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CanoScan 8800F

SERVICE MANUAL

Revision 0

CANOSCAN 8800F JP	2168B001AA
CANOSCAN 8800F US	**2168B002AA**
CANOSCAN 8800F CA	**2168B003AA**
CANOSCAN 8800F GB	**2168B008AA**
CANOSCAN 8800F EUM/EMB	**2168B009AA**
CANOSCAN 8800F AU	**2168B011AA**
CANOSCAN 8800F ASA	**2168B012AA**
CANOSCAN 8800F HK	**2168B013AA**
CANOSCAN 8800F CN	**2168B014AA**
CANOSCAN 8800F KR	**2168B016AA**

Canon

QY8-13BQ-000

Application

This manual has been issued by Canon Inc. to provide information necessary to self-study techniques, setting-up, maintenance and repair to technicians who service the target products. This manual covers all locations where the target products are sold. For this reason, there may be information in this manual that does not apply to your locality.

Revision

This manual might include technically incorrect descriptions or misprints because the target products may be improved or changed. For this reason, service information is being published in case of any changes in this manual. If this manual is having a significant change, in long or in short term, a revised edition will be carried out.

The following paragraph does not apply to any countries where such provisions are inconsistent with local law.

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Outline

This manual is provided into 4 sections providing each necessary information to service the target product.

Part 1: Maintenance

Maintenance and repair related information of the target product Part 3:

Part 2: Technical Reference

Technical matters such as new techniques and FAQ of the target product

Part 3: Parts Catalog

Parts catalog of the target product

Part 4: Appendix

Block diagram and specifications of the target product

<Outline>

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Part 1
Maintenance

1. Maintenance

1-1 Service Engineer adjustment/Periodic Replacement/Periodic Inspection/Replacement of Consumable

1-1-1 Adjustment

ITEM	PERIOD	PURPOSE	TOOL	TIME
N/A				

1-1-2 Periodic Inspection

ITEM	PERIOD	PURPOSE	TOOL	TIME
N/A				

1-1-3 Periodic Replacement

ITEM	PERIOD	PURPOSE	TOOL	TIME
N/A				

1-1-4 Replacement of Consumable

ITEM	PERIOD	PURPOSE	TOOL	TIME
N/A				

1-2 Customer Maintenance

ITEM	PERIOD	PURPOSE	TOOL	TIME
N/A				

1-3 Product Life

1-3-1 Main Body

The following 1 or 2, which comes earlier

1. Scan Count: 15,000 scans
2. Age of Service: 3 years

1-4 Special Tools

NAME	TOOL NUMBER	PURPOSE	REMARKS
N/A			

1-5 Serial Number Indicating Location

Back side of the main body

2. Troubleshooting

2-1 Troubleshooting by Symptom

	SYMPTOM	ACTION	REMARKS
Malfunction	Unit does not turn the power on Spontaneously shuts down right after turned on	Replace AC adapter or replace MAIN PCB ASS'Y	
	Carriage does not operate	Replace MOTOR ASS'Y or replace MAIN PCB ASS'Y	
	Acoustic noise	Eliminate the foreign substance or replace MOTOR ASS'Y or replace MAIN PCB ASS'Y or replace CARRIAGE ASS'Y	
	Scanning lamp does not light up	Replace CARRIAGE ASS'Y or replace MAIN PCB ASS'Y	
Faulty scanned image	Blurred image	Clean PLATEN GLASS ASS'Y or replace CARRIAGE ASS'Y or replace MAIN PCB ASS'Y	
	Solid vertical line	Clean PLATEN GLASS ASS'Y or replace CARRIAGE ASS'Y	
	Solid horizontal line	Check the connection with PC or replace USB cable or replace MAIN PCB ASS'Y	
	Faulty color reproduction	Replace MAIN PCB ASS'Y	

3. Servicing

3-1 Advisory for Replacement of Service Part (also for disassembly and assembly)

REPLACING SERVICE PART	NOTE FOR REPLACEMENT*1	ADJUSTMENT /SETTING UP	VERIFYING OPERATION
MAIN PCB ASS'Y	Disconnect the power cord,leave the unit about 1 minute (to discharge the stored charge of the capacitor) and dismount the part (to prevent MAIN PCB ASS'Y broken)		Enforce scan operation
CARRIAGE ASS'Y	Be careful not to touch mirrors or CCD PCBs. Be careful not to put dirt or fingerprint on the light guide.		Enforce scan operation
PLATEN GLASS ASS'Y (FE2-0201-000)	Be careful not to put dirt or fingerprint on the document glass.		Enforce visual inspection

1:Note for entire work
Have a careful look on the wiring arrangement of flexible cable and harness, and connection of connectors. [Refer to 3-2 Instruction for Servicing (1) Wiring arrangement of flexible cable and harness, and connection of connectors]
Be careful not to drop down ferrite core to be broken.
Be careful not to let electrostatic break electric parts down.
Disconnect the power cord, leave the unit about 1 minute (to discharge the stored charge of the capacitor) and dismount the part (to prevent MAIN PCB ASS'Y broken).
Do not stain inappropriate part with TIMING grease. Do not scratch or damage parts and the unit.
Be careful not to damage or stain external cover.

3-2 Instruction for Servicing

3-2-1 Detaching the front cover

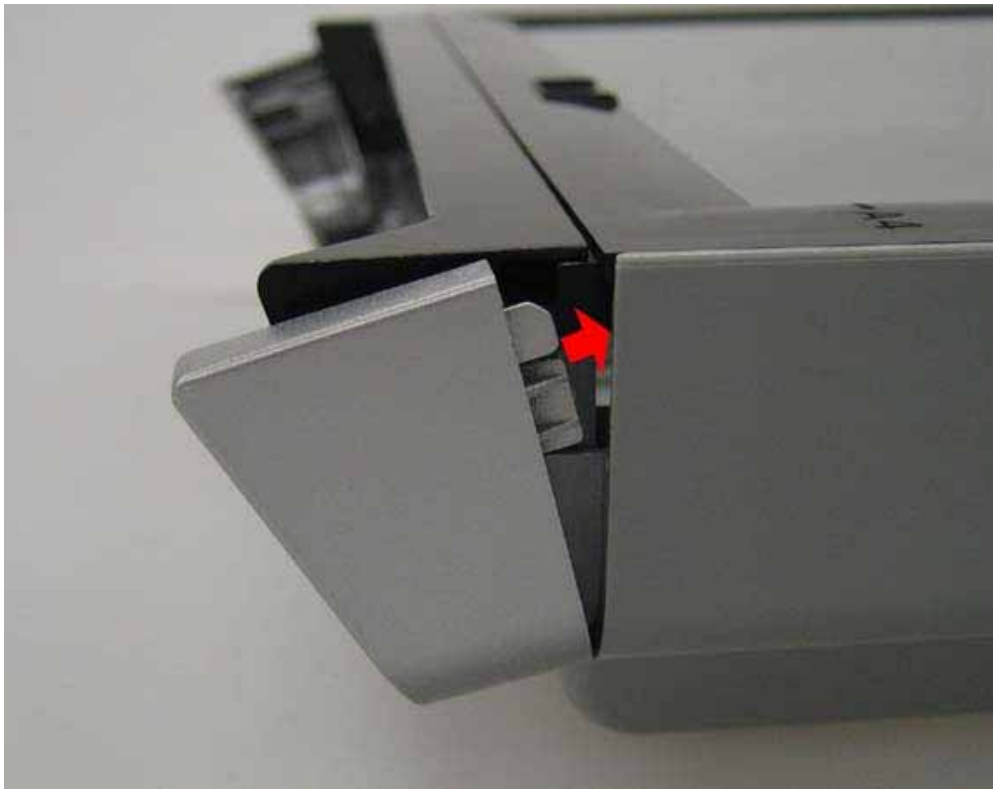
1) Lift the bottom side of the front cover as shown in the picture and detach the cover pulling the upper side outwards.

2) Detach the front face and front cover lifting up the bottom side of the front face.

3-2-2 Attaching the front cover

1) Attach the front face.

2) Attach the front cover putting hooks on both sides of the front cover to the main unit.



3-2-3 Handling the carriage unit

1) If CCD is shocked, the optical axis will be out of alignment and scanned images will not be outputted properly. Be careful when handling a carriage unit.

2) Be careful not to put dirt or dust on the light guide.

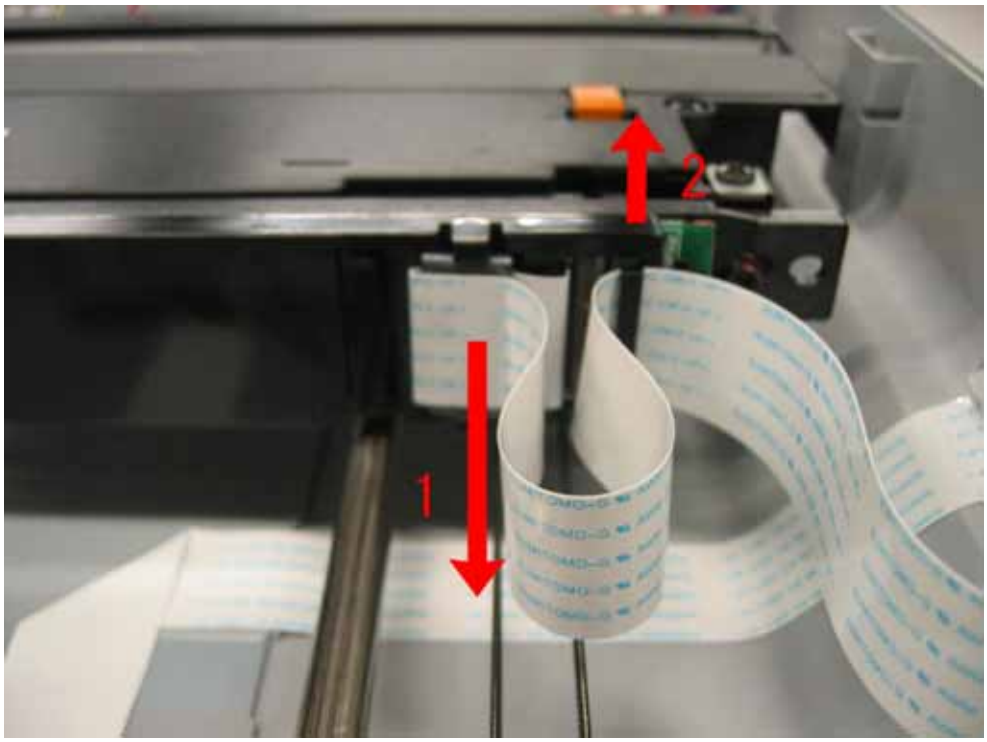
3-2-4 Detaching the FFC cable

Notice:

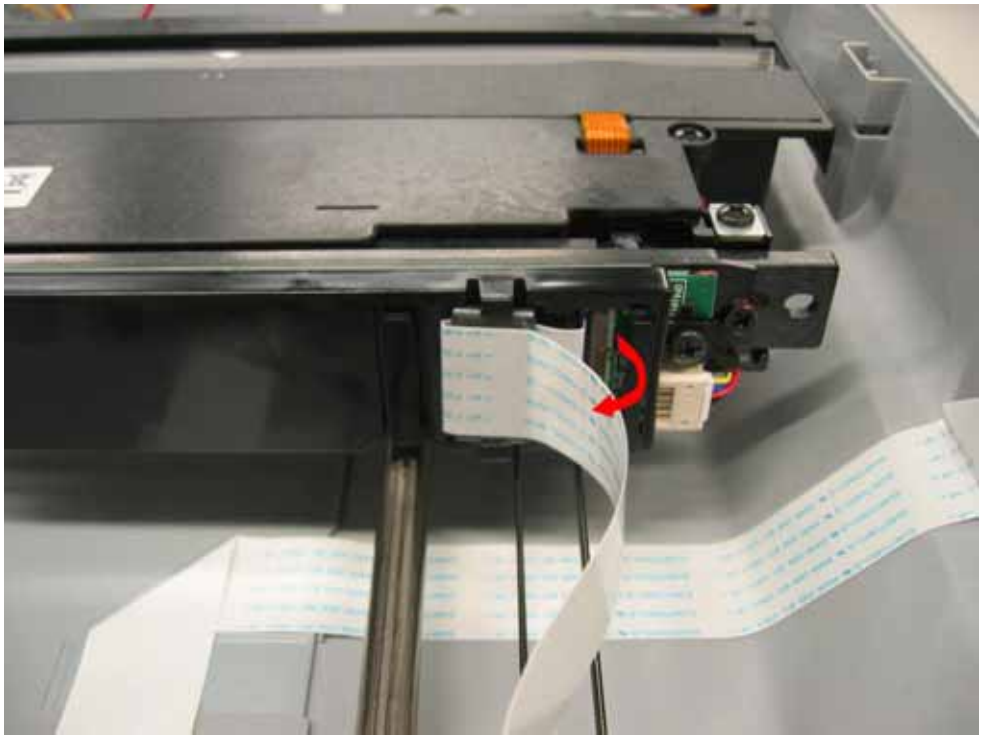
Be careful not to crease the FFC cable.

This operation is performed in the area around CCD. If CCD is shocked, the optical axis will be out of alignment and scanned images will not be outputted properly. Be careful when handling a carriage unit.

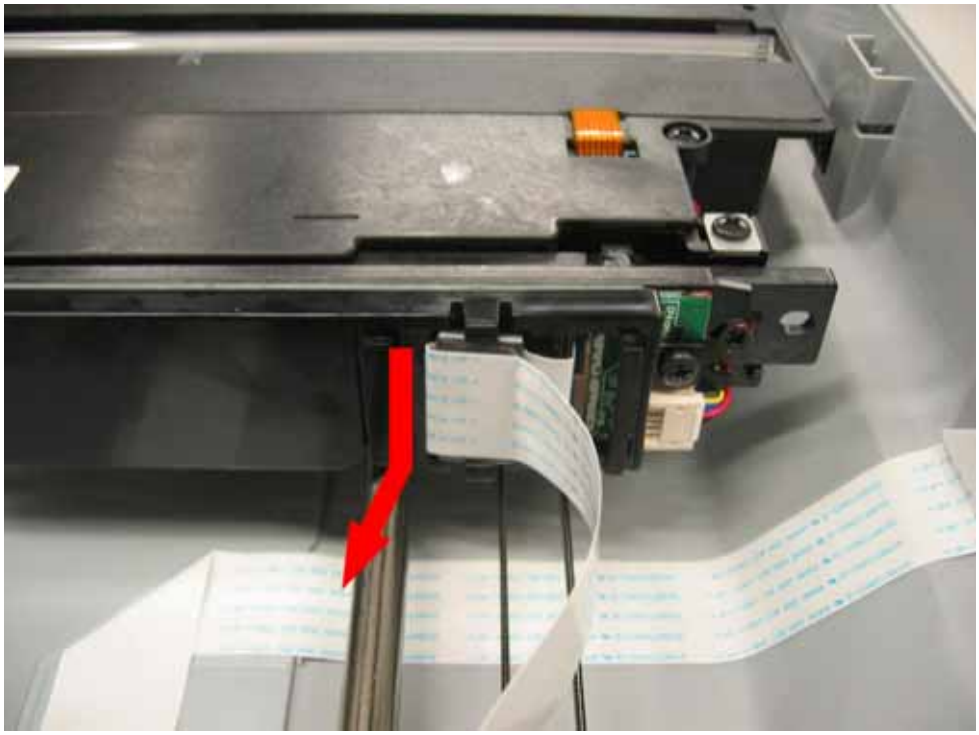
1) Move the carriage to the center of the main unit. Pull the FFC cable to the near side and take it from the hook.



2) Lift the hook on the connecter.

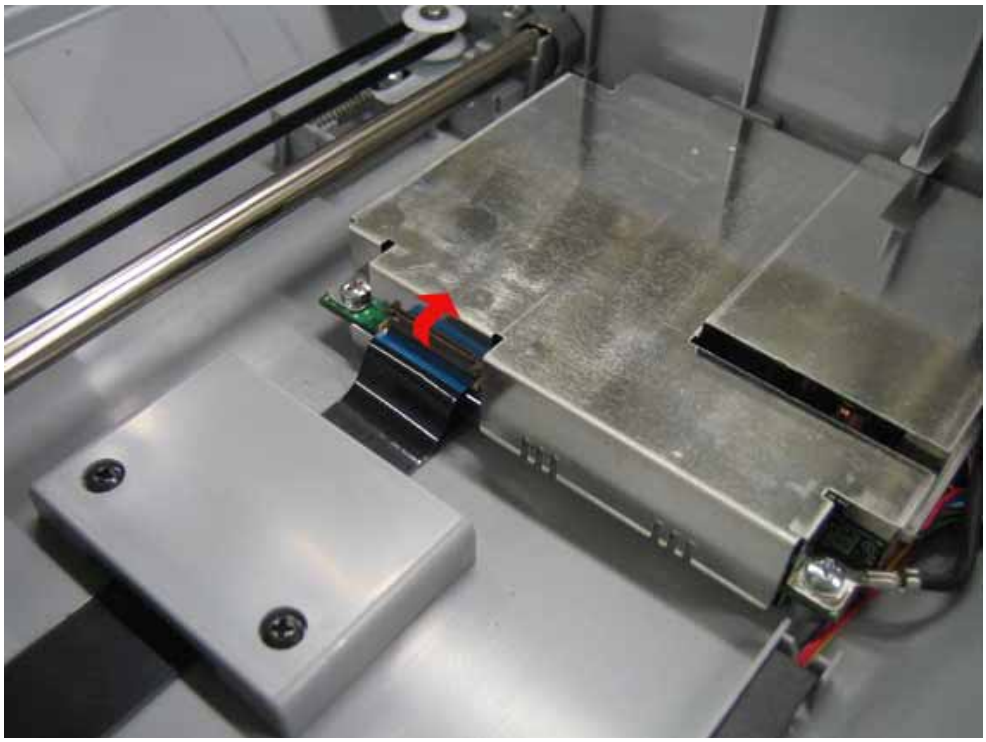


3) Pull the ferrite cores to the near side while pushing them down and detach the ferrite cores and the FFC cable.



3-2-5 Detaching the FFC cable (Main PCB)

1) Lift the hook on the connecter and then detach the FFC cable.



<3. Servicing>

4. Transport

4-1 Transport

When a unit, such as after repairing, is being transported, it needs a few cares in preparation for transport.

1) Turn on the power switch of scanner and return Carriage unit to home position.

2) Move the lock switch to ON side to fix Carriage unit.

3) Fix the scanner body with tape. [See the figure below]

Note:Use a fixing tape almost equivalent to the polyester one used for shipping product. (A tough, not easily peelable tape which would not leave its glue after peeled.)

<4. Transport>

Part 2
Technical Reference

1. New Features

(1) CCD scanner with white LED, no need to warm up

High brightness white LED is used as light source for reflective documents and films.
To scan high quality images, technology to convert point light source of LED to line light source with uniform intensity is essential. It is realized by applying our unique technology for optical guiding device development acquired by CIS unit development of LiDE series.
Warming up required for traditional fluorescent lamp (approximately 30 seconds at normal temperatures) is no longer needed. The first scanning starts immediately.
Turning on lamp after scanning is not required. It also serves the energy-conservation.

(2) Faster scanning speed at low resolution

The scanning speed at 300/600dpi, which is often used to scan reflective documents, becomes faster by improving the data reading method from CCD.

Color 300dpi : 1.0msec/line (8600F: 3.6msec/line)

Color 600dpi : 1.7msec/line (8600F: 3.6msec/line)

(3) Reduced body size

Newly designed carriage (ST lens is used) and white LED used as light source of FAU allow to make the body approximately 17% thinner than that of 8600F.

2. Product FAQ (Particular problems and their corrective actions)

Item	Frequency	Function	Symptom	Condition	Cause	Solution	Expected Call/Complaint
1	B	scan	Solid vertical line on the image	Scan	Calibration is not executed properly	Execute calibration	Solid vertical line on the image
2	B		Acoustic noise when the power turned on		Lock switch is not released	Release the lock switch	Acoustic noise
3	A	scan	Thumbnail does not display normally	Film scan Film scan with overexposure / underexposure films	Film images are not recognized as images	Set Thumbnail "OFF" and scan	Thumbnail does not appear

<2. Product FAQ>

Part 3
Part Catalog

1. Part Catalog

Figure 1 Option

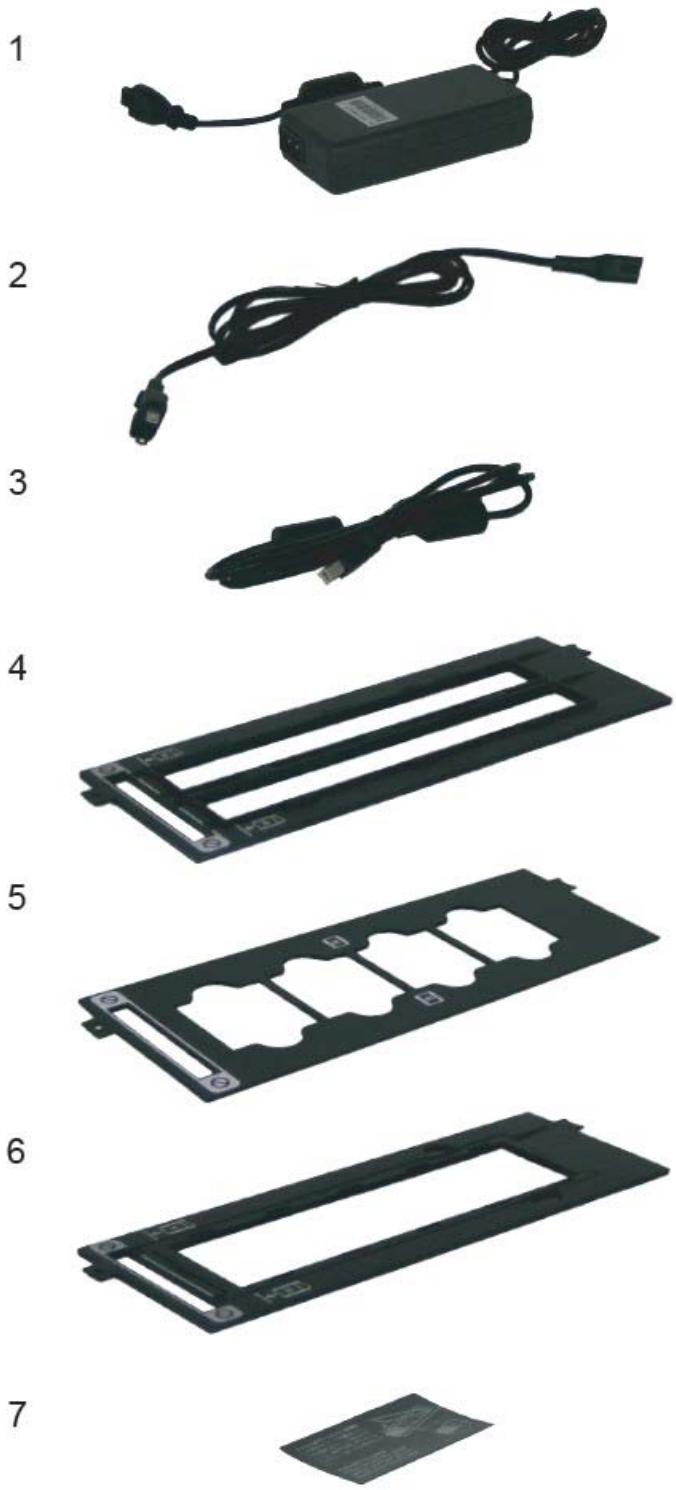


FIGURE & KEY NO.		PART NUMBER	RANK	QTY	DESCRIPTION	REMARKS
1-	1	QK1-3545-000		1	ADAPTER, AC	
	2	QK1-3761-000		1	CABLE, POWER	JAPAN
		QH2-2719-000		1	CABLE, POWER	US, CAN
		QK1-1675-000		1	CABLE, POWER	UK, HK
		QH2-2716-000		1	CABLE, POWER	EU, ASA
		QK1-0776-000		1	CABLE, POWER	AU
		QK1-3048-000		1	CABLE, POWER	CN
		QH2-2721-000		1	CABLE, POWER	KR
	3	QK1-3299-000		1	CABLE, USB	
	4	QC2-5902-000		1	FILM GUIDE, 35MM MOUNT	
	5	QM3-2694-000		1	FILM GUIDE, 35MM SLEEVE	
	6	QM3-2695-000		1	FILM GUIDE, 120MM	
	7	QC2-5900-000		1	SHEET, MASK	

Figure 2 Main Body

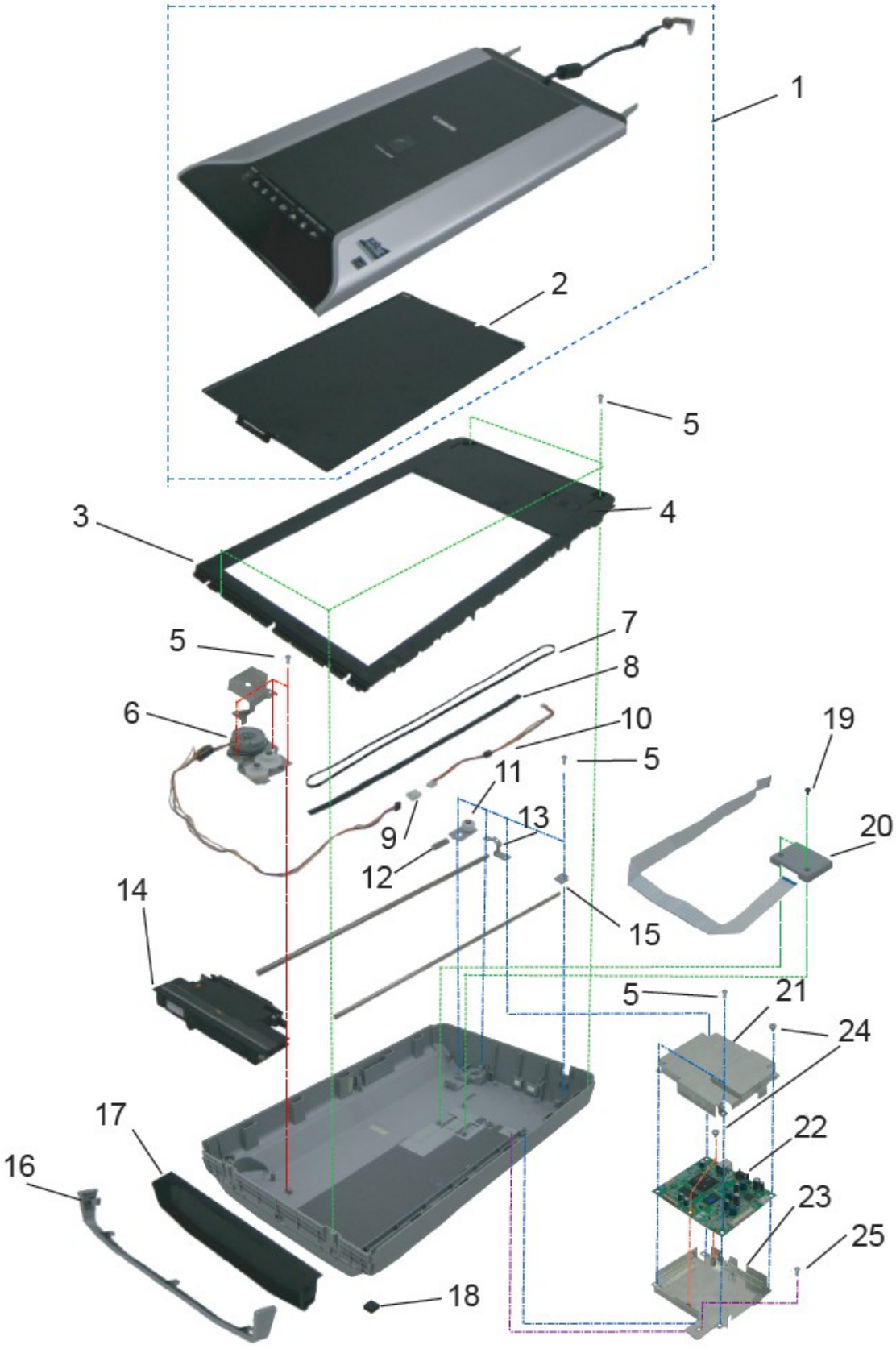
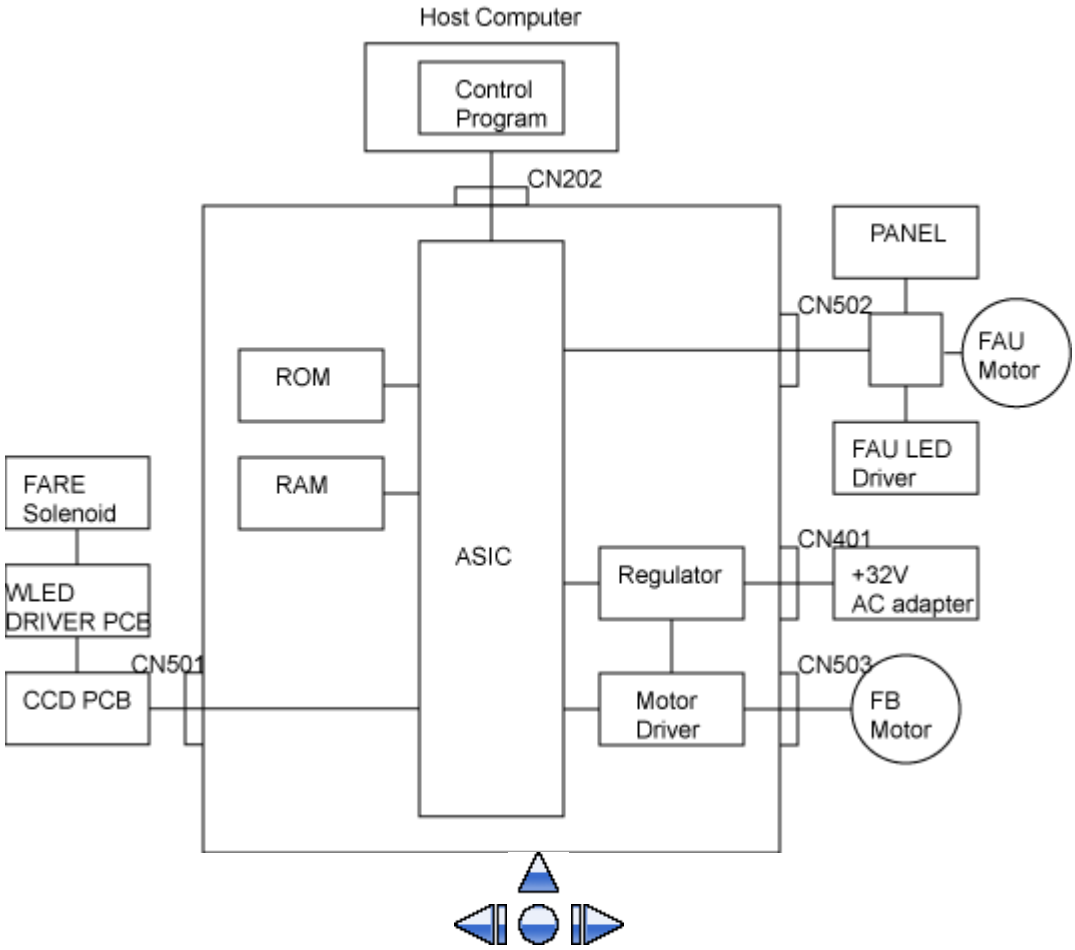


FIGURE & KEY NO.		PART NUMBER	RANK	QTY	DESCRIPTION	REMARKS
2-	1	QM3-2689-000		1	FILM ADAPTER UNIT	
	2	QM3-3054-000		1	WHITE SHEET UNIT	
	3	QM3-2688-000		1	PLATEN GLASS UNIT	
	4	QC2-4693-000		1	LOCK, CARRIAGE	
	5	XB4-7300-805		12	SCREW	
	6	QM3-2693-000		1	MOTOR ASSEMBLY	
	7	QC2-5822-000		1	BELT	
	8	QC2-5833-000		1	COVER, CABLE	
	9	QK1-3555-000		1	CONNECTOR, MOTOR CABLE	
	10	QM3-2324-000		1	CABLE, MOTOR	
	11	QM3-0059-000		1	PULLEY UNIT	
	12	QC2-0527-000		1	SPRING	
	13	QC2-5906-000		1	PLATE, SHAFT	
	14	QM3-2691-000		1	CARRIAGE ASSEMBLY	
	15	QC2-5907-000		1	PLATE, SUB SHAFT	
	16	QC2-5814-000		1	COVER, FRONT	
	17	QC2-5815-000		1	COVER, FRONT FACE	
	18	QC1-6457-000		4	RUBBER, FOOT	
	19	XB4-7200-609		2	SCREW	
	20	QC2-5832-000		1	COVER , FERRITE CORE	
	21	QC2-5831-000		1	PLATE, MAIN PCB, UPPER	
	22	QM3-2314-000		1	MAIN PCB ASSEMBLY	
	23	QL2-2319-000		1	PLATE, MAIN PCB LOWER	
	24	XB1-2300-405		2	SCREW	
	25	XB6-7300-405		1	SCREW	

<Part Catalog>

Part 4
Appendix

1. Block Diagram



<1. Block Diagram >

2. Specifications

2-1 Scanner Main Unit

Type		Flatbed (Stationary original type)
Image sensor		CCD (6 line color image CCD)
Optical resolution*1		4800dpi x 9600dpi (Maximum resolution)
Light source		White LED
Document type		Sheet, Book
Document alignment position		Right-end corner
Max. document size		A4/Letter size (216mm x 297mm)
Image mode	Color	48 bit (16 bit for RGB each) input 48 bit or 24 bit (16 bit or 8 bit for RGB each) output
	Grayscale	48 bit (16 bit for RGB each) input 16 bit (Film only) or 8 bit output
Preview time*2 *3		Approximately 3 sec
Scanning time *2	Color	12.1msec/line (4800 dpi) 12.1msec/line (2400 dpi) 6.1msec/line (1200 dpi) 1.7msec/line (600 dpi) 1.0msec/line (300 dpi)
	Grayscale	12.1msec/line (4800 dpi) 12.1msec/line (2400 dpi) 6.1msec/line (1200 dpi) 1.7msec/line (600 dpi) 1.0msec/line (300 dpi)
Power supply		AC adapter
Interface		UB2.0 Hi-Speed
Scanner button		7 buttons (PDF x 4, COPY, PHOTO/FILM, E-MAIL)
Operating environment		Temperature:10-35 degree C
		Relative Humidity:10%-90%RH(Non condensing)
		Air Pressure : 613-1013hPa
Power source		AC 100-240V, 50/60 Hz (Use proprietary AC adapter)
Power consumption		During operation: 18W
		During standby: 1.5W
		During power off (During suspend for bus powered product): 1.0W
Dimensions		272 x 479 x 100 mm
Weight		Approximately 4.2kg

2-2 Film Scanning Part

Light source		White LED
FARE		FARE Level 3
Film size		35mm strip (12 frames)
		35mm slide (4 frames)
		120 format (Maximum 6 x 22cm, strip only)
Image mode (Color)		RGB 48-bit (16-bit for RGB each) input 48-bit or 24-bit (16-bit or 8-bit for RGB each) output
Image mode (Grayscale)		Grayscale RGB 48-bit (16-bit for RGB each) input 16-bit (Film only) or 8-bit output
Effective scanning area	35mm film1*4	24 x 36 mm
	120 format*5	56 x 220 mm
Effective scanning pixels*6	35mm film1*4	4535 x 6803
	120 format*5	10583 x 41575
Optical resolution		4800 x 9600 dpi
Scanning time		1.5-36.3 msec/line
Operating environment		Temperature: 10-35 degree C
		Humidity: 20%-80%RH (Non condensing)

***1 Optical resolution is the maximum sampling rate for scanning documents based on ISO 14473.**
***2 The fastest speed in USB 2.0 Hi-Speed mode on Windows. Transfer time to computer is not included. The actual speed depends on the type of item to scan, the scanning settings or the specification of computer.**
***3 Preprocessing time is not included.**
***4 For 1 frame of 35mm film**
***5 6x22cm film is used.**
***6 At the maximum optical resolution of the scanner**

Specifications subject to change without notice.

<2. Specifications>