the batch. For details, refer to Section 8.1.4 “Loading Documents”.



NOTICE

Make sure that all documents are placed underneath the pick roller, otherwise the documents will not be picked.

(9) Scan the document by clicking the [Scan] menu → [Scan] in ScandAll PRO.

8.3 Cleaning

As a guideline, clean the scanner every 1,000 sheets scanned.
Note that this guideline varies depending on the type of documents you scan.

NOTICE

Cleaning cycles may vary depending on the condition of the documents. Also, cleaning must be performed more frequently when the following types of documents are scanned:

- Smooth-faced documents such as coated paper
- Documents with printed text/graphics that almost cover the entire surface
- Chemically-treated documents such as carbonless paper
- Documents containing a large amount of calcium carbonate
- Documents written with lead pencil
- Documents on which the toner is not sufficiently fused

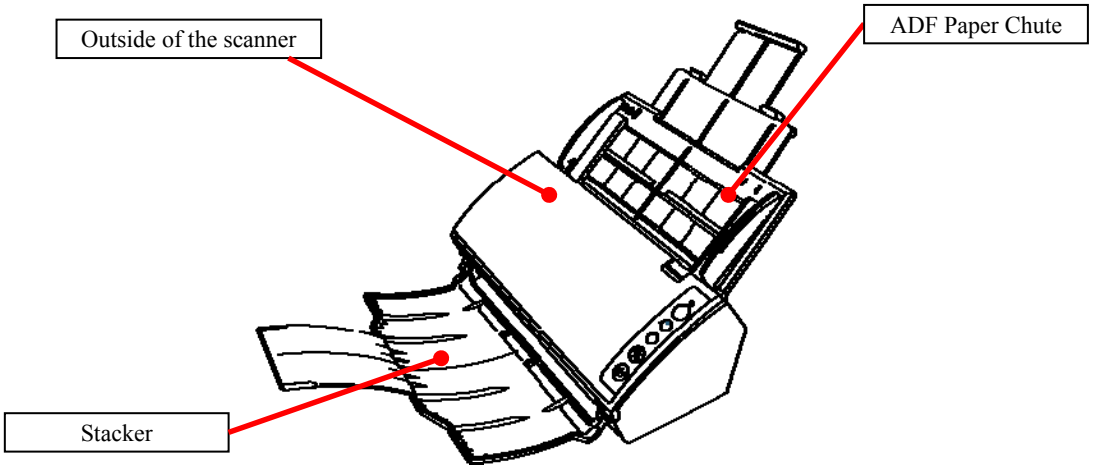
No.	Cleaning location	Cleaning procedure	Remarks
1	Outside of the scanner	Refer to Section "8.3.1" for information on how to clean the outside of the scanner.	
2	Pad ASSY	Refer to Section 8.3.2 (1) for information on how to clean the pad assy.	
3	Pick Roller	Refer to Section 8.3.2 (2) for information on how to clean the pick roller.	
4	Idler Roller	Refer to Section 8.3.2 (3) for information on how to clean the idler roller.	
5	Glass	Refer to Section 8.3.2 (4) for information on how to clean the glass.	
6	Ultrasonic Sensor	Refer to Section 8.3.2 (5) for information on how to clean the ultrasonic sensor.	
7	Feed Roller	Refer to Section 8.3.2 (6) for information on how to clean the feed roller.	
8	Eject Roller	Refer to Section 8.3.2 (6) for information on how to clean the eject roller.	

8.3.1 Cleaning the Outside

The outside of the scanner, including the ADF paper chute and the stacker, should be cleaner with either a piece of dry cloth or a cleaning wipe.

NOTICE

- Never use paint thinner or any other organic solvents.
- Do not let any moisture or water inside the scanner during cleaning.
- It may take a long time to dry if an excessive amount of mild detergent is used. Moisten the cloth with moderate quantity. Wipe off the cleaner completely to leave no residue on the cleaned parts.



8.3.2 Cleaning the Inside

The inside of the scanner should be cleaned with a sheet of cleaning wipe or a piece of cloth moistened with isopropyl alcohol. As the scanner continues to feed the documents, paper dust will accumulate inside the scanner and it may cause scanning errors. As a guideline, clean the inside of the scanner every 1,000 sheets scanned. Note that this guideline varies depending on the type of documents you scan. For instance, it may be necessary to clean more frequently when you scan documents on which the toner is not sufficiently fused.

⚠ CAUTION

- The glasses inside the ADF become very hot when the scanner is being used. When cleaning the inside of the scanner, make sure to unplug the power cable and wait for at least 15 minutes before you start cleaning.
- When you perform cleaning, make sure that the inside is free of foreign matter, and be careful not to get your hand or the cloth caught on the pick spring (metal part) as a deformed pick spring (metal part) may cause injury.

NOTICE

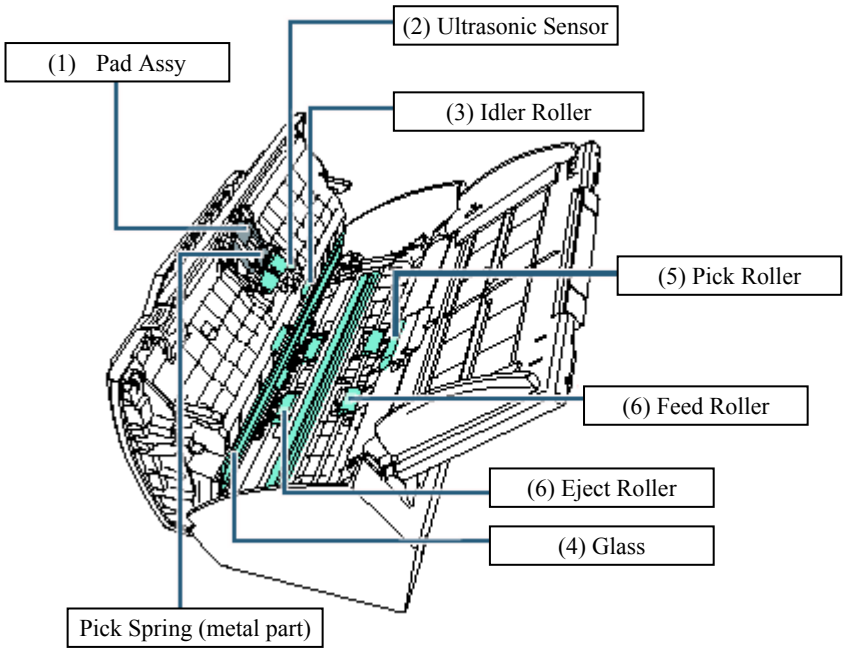
- Do not use water or mild detergent to clean the inside of the scanner.
- It may take a long time to dry if an excessive amount of isopropyl alcohol is used. Moisten the cloth with moderate quantity. Wipe off the cleaner completely to leave no residue on the cleaned parts.

(1) Turn off the scanner and wait for at least 15 minutes. (Refer to Section 8.1.1 “Turning the Power ON/OFF”.)
(2) Open the ADF. (Refer to Section 8.1.2 “Opening/Closing the ADF”.)

⚠ CAUTION

Be careful not to have your fingers caught when the ADF closes.

(3) Clean the following locations with a sheet of cleaning wipe or a cloth moistened with isopropyl alcohol.



① Pad ASSY (x1)

Wipe the dirt and dust off the surface of the rubber pads, downwards from top to bottom. Be careful not to get your hand or the cloth caught on the pick spring (metal part).

② Ultrasonic Sensor (x2)

Gently wipe the dirt and dust off the surface of the ultrasonic sensors.

③ Idler Roller (x4)

Gently wipe the rollers as you rotate them manually. Be careful not to damage the roller surface. Make sure that it is cleaned properly because residue on the roller will affect the feeding performance.

④ Glass (x2)

Gently wipe the dirt and dust off the surface of the glass sections.

⑤ Pick Roller (x1)

Gently wipe the roller as you rotate it downwards manually. Be careful not to damage the roller surface. Make sure that it is cleaned properly because residue on the roller will affect the feeding performance.

⑤ Feed Roller (x1) / Eject Roller (x2)

The power must be turned on to rotate the feed/eject rollers.

(1) Turn on the scanner. (Refer to Section 8.1.1 “Turning the Power ON/OFF”.)

(2) Open the ADF when “1” is displayed on the Function Number Display. (Refer to Section 8.1.2 “Opening/Closing the ADF”.)

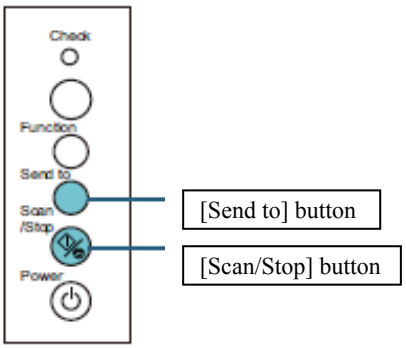
[Reference]

If you open the ADF when “P” or “0” is displayed on the Function Number Display, the feed/eject rollers do not rotate even when you proceed to the next operation.

(3) When you press the [Send to] and [Scan/Stop] buttons at the same time, the feed/eject rollers rotate a certain amount.

⚠ CAUTION

When you press the [Send to] button and the [Scan/Stop] button at the same time, the feed rollers and eject rollers rotate together. Be careful not to touch the rollers while they are rotating.



(4) Put a sheet of cleaning wipe or a cloth moistened with isopropyl alcohol against the roller surface, and wipe horizontally.

Wipe the whole surface by pressing the [Send to] and [Scan/Stop] buttons at the same time to rotate the rollers. Make sure that it is cleaned properly because black residue on the roller will affect the feeding performance.

[Reference]

As a guideline, pressing the [Send to] and [Scan/Stop] buttons six times will rotate the feed/eject rollers one revolution.

(5) Close the ADF. (Refer to Section 8.1.2 “Opening/Closing the ADF”.)

NOTICE

Confirm that the ADF is closed properly. Otherwise, the document may not be fed through the ADF.

8.4 Consumables

Consumables need to be replaced periodically. It is recommended that you keep a stock of new consumables and replace them before it reaches the end of the consumable life.

8.4.1 List of Consumables

The following table shows the consumables used for the scanner.

No.	Name	Part No.	Suggested replacement cycle	Usage status check	How to replace
1	PAD ASSY	PA03586-0002	50,000 sheets or one year	8.5.4.1	8.4.3
2	PICK ROLLER	PA03586-0001	100,000 sheets or one year	8.5.4.1	8.4.4

*Note that the suggested replacement cycles are guidelines for using A4 (80 g/m^2 [20 lb]) wood-free or wood-containing paper as these cycles vary depending on the type of papers scanned and how often the scanner is used and cleaned.

8.4.2 Checking and Resetting the Consumable Counters

Select one of the following methods to perform "Checking the consumable replacing timing" and "Clearing the consumable counters". Please select method ② "Check/Clear [Show/Clear Counters] on Offline Maintenance Mode" when performing maintenance.

① Check/Clear on Software Operation Panel (SOP)
(Refer to Section 8.5.4 "Checking and Resetting the Counters".)

② Check/Clear [Show/Clear Counters] on Offline Maintenance Mode
(Refer to Section 7.1.6 "Consumable Counter Display and Reset".)

[Reference]

The items that can be cleared differ depending on the method.
Select a method according to the item you want to clear.

No	Consumable counter	(1) SOP		(2) Maintenance mode		Remarks
		Check	Clear	Check	Clear	
1	Pad ASSY	Y	Y	Y	Y	
2	Pick Roller	Y	Y	Y	Y	

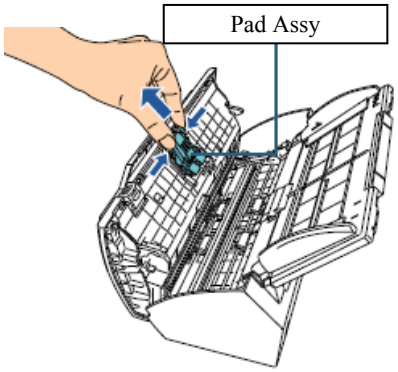
8.4.3 Replacing the Pad ASSY (supplied part)

(1) Remove all documents from the ADF paper chute.
(2) Open the ADF. (Refer to Section 8.1.2 “Opening/Closing the ADF”.)

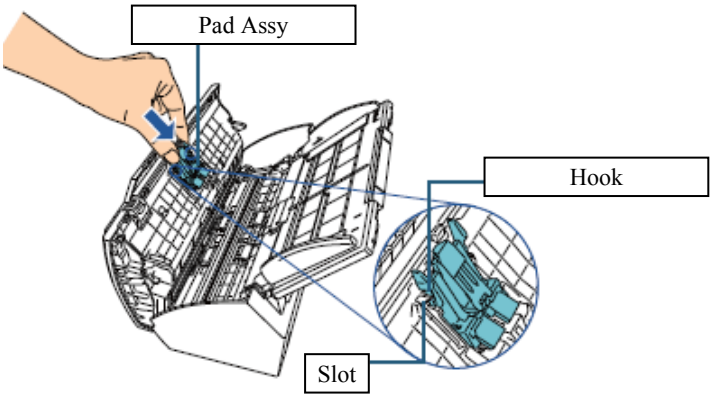
NOTICE

Be careful not to have your fingers caught when the ADF closes.

(3) Remove the pad assy. Hold both ends of the pad assy and pull it out in the direction of the arrow.



(4) Attach a new pad assy. Push the pad assy in until the hooks on both sides lock in place.



NOTICE

Confirm that the pad assy is installed properly.
Otherwise, it may cause feeding errors such as paper jams.

(5) Close the ADF. (Refer to Section 8.1.2 “Opening/Closing the ADF”.)

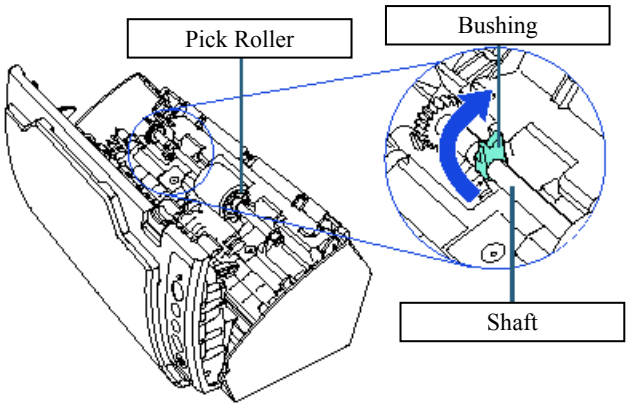
NOTICE

Be careful not to have your fingers caught when the ADF closes.

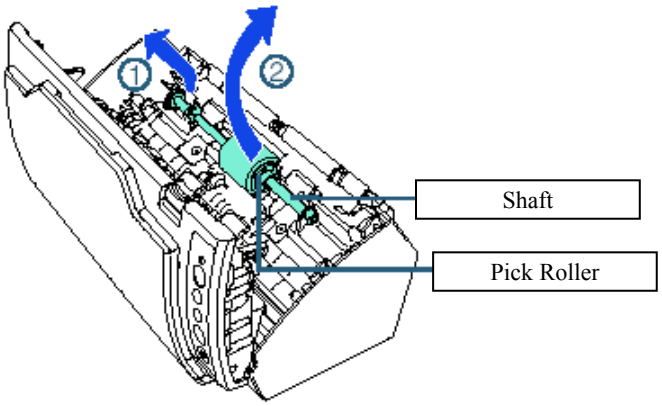
(6) Reset the consumable counter. (Refer to Section 8.5.4.2 “Resetting the counters”.)

8.4.4 Replacing the Pick Roller (supplied part)

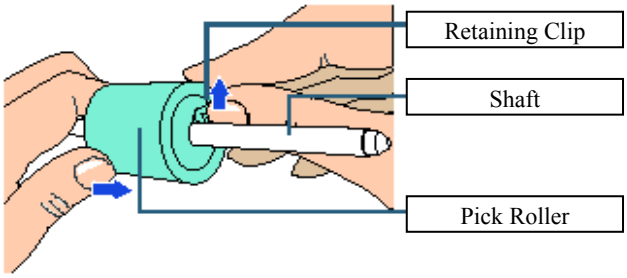
(1) Remove all documents from the ADF paper chute.
(2) Remove the ADF paper chute. (Refer to Section 6.8.1.)
(3) Open the ADF. (Refer to Section 8.1.2.)
(4) Remove the Guide P ASSY. (Refer to Section 6.8.3.)
(5) Rotate the bushing (left).



(6) Remove the shaft by slightly pulling up the left part of the shaft (about 5 mm), moving it towards the left side, and then lifting it up.

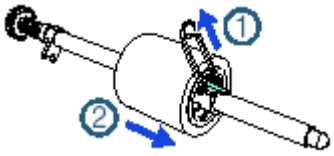


(7) Remove the pick roller from its shaft by pulling out the shaft as you lift the retaining clip.

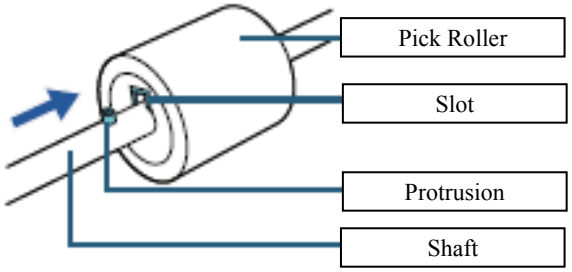


NOTICE

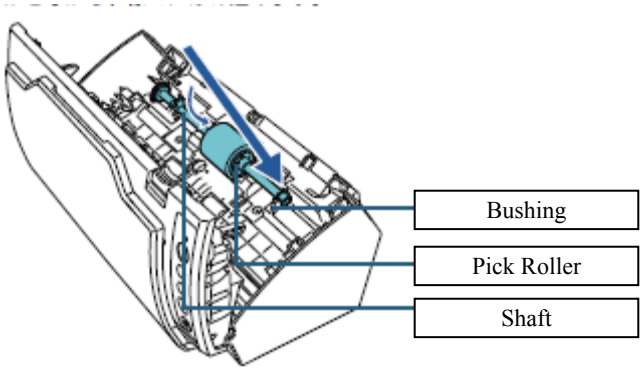
Lifting the retaining clip with your fingernail may hurt or damage your fingernail.
Use a paper clip or something alike if you have trouble lifting it up.



(8) Attach a new pick roller on the shaft by inserting the protrusion on the shaft into the slot.



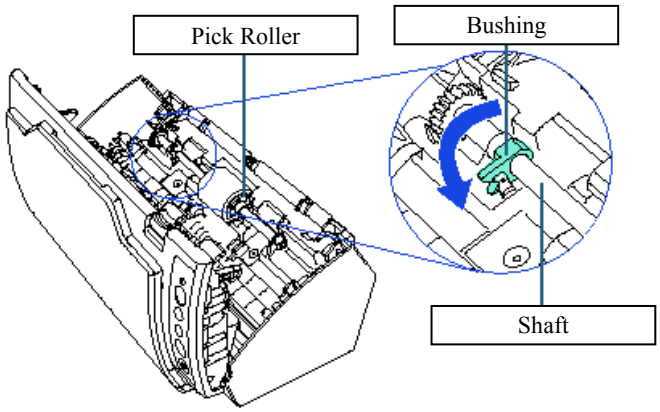
(9) Attach the shaft. Insert the right end of the shaft into the bushing (right), and set the shaft into the slot gradually by lowering it.



(10) Secure the bushing (left).

NOTICE

Confirm that the shaft is installed properly. Otherwise, it may cause feeding errors such as paper jams.



(11) Attach the Guide P ASSY. (Refer to Section 6.8.3.)

NOTICE

Confirm that the Guide P ASSY is installed properly. Otherwise, it may cause feeding errors such as paper jams.

(12) Close the ADF. (Refer to Section 8.1.2.)

NOTICE

Be careful not to have your fingers caught when the ADF closes.

(13) Attach the ADF paper chute. (Refer to Section 6.8.1.)

(14) Reset the consumable counter. (Refer to Section 8.5.4.2 “Resetting the counters”.)

8.5 Scanner Settings

8.5.1 Software Operation Panel

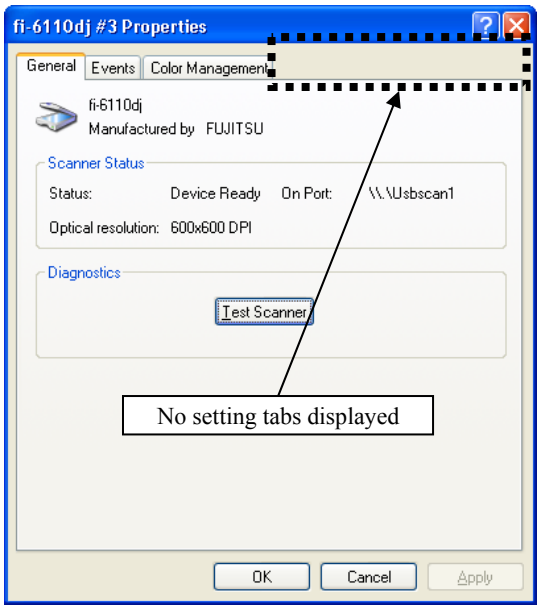
The Software Operation Panel (SOP) is an application which allows you to configure various settings such as the operation of the scanner and managing the consumables. The Software Operation Panel (SOP) is installed together with the scanner drivers TWAIN and ISIS, and the setting information is stored in EEPROM.

You can configure and check the following items using the Software Operation Panel.

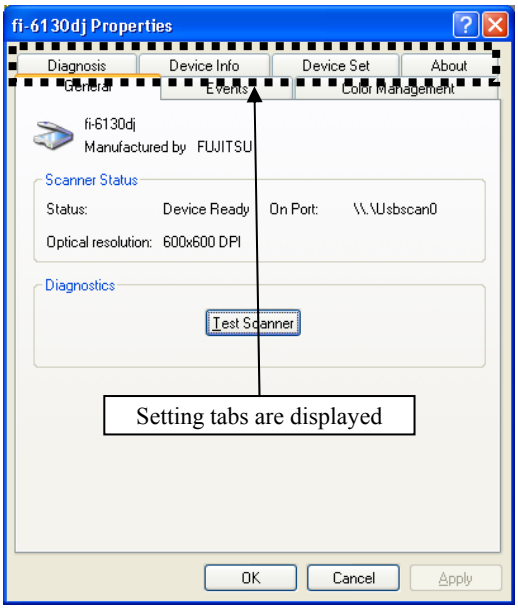
- Diagnosis: Configure device setting. For more information, refer to Section 8.5.3.1.
- Device Info: Various kinds of information about the device. For more information, refer to Section 8.5.3.2.
- Device Setting/Device Setting 2: Configure operational settings for scanning. For more information, refer to Sections 8.5.3.3 and 8.5.3.4.

Reference

You cannot refer to [Device Info] or manage [Device Set] in the [Properties] dialog box of [Scanners and Cameras] for this device.



fi-6110 Properties



[Reference] fi-6130 Properties

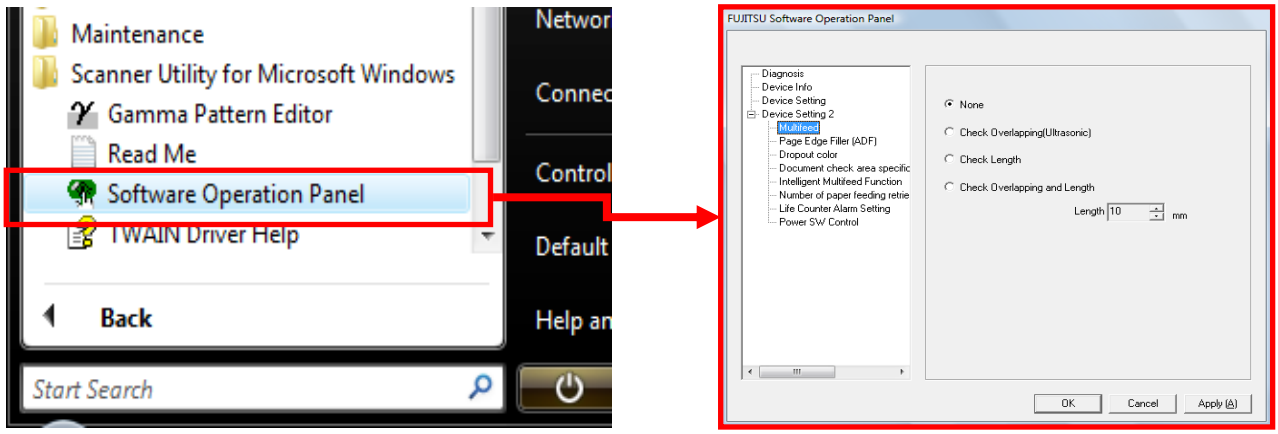
8.5.2 Starting Up the Software Operation Panel

Start up the Software Operation Panel in the following procedure.

NOTICE

- The Software Operation Panel must be started up by a terminal user with administrator privileges.
- Device setting information configured in the Software Operation Panel is stored in EEPROM.

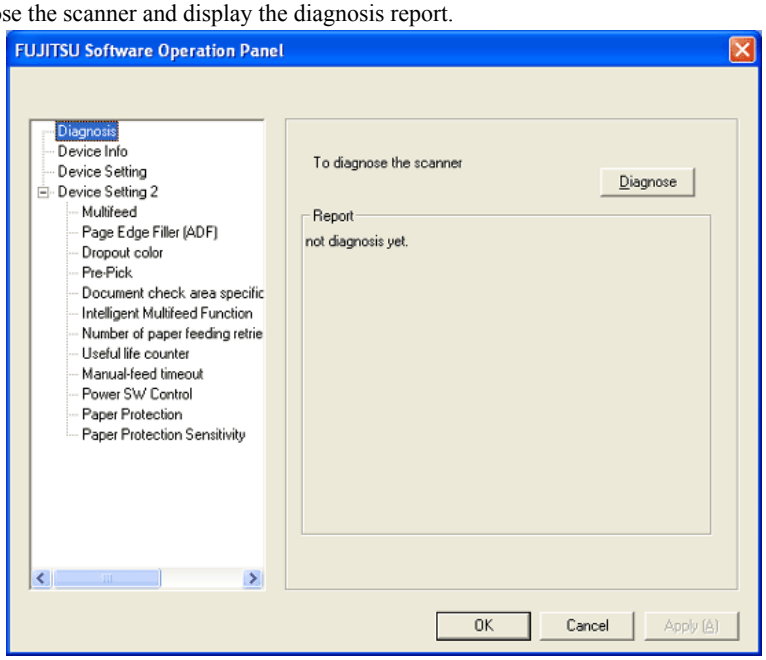
(1) Select the [Start] menu, → [All Programs] → [Scanner Utility for Microsoft Windows] → [Software Operation Panel].
(2) The [FUJITSU Software Operation Panel] dialog box appears.



8.5.3 Software Operation Panel Items

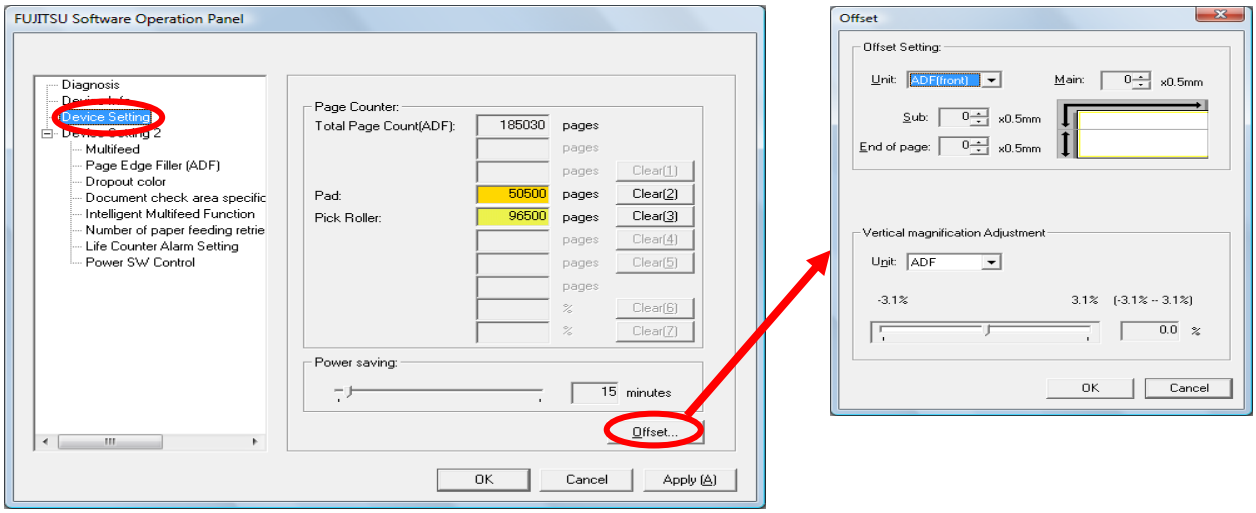
8.5.3.1 Diagnosis

You can diagnose the scanner and display the diagnosis report.



8.5.3.2 Device Info

You can display/clear the page counter, configure the power saving, and perform offset/magnification adjustment.

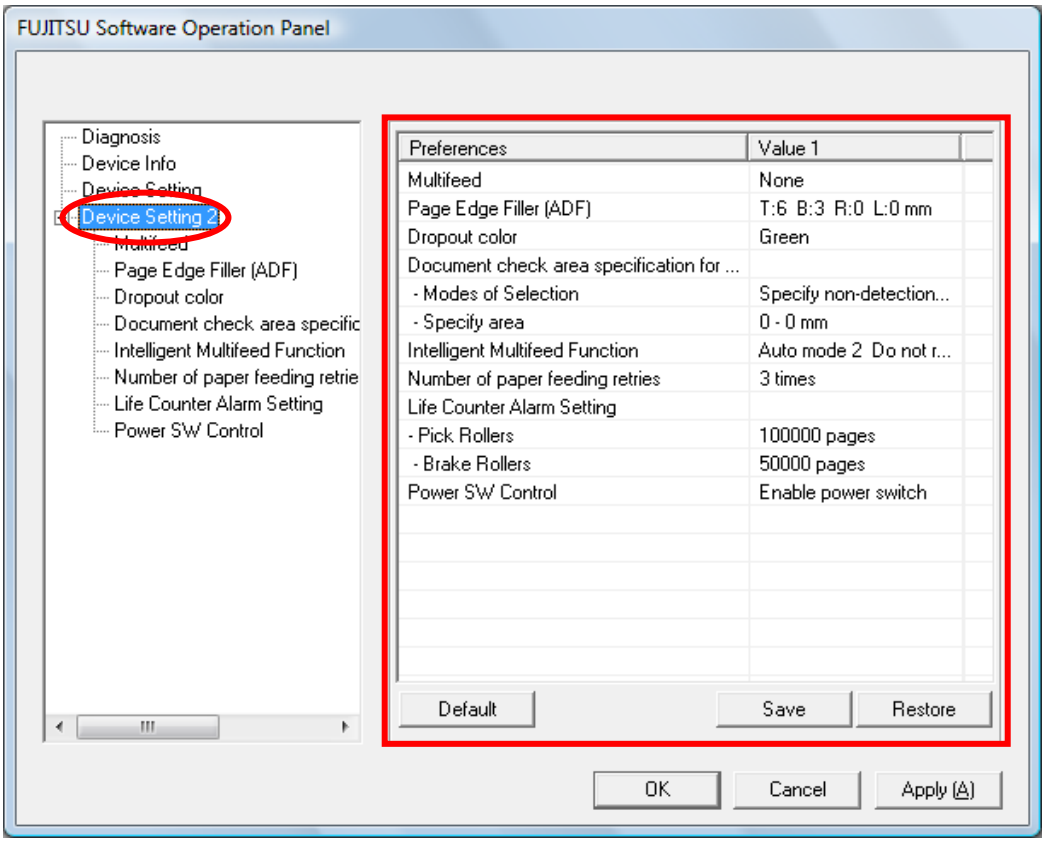


■Device Setting

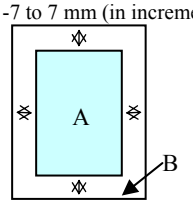
Item	Description	Parameter/Value	Factory Default
Page Counter	Check the counters to determine when to replace the consumables. Also use it to reset the counters after replacing the consumables.	Total Page Count (ADF) / Pad / Pick Roller	0
Power saving	Specify the waiting time before entering power saving mode.	Range: 5 to 235 min. (in increments of 5)	15 min.
Offset Setting	Adjust the position to start the scan on the selected scanning side(s).	Unit: ADF (Front) / ADF (Back) Main/Sub/End of page: -2 to +2 mm (in increments of 0.5)	Main/Sub/End of page: 0 mm
Vertical magnification adjustment	Adjust the magnification level in feed direction for the selected scanning method.	Unit: ADF Range: -3.1 to 3.1% (in increments of 0.1)	0%

8.5.3.3 Device Setting 2

You can configure detailed scanner settings.



■ Device Setting 2

Item	Description	Parameter/Value	Factory Default
Multifeed	Specify a method for multifeed detection. Detect multifeeds by monitoring the overlap, document length, or the combination of both. This setting can also be configured from the scanner driver's setup dialog box. Note that priority is given to the scanner driver setting.	None / Check Overlapping (Ultrasonic) / Check Length / Check Overlapping and Length Length: 10 / 15 / 20 mm (for detection by document length)	None Length: 10mm
Page Edge Filler (ADF)	Specify a width for the margin around the edge of the scanned image to fill in white. With TWAIN driver, this setting can also be configured from the scanner driver's setup dialog box. Note that priority is given to the setting with a larger value.	Top / Left / Right: 0 to 15 mm Bottom: -7 to 7 mm (in increments of 1)  (A: image, B: filled area, A+B: output)	Top/Bottom/Left/Right: 0 mm
Dropout color	Select a color to be removed from the scanned image (only available in black & white or grayscale mode). With TWAIN driver, this setting can also be configured from the scanner driver's setup dialog box. Note that priority is given to the scanner driver setting. With ISIS driver, the scanner driver setting is enabled at all times.	Red / Green / Blue / None	Green
Document check area specification for Multifeed Detection	Selected range: Select this item to restrict the area to run multifeed detection.	[Selected area] check box	Not selected
	Enable / Disable (Middle): Specify whether to enable or disable multifeed detection in the selected area.	Enable / Disable (When [Selected range] is selected)	Disable
	Start (Middle): Specify the start position of the area in length (mm) from the leading edge of the document.	0 to 510 mm (in increments of 2)	0 mm
	End (Middle): Specify the end position of the area in length (mm) from the leading edge of the document.	0 to 510 mm (in increments of 2)	0 mm
Intelligent Multifeed Function	When there is a paper of the same size attached to a designated location on the page, configure the scanner to memorize the location of the attachment and not detect multifeeds for that location. Note that you first need to select [Check Overlapping (Ultrasonic)] or [Check Overlapping and Length] in either the scanner driver's setup dialog box or the multifeed detection setting.	Manual mode / Auto mode 1 / Auto mode 2	Manual mode
	Select to clear the overlap pattern (length, location) memorized in Auto mode.	[Clear overlap pattern] check box	Not selected
	Specify whether or not to memorize the multifeed pattern upon power-off.	Remember / Do not remember	Do not remember
Number of paper feeding retries	Configure this setting to change the number of feeding retries when a pick error occurs.	1 to 12 times	3 times
Life Counter Alarm Setting	Specify the replacement cycle for the consumables.	Each consumable 10,000 to 2,550,000 sheets (in increments of 10,000)	Pick roller: 100,000 sheets Pad; 50,000 sheets
Power SW Control	Specify the method by which the scanner is powered ON/OFF.	Enable power switch / Disable power switch / Enable USB power feeding	Enable power switch

8.5.4 Checking and Resetting the Counters [Page Counter]

You can check and reset the page counter using the Software Operation Panel (SOP).

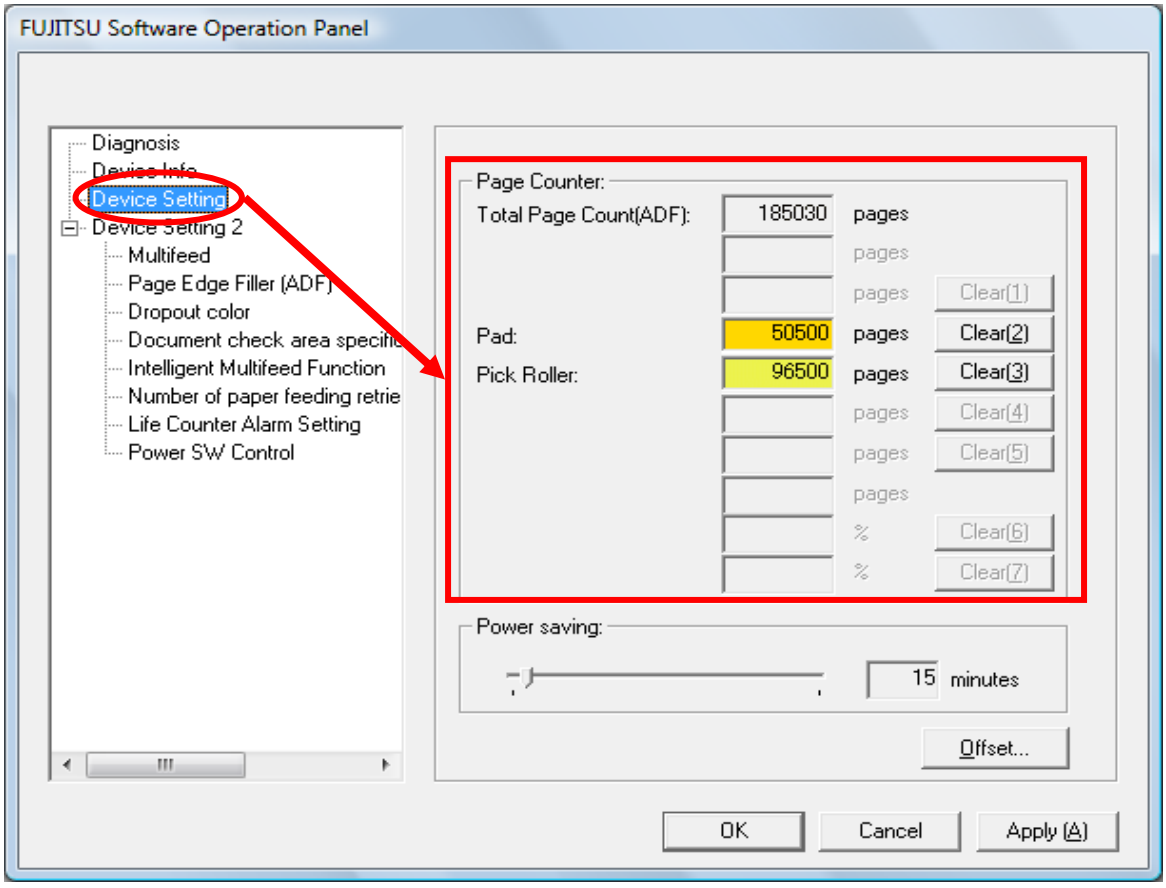
8.5.4.1 Checking the counters

Check the page counter in the following procedure.

(1) Start up the Software Operation Panel. (Refer to Section 8.5.2.)
(2) From the listing on the left, select [Device Setting].
(3) Page counters are listed on the right side of the displayed dialog box.
In this dialog box, you can check the following items.

Item	Description
Total Page Count (ADF)	Approximate total number of sheets scanned through the ADF
Pad	Number of sheets scanned after replacing the pad assy (in units of 500)
Pick roller	Number of sheets scanned after replacing the pick roller (in units of 500)

- The color of the counter changes to indicate that the consumable needs replacement.
The [Device Setting] counter turns light yellow when the page count after replacing the consumable reaches 95% of the value specified in “Replacement Cycle of Consumables [Life Counter Alarm Setting]”, and turns yellow when it reaches 100%.



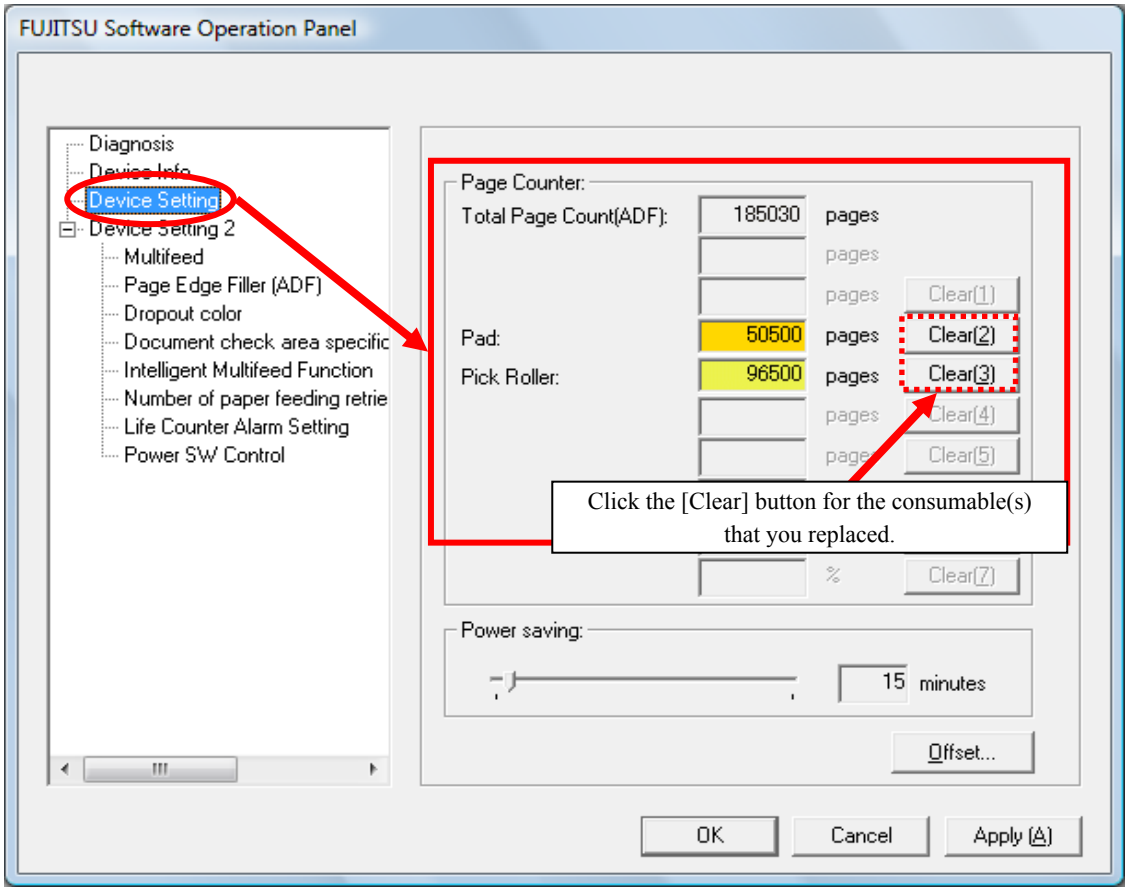
8.5.4.2 Resetting the counters

Reset the page counter in the following procedure.

NOTICE

Reset the corresponding counters only when you have replaced the consumables.

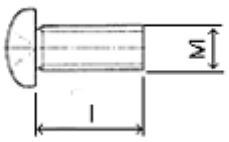
(1) Start up the Software Operation Panel. (Refer to Section 8.5.2)
(2) From the listing on the left, select [Device Setting].
(3) Click the [Clear] button for the consumable(s) that you replaced.
(4) Check that the counter is reset to 0, and then click the [OK] button.

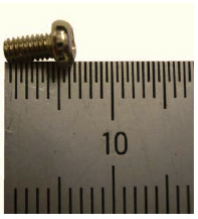


Appendix 1 Screws

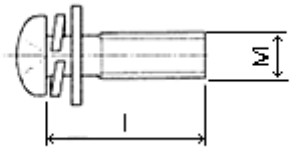
The screws that are used in this device are as follows.

Name on this manual	Description	Part number	M (mm)	L (mm)	Remarks
Screw A	Small screw	RU6SNA2R3-05121	3	5	

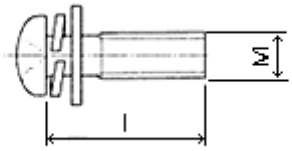




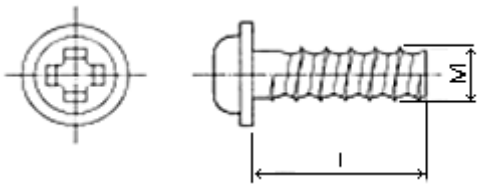
Name on this manual	Description	Part number	M (mm)	L (mm)	Remarks
Screw B	Screw	RU6SW3N3-08121	3	8	



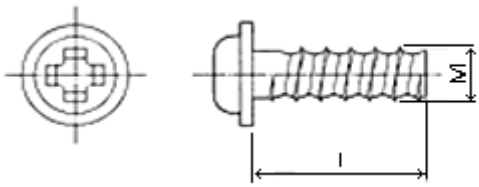
Name on this manual	Description	Part number	M (mm)	L (mm)	Remarks
Screw C	Screw	RU6SW3N3-10121	3	10	



Name on this manual	Description	Part number	M (mm)	L (mm)	Remarks
Tapping screw A	PT screw	PA83952-2638	3	8	



Name on this manual	Description	Part number	M (mm)	L (mm)	Remarks
Tapping screw B	PT screw	PA83952-2636	3	6	



Appendix 2 Emulation Mode

Emulation of the following scanners can be specified on this scanner.

Model name	Scanner that can be emulated	Remarks
fi-6110	fi-5110C	

To activate the Emulation function, scanner setting needs to be changed.
For the configuration method, see below.
The functions enhanced on the fi-6110 are not available while being emulated.
When [Check thickness] is selected for multifeed detection, multifeed is detected by overlapping.

1. Launching "Emulation switching mode"

NOTICE

While "Emulation switching mode" is activating, interface connection with the computer is disabled.

1. With the ADF open and the Empty sensor status ON, press the Power button while pressing the Function button to turn the power on. (Screen: E01)
   [Reference] The Empty Sensor automatically becomes [ON] when the ADF is opened.

2. The power is turned on, and the activation console at "Emulation switching mode" starts. (Screen: E03)
3. When the Function Number Display shows that the scanner is in Maintenance mode, let go of the Function button. (Screen: E03)
4. The scanner is transited to the "Emulation switching mode". (Screen: E04)

Check the table below for scanner operation and status of the Function Number Display.

[Operation and status of the Function Number Display while activating the "Emulation switching mode"]

Screen	Operation	Function Number Display	Status	Remarks
E01	ADF open + Pressing the Function button + Press the Power button to turn on	 (OFF)	Power OFF	
E02	Pressing the Function button (with ADF open)	 (ON)	Initializing	
E03	Let go of the Function button (with ADF open)	 (ON)	Maintenance mode	Maintenance mode activating console is displayed when the initialization is completed successfully.
E04	Close the ADF.	 (ON)	Emulation switching mode	

2. "Emulation switching mode" setting method

1. Pressing the Scan/Stop button during "Emulation switching mode" displays the current status on the Function Number Display.

2. Pressing the Function button updates the number on the Function Number Display. Select the number corresponding to the scanner to be emulated.

   The following table shows the numbers corresponding to the scanner to be emulated.

Function Number Display (scanner number)	Emulated mode	Remarks
0	fi-6110	Initial value (standard) Emulation mode invalid
1	fi-5110C	

3. Pressing the Scan/Stop button displays the selected scanner name (numbers) on the Function Number Display by turns.

Function Number Display (scanner number)	Emulated mode	How to display
0	fi-6110	"6110" is displayed as below repeatedly. "-" ➔ "6" ➔ "SP" ➔"1" ➔ "SP" ➔ "1" ➔"SP" ➔ "0" ➔ "SP"
1	fi-5110C	"5110"is displayed as below repeatedly. "-" ➔"5" ➔"SP" ➔ "1" ➔"SP" ➔"1" ➔"SP" ➔ "0" ➔"SP"

* The first "-" is a start mark. "SP" signifies "OFF: No display". Switching interval is 0.5 second.

4. If the scanner name (numbers) displayed on the Function Number Display is correct, press the Function button to go to EEPROM writing process.
   Function button: Asks whether to write the selected mode into EEPROM. (Screen: E05)
   Send to button: Cancels the process and returns to initial display of Emulation mode. (Screen: E04)

5. Press the Scan/Stop + Function buttons to start writing the changed setting into EEPROM. (Screen: E06)

6. If writing into EEPROM is complete successfully, the Function Number Display shows "o" (upper). (Screen E07)
   If writing into EEPROM failed, the Function Number Display shows "c". (Screen: E08)
   Restart the operation from launching the "Emulation switching mode".

Screen	Operation	Function Number Display	Status	Remarks
E05	Press Function button: Asks whether to write into EEPROM Press Send to button: Cancels the process and returns to the initial screen.	 (Blink)	Asking whether to write into EEPROM	Blinks "o" (lower). Interval of blinking: 1.0 second (Switching interval of light ON and OFF is 0.5 second)
E06	Scan/Stop button + Function button	 (ON)	Writing into EEPROM	Displays "L" without blinking. * No button is available.
E07	Go to step (7) "Restart scanner".	 (ON)	Writing into EEPROM is complete successfully	Displays "o" (upper) without blinking.
E08	Retry by launching the "Emulation switching mode".	 (ON)	Writing to EEPROM failed	Displays "c" (lower) without blinking.

7. Restart the scanner.
   If the writing process to EEPROM is complete successfully, press the Power button for more than two seconds to turn off the power and back on again to restart the scanner.
   The scanner is launched as an emulated scanner.