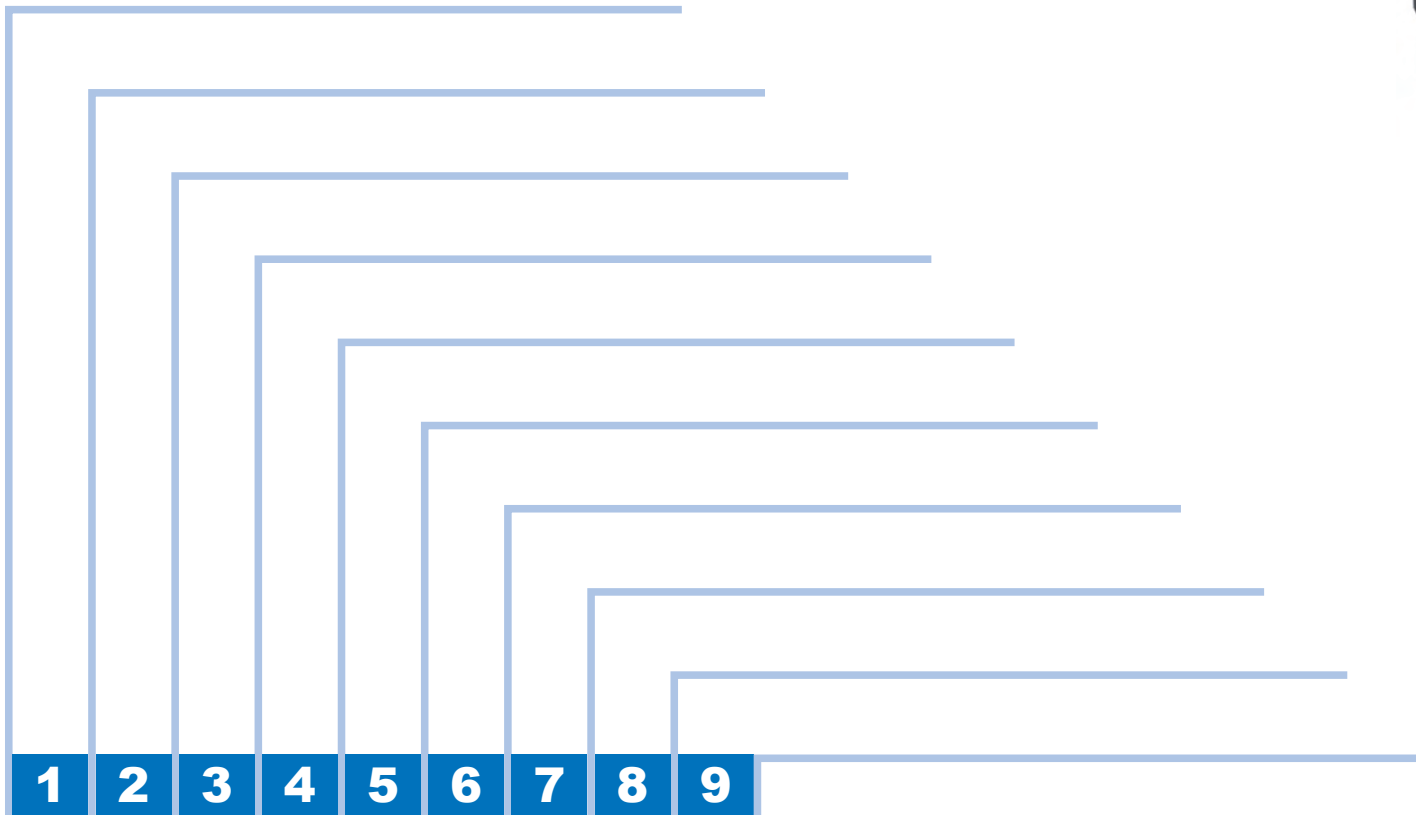# Canon

imageRUNNER 1435/1430 Series

Service Manual Rev1

1 2 3 4 5 6 7 8 9

Application

This manual has been issued by Canon Inc. for qualified persons to learn technical theory, installation, maintenance, and repair of products. This manual covers all localities where the products are sold. For this reason, there may be information in this manual that does not apply to your locality.

Corrections

This manual may contain technical inaccuracies or typographical errors due to improvements or changes in products. When changes occur in applicable products or in the contents of this manual, Canon will release technical information as the need arises. In the event of major changes in the contents of this manual over a long or short period, Canon will issue a new edition of this manual.

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

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Caution

Use of this manual should be strictly supervised to avoid disclosure of confidential information.

Explanation of Symbols

The following symbols are used throughout this Service Manual.

Symbols	Explanation	Symbols	Explanation
	Check.	1x	Remove the claw.
	Check visually.	1x	Insert the claw.
	Check a sound.		Push the part.
1x	Disconnect the connector.		Connect the power cable.
1x	Connect the connector.		Disconnect the power cable.
1x	Remove the cable/wire from the cable guide or wire saddle.	ON	Turn on the power.
1x	Install the cable/wire to the cable guide or wire saddle.	OFF	Turn off the power.
1x	Remove the screw.	1x	Loosen the screw.
1x	Install the screw.	1x	Tighten the screw.

Symbols	Explanation	Symbols	Explanation
	Cleaning is needed.		Measurement is needed.

The following rules apply throughout this Service Manual:

1. Each chapter contains sections explaining the purpose of specific functions and the relationship between electrical and mechanical systems with reference to the timing of operation.

   In the diagrams, ▭▮▮▮ represents the path of mechanical drive; where a signal name accompanies the symbol, the arrow ⟶ indicates the direction of the electric signal.
   The expression "turn on the power" means flipping on the power switch, closing the front door, and closing the delivery unit door, which results in supplying the machine with power.

2. In the digital circuits, '1' is used to indicate that the voltage level of a given signal is "High", while '0' is used to indicate "Low". (The voltage value, however, differs from circuit to circuit.) In addition, the asterisk (*) as in "DRMD*" indicates that the DRMD signal goes on when '0'.

   In practically all cases, the internal mechanisms of a microprocessor cannot be checked in the field. Therefore, the operations of the microprocessors used in the machines are not discussed: they are explained in terms of from sensors to the input of the DC controller PCB and from the output of the DC controller PCB to the loads.

The descriptions in this Service Manual are subject to change without notice for product improvement or other purposes, and major changes will be communicated in the form of Service Information bulletins.
All service persons are expected to have a good understanding of the contents of this Service Manual and all relevant Service Information bulletins and be able to identify and isolate faults in the machine.

Contents

5 Adjustment

6 Troubleshooting

9 Installation

Appendix

Safety Precautions

- Laser Safety
- Handling of Laser System
- Turn Power Switch ON
- Power Supply
- Safety of Toner
- Notes when Handling the Lithium and Ni-MH Batteries
- Notes before it Works Serving
- Points to Note at Cleaning
- Notes on Assembly / Disassembly

Laser Safety

Since radiation emitted inside the machine is completely confined within protective housings, external covers and interlock switches, the laser beam cannot escape from the machine during any phase of user operation. Therefore this machine is classified in Class 1 laser products that are regarded as safe during normal use according to International Standard IEC60825-1

Handling of Laser System

This machine is classified in Class 1 laser products.

However, inside the machine, Class 3B laser beam is emitted and is hazardous when entered into an eye.

When servicing the area around the laser assembly, be sure to turn off the main power.

If you must service while the power is turned on, be sure to keep the followings:

• Do not use a screwdriver or tools that have a high level of reflectance in the laser path.

• Remove watches and rings before starting the work. (They can reflect the laser beam, possibly hitting an eye.)

The machine's covers that confine laser beam radiation are identified by means of a warning label (Figure). If you must open the cover and defeat interlock switches, be sure not to enter the laser beam into an eye during the work.

The following warnings are given to comply with Safety Principles (EN60950-1).

Diese Maschine ist der Klasse 1 der Laserprodukte zugeordnet.

Innerhalb der Maschine wird jedoch ein Laserstrahl der Klasse 3B ausgestrahlt und es ist gefährlich, wenn dieser Strahl in die Augen gerät.

Bei Servicearbeiten am oder in der Nähe des Laserteils zuerst das Hauptgerät abschalten.

Bei Servicearbeiten, die unbedingt bei eingeschaltetem Gerät durchgeführt werden müssen, auf jeden Fall die folgenden Vorsichtsmaßnahmen beachten.

• Keine stark reflektierenden Schraubenzieher oder ähnliche Werkzeuge direkt in den Lichtpfad des Laserstrahls bringen.

• Vor Beginn der Arbeit Uhren, Ringe und ähnliche Gegenstände abnehmen. (Reflektierende Laserstrahlen könnten sonst in die Augen geraten.)

Die Geräte-Abdeckungen, die Laserstrahlen reflektieren können, werden durch einen besonderen Warnaufkleber gekennzeichnet (siehe Bild).

Muss die Abdeckung geöffnet und die Sicherheitssperre ausgeschaltet werden, besondere Vorsicht walten lassen, damit der Laserstrahl nicht in die Augen gerät.

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Turn Power Switch ON

The machine is equipped with 2 power switches: main power switch and energy saver key. The machine goes on when the main power switch is turned on (i.e., other than in low power mode, sleep mode).

Main Power Switch

ON↑

F-0-2

Power Supply

⚠ CAUTION:

1. As a general rule, do not use extension cords. Using an extension cord may result in a fire or electrical shock. If an extension cord must be used, however, use one for local rated voltage and over, untie the cord binding, and insert the power plug completely into the extension cord outlet to ensure a firm connection between the power cord and the extension cord.

2. The socket-outlet shall be installed near the equipment and shall be easily accessible.

Safety of Toner

About Toner

The machine's toner is a non-toxic material made of plastic, iron, and small amounts of dye.

⚠ CAUTION:

Do not throw toner into fire. It may cause explosion.

Toner on Clothing or Skin

- If your clothing or skin has come into contact with toner, wipe it off with tissue; then, wash it off with water.
- Do not use warm water, which will cause the toner to jell and fuse permanently with the fibers of the cloth.
- Toner is easy to react with plastic material, avoid contact with plastic.

Notes when Handling the Lithium and Ni-MH Batteries

⚠ CAUTION:

RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE. DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS.

The following warnings are given to comply with Safety Principles (EN60950).

⚠ CAUTION:

Wenn mit dem falschen Typ ausgewechselt, besteht Explosionsgefahr. Gebrauchte Batterien gemäß der Anleitung beseitigen.

⚠ 警告
如果更換不正確之電池型式會有爆炸的風險
請依製造商説明書處理用過之電池

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Notes before it Works Serving

> ⚠ CAUTION:
>
> At servicing, be sure to turn OFF the power source according to the specified steps and disconnect the power plug.

Points to Note at Cleaning

> ⚠ CAUTION:
>
> When performing cleaning using organic solvent such as alcohol, be sure to check that the component of solvent is vaporized completely before assembling.

Notes on Assembly / Disassembly

Follow the items below to assemble/disassemble the device.

- Disconnect the power plug to avoid any potential dangers during assembling/disassembling works. Wait "1" minutes until the energy is radiated after disconnecting the power plug on assembling/disassembling.
- If not specially instructed, reverse the order of disassembly to reinstall.
- Ensure to use the right screw type (length, diameter, etc.) at the right position when assembling.
- To keep electric conduction, binding screws with washers are used to attach the grounding wire and the varistor. Ensure to use the right screw type when assembling.
- Unless it is specially needed, do not operate the device with some parts removed.
- Never remove the paint-locked screws when disassembling.
- The fuse is mounted on the neutral line of The AC driver PCB. It may result in an electrical shock, in case that the power plug is connected while assembling/disassembling after fuse blowing. Symbols or caution, shown below, is indicated on the PCB also describes this note.

> CAUTION
>
> DOUBLE POLE/NEUTRAL FUSING

F-0-4

- During disassembly, reassembly or transportation of the printer, remove the cartridge if required.
  When the cartridge is out of the printer, put it in a protective bag even in a short period of time to prevent the adverse effect of light.
- Ground yourself by touching the metal part of the printer before handling the PCB to reduce the possibility of damage caused by static electricity.
- When you replace the part that the rating plate or the product code label is attached, be sure to remove the rating plate or the product code label and put it to the new part.

Points to Note when Tightening a Screw

- For reduction in weight, thin plates are used in some parts in this machine.
- In case a triangle symbol is marked next to a screw hole as shown in the figure, strongly tightening the screw may damage or deform the screw hole.
- In case a triangle symbol is marked next to a screw hole, take care not to apply too much force when tightening the screw.

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The recommended torque value is shown below as a reference value.

Fastened member		Type of Screws							
		RS tight		W Sams		Binding		TP	
		Metal	Resin	Metal	Resin	Metal	Resin	Metal	Resin
Tightening torque (N*m)	M4	Approx. 1.6	Approx. 1.6	Approx. 1.6	Approx. 0.8	Approx. 1.6	Approx. 0.8	Approx. 1.6	Approx. 0.8
	M3	Approx. 0.8	Approx. 0.8	Approx. 0.6	Approx. 0.6	Approx. 0.6	Approx. 0.6	Approx. 0.6	Approx. 0.6

T-0-1

* For PCB, refer to the tightening torque value of resin (fastened member).

Type of Screws			
RS tight	W Sams	Binding	TP

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1 Product Overview

■Product Lineup

■Feature

■Specifications

■Name of Parts

Product Lineup

Host machine

F-1-1

	iR1435				iR1430
	Basic mode with Platen Coverl	i model with ADF	iF model with ADF and Fax	P model Printer model	J model with Platen Coverl
Print Speed (A4R/LTRR)	35/37ppm				30/31ppm
Class	Euivalence in iR1020/1021/1024/1025 Series				
LAN Port	Yes	Yes	Yes	Yes	-
USB Port	USB2.0 Device / USB2.0 Host / USB1.1 Host				USB2.0 Device
Option Conversion	Cassette Feeding Module	Yes	Yes	Yes	Yes	Yes
	FL Cassette-AW1	Yes	Yes	Yes	Yes	Yes
	Copy Card Reader-F1	Yes	Yes	Yes	-	-
	Copy Card Reader Attachment-E1	Yes	Yes	Yes	Yes	-
	Handset-K1	-	-	Yes (EUR Only)	-	-
	Control Interface Kit-C1	Yes	Yes	Yes	-	-

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Option

Control Interface Kit-C1

Handset-K1

Copy Card Reader-F1
Copy Card Reader Attachment-E1

FL Cassette-AW1

Cassette Feeding Module-AC1

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Product name	Required options, conditions, etc.
Cassette Feeding Module-AC1	A4 type / Universal type
FL Cassette-AW1	Standard or option (A4 type / Universal type)
Copy Card Reader-F1	• Copy Card Reader Attachment-E1 is required. • Installation with Handset is not available. • Installation with Control Interface Kit-C1 is not available.
Copy Card Reader Attachment-E1	• Copy Card Reader-F1 is required. • Installation with Handset is not available..
Handset-K1	Installation with Copy Card Reader is not available.
Control Interface Kit-C1	Installation with Copy Card Reader is not available.

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Feature

Product feature

Reader unit
- The mold frame was adopted.

Small-size/weight-saving

Drum unit
- Installed at the time of factory shipment.

Improved installability

Toner
- The toner of the low melting was adopted.

Paper loading improvement
(High-temperature and high-humidity environment)

Main Controller
- System collaboration with other ADVANCE models is possible .

Improved installability

Main body frame
- The mold frame was adopted.

Small-size/weight-saving

F-1-3

Specifications

Product Specifications

Copyboard	Original stream reading, original fixed reading
Body	Desktop
Light source type	LED(RGB)
Photosensitive medium	φ30 OPC
Image reading method	CIS
Reproduction method	Indirect electrostatic method
Exposure method	Laser exposure system
Charging method	Roller charging
Development method	Dry one-component jumping development
Transfer method	Roller transfer
Separation method	Curvature and static eliminator
Pickup method	• Cassette: Retard separation method • Multi-purpose pickup tray: Pad separation method
Fixing method	On demand
Delivery method	Face down (Inner delivery)
Reproduction ratio	25 to 400%
Drum cleaning method	Cleaning blade
Toner type	Single component magnetic negative charge toner
Toner replenish method	Toner cartridge
Toner level detection	Yes
Top image margin	2.5 +/-1.5 mm (front Side) 2.5 +/-2.0 mm (back Side)
Left image margin	2.5 +/-1.5 mm (front Side) 2.5 +/-2.0 mm (back Side)
Warm-up time	Power ON: 20 sec or less
Number of image gradations	256 gradation
Reading resolution	600 × 600dpi
Writing resolution	600 × 600dpi
First print time	5.0 sec or less
Paper type (Cassette)	Plain paper (64 to 90 g/m2), recycled paper (64 to 90 g/m2), color paper (64 to 90 g/m2)
Paper type (Multi-purpose pickup tray)	transparency (60 to 63 g/m2), recycled paper (64 to 90 g/m2), color paper (64 to 90 g/m2), Plain paper (64 to 90 g/m2), heavy paper 1 (91 to 105 g/m2), heavy paper 2 (106 to 128 g/m2), OHP, labels, Envelopes (No.10(COM10), Monarch, ISO-C5,DL)
Paper size (Cassette 1)	A4	A4R
	Universal	A4R, LTRR, LGL, 16K
Paper size (Multi-purpose pickup tray)		A4R, B5R A5R, LTRR, LGL, STMTR, EXECR, 16K, Envelopes (No.10(COM10), Monarch, ISO-C5, DL), Custom paper size (76 x 216 mm to 127 x 356 mm),

Pickup capacity	Cassette1/2: 500 sheets (80 g/m2) Multi-purpose pickup tray: 100 sheets (80 g/m2)
Duplex method	Through path duplex

Noise (LWAd)	• imageRUNNER 1435:
	    Standby: 53dB or less, Printing: 69.9 dB or less (reference)
	• imageRUNNER 1430:
	    Standby: 43dB or less, Printing: 68.9 dB or less (reference)

Ozone	1.5mg/h or less
Power supply rating	30cpm	220 - 240V AC, 50Hz/60Hz, 3.5A (Latin America)
	31cpm	120 - 127V AC, 60Hz, 7.5A (Latin America)
	35cpm	• 220V AC, 50Hz, 3.8A (CHINA) • 220 - 240V AC, 50Hz/60Hz, 3.8A (Europe, Asia, Latin America, Korea, India)
	37cpm	120 - 127V AC, 60Hz, 7.8A (North America, Latin America, Brazil)
Power consumption	Maximum	1.5 KW or less
	Standby	15 W or less
	Deep Sleep	2.0 W or less
Dimensions (W x D x H)	545 mm × 457mm × 475.3 mm (ADF model) 545 mm × 457mm × 422.5 mm (Copyboard model) 545 mm × 457mm × 382.5 mm (Printer model)
Environment temperature / humidity range	"Checking before Installation"(page 9-2).

Weight	• Minimum (Printer model):
	    21.44kg (not included the drum unit and toner cartridge)
	• Maximum (ADF model):
	    23.74kg (not included the drum unit and toner cartridge)

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Productivity (Print speed)

■ imageRUNNER 1435

Paper type	Size	1-sided		2-sided	
		Cassette pickup	Multi-purpose pickup	Cassette pickup	Multi-purpose pickup
Plain paper mode. Color paper mode. Recycled paper mode. (64 to 90 g/m2)	A4R	35	35	18	18
	B5R	-	15	-	-
	A5R	-	15	-	-
	LGL	30	15	16	9
	LTRR	37	37	18	18
	EXECR	-	15	-	-
	STMTR	-	15	-	-
	16K	16	16	10	10
	OFFICIO	33	15	18	9
	Foolscap	30	15	16	9
Transparency mode. (60 to 63 g/m2) Heavy paper 1 mode. (91to 105 g/m2)	A4R	-	18	-	-
	B5R	-	15	-	-
	A5R	-	15	-	-
	LGL	-	15	-	-
	LTRR	-	18	-	-
	EXECR	-	15	-	-
	STMTR	-	15	-	-
	16K	-	15	-	-
	OFFICIO	-	15	-	-
	FOOLSCAP	-	15	-	-
Heavy paper 2 mode. (106 to 128 g/m2)	A4R	-	12	-	-
	B5R	-	15	-	-
	A5R	-	15	-	-
	LGL	-	10	-	-
	LTRR	-	12	-	-
	EXECR	-	15	-	-
	STMTR		15		
	16K		15		
	OFFICIO	-	10	-	-
	FOOLSCAP	-	10	-	-
Envelope mode.	Monarch	-	12	-	-
	COM10	-	12	-	-
	ISO-C5	-	12	-	-
	DL	-	12	-	-
OHP mode.	A4R	-	18	-	-
	LTRR	-	18	-	-

Paper type	Size	1-sided		2-sided	
		Cassette pickup	Multi-purpose pickup	Cassette pickup	Multi-purpose pickup
Label mode.	A4R	-	12	-	-
	LTRR	-	12	-	-
Custom paper	76 x 216 mm to 127 x 356 mm	-	5	-	-

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■ imageRUNNER 1430

Paper type	Size	1-sided		2-sided	
		Cassette pickup	Multi-purpose pickup	Cassette pickup	Multi-purpose pickup
Plain paper mode. Color paper mode. Recycled paper mode. (64to 90 g/m2)	A4R	30	30	18	18
	B5R	-	15	-	-
	A5R	-	15	-	-
	LGL	25	15	16	9
	LTRR	31	31	18	18
	EXECR	-	15	-	-
	STMTR	-	15	-	-
	16K	16	16	10	10
	OFFICIO	30	15	18	9
	FOOLSCAP	25	15	16	9
Transparency mode. (60 to 63 g/m2) Heavy paper 1 mode. (91to 105 g/m2)	A4R	-	18	-	-
	B5R	-	15	-	-
	A5R	-	15	-	-
	LGL	-	15	-	-
	LTRR	-	18	-	-
	EXECR	-	15	-	-
	STMTR	-	15	-	-
	16K	-	15	-	-
	OFFICIO	-	15	-	-
	FOOLSCAP	-	15	-	-

Paper type	Size	1-sided		2-sided	
		Cassette pickup	Multi-purpose pickup	Cassette pickup	Multi-purpose pickup
heavy paper 2 mode. (106 to 128 g/m2)	A4R	-	12	-	-
	B5R	-	15	-	-
	A5R	-	15	-	-
	LGL	-	10	-	-
	LTRR	-	12	-	-
	EXECR	-	15	-	-
	STMTR		15		
	16K		15		
	OFFICIO	-	10	-	-
	FOOLSCAP	-	10	-	-
Envelope mode.	Monarch	-	12	-	-
	COM10	-	12	-	-
	ISO-C5	-	12	-	-
	DL	-	12	-	-
OHP mode.	A4R	-	18	-	-
	LTRR	-	18	-	-
label mode.	A4R	-	12	-	-
	LTRR	-	12	-	-
Custom paper	76 x 216 mm to 127 x 356 mm	-	5	-	-

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Paper Type

See the table below for the custom paper size.

Type	Feeding direction (mm)	Width direction (mm)
Custom paper size	127 to 356	76 to 216

T-1-6

■ Pickup

Usable paper types are as follows.

Paper type	Size	Multi-purpose pickup tray	Cassette 1	Cassette 2 *1
Transparency (60 to 63 g/m2)	A4R	Yes	No	No
	B5R	Yes	No	No
	A5R	Yes	No	No
	LGL	Yes	No	No
	LTRR	Yes	No	No
	STMTR	Yes	No	No
	EXECR	Yes	No	No
	OFFICIO	Yes	No	No
	B-OFFICIO	Yes	No	No
	M-OFFICIO	Yes	No	No
	G-LTRR	Yes	No	No
	G-LGL	Yes	No	No
	A-FOOLSCAP	Yes	No	No
	FOOLSCAP	Yes	No	No
	16K	Yes	No	No
	Custom paper size	Yes	No	No
Plain paper (64 to 90 g/m2) Color paper (64 to 90 g/m2) Recycled paper (64 to 90 g/m2)	A4R	Yes	Yes	Yes
	B5R	Yes	No	No
	A5R	Yes	No	No
	LGL	Yes	Yes	Yes
	LTRR	Yes	Yes	Yes
	STMTR	Yes	No	No
	EXECR	Yes	No	No
	OFFICIO	Yes	Yes	No
	B-OFFICIO	Yes	Yes	Yes
	M-OFFICIO	Yes	Yes	Yes
	G-LTRR	Yes	Yes	Yes
	G-LGL	Yes	Yes	Yes
	A-FOOLSCAP	Yes	No	No
	FOOLSCAP	Yes	Yes	Yes
	16K	Yes	Yes	Yes
	Custom paper size	Yes	No	No

Paper type	Size	Multi-purpose pickup tray	Cassette 1	Cassette 2 *1
Heavy paper 1 (91 to 105 g/m2) Heavy paper 2 (106 to 128 g/m2) BOND (75 to 90 g/m2)	A4R	Yes	No	No
	B5R	Yes	No	No
	A5R	Yes	No	No
	LGL	Yes	No	No
	LTRR	Yes	No	No
	STMTR	Yes	No	No
	EXECR	Yes	No	No
	OFFICIO	Yes	No	No
	B-OFFICIO	Yes	No	No
	M-OFFICIO	Yes	No	No
	G-LTRR	Yes	No	No
	G-LGL	Yes	No	No
	A-FOOLSCAP	Yes	No	No
	FOOLSCAP	Yes	No	No
	16K	Yes	No	No
	Custom paper size	Yes	No	No
Envelope	Monarch	Yes	No	No
	COM10	Yes	No	No
	ISO-C5	Yes	No	No
	DL	Yes	No	No
	Custom paper size	Yes	No	No
OHP	A4R	Yes	No	No
	LTRR	Yes	No	No
Label	A4R	Yes	No	No
	B5R	Yes	No	No
	A5R	Yes	No	No
	LGL	Yes	No	No
	LTRR	Yes	No	No
	STMTR	Yes	No	No
	EXECR	Yes	No	No
	Custom paper size	Yes	No	No

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*1: Cassette Feeding Module-AC1 (option) is named as Cassette 2 when it is installed.

Name of Parts

External View

ADF Model

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F-1-5

[1]	Front Upper Cover
[2]	Front Cover Unit
[3]	Cassette 1
[4]	Front Right Cover
[5]	Control Panel
[6]	Delivery Tray
[7]	Reader
[8]	Document Delivery Tray
[9]	Delivery Tray
[10]	Feeder Cover
[11]	Left Rear Cover
[12]	Left Door Unit
[13]	Multi-purpose Tray
[14]	Left Front Cover
[15]	Main Switch
[16]	Right Cover
[17]	USB Port 1
[18]	LAN Port
[19]	USB Port 2
[20]	Handset Terminal
[21]	External Telephone Terminal
[22]	Telephone Line Terminal
[23]	Rear Cover
[24]	USB Port 3

■ Copyboard Model

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F-1-7

[1]	Front Upper Cover
[2]	Front Cover Unit
[3]	Cassette 1
[4]	Front Right Cover
[5]	Control Panel
[6]	Delivery Tray
[7]	Reader
[8]	Copyboard
[9]	Left Rear Cover
[10]	Left Door Unit
[11]	Multi-purpose Tray
[12]	Left Front Cover
[13]	Main Switch
[14]	Right Cover
[15]	USB Port 1
[16]	LAN Port
[17]	USB Port 2
[18]	Rear Cover
[19]	USB Port 3

■ Printer Model

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[1]	Front Upper Cover
[2]	Front Cover Unit
[3]	Cassette 1
[4]	Front Right Cover
[5]	Control Panel
[6]	Delivery Tray
[7]	Printer Upper Cover
[8]	Left Rear Cover
[9]	Left Door Unit
[10]	Multi-purpose Tray
[11]	Left Front Cover
[12]	Main Switch
[13]	Right Cover
[14]	USB Port 1
[15]	LAN Port
[16]	USB Port 2
[17]	Rear Cover
[18]	USB Port 3

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Cross Sectional View

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[1]	CIS Unit
[2]	Delivery Reverse Roller
[3]	Delivery Reverse Unit
[4]	Fixing Assembly
[5]	Fixing Film Unit
[6]	Pressure roller
[7]	Laser Scanner Unit
[8]	Drum Unit
[9]	Photosensitive Drum
[10]	Transfer Roller
[11]	Duplex Roller
[12]	Registration Roller
[13]	Cassette 1 Feed Roller
[14]	Cassette 1 Separation Roller
[15]	Multi-purpose Tray Vertical Path Roller
[16]	Multi-purpose Tray Pickup Roller
[17]	Multi-purpose Tray Separation Pad
[18]	Cassette 1 Pickup Roller
[19]	Developing Assembly
[20]	Toner cartridge
[21]	ADF Base
[22]	Original Tray
[23]	Delivery Roller
[24]	Delivery Roller
[25]	Separation Pad
[26]	Pickup Roller
[27]	Separation Roller
[28]	Feed Roller
[29]	Platen Guide

● Control Panel

■ Power Switch

● Types of Power Switch

Main Power Switch

Energy Saver Key

F-1-11

Equipped switch and key is described below.

[1] Main Power Switch:

　　Uses to turn OFF / ON the main power.

[2] Energy Saver Key:

　　Used to shift to power-save mode or to restore it to normal mode.

● Points to Note on Turning OFF/ON the Power Switch

• To turn off the main power, turn off the main power switch.
• After power-off (after the main power switch is turned off), do not reactivate the main power switch until a screen disappears.
• Do not turn off the main power while downloading.

Description of Control Panel

■ Control Panel

NOTE:
A major control panel is used to describe function below as several types of panels are equipped by specifications and countries.

F-1-12

No.	Name	Function
[1]	[COPY] Key	Press to switch the mode to copy.
[2]	[FAX] Key	Press to switch the mode to fax.
[3]	[SCAN] Key	Press to switch the mode to scan.
[4]	[DIRECT PRINT] Key	Press to switch the mode to memory printing.
[5]	[Status Monitor] Key	Press to check the status of printing or faxing, to view the usage history, or to view the network settings such as the IP address of the machine.

No.	Name	Function
[6]	[2-Sided] Key	Press to set 2-sided copies.
[7]	[Paper Selection/Settings] Key	Press to select a paper source, such as a drawer or multi-purpose tray, and register paper size and type.
[8]	[Reset] Key	Press to reset the settings.
[9]	[Back] Key	Press to return to the previous screen.
[10]	[▲] Key	Press to scroll up or to increase the value.
	[▼] Key	Press to scroll down or to decrease the value.
	[◄] Key	Press to return to the previous screen, or move the cursor to the left.
	[►] Key	Press to proceed to the next screen, or move the cursor to the right.
	[OK] Key	Press to confirm an action or setting.
[11]	Numeric Keys ([0] - [9] Keys)	Press to enter characters and numbers.
	[*] Key	Press to use tone dialing such as when receiving fax information services.
	[#] Key	Press to enter symbols.
[12]	[Clear] Key	Press to delete entered characters and numbers.
[13]	[Menu] Key	Press to specify or register various settings.
[14]	[Energy Saver] Key	Press to manually set or cancel the Sleep mode.
[15]	[ID] Key	When a logon screen is displayed, press the key after entering your logon information such as an ID and PIN.
[16]	[Secure Print] Key	Press when you start printing secured documents.
[17]	[Counter Cheek] Key	Press to view the counter values as well as the list of the equipment that is attached or enabled.
[18]	[Start] Key	Press to start a job.
[19]	[Stop] Key	Press to cancel jobs.
[20]	[Error] Indicator	Flashes when an error occurs.
[21]	[Processing/ Data] Indicator	Flashes when the device is in operation, is on when there is a job waiting to be processed.
[22]	Display (LCD)	During normal operation, displays messages and prompts. When adjusting the settings, displays your selections, text, and numbers.
[23]	[One-touch] Key	Press to quickly specify a destination for sending documents.
	[Address Book] Key	Press to display a list of destinations registered in the Address Book, or to register or edit destinations in the Address Book.
	[Coded Dial] Key	Press to use coded dial numbers.
	[Recall Settings] Key	Press to recall previously used destinations with settings specified for sending documents.
	[Hook] Key	Press to dial without lifting up the handset of the external telephone, such as when receiving fax information services.
	[Pause] Key	Press to insert pauses in the fax number.

T-1-8

2

Technology

■ Basic Configuration

■ Original Exposure and
Feed System

■ Main Controller

■ Laser Control System

■ Image Formation System

■ Fixing System

■ Pickup / Feed System

■ External Auxiliary System

■ Embedded RDS

■ Setting Information
Export/Import Function
(DCM)

Basic Configuration

Functional Configuration

The host machine is constructed by following 6 functional system blocks; Original Exposure and Feed System, Controller System, Laser Control System, Image Formation System, Fixing System and Pickup Feed System.

Original exposure system

| CIS unit | ADF unit |

Controller system

Controller system
・ Engine control
・ System control

Delivery

Duplexing feed

Fixing system

Fixing

Laser exposure system

Transfer

Laser scanner unit

Image formation system

Pickup

Pickup/feed system

Cassette 1

Cassette 2

← Paper flow
← Signal flow
← Laser beam

F-2-1

Basic Sequence

■ Basic Operation Sequence

Operation Sequence is controlled by the engine control on the controller PCBs. Each sequence, from main power switch ON until the main motor stops, is described as below. See timing chart for detail in the Appendix chapter.

Zone	Purpose	Remarks
WAIT (wait)	Interval from power-ON or closing the doors until print-ready status	• Eliminates charging on surface of the photosensitive drum and clean the transfer roller. • Keeps heater temperature constant	Detects presence of the toner cartridge
STBY (standby)	Interval from wait time or the last rotation completion until print command input from the controller or power-OFF.	Keeps the host machine standby	-
INTR (initial rotation)	Interval from print command input from the controller until temperature of the fixing unit reaches target value.	Keeps photosensitive drum stable sensitivity for print advance preparations	-
PRINT (print)	Interval from initial rotation until last page fixation completion.	• Forms image on the photosensitive drum, based on Video signal (/VDO1,/VDO2,VDO1,VDO2) from the controller. • Transfers toner image onto the paper.	-
LSTR (last rotation)	Interval from print job completion until motor deactivation.	Delivers the paper completely between the final job.	Directly starts INTR after LSTR end when print indication command input from the controller

T-2-1

Original Exposure and Feed System

Construction

■ Specifications / Controls / Functions

The major specifications, controls and functions of the original exposure and feed system are described below.

Item		Specification / Function
Original exposure		LED
Original scan	In book mode	Scanning by moving the contact image sensor (CIS)
	In ADF mode	Stream reading by the fixed contact image sensor (CIS)
Read resolution		600 dpi x 600 dpi
Gradation		256 gradation
Carriage position detection		CIS HP sensor (SR03)
Magnification		25% to 400% (1% unit)
Main scanning direction		Processed on the Main Controller PCB
Sub scanning direction		Processed on the Main Controller PCB
Lens		Rod lens array
Original reading sensor		Number of lens: 1
		Number of pixels: Total 5184 (incl. 5126 effective pixels)
		Maximum original scan width: 217mm
CIS drive control		Drive control by the Reader Motor (M02)
Original size detection	Reader	No
	ADF	Horizontal scanning direction: No
		Vertical direction: by original feeding length
ADF original pickup method		Auto pickup/delivery method
ADF setting direction of original		Face-up stacking
ADF setting position of original		Center reference
ADF separation method of original		Upper separation by separation pad
ADF scanning method of original		Stream reading
ADF weight of original	1-sided	50 to 105 g/m2
	2-sided	64 to 105 g/m2
ADF original size		A4R, A5, A5R, B5R, B6, LGL, LTRR, STMT, STMTR Original width direction: 139.7 to 215.9 mm Original feed direction: 128.0 to 355.6 mm
ADF original tray capacity		A4R/LTRR: 50 sheets (80 g/m2) LGL: 30 sheets (80 g/m2)
ADF original processing mode		1-sided original processing 2-sided original processing
ADF original size detection function		No

Item		Specification / Function
ADF mixed original mode function	Mix of same configuration mode	Yes (original weight same as continuous feed mode) Combination is as follows; • LTR / LGL
	Mix of different configuration mode	None
Book original		Supported (Heavy load up to 2 kg)
ADF done stamp function		No

T-2-2

■ Main Configuration Parts

● Reader Unit

The major parts of the reader unit are shown as follows.

F-2-2

Item	No.	Specification / Function
CIS Unit	-	Reads the original. (LED, transparent material)
Drive Pulley, Drive Belt	-	Controls the carriage drive.
CIS HP sensor	SR03	Photo interrupter: detects the home position of CIS unit.
Reader motor	M02	Pulse Motor: controls the carriage drive.

T-2-3

● ADF unit

The major parts of the ADF unit are shown as follows.

1) Layout drawing of major parts.

F-2-3

Item	Specification / Function
Separation Roller	Separates and feeds the original
Separation Pad	Separates the original
Pickup Roller	Picks up the original
Document Tray	Stacks the delivered original
ADF Base	Stacks the delivered original
Delivery Roller	Delivers and reverses the original
Platen Guide	Reading original assembly
Feed Roller	Feeds the original

T-2-4

2) Layout drawing of sensors.

F-2-4

Item	No.	Specification / Function
Document Sensor	SR02	Detects original presence.
Document End Sensor	SR01	Detects paper reach of the leading edge / paper pass of the trailing edge.

T-2-5

3) Drive system drawing of motor and solenoid.

F-2-5

F-2-6

Item	No.	Specification / Function
ADF Motor	M01	Pulse Motor: Feed original
ADF Disengagement Solenoid	SL01	Releases pressure from the delivery reverse roller during the reverse.

T-2-6

Basic Operation

■ Basic Sequence

● Basic Sequence at Power-On

1) The CIS unit searches the HP.

F-2-7

F-2-8

< Related Error Code >

E202-0001 : CIS unit HP error

E202-0002 : CIS unit HP error

● Basic Sequence at Start Key ON (book mode)

1) The CIS unit is moved to the copyboard glass start position after black / white shading.

2) An image scan is performed.

3) The CIS unit is moved to the shading position.

F-2-9

F-2-10

● Basic Sequence at Start Key ON (ADF mode)

1) The CIS unit is moved to the stream reading start position after black and white shading.

2) An image scan is performed.

3) The CIS unit is moved to the shading position.

F-2-11

F-2-12

● ADF Operation Mode

■ Overview

ADF operation provides following 2 modes. ADF is controlled by the host machine to operate each mode and print.

Name	Outline	Supported Print Mode
Forward pickup/delivery	Pick up, read an original and then deliver it.	1-sided original → 1-sided print
		1-sided original → 2-sided print
Forward pickup/reversal delivery	Pick up and reverse an original after completing reading of the front side. Reverse an original again after reading the back side and then deliver it.	2-sided original → 2-sided print
		2-sided original → 1-sided print

● 1-sided original reading

- Operation of 1-sided original reading (2 originals)

1-sided original reading operation
(when 2 sheets of originals are set) 1/2

- Set the original

- Pickup the 1st sheet and move down the pickup roller.

- Feed the 1st sheet

- Waiting for reading front side of the 1st sheet

- Start reading front side of the 1st sheet and pickup the 2nd sheet

- End of reading front side of the 1st sheet and feed the 2nd sheet

- Waiting for reading front side of the 2nd sheet

- Start reading front side of the 2nd sheet. Deliver the 1st sheet

F-2-13

1-sided original reading operation
(when 2 sheets of originals are set) 2/2

- Complte reading front side of the 2nd sheet.

- Deliver the 2nd sheet and move up the pickup roller.

F-2-14

● 2-sided original reading

- Operation of 2-sided original reading (2 originals)

2-sided original reading operation
(when 2 sheets of originals are set) 1/5

- Set the original

- Pickup the 1st sheet and move down
  the pickup roller.

- Feed the 1st sheet

- Waiting for reading of front side
  of the 1st sheet

- Start reading front side of the 1st sheet.

- End of reading front side of the 1st sheet

- Feed to the reverse point
  of the 1st sheet

- Re-pickup the 1st sheet

F-2-15

2-sided original reading operation
(when 2 sheets of originals are set) 2/5

- Feed the 1st sheet and
  disengage the delivery roller

- Waiting for reading back side
  of the 1st sheet

- Waiting for reading back side of
  the 1st sheet and pressurize the
  delivery roller

- End of reading back side
  of the 1st sheet

- Feed to the reverse point
  of the 1st sheet

- Re-pickup the 1st sheet

- Feed the 1st sheet and
  disengage the delivery roller

- Idle feed the 1st sheet and
  pressurize the delivery roller

F-2-16

2-sided original reading operation
(when 2 sheets of originals are set) 3/5

- Deliver the 1st sheet

- End of job the 1st sheet

- Pickup the 2nd sheet

- Feed the 2nd sheet and
  disengage the delivery roller

Waiting for reading the front side
of the 2nd sheet and move up the pickup roller

- Start reading front side of
  the 2nd sheet and pressurize the
  delivery roller

- End of reading front side of the 2nd sheet

- Feed to the reverse point of the 2nd sheet

F-2-17

2-sided original reading operation
(when 2 sheets of originals are set) 4/5

- Re-pickup the 2nd sheet

- Feed the 2nd sheet and
  disengage the delivery roller

- Waiting for reading back side
  of the 2nd sheet

- Start reading back side of
  the 2nd sheet and pressurize
  the delivery roller

- End of reading back side of
  the 2nd sheet

- Feed to the reverse point of the 2nd sheet

- Re-pickup the 2nd sheet

- Feed the 2nd sheet and
  disengage the delivery roller

F-2-18

2-sided original reading operation
(when 2 sheets of originals are set) 5/5

- Idle feed the 2nd sheet and
  engage the delivery roller

- Pass through the 2nd sheet reading position

- Deliver the 2nd sheet and End of job

Controls

■ Reader Unit

● Reader Motor Control

1) Forward movement during image scan

During image scanning, the CIS unit is controlled using the following motor sequence.

[1]Acceleration interval: Accelerate to the speed specified for each mode
[2]Run-up interval: A margin to stabilize the speed
[3]Image reading interval: An image is read at a constant speed
[4]Deceleration interval: After trailing edge detection, the motor decelerates rapidly and stops.

F-2-19

> Note:
> Scanning speed is as follows.
> Copy (300dpi x 600dpi): 177.4 mm/s
> Color SEND (300dpi x 600dpi): 59.1 mm/s

2) Reverse movement during image scan

The CIS unit's reverse movement to the shading position after image scanning is the same as the forward movement.

● Magnification Ratio

The scanning speed does not change depending on the copy magnification ratio. Images read at a resolution specified by the controller—300 dpi (horizontal scanning) × 600 dpi (vertical scanning) or 600 dpi (horizontal scanning) × 600 dpi (vertical scanning)—are processed by the main controller PCB (PCB2) according to the copy ratio.

● Original Size Detection

The reader assembly does not have original size sensors or platen cover open/closed sensors, size detection is not performed.

ADF Unit

■ Pickup Control

When the Start key is pressed or when an original pickup signal is received, the ADF motor (M01) rotates, and the pickup roller moves down. At this point, the pickup roller rotates to pick up and feed the original. The separation roller and the separation pad prevent double feeding. Further, the stopper operates in conjunction with the pickup roller unit.

F-2-20

■ Feed Control

● 1-Sided Stream Reading

The feed roller is driven by the ADF motor (M01) and feeds the original to the reading position.

F-2-21

Note:

The preparation of the main controller PCB (memory allocation) may not be complete when the original passes through the document end sensor (SR01). If this occurs, the feed roller stops the original in front of the reading position. When the preparation of the main controller PCB is complete, the feed roller feeds the original to the reading position.

F-2-22

● 2-Sided Stream Reading

The feed roller is driven by the positive rotation of the ADF motor (M01) and feeds the original. When the document end sensor (SR01) turns on, the ADF motor (M01) stops, which also stops the original. After the specified time elapses, the feed roller rotates to feed the original to the reading position. At this point, to prevent the next pickup, the ADF motor (M01) rotates in the negative direction to raise the pickup roller.

F-2-23

Note:

The preparation of the main controller PCB (memory allocation) may not be complete when the original passes through the document end sensor (SR01). If this occurs, the feed roller stops the original before the reading position. When both the memory allocation and the raising of the pickup roller are complete, the feed roller feeds the original to the reading position.

Document End Sensor (SR01)
Feed Roller
Original Detection Position
Deceleration
Stop
Acceleration
Constant speed
Deceleration
Interval for rotation stabilization
Reading position

F-2-24

● Reading Control

When the leading edge of the original reaches the reading position and a read request signal is received from the host machine, stream reading begins. Stream reading is a mode in which the original is scanned by sliding it across the host machine's fixed scanner glass. The original is fed by the feed roller, which is rotated by the ADF motor (M01). Images that are read are stored in the host machine's memory.

M01
Feed Roller
Reading Glass
CIS Unit

F-2-25

■ Original Reverse Control

● Basic Operation

Originals can be reversed from the front to the back side or from the back to the front. Since the same operation is used for both, only the operation for reversing from the front to the back side is described below.

Front side pickup

1. The feed roller is driven by the positive rotation of the ADF motor (M01), and the front side of original is read.
2. After reading, the delivery roller rotates to feed the original to the ejection area.
3. After feeding the original a given distance, the ADF motor (M01) stops.

Feed Roller

M01

Delivery Roller

F-2-26

Reverse and feed

1. The delivery roller is driven in reverse by the negative rotation of the ADF motor (M01) and feeds the original.
2. When the document end sensor (SR01) turns on, the ADF motor (M01) stops, which also stops the original. At this point, the disengagement solenoid (SL01) is turned on to release the pressure from the delivery reverse roller.
3. The feed roller is driven by the positive rotation of the ADF motor (M01) and feeds the original to the reading position.

M01

Delivery Roller

M01   SL01

Document End Sensor (SR01)

M01

Feed Roller

Reading position

F-2-27

■ Delivery Control

● Basic Operation

After stream reading, the delivery roller rotates to eject the original into the delivery tray.
Then, the ADF motor (M01) stops.

F-2-28

> **Note:**
> • With 1-sided reading, after delivery, the pickup roller is moved up.
> • With 2-sided reading, this is not performed because it has already been moved up.

■ Original Detection

● Original Presence Detection

When an original is set in the document tray, the original blocks the document sensor (SR02) causing the original to be detected.

● Original Size Detection

The original size is determined by calculating follwing 2 elapse times.

• Time A:
  From a point in time when the document end sensor (SR01) turns ON to a point in time when the original reaches the reading position.
• Time B:
  From a point in time when the original reaches the reading position to a point in time when the document end sensor (SR01) turns OFF.

F-2-29

■ Dust Detection Control

When an original is read, to prevent dust from appearing in the image, the original reading position is adjusted or the image is corrected when dust is detected on the platen roller of the stream reading glass/ADF. This control is performed only when the ADF is in use and is closed.

● Dust Detection Avoidance

If dust was detected on the paper in the last job, the reading position of the next stream reading job is adjusted to avoid the dust.

- Control timing
  At the reading position, the CIS unit detects the reflection light from the platen guide surface to determine the presence of dust. The presence of dust is detected in the order A, B, and C. The location with the least dust is used as the reading position in the next job.

- Execution
  As when a job is completed, the presence of dust is detected in the order A, B, and C. The CIS unit moves to the location with the least dust and reads the original.

F-2-30

Position	Description
A	Reading reference position
B	Approx. 0.5 mm to the right of reference position A
C	Approx. 0.5 mm to the right of reference position B

T-2-7

< Related Service Mode >

COPIER > OPTION > BODY > DFDST-L2 : Adjustment of dust detect level: after job, ADF

● Dust Detection Correction

When dust is detected on the ADF reading glass, the image is corrected to prevent the dust from appearing.

- Control timing

  During stream reading jobs, from when an original reaches the position immediately before the reading position to when the reading of the original is completed (every page).

- Execution

  If dust is present at the points where dust was detected. the dust is assumed to be on the reading glass, and dust correction is performed.

< Related Service Mode >

COPIER > OPTION > BODY > DFDST-L1 : Adjustment of dust detect level: paper interval, ADF

◉ Image Processing

■ Outline

Image processing is performed in the CIS unit and the main controller PCB.

Item	Function
CIS unit	LED Light Intensity Adjustment
	CIS internal analog control
	Image Reading Sensor
	Image Reading Sensor Output Gain Correction and Offset Correction
	A/D Conversion of the Image Reading Sensor Output
Main controller PCB	Shading Correction

F-2-31

■ CIS Unit

The CIS (contact image sensor) performs original exposure and image reading on a line-by-line basis.

Scan direction

Light guide

Rod lens array

Light guide

Rod lens array

Image reading sensor

F-2-32

Item	Function
Light guide	Directs the LED light over the entire image line.
Rod lens array	Collects the light reflected from the original.
Image reading sensor	Receives the reflection light passing through the rod lens array.

< Related Service Mode >

• Actions when replacing the CIS Unit

COPIER > ADJUST > CCD > LED-BW-R, BW-G, BW-B

COPIER > ADJUST > CCD > LED-CL-R, CL-G, CL-B

COPIER > FUNCTION > CCD > BW-AGC, CL-AGC

COPIER > ADJUST > ADJ-XY >STRD-POS

COPIER > FUNCTION > INSTALL > STRD-POS

COPIER > ADJUST > CCD > DFTAR-R, DFTAR-G, DFTAR-B, DFTAR-BW

COPIER > FUNCTION > CCD > DF-WLVL1, WLVL3

COPIER > FUNCTION > CCD > DF-WLVL2

COPIER > FUNCTION > CCD > DF-WLVL4

COPIER > ADJUST > ADJ-XY > ADJ-X, ADJ-Y, ADJ-X-MG

COPIER > ADJUST > ADJ-XY- > ADJ-Y-DF, ADJ-Y-DF2

FEEDER > ADJUST > DOCST, DOCSTDUP, DOCST2

FEEDER > ADJUST > LA-SPD, LA-SPD2

● LED Light Intensity Adjustment

To make the image reading level from the image reading sensor constant, the LED activation time is adjusted every time the original is scanned. The LED activation time of each color is adjusted to prevent variations in light intensities.

● CIS Internal Analog Control

The CIS (contact image sensor) performs the following three analog image processing controls on the reflection light from the original.
    a. Image formation by the rod lens array
    b. Light reception by the Image reading sensor array
    c. Photoelectric conversion and output by the Image reading sensor array

The Image reading sensor array consists of three channels (units). Each channel has an output correction table and outputs images after correcting the gain relative to the input luminance signal.

● Image Reading Sensor

The Image reading sensor used in this equipment is a single line linear image sensor consisting of 5184 light-receiving cells. For each channel (three channels total) of the Image reading sensor array, signals that have gone through photoelectric conversion in the light-receiving block are output in parallel to the main controller PCB.

● Image Reading Sensor Output Gain Correction and Offset Correction

The gain of the analog video signals output from the image reading sensor is kept constant (gain correction). And, the output voltage when incident light is not received is kept constant (offset correction).

● A/D Conversion of the Image Reading Sensor Output

After gain correction and offset correction, the A/D converter converts the analog video signal into digital signals that correspond to the voltage levels of each pixel.

■ Main Controller PCB

The functions of the image processing system on the PCB are described below.
- Shading adjustment: Performed in service mode
- Shading correction: Performed for each job

Main Controller PCB

F-2-33

< Related Service Mode >

COPIER > ADJUST > CCD > DFTAR-R, DFTAR-G, DFTAR-B, DFTAR-BW

COPIER > FUNCTION > CCD > DF-WLVL1, DF-WLVL2, DF-WLVL3, DF-WLVL4

● Shading Correction

Even when the density of the original is uniform, the Image reading sensor output is not necessarily uniform for the following reasons.
1) Variation in sensitivity between each pixel of the image reading sensor
2) Variation in light intensity of the rod lens array
3) Difference in the transmission light intensity between the center area and the peripheral area of the lens.
4) Difference in the light intensity between the center area and the peripheral area of the LEDs.
5) LED deterioration

Shading correction is performed to correct this non uniformity in the image reading sensor output. Due to the characteristics of each CIS pixel, variation in reading levels in the horizontal scanning direction occurs. Therefore, reading is performed with the LED lit and not lit and the white and black levels at each horizontal scanning position are corrected in order to make reading levels constant. There are two types of shading correction: white shading and black shading.

<Related Error Codes>

E225-0001: CIS unit light intensity is under the standard level

White shading (Book mode)

At predetermined intervals, R, G, and B are switched to illuminate a white plate, and the luminance is read. The white level correction coefficient is calculated for each horizontal scanning position to make the white level reading in the horizontal scanning position constant.

F-2-34

White shading (ADF mode)

Stream reading shading correction is performed using the white level adjustment value (factory adjustment value). The white level at each horizontal scanning position is corrected using the factory adjustment value as the target value.

Black shading

A white plate is read with the LED turned off. The black level correction coefficient is calculated for each horizontal scanning position to make the black level reading in the horizontal scanning position constant.

— Luminance value before correction

↓ Correction coefficient

F-2-35

Jam Detection

This equipment uses document end sensor (SR01) and document sensor (SR02) to detect original jams. The jam detection check timing is stored in the main controller PCB. The presence of a jam is determined by whether an original is at the relevant sensor at the check time. Jam codes in this equipment can be verified by displaying the jam error log in the equipment's service mode.

ACC ID	Jam Code	Type	Item	No.
01	0001	DELAY	Document End Sensor	SR01
01	0002	STNRY	Document End Sensor	SR01
01	0004	DELAY (only when reverse)	Document End Sensor	SR01
01	0005	STNRY (only when reverse)	Document End Sensor	SR01
01	0071	TIMING NG	-	-
01	0094	POWER ON	Document End Sensor	SR01
			Document Sensor	SR02
01	0095	OTHER	-	-

< Related Service Mode >

COPIER > DISPLAY > JAM : Display of jam log

Service Tasks

■ Periodically Replaced Parts

None

■ Consumable Parts

None

■ Periodical Servicing

None

■ Actions when Replacing the Parts

No.	Item	Contents	Reference
1	Copyboard Glass Unit	• Entering white level data of the standard white plate • Automatic gain offset adjustment for the CIS unit • Adjust of image reading start position • Automatic white level adjustment • Adjustment of image position	p. 5-6
2	CIS Unit	• Automatic gain offset adjustment for the CIS unit • Adjust of image reading start position • Automatic white level adjustment • Adjustment of image position	p. 5-4
3	ADF Unit	• Automatic white level adjustment • Adjustment of image position	p. 5-8
4	Main Controller PCB	• Initialize the setting value for reader /ADF • Entering the setting value from the service label (W-PLT-X/Y/Z) • Automatic gain offset adjustment for the CIS unit • Enter the all setting value other than W-PLT-X/Y/Z from the service label	p. 7-5

T-2-8

Main Controller

Overview

■ Configuration / Function

Main Controller PCB

F-2-36

Item		Function
Main Controller PCB	ROM	Host machine setting data, loader program to be started at first, download function program such as UST, main program (decompressed into the RAM and executed), data for demonstration print function, language data, and fax backup data in preparation for power OFF
	RAM	Main program area, fixed memory area, dynamic memory area, memory for images, and area for storing data for executing fax transmission/reception jobs (necessary data is also saved to the ROM as backup in preparation for power OFF)

T-2-9

■ Main controller PCB

F-2-37

No.	Function
J903	ADF DRIVER & SENSOR
J904	READER DRIVER & SENSOR
J905	USB1.1 Host
J906	Serial Debug Monitor1
J908	USB2.0 Host
J909	USB2.0 Device
J911	RJ-45 + Transformer Connector
J912	DCON I/F
J913	Panel
J914	Power Connector
J915	Power Control
J918	MODEM I/F
J921	VH Supply I/F
J922	Speaker
J925	Serial Debug Monitor2
J926	DDR2 Back-Up I/F
J932	CCVI
J933	New Card Reader
J935	FRAM Counter
J936	SOFT-ID
J937	Debug
J938	FRONT COVER TRIG

T-2-10

Laser Control System

● Overview

■ Outline

The laser control system forms static latent image on the photosensitive drum by laser exposure. The laser scanner unit consists of a laser assembly and scanner motor assembly and is controlled by signals received from the controller. This equipment employs a 2-beam laser system that can expose two beams in a single scan. Also, to make the equipment compact, a single-polygon 2-laser system is used.

■ Specifications / Controls / Functions

The major specifications, controls and functions of the laser control system is described below.

Item		Contents
Laser Beam	Number of laser beam	2
	Output	3.5mW
	Wave length	785 to 800nm
Polygon Motor	Motor type	DC brushless motor
	Number of rotation	Approx. 37900rpm
	Type of bearing	Oil bearing
Polygon Mirror	Number of facets	4
List of Controls	Laser activation timing control	Laser control signal
	Synchronization control	BD signal
	Light intensity control	Automatic photocurrent Control (APC)
	Other	Polygon motor control
		Laser shutter control

T-2-11

■ Main Configuration Parts

F-2-38

Name	Function
Polygon mirror	Scans laser beam on the photoconductive drum in main scan direction.
Anamorphic lens	Reflects laser beam into the BD detector.
Laser unit	Emits laser beam and detects BD signal.
Photoconductive drum	Receives laser beam to form latent image.

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Controls

■ Control System Configuration

The laser exposure system is controlled by the engine controller PCB (PCB1) and laser unit.

Item		Function
Laser lighting timing control	Laser control signal	Turns ON/OFF the laser beam in combination of the laser control signal.
	BD signal	Adjusts reading start position in horizontal direction.
Laser intensity control	APC (Automatic Photocurrent Control)	Makes amount of laser beam constant on a line-by-line basis.
Laser scanner motor control	Polygon motor control signal	Controls rotation of the polygon motor in a specified speed.
Laser OFF control	Laser shutter control	Prevents laser beam exposure inside of the host machine.

T-2-13

F-2-39

■ Laser Lighting Timing Control

● Laser Control Signal

The laser beam on/off state is controlled by a combination of the laser control signals (CONT0/1/2) from the engine controller PCB (PCB1). The engine controller PCB (PCB1) sends video signals for image formation (VDO1, /VDO1, /VDO2, /VDO2) and laser control signals (CONT0/1/2) to the laser unit. Based on the combination of the CONT0/1/2 signals, the laser unit controls the on/off state of the two laser beams. The following table shows the different combinations of the laser control signals (CONT0/1/2).

Laser control signal			Laser status		
CONT2	CONT1	CONT0	Laser A	Laser B	Description
0	0	0	OFF	OFF	Laser control OFF
0	1	0	ON	OFF	APC_A control
0	0	1	OFF	ON	APC_B control
0	1	1	OFF	OFF	Forcible output OFF
1	0	0	ON	ON	Laser AB Forcible output
1	0	1	OFF	ON	Laser B Forcible output
1	1	0	ON	OFF	Laser A Forcible output
1	1	1	Enable video signal entry	Enable laser emitting following the video signal.	

T-2-14

■ BD signal

The BD signal is a horizontal (horizontal scanning) sync signal that the controller uses to output image signals for each scan. A printer starts sending a BD signal when it detects that the picked up sheet of paper reaches a specific point. The controller assumes the beginning of a continuous BD signal to be the leading edge of paper, and the end of the signal to be the trailing edge.

■ Light Intensity Control

● APC (Automatic Photocurrent Control)

The APC monitors the laser beam that the built-in photodiode in the laser diode receives and adjusts the light intensity to an appropriate level.

■ Laser Scanner Motor Control

● Polygon Motor Control Signal

The rotation speed of the polygon motor is controlled according to the polygon motor rotation speed signal (FG signal) from when the motor starts to when image formation takes place after reaching the target rotation. During image formation, the polygon motor rotation speed is controlled on the basis of the BD signal. The polygon motor rotation speed is controlled by an acceleration signal (ACC signal) and deceleration signal (DEC signal).

F-2-40

■ Laser OFF Control

● Laser Shutter Control

When the drum unit is pulled out, the laser shutter that operates in conjunction with the drum unit moves down to block the laser optical path. Also, when it is detected that the front cover or the left door has been opened, the polygon motor and laser output are turned off.

[1] Polygon mirror

[2] Laser shutter

[3] Laser beam

F-2-41

● Service Task

■ Periodically Replacing Parts

None

■ Consumable Parts

None

■ Periodical Servicing

None

■ Action when replacing parts

None

Image Formation System

● Construction

■ Specifications / Controls / Functions

The major specifications, controls and functions of the image formation system is described below.

Item		Specifications
Photosensitive drum	Material	OPC drum
	Drum diameter (Φ)	30mm
	Cleaning method	Rubber blade
	Process speed	214mm/sec
Primary charging	Charging method	Roller charging
	Roller diameter (Φ)	12mm
Transfer	Transfer method	Roller transfer
	Roller diameter(Φ)	16mm
Developing Assembly	Developing method	Dry one-component jumping development (AC+DC)
	Toner type	Magnetic negative toner
	Toner level detection	Permeability sensor, video count
	Developing cylinder diameter	20mm
Separation	Separation method	Curvature and static eliminator
	Toner waste container	Drum unit

T-2-15

■ Main Configuration Parts

F-2-42

No	Name	Function
[1]	Photosensitive Drum	Forms image on surface of the photosensitive drum.
[2]	Cleaning Blade	Removes remaining toner on surface of the photosensitive drum.
[3]	Primary Charging Roller	Negative charge on surface of the photosensitive drum in conjunction with the drum rotation.
[4]	Developing Blade	Controls amount of toner uniformed on the developing cylinder.
[5]	Drum Unit	Consists of a photosensitive drum, primary charging roller, etc.
[6]	Developing Assembly	Consists of a developing cylinder, developing blade, etc.
[7]	Toner Cartridge	A cartridge filled with toner for supply.
[8]	Developing Cylinder	Transfers toner from the developing assembly to the photosensitive drum.
[9]	Transfer Roller	Positive charge back side of paper to transfer toner from the photosensitive drum to paper.
[10]	Static Eliminator	Negative charge back side of paper to separate paper from the photosensitive drum.

■ Image Formation Process

The image formation system mainly consists of 6 blocks such as primary charging, laser exposure, developing, transfer, separation and cleaning.

F-2-43

	Image Formation Process	Description
[1]	Primary charging block	Negative potential is formed on the surface of the photosensitive drum.
[2]	Laser exposure block	Latent image formation is formed on the photosensitive drum as charge neutralization is proceeded by laser beam sweep.
[3]	Developing block	Visible image is formed as the negatively-charged toner on the developing cylinder is adhered to the latent image formation on the surface of the photosensitive drum.
[4]	Transfer block	A toner on the photosensitive drum is transferred to the paper as positive charge is applied to the back of it.
[5]	Separation block	A paper is easily separated from the photosensitive drum with its elastic force while negative charge is applied to the back of the paper.
[6]	Drum cleaning block	A cleaning blade scrapes a residual toner on the surface of the photosensitive drum and it feeds the waste toner to the drum unit.

T-2-16

Basic Sequence

Basic sequence for printing is shown as follows.

Main Power Switch ON

	Sequence	WAIT	STBY	INTR	PRINT	LSTR
1	Main Motor (M1)	▓▓▓▓		▓▓	▓▓▓▓▓▓▓▓	▓▓▓▓
2	Fixing Motor (M3)			▓	▓▓▓▓▓▓▓▓▓	▓▓▓▓▓
3	Polygon Motor (M2)			▓	▓▓▓▓▓▓▓▓▓	▓▓▓▓▓
4	Laser				▓▓▓▓▓▓▓▓▓▓	▓▓▓▓▓
5	Pre-registration Sensor(SR11)				▓▓▓ ▓▓	
6	Fixing Delivery Sensor(SR5)					▓▓▓▓▓
7	Registration Clutch (CL1)	▓▓▓▓			▓▓▓ ▓▓	
8	Charging AC Bias	▓▓▓		▓	▓▓▓▓▓	
9	Charging DC Bias	▓▓▓		▓	▓▓▓▓▓▓▓▓	
10	Charging AC/DC Bias	▓			▓▓▓ ▓▓▓	
11	Developing DC Bias	▓▓▓			▓▓▓ ▓▓▓	
12	Transfer Bias	▓			▓▓▓▓▓▓▓▓	
13	Separation Static Bias				▓▓▓ ▓▓	
14	Fixing Bias			▓▓▓	▓▓▓▓▓▓▓▓▓▓	

F-2-44

Controls

■ Drum Unit

The drum unit mainly consists of a photosensitive drum, cleaning blade and primary charging roller. The drum unit is driven by the main motor (M1). The cleaning blade is in contact with the surface of the photosensitive drum to remove remaining toner which is not transferred to paper.

Cleaning Blade

Primary Charging Roller

Photosensitive Drum

M1

Main Motor drive signal

Engine Controller PCB

F-2-45

● Primary Charging Bias Control

The primary charging bias system is charged directly by a charging roller. In addition to DC bias, AC bias is applied to the primary charging roller to provide constant charging.

Photosensitive Drum

Primary Charging Roller

HVT PCB

Environment Sensor

Primary charging bias drive signal

Environment sensor detection signal

Primary DC bias control circuit

Primary AC bias control circuit

Engine Controller PCB

F-2-46

● AC Bias Switch Control

The AC bias output value is changed according to the environment detected by the environment sensor (SR18).

● Detection Full of Waste Toner

Turn ON/OFF the waste toner full sensor (SR6) intermittently by torque limiter when the main motor (M1) rotates in almost full of the waste toner. Full of waste toner is detected by counting ON/OFF signal of the sensor.

● Pre-delivery of the Drum Unit (drum low alarm)

The host machine requests UGW for pre-delivery of the drum unit either when life of the drum unit reaches to the setting value (%) or full of waste toner is detected by the waste toner full sensor (SR6). The setting value(%) is available to set in between 50 to 200% (default 100%) in the service mode.

Condition	Detection timing	Message
Full of waste toner warning 1	When end of life of the drum unit reaches to the setting value %.	None (only drum low alarm)
Full of waste toner warning 2	The point in time when the day elapsed 7 days after the full of the waste toner warning 1, or the point in time when the waste toner reaches to full.	Toner Low (Replacement Not Yet Needed)
Full of waste toner	The point in time when printing over 200 sheets of paper after the full of waste toner detection.	Replace the toner cartridge
Detection of replacement complete	The point in time when a fuse is cut and replacement is detected automatically .	None (only replacement complete alarm)

T-2-17

< Related Alarm Code >

35-0073 Drum Unit replacement completion alarm

40-0073 Drum low alarm

< Related Service Mode >

COPIER > OPTION > FNC-SW > D-DLV-BK : Set drum low alarm notice timing

COPIER > OPTION> DSPLY-SW > DRM-WARN : Display / Hide a drum unit replacement message

● Drum Unit Presence Detection

The drum unit presence is detected by the feedback value from which AC bias is applied during the initial rotation.

■ Developing Assembly

The developing assembly mainly consists of a developing cylinder, a developing blade, and a stirring plate. The developing assembly is driven by the main motor (M1). The toner sensor (SR17) which is a permeability sensor, detects the toner level in the developing assembly.

Developing Assembly

Stirring Plate

Developing Cylinder

SR17

Developing Blade

M1

Main Motor drive signal

Sleeve Clutch drive signal

Engine Controller PCB

F-2-47

● Developing Bias Control

DC bias and AC bias are applied to the developing cylinder.

Photosensitive Drum

Developing Cylinder

Environment Sensor

HVT PCB

Developing bias drive signal

Environment sensor detection signal

Developing DC bias control circuit

Developing AC bias control circuit

Engine Controller PCB

F-2-48

● DC/AC Bias Constant Voltage Control

The DC bias control circuit and AC bias control circuit in the engine controller PCB are controlled so that the DC bias and AC bias applied to the developing cylinder are at constant voltages.

● Toner Level Detection

After the main motor (M1) drive stabilizes or stops, the toner sensor (SR17) samples the permeability of the magnetic substance in the toner to detect whether the toner is present. If the toner is present near the toner sensor (SR17) surface, toner is assumed to be present. If it is not, the toner is assumed to be absent.

Toner Container

Toner Sensor(SR17)

Developing Assembly

F-2-49

Toner level	Status	Message	Operation
Presence	F-2-50	None	When the toner is present, a message is not displayed on the control panel.
Empty (presence in the toner container)	F-2-51	Toner Low (Replacement Not Yet Needed)	When the toner empty(0%) is detected, a message is displayed on the control panel. The print operation continues and the toner bottle can be replaced while printing. (toner low alarm)
Empty	F-2-52	Toner End (Replace the toner cartridge)	After toner empty is detected, Approx. 600 sheets of paper can be printed. The print operation stops when the toner END is detected.

T-2-18

● Pre-delivery of the Toner (toner low alarm)

The host machine requests UGW for pre-delivery of the toner either when remaining quantity of the toner reaches to the setting value (%) or toner empty is detected by the toner sensor (SR17). The setting value(%) is available to set in between 1 to 40% (default 26%) in the service mode. The host machine notifies UGW for replacement complete when printing is available after replacement the toner cartridge..

< Related Alarm Code >
10-0020 Toner low alarm
10-0100 Toner cartridge replacement alarm

< Related Service Mode >
COPIER > OPTION > FNC-SW > T-DLV-BK : Set toner low alarm notice timing
COPIER > OPTION > DSPLY-SW > TNR-WARN : ON/OFF of toner warning display

■ Transfer Unit

The transfer unit consists mainly of a transfer roller and a static eliminator. The transfer roller rotates as a slave to the drum unit.

Separation Static Charge Eliminator

Transfer Roller

F-2-53

● Transfer Bias Control

Negative bias, sheet-to-sheet bias, and positive bias are applied to the transfer charging roller according to the type of sequence.

Photosensitive Drum

Separation Static
Charge Eliminator

Environment Sensor

Transfer Roller

HVT PCB

Separation static
charge eliminator
bias control signal

Transfer bias
control signal

Environment sens
detection signa

Separation static charge
eliminator control circuit

Transfer bias control circuit

Engine Controller PCB

F-2-54

● Cleaning Bias Control

A negative voltage is applied at the last rotation to return the toner adhered to the transfer roller back to the photosensitive drum.

● Separation Static Eliminator Bias Control

To make it easier to separate paper from the photosensitive drum by reducing the electrostatic attraction force between the two, 2 types of negative voltages, a strong bias and a weak bias, are applied to the static eliminator according to the print mode and sequence.

⬤ Service Tasks

■ Periodically Replaced Parts

None

■ Consumable Parts

None

■ List of Periodical Services

None

■ Actions when Replacing the Parts

None

Fixing System

⬤ Overview

■ Features

The on-demand fixing method is equipped.

Fixing Film Unit

Pressure Roller

Fixing inlet guide

Paper

F-2-55

■ Specifications / Controls / Functions

Item	Function / Method
Fixing method	On-demand fixing
Fixing heater	Ceramic heater
Controlled temperature	205 deg C (A4 / plain paper) *1
Temperature control	Main thermistor and Sub thermistor
Edge heat rising prevention control	Down sequence control
Fixing loop control	Arch sensor (SR14)
Protective Function	• Main thermistor and Sub thermistor • Thermo switch (Rate operation temperature: 270 deg C +/- 10 deg C)

T-2-19

*1. Target temperature is specified by paper size, fixing mode, number of prints and fixing temperature at the start of warm-up control.

Fixing temperature: The temperature that thermistor detected.

■ Main Configuration Parts

F-2-56

Item	No.	Function / Method
Fixing film unit	-	Applies heat and pressure to fix toner image on a sheet of paper.
Pressure roller	-	
Fixing heater	H1	Ceramic heater
Main thermistor	TH1	• Contacts with the heater. • Temperature control and detection of abnormal temperature rise.
Sub thermistor	TH2	• Contacts with the heater (non-feeding area). • Temperature control and detection of abnormal temperature rise, temperature detection/cooling control on edges.
Thermo switch	TP2/TP3	• Contacts with the heater. • Blocks AC electric power supply when a failure is detected.
Fixing delivery sensor	SR5	Detects jam.
Fixing Pressure Release Sensor 1	SR15	Detects release pressure.
Fixing Pressure Release Sensor 2	SR16	Detects release pressure.

T-2-20

Controls

■ Fixing Temperature Control

F-2-57

● Print Temperature Control

To increase the fixing temperature until the target temperature and keep the target temperature during the printing.
- Startup (wait) temperature control
- Print temperature control
- Sheet-to-sheet temperature control

● Down Sequence Control

To prevent fixing failure due to edge temperature rise or temperature fall, which reduced the productivity (through-put).
- Down sequence when printing continuously
- Down sequence when switching paper size

■ Print Temperature Control

F-2-58

● Startup (wait) Temperature Control

To increase fixing temperature to be ready for printing after receiving the print-start command.

● Print Temperature Control

Set appropriate target temperature determined by environment in fixing mode (7 types) to prevent fixing error or high temperature offset. Control the temperature to keep the target temperature determined by the detected temperature at the Main thermistor (TH1) during the printing.

Condition 1-1 : A4 size, 1-sided (Full-speed)
   Environment temperature= less than 18 deg C

Fixing mode	Paper type	Temperature before the heater turns ON (deg C)	Target temperature (deg C)
Plain paper mode	Plain paper (64 to 90g/m2)	50 or less	205
		50 </= 110	205
		110 </= 130	203
		130 </= 160	203
		160 or more	200

T-2-21

*Fixing mode is applied to only plain paper mode at 1-sided (Full-speed)

Condition 1-2 : A4 size, 1-sided (Full-speed)
   Environment temperature= 18 deg C or more

Fixing mode	Paper type	Temperature before the heater turns ON (deg C)	Target temperature (deg C)
Plain paper mode	Plain paper (64 to 90g/m2)	50 or less	205
		50 </= 110	205
		110 </= 130	203
		130 </= 160	203
		160 or more	200

T-2-22

*Fixing mode is applied to only plain paper mode at 1-sided (Full-speed)

Condition 2 : A4 size, 1-sided (Half-speed)

Fixing mode	Paper type	Temperature before the heater turns ON (deg C)	Target temperature (deg C)
Transparency mode	Transparency (60 to 63g/m2)	50 or less0	205
		50 </= 110	205
		110 </= 130	203
		130 </= 160	203
		160 or more	200
Plain paper mode	Plain paper (64 to 90g/m2)	50 or less	-
		50 </= 110	-
		110 </= 130	-
		130 </= 160	-
		160 or more	-
Heavy paper mode	Heavy paper 1 (91to 105 g/m2)	50 or less	150
		50 </= 110	150
		110 </= 130	150
		130 </= 160	150
		160 or more	150
Super Heavy paper mode	Heavy paper 2 (106 to 128 g/m2)	50 or less	150
		50 </= 110	150
		110 </= 130	150
		130 </= 160	150
		160 or more	150

Fixing mode	Paper type	Temperature before the heater turns ON (deg C)	Target temperature (deg C)
OHP mode	OHP	50 or less	165
		50 </= 110	165
		110 </= 130	165
		130 </= 160	160
		160 or more	160
Label mode	Label	50 or less	185
		50 </= 110	185
		110 </= 130	185
		130 </= 160	180
		160 or more	180
Envelope mode	Envelope	50 or less	-
		50 </= 110	-
		110 </= 130	-
		130 </= 160	-
		160 or more	-

T-2-23

* " -" indicates Fixing mode is not available.

NOTE:
The target temperature is 180 deg C when printing in the envelope mode.

Condition 3-1 : A4 size, 2-sided (Full-speed)
Environment temperature= less than 18 deg C

Fixing mode	Paper type	Temperature before the heater turns ON (deg C)	Target temperature (deg C)
Plain paper mode	Plain paper (64 to 90g/m2)	50 or less	205
		50 </= 80	205
		80 </= 110	205
		110 </= 130	202
		130 </= 150	200
		150 </= 160	197
		160 </= 170	195
		170 </= 175	192
		175 or more	190

T-2-24

*Fixing mode is applied to only plain paper mode at 2-sided (Full-speed)

Condition 3-2 : A4 size, 2-sided (Full-speed)
Environment temperature= 18 deg C or more

Fixing mode	Paper type	Temperature before the heater turns ON (deg C)	Target temperature (deg C)
Plain paper mode	Plain paper (64 to 90g/m2)	50 or less	200
		50 </= 80	200
		80 </= 110	200
		110 </= 130	197
		130 </= 150	195
		150 </= 160	192
		160 </= 170	190
		170 </= 175	187
		175 or more	185

T-2-25

*Fixing mode is applied to only plain paper mode at 2-sided (Full-speed)

Condition 4: A4 size, 2-sided (Half-speed)
• Fixing mode is not available.

● Sheet-to-sheet Distance Temperature Control

To prevent the excessive temperature rise and to save the power consumption, the target temperature is set lower than the printing temperature.

A4 size, 1-sided

Fixing mode	Paper type	Target temperature (deg C)
Transparency mode	Transparency (60 to 63g/m2)	Target temperature -10
Plain paper mode	Plain paper (64 to 90g/m2)	Target temperature -10
Heavy paper mode	Heavy paper 1 (91to 105 g/m2)	Target temperature -5
Super Heavy paper mode	Heavy paper 2 (106 to 128 g/m2)	Target temperature -5
OHP mode	OHP	Target temperature -10
Label mode	Label	Target temperature -10
Envelope mode	Envelope	-

T-2-26

*The target temperature is not different from the environment temperature.

NOTE:
• The target temperature in the envelope mode is -10 deg C less than the target temperature during the printing.
• The target temperature in the envelope mode while through-put down performing is -15 deg C less than the target temperature during the printing.

< Related Error Code >
E000-0000 : Fixing assembly temperature rising error during the startup
E001-000x : Fixing assembly abnormal high temperature
E002-0000 : Fixing assembly temperature rising error during the printing
E003-000x : Fixing assembly abnormal low temperature

< Related Service Mode >
COPIER > OPTION > CUSTOM > TEMP-TBL : Fixing temperature setting at plain, 1/1 speed
COPIER > OPTION > IMG-FIX > TMP-TB14 : Fixing temperature setting (plain, thin paper, OHP, 1/2speed)
COPIER > OPTION > IMG-FIX > TMP-TBL2 : Fixing temperature setting (heavy paper 1, 1/2speed)
COPIER > OPTION > IMG-FIX > TMP-TBL4 : Pickup timing adjustment
COPIER > OPTION > IMG-FIX > TMP-TBL6 : Fixing temperature setting (envelope)
COPIER > OPTION > IMG-FIX > TMP-TBLC : The fixing surface temperature setting on Special Mode N
COPIER > OPTION > IMG-FIX > TMPTBLC2 : Paper curl correction mode: 2nd
COPIER > OPTION > CUSTOM > FLK-RD : Flicker reduction mode

■ Down Sequence Control

● Down Sequence when Printing Continuously

Purpose:

To prevent temperature rise of non-feeding area in the case of continuous print, fixing offset or deterioration of fixing film.

Starting conditions:

The down sequence is performed step by step. When the detected temperature of sub thermistor reaches the following temperature or higher for 400 msec continuously, the through-put decreases every one step.

Size	Down sequence shift temp (deg C)		
	1st Step	2st Step	3st Step
A4R, LTRR, LGL	255	260	265
16K	250	255	260
A5R, B5R, STMTR, EXER	230	250	260
Envelope	255	260	265
Custom paper size	240	250	255

T-2-27

Operation:

Temperature is reduced by making wider sheet-to-sheet distance with the maximum 4 steps to control the temperature at lower than the target temperature for normal print.

Through-put: "iR1430 / 1435" is indicated in the figure

Fixing mode	Step	LTRR	A4R	LGL	16K	A5R B5R STMTR EXECR	Envelope	Custom paper size
Transparency	norm	18/18	18/18	15/15	15/15	15/15	-	5/5
	1	9/9	9/9	7/7	12/12	12/12	-	4/4
	2	4/4	4/4	4/4	10/10	10/10	-	3/3
	3	2/2	2/2	2/2	6/6	6/6	-	2/2
Plain paper	norm	31/37	30/35	25/30	16/16	15/15	-	5/5
	1	18/18	18/18	15/15	14/14	12/12	-	4/4
	2	4/4	4/4	4/4	10/10	10/10	-	3/3
	3	2/2	2/2	2/2	6/6	6/6	-	2/2
Heavy paper	norm	18/18	18/18	15/15	15/15	15/15	-	5/5
	1	9/9	9/9	7/7	12/12	12/12	-	4/4
	2	4/4	4/4	4/4	6/6	6/6	-	3/3
	3	2/2	2/2	2/2	4/4	4/4	-	2/2

Fixing mode	Step	LTRR	A4R	LGL	16K	A5R B5R STMTR EXECR	Envelope	Custom paper size
Super Heavy paper mode	norm	12/12	12/12	10/10	15/15	15/15	-	5/5
	1	6/6	6/6	5/5	12/12	12/12	-	4/4
	2	3/3	3/3	3/3	6/6	6/6	-	3/3
	3	2/2	2/2	2/2	4/4	4/4	-	2/2
OHP mode	norm	18/18	18/18	-	-	-	-	-
	1	9/9	9/9	-	-	-	-	-
	2	4/4	4/4	-	-	-	-	-
	3	2/2	2/2	-	-	-	-	-
Envelope mode	norm	12/12	12/12	10/10	-	15/15	-	5/5
	1	6/6	6/6	5/5	-	12/12	-	4/4
	2	3/3	3/3	3/3	-	6/6	-	3/3
	3	2/2	2/2	2/2	-	4/4	-	2/2
Envelope mode	norm	-	-	-	-	-	12/12	5/5
	1	-	-	-	-	-	8/8	4/4
	2	-	-	-	-	-	6/6	3/3
	3	-	-	-	-	-	4/4	2/2

T-2-28

Completion conditions:

When the fixing temperature reaches 170 deg C and lower for 400 msec continuously, the through-put returns to the normal step.

F-2-59

< Related Service Mode >

COPIER > OPTION > IMG-FIX > EDG-WAIT(0: OFF, 1: ON) : Edge temperature rise standby setting

● Down Sequence when Overheating inside the Machine

Through-put down is not performed by the host machine internal temperature rise.

■ User Mode Related to Fixing Grade

The fixing grade is affected by some special modes in user mode which change the control temperature or through-put. The related modes are as follows.

Special Mode N	
Outline	Curl correction mode
Use case	When paper jam occurs in 2-sided printing using the curled paper and absorbed moisture paper.
Details	Paper jam frequently occurs when performing 2-sided printing, especially with the curled paper and absorbed moisture paper. In this case, change the setting value to Mode 1 (N1 mode) or Mode 2 (N3 mode). • N1 mode: Lower the fixing target temperature for plain paper. • N3 mode: The through-put decreases during the wait.
Set range	AUTO, OFF, N1 Mode, N3 Mode
Default value	AUTO
Special Mode S	
Outline	Performance priority mode
Use case	Cooling down operation is controlled without dropping the through-put as far as possible.
Details	The temperature judgement value of the fixing sub thermistor is changed between the start of cooling down and the end in the last rotation.
Set range	OFF(190 deg C), ON(220 deg C)
Default value	OFF
Special Mode P	
Outline	Thin paper mode
Use case	When paper cling or high-temperature offset occurs with out-of-specific thin paper.
Details	Control paper cling while changing following conditions. Transfer • Turns ON at 8mm inside of paper. • Turns OFF at the sheet-to-sheet. Separation • -2500V until 6mm inside of paper (leading edge strong bias) • -1500V other than the above (weak bias) Fixing temperature control • The target temperature in the "Thin paper mode" is set -10 deg C less than the target temperature during the wait, printing and sheet to sheet.
Set range	OFF, ON
Default value	OFF

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■ Paper Loop Amount Control before Fixing

Purpose:

To print an appropriate image by avoiding shock when the trailing edge of paper ejects from the registration roller since an appropriate paper loop is formed between the transfer and the fixing.

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Execution condition:

Performed every paper feed.

Operation:

The arch sensor detects paper loops between the transfer nip and the fixing nip. Fixing motor drive speed is varied as follows.

1) The fixing motor is set to low speed when the leading edge of paper is fed 35 mm from the transfer nip. This speed is maintained until 91 mm from the nip.
2) When the arch sensor on state is detected continuously for 24 ms or longer, the fixing motor is set to high speed. This speed is maintained until the loop disappears causing the arc sensor to turn off.
3) When the arch sensor off state is detected continuously for 24 ms, the fixing motor is set to low speed. This speed is maintained until a predetermined amount of loop is detected causing the loop sensor to turn on.
4) Steps 2 and 3 are repeated until the paper trailing edge passes through the transfer nip.

5)After the trailing edge is fed 10 mm from the transfer nip, the fixing speed is set to high, and loop control is terminated.
However, if the paper trailing edge tension mode is on and the paper type is transparency, the fixing motor drive speed is set to 108.3 mm/s when the paper reaches 63 mm in front of the transfer nip.

6)If the next sheet of paper is available, the operation returns to step 1. Otherwise, the operation proceeds to last rotation.

<Related Service Mode>
COPIER > OPTION > IMG-TR >FX-SP-H: Paper trailing edge tension setting

■ Protection Features

● Error Latch Control

In case that the main power is turned ON/OFF for recovery when error occurs, heater is turned on electricity several times to prevent danger condition such as over heat.

Operation Specifications:
Operation of turning on electricity to read out error information just after turning ON the main power is suspended, which the error information is written in the EEPROM error latch storage area of the engine controller PCB when a specific error occurs.

Code	Description	Error Clear
E000	Fixing assembly temperature rising error during the startup	Yes
0000	The fixing assembly does not rise to the constant temperature within specified time during the startup.	
E001	Fixing assembly abnormal high temperature	Yes
0000	The main thermistor detects 260 deg C or more.	
0001	The sub thermistor detects 295 deg C or more.	
E002	Fixing assembly temperature rising error during the printing	Yes
0000	The fixing assembly does not rise to the constant temperature within specified time during the printing.	
E003	Fixing assembly abnormal low temperature	Yes
0000	• The main thermistor detects abnormal low temperature during the printing, sheet-to-sheet and ejection. • The main thermistor detects abnormal low temperature during the wait, and cleaning.	
0001	• The sub thermistor detects abnormal low temperature during the printing, sheet-to-sheet and ejection. • The sub thermistor detects abnormal low temperature during the wait, and cleaning.	
E004	Thermistor disconnection detection error	No
0000	• When thermistor disconnection is detected. • When the engine controller PCB is damaged.	
E014	Fixing pressure or release is not available by the fixing motor (M3).	No
0000	Fixing release is never detected more than 3 sec or more by the fixing pressure release sensor 1/2 (SR15/16).	
0001	Fixing pressure is never detected more than 3 sec or more by the fixing pressure release sensor 1/2 (SR15/16).	
E261	Zero cross detection error	No
0000	Zero cross error is detected.	

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< Related Service Mode >
COPIER > FUNCTION > CLEAR > ERR: Clearing error code

Work of Service

■ Periodically Replaced Parts

None

■ Consumable Parts

None

■ List of Periodical Servicing

None

■ Actions when Replacing the Parts

None

Pickup / Feed System

Overview

■ Specifications / Controls / Functions

Item		Description
Paper storage method		Front loading method
Pickup method	Cassette	Retard separation method
	Multi-purpose pickup tray	Pad separation method
Paper stack capacity	Cassette	500 sheets (80g/g/m2)
	Multi-purpose pickup tray	100 sheets (80g/g/m2)
Paper feed reference		Center reference
Paper size	Cassette	A4R, LTRR, LGL, 16K
	Multi-purpose pickup tray	A4R, B5R, A5R, LTRR, LGL, STMTR, EXECR, 16K, Envelope (No.10 (COM10), Monarch, ISO-C5, DL) Custom paper size (76 x 216 mm to 127 x 356 mm)
Paper grammage	Cassette	64 to 90g/m2
	Multi-purpose pickup tray	64 to 128g/m2
Paper size switch	Cassette	User
	Multi-purpose pickup tray	User
Duplex method		Through path
Option		Cassette Feeding Module-AC1 FL CASSETTE-AW1

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■ Parts Configuration

● Arrangement of Rollers

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[1]	Cassette 1 Pickup Roller
[2]	Multi-purpose Tray Separation Pad
[3]	Multi-purpose Tray Pickup Roller
[4]	Multi-purpose Tray Vertical Path Roller
[5]	Cassette 1 Separation Roller
[6]	Cassette 1 Feed Roller
[7]	Registration Roller
[8]	Duplex Roller
[9]	Pressure Roller
[10]	Fixing Film Unit
[11]	Delivery Reverse Roller

● Arrangement of Sensors

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SR5	Fixing Delivery Sensor
SR10	Delivery Full Sensor
SR11	Pre-registration Sensor
SR12	Multi-purpose Tray Paper Sensor
SR13	Cassette 1 Paper Sensor
SR14	Arch Sensor

● Route of Drive

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M1	Main Motor
M3	Fixing Motor
CL1	Registration Clutch
SL1	Duplex Solenoid
SL2	Cassette 1 Pickup Solenoid
SL5	Multi-purpose Tray Pickup Solenoid

■ Diagram of Paper Paths

Reversing point

Delivery point

Pickup from
Manual Feeder

Pickup from Cassette 1

Pickup from Cassette 2

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Controls

Pickup Block

Reverse/Duplex Assembly

Fixing / Registration Assembly

Multi-Purpose Pickup Assembly

Cassette Pickup Assembly

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Area	Detection / Control
Cassette pickup assembly	Paper length detection
	Paper presence detection
	Cassette Presence Detection
Multi-purpose pickup assembly	Paper presence detection
	Paper size detection
Fixing/registration assembly	Registration control
Duplex/delivery assembly	Number of Circulating Sheets at the 2-sided Print
JAM detection	JAM detection

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Cassette Pickup Assembly

The paper inside the cassette is lifted by the middle plate. During pickup, the cassette 1 pickup solenoid (SL2) turns on to rotate the cassette 1 pickup roller a full turn. When the cassette 1 pickup roller comes in contact with the paper surface, the top sheet is picked up by roller rotation. Only a single sheet of paper is picked up and moved to the feed path by the cassette 1 separation roller and fed to the registration roller by the cassette 1 feed roller. The cassette 1 feed roller and cassette 1 pickup roller are driven by the main motor (M1). For the pickup control of cassette 2, refer to the Cassette Feeding Module-AC1 service manual.

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[1]   Lifter plate
[2]   Cassette 1 Separation Roller
[3]   Cassette 1 Feed Roller
[4]   Cassette 1 Pickup Roller

● Paper Length Detection

It does not have a cassette paper size detection function. The size of the paper in the cassette is determined by converting the time from when the registration clutch (CL1) turns on to when the paper trailing edge passes through the pre-registration sensor (SR11) into distance.

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● Paper Presence Detection

Paper presence is detected by the cassette 1 paper sensor (SR13). It does not have a function for detecting the paper level in the cassette.

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Cassette 1 paper sensor	Paper level	Display on the control panel
OFF	Presence	
ON	Absence	

● Cassette Presence Detection

It does not have a cassette presence detection function. When the cassette is not inserted, the cassette paper sensor flag moves to the evacuation position so that it is unable to detect paper and unable to print.

■ Multi-Purpose Pickup Assembly

The paper in the tray of the multi-purpose pickup tray is forced against the multi-purpose tray pickup roller by the middle plate. Then, the multi-purpose tray pickup roller and separation pad separates and feeds a single sheet of paper.

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● Paper Presence Detection

It does not have a paper size detection function. Likewise the cassette paper size detection, the size of the paper in the multi-purpose tray is determined by converting the time from when the registration clutch (CL1) turns on to when the paper trailing edge passes through the pre-registration sensor (SR11) into distance.

● Paper Size Detection

Paper presence is detected by the multi-purpose tray paper sensor (SR12). If paper absence is detected, same paper size and type are presence in other paper source, auto cassette change is executed.

■ Fixing/Registration Assembly

● Registration Control

The registration roller is driven by the main motor (M1). In between the registration roller and the main motor (M1) is the registration clutch (CL1) which controls the on/off state of the registration roller so that the paper and the image on the drum are aligned at a specific registration.

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■ Duplex/Delivery Assembly

The relative time from when the fixing delivery sensor (SR5) is turned off is used to detect the timing at which the paper trailing edge passes through a point 25 mm upstream from the delivery/reverse roller. This timing is used to turn on the duplex solenoid (SL1). After the duplex solenoid (SL1) turns on, the delivery reverse roller turns in reverse direction, and the paper is led to the duplex assembly. The paper is fed for the paper length + margin (10 mm) + duplex solenoid (SL1) connecting time (26 ms), and then the duplex solenoid is turned off. The paper fed to the duplex assembly is delivered to the registration roller by the duplex roller.

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● Number of Circulating Sheets at the 2-sided Print

It does not have an internal queue mechanism, a single sheet circulates at a time.

■ JAM Detection

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ACC ID	Jam Code	Type	Sensor ID	Sensor Name
4	0001	DELAY	SR01	Document End Sensor
4	0002	STNRY	SR01	Document End Sensor
4	0004	DELAY	SR01	Document End Sensor
4	0005	STNRY	SR01	Document End Sensor
4	0071	SEQ NG *1	-	-
4	0094	POWER ON	SR01 SR02	Document End Sensor Document Sensor
4	0095	PICKUP NG	SR02	Document Sensor

ACC ID	Jam Code	Type	Sensor ID	Sensor Name
3	0104	DELAY	SR11	Pre-registration Sensor
3	0144		SR5/SR10/SR11	Fixing Delivery Sensor/Delivery Full Sensor/Pre-registration Sensor
3	0184		SR11	Pre-registration Sensor
3	01C4		SR5/SR10/SR11	Fixing Delivery Sensor/Delivery Full Sensor/Pre-registration Sensor
3	010C		SR11	Pre-registration Sensor
3	014C		SR5/SR10/SR11	Fixing Delivery Sensor/Delivery Full Sensor/Pre-registration Sensor
3	018C		SR11	Pre-registration Sensor
3	01CC		SR5/SR10/SR11	Fixing Delivery Sensor/Delivery Full Sensor/Pre-registration Sensor
3	0208	STNRY	SR11	Pre-registration Sensor
3	0248		SR5/SR11	Fixing Delivery Sensor/Pre-registration Sensor
3	0288		SR11	Pre-registration Sensor
3	02C8		SR5/SR11	Fixing Delivery Sensor/Pre-registration Sensor
3	0210		SR11	Pre-registration Sensor
3	0250		SR5/SR11	Fixing Delivery Sensor/Pre-registration Sensor
3	0290		SR11	Pre-registration Sensor
3	02D0		SR5/SR11	Fixing Delivery Sensor/Pre-registration Sensor
3	1014	POWER ON	SR11	Pre-registration Sensor
3	1054		SR5/SR11/SR14	Fixing Delivery Sensor/Pre-registration Sensor/Arch Sensor
3	1094		SR11	Pre-registration Sensor
3	10D4		SR5/SR11/SR14	Fixing Delivery Sensor/Pre-registration Sensor/Arch Sensor
3	1118	DOOR OP	SR11	Pre-registration Sensor
3	1158		SR5/SR10/SR11/SR14	Fixing Delivery Sensor/Delivery Full Sensor/Pre-registration Sensor/Arch Sensor
3	1198		SR11	Pre-registration Sensor
3	11D8		SR5/SR10/SR11/SR14	Fixing Delivery Sensor/Delivery Full Sensor/Pre-registration Sensor/Arch Sensor

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Work of Service

■ Periodically Replaced Parts

None

■ Consumable Parts

None

■ List of Periodical Servicing

None

■ Actions when Replacing the Parts

None

External Auxiliary System

● Controls

■ Software Counter

The host machine is equipped with counters that indicate the counts of output according to types of job. These counters are indicated in response to a press on the Counter Check Key on the control panel. Counters for each country (model) are listed below.

Count-up timing
1-sided print / 2nd side of 2-sided print : Delivery Full Sensor (SR10)
1st side of 2-seded print : Pre-registration Sensor (SR11)

Target	Display number of each counter (in service mode) / item						Country Code
	Counter 1	Counter 2	Counter 3	Counter 4	Counter 5	Counter 6	
120V UL model	Total 1	Copy (Total 1)	*1	*1	*1	*1	Group 4
	101	201	000	000	000	000	
230V General model KOR model CHN model	Total 1	Copy (Total 1)	*1	*1	*1	*1	Group 3 KOR CHN
	101	201	000	000	000	000	
230V UK model type1 (existing type)	Total (Black/ Small)	Scan (Total 1)	Scan (Total 1)	*1	*1	*1	Group 1
	113	501	301	000	000	000	
230V UL model type2 (new method)	Total 1	*1	*1	*1	*1	*1	Group 1
	101	000	000	000	000	000	
120V CLA model	Total 1	Copy (Total 1)	*1	*1	*1	*1	Brazil
	101	201	000	000	000	000	
230V CLA model	Total 1	Copy (Total 1)	*1	*1	*1	*1	Group 5
	101	201	000	000	000	000	

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*1: Nothing is displayed as a default. The setting can be changed in the service mode.

<Explanation of the list>
- Small: Small size paper (when paper length is 324 mm or less in paper feed direction)
- Total: Copy + Print; 1 count up
- Three-digit number in the counter column shows the setting value of the following service mode items.
  (Lv.1) COPIER > OPTION > USER > COUNTER 1 to 6.
- COUNTER 2 to 6 can be changed in the service mode (COPIER > OPTION > USER).
- The change of the counter display type (New method/Conventional method) can be changed in the service mode (COPIER > OPTION > USER> CNT-SW).

Group	Country	Default	User mode type setting
KOR	KOREA	0	KOREA
CHN	CHINA	0	CHINA
BRA	BRAZIL	0	BRA2
Group 1 EUR Middle East Africa	Austria	-	AUSTRIA
	Belarus	-	BELARUS
	Belgium	-	BELGIUM
	Czech	-	CZECH
	Denmark	-	DENMARK
	Egypt	-	EU3
	Finland	-	FINLAND
	France	-	FRANCE
	Germany	-	GERMANY
	Greece	-	GREECE
	Hungary	-	HUNGARY
	Ireland	-	IRELAND
	Italy	-	ITALY
	Jordan	-	EU3
	Luxembourg	-	LUXEMBOURG
	Netherlands	-	N.L.
	Norway	-	NORWAY
	Poland	-	POLAND
	Portugal	-	PORTUGAL
	Russia	-	RUSSIA
	Saudi Arabia	-	EU3
	Slovenia	-	SLOVENIA
	South Africa	-	SAF
	Spain	-	SPAIN
	Sweden	-	SWEDEN
	Switzerland	-	SWISS
	Ukraine	-	UKRAINE
	United Kingdom	0	U.K.
	Others	-	EU1
	-	-	EU2
Group 3 Oceania Asia Latin America 230V	Hong Kong	-	HONG KONG
	Singapore	0	SINGAPORE
	New Zealand	-	N.Z.
	Malaysia	-	MALAYSIA
	Vietnam	-	EU1
	Argentina	-	ARG
	Others(Australia)	-	AUSTRALIA
	Others(ASIA)	-	ASIA
	Others(Latin)	-	EU1

Group	Country	Default	User mode type setting
Group 4 North America Latin America 120V	USA	-	USA
	Canada	-	USA
	Brazil	-	BRA
	Mexico	-	LATIN
	Others	-	LATIN
Group 5	Argentina	0	ARG
	Others(Latin)	-	EU1

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■ Fan

● Fan

FM2

FM1

FM3

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No	Name	Function	Error Cord
FM1	Delivery Cooling Fan	Cools delivery part	E805-0000
FM2	Power Supply Cooling Fan	Cools power supply	E805-0002
FM3	Image Formation Part Cooling Fan	Cools image formation part	E805-0001

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● Fan Drive Sequence

	WUP	STBY	INI	PTINT	LSTR	STBY	JAM /ERROR	
Delivery Cooling Fan (FM1)								*2
Power Supply Cooling Fan (FM2)								*2
Image Formation Part Cooling Fan (FM3)								*1

▬ : Full-speed

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*1: In 1-sided, stops driving at 27 deg C or less and drives full speed at 27 deg C or more.

*2: Stops immediately when Door open is detected.

< Related Service Mode >

COPIER > OPTION > FNC-SW > DLVFN-SW : Set the delivery cooling fan operation

■ Power

● Power Supply

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■ Power-Saving Mode

This is the function to save power consumed by the printer. The table below lists various power-saving modes.

Power-Saving Mode		Status
Stand-by		at power-OFF on the reader
Power-saving		at power-OFF on the reader and the display (LCD)
Sleep	Sleep 1	at power-OFF on the reader, engine and the display (LCD)
	Sleep 2	at power-OFF on the reader and the engine.
	Sleep 3 (3W sleep)	at power-off on the reader, the engine and the display (LCD) The main controller enters the power-saving mode.
Automatic shutdown[*]		The Main Power Switch is turned OFF when a specified period of time has passed (default: 4 hours) after the machine has entered sleep mode (excluding sleep 2).

*: In the case of a model without fax

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⬤ Work of Service

■ Periodically Replaced Parts

None

■ Consumable Parts

None

■ List of Periodical Servicing

None

■ Actions when Replacing the Parts

None

Embedded RDS

● Product Overview

■ Overview

Embedded RDS (hereinafter referred to as E-RDS) is a monitoring program that runs on the host machine. When the monitoring option is enabled by making the setting on this machine, information such as the status change of the machine, counter information, and failure information are collected. The collected device information is sent to a remote maintenance server called UGW (Universal Gateway Server) via Internet, thus allowing for e-Maintenance/ imageWARE Remote (Remote Diagnosis System).

The following device information/ status can be monitored.

- Billing counts
- Parts counter
- Firmware info
- Service call error log
- Jam log
- Alarm log
- Status changes (Toner low/ out, etc.)

Since high confidentiality is required for the information shown above, it performs communication between this machine and the UGW using HTTPS/ SOAP protocol.

The e-Maintenance/ imageWARE Remote system configuration

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■ Features and benefits

E-RDS embedded with a network module in advance can realize a front-end processing of e-Maintenance/ imageWARE Remote system without attaching any extra hardware equipment.

■ Major Functions

● Service mode menu Transmission

E-RDS sends the target service mode menu data to UGW in the following cases:

- When a specific alarm and service call error are detected
- When the setting is changed in service mode

The following shows the transmission timing and the target data for transmission in service mode menu:

Transmission timing	Transmitting data			Error retry
When the following alarm is detected. Alarm codes for transmission: 0x060002,　　　　　　// Fixing 0x060004 - 0x069999, // Fixing 0x090005 - 0x099999, // Dram 0x100006 - 0016, 0x100022 - 0099, 0x100101 - 9900,　　　// Development 0x300001 - 0x309999　// High voltage	COPIER	DISPLAY	ANALOG	No
			HV-STS	
			CCD	
			DPOT	
			DENS	
			FIXING	
			SENSOR	
			MISC	
			HT-C	
			HV-TR	
			P-PASCAL	
When the following service call error is detected. Error codes for transmission: E000 - E00F, // Fixing E020,　　　　// Development ATR E060 - E06F　// High voltage	COPIER	DISPLAY	ANALOG	No
			HV-STS	
			CCD	
			DPOT	
			DENS	
			FIXING	
			SENSOR	
			MISC	
			HT-C	
			HV-TR	
			P-PASCAL	
When a value is set to [COPIER - ADJUST] subordinate's Service mode menu. (Transmission will be done at 60 min, later of setting)	COPIER	ADJUST		Yes

Transmission timing	Transmitting data			Error retry
When the first communication test is done. (For transmission process, 5 minutes after the execution)	COPIER	DISPLAY	ANALOG	Yes
			HV-STS	
			CCD	
			DPOT	
			DENS	
			FIXING	
			SENSOR	
			MISC	
			HT-C	
			HV-TR	
			P-PASCAL	
		ADJUST		

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Limitations

■ Service Mode Menu Transmission Function

1) In the following cases, service mode menu data is not transmitted.
   - When an unsent alarm log or service call log has been detected by E-RDS at power-on
   - When an alarm log or service call log to be resent due to a transmission failure is detected
   - When transmission of service mode menu executed at the time of detection of an alarm or a service call error ended in failure
   - If a new alarm or service call error occurs while service mode menu data is being obtained after detection of an alarm or a service call error, the data being obtained is not sent.

2) If alarms/service call errors successively occur, and if the time of the host machine is corrected or changed while the log is being sent, service mode menu data may not be properly sent. It is because a Link No.* may be applied to the old log although it should be applied to the new log.

   * Link No.:
     A common number for linking the service mode menu data with the alarm log/service call log data to be sent
     After completion of log transmission, the service mode menu data is obtained, and is sent with this number attached.

3) Transmission of the data of changes made in service mode menu settings is not performed instantly, but performed when a specified period of 60 minutes elapse after the change of service mode menu settings is detected or when a communication test is performed at the time of power-on. (There is a time lag.)

4) When service mode menu settings ([COPIER] > [Adjust]) are made, transmission is performed even when no change is made in the target data to be transmitted. Transmission of service mode data is also performed when changes are made in the service mode setting value not subject to transmission or when settlement of a value is performed without changing the setting value.

Service cautions

1) After clearing RAM of the Main Controller PCB, initialization of the E-RDS setting (ERDS-DAT) and a communication test (COM-TEST) need to be performed.
   Failure to do so will result that the counter transmitting value to the UGW may become unusual.
   Also, after replacing the main controller board, all settings must be reprogrammed.

2) The following settings in service mode must not be change unless there are specific instructions to do so. Changing these values will cause error in communication with UGW.
   - Set port number of UGW
     [SERVICE MODE] > [COPIER] > [FUNCTION] > [INSTALL] > [RGW-PORT]
     Default : 443

3) If the e-Maintenance/ imageWARE Remote contract of the device is invalid, be sure to turn OFF the E-RDS setting (ERDS : 0).

4) With this machine, a communication test can be conducted from the [Counter Check] on the Control Panel.* When conducting a communication test from the [Counter Check] on the Control Panel, pay attention on the following points:
   - During a communication test, do not take any actions such as pressing a key. Actions are not accepted until the communication test is completed (actions are ignored).
   - When a communication test is being conducted from service mode or from the [Counter Check] on the Control Panel, do not conduct a communication test from the other. These operations are not guaranteed.

NOTE:
*The user can conduct a communication test and seen the communication test result.
If the communication results in failure, the following screens are displayed.

Communication failed.

Close

E-RDS Setup

■ Confirmation and preparation in advance

To monitor this machine with e-Maintenance/ imageWARE Remote, the following settings are required.

1) Advance confirmation
Confirm with the UGW administrator that the device to be monitored with e-Maintenance/ imageWARE Remote is registered in the UGW.

2) Advance preparations
The following network-related information needs to be obtained from the user's system administrator in advance.

Information item 1
IP address settings
   - Automatic setting : DHCP, RARP, BOOTP
   - Manual setting : IP address, subnet mask and gateway address to be set

Information item 2
Is there a DNS server in use?
If there is a DNS server in use, find out the following.
   - Primary DNS server address
   - Secondary DNS server address

Information item 3
Is there a proxy server?
If there is a proxy server in use, find out the following.
   - Proxy server address
   - Port No. for proxy server

Information item 4
Is proxy server authentication required?
If proxy server authentication is required, find out the following.
   - User name and password required for proxy authentication

3) Network settings

Based on the results of the information obtained in 2) Advance preparations, make this machine network related settings.
See Users' Guide for detailed procedures.

> CAUTION:
>
> When changes are made to the above-mentioned network settings, be sure to turn OFF and then ON the main power of this machine.

■ Steps to E-RDS settings

1) Start [Service Mode].

2) Select [COPIER] > [FUNCTION] > [CLEAR] > [ERDS-DAT] and press the [OK] key.

> NOTE:
> This operation initializes the E-RDS settings to factory setting values.
> For the setting values to be initialized, see the section of "Initializing E-RDS settings".

3) Select [COPIER] > [FUNCTION] > [INSTALL] > [ERDS].

4) Press the numeric key [1] on the control panel (the setting value is changed to 1) and press the [OK] key. (The data is reflected to the setting value field.)

> NOTE:
> This operation enables the communication function with UGW.

ERDS ▲ 0 (0 - 1) ▶ ERDS 1 ▼ (0 - 1)

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> CAUTION:
>
> The settings of RGW-PORT in Service mode must not be change unless there are specific instructions to do so.
>
> Changing these values will cause error in communication with UGW.

5) Select [COM-TEST] and press the [OK] key.

> NOTE:
> This initiates the communication test between the device and the UGW.

6) Select [COM-RSLT] and press the [OK] key.
If the communication is successful, "OK" is displayed. If "NG" (failed) appears, refer to the "Troubleshooting" and repeat until "OK" is displayed.

> NOTE:
> The communication results with UGW can be distinguished by referring to the COM-LOG. By performing the communication test with UGW, E-RDS acquires schedule information and starts monitoring and meter reads operation.

■ Initializing E-RDS settings

It is possible to clear the FLASH data of E-RDS and change the E-RDS setting back to the default value.

● Initialization procedure

1) Start [Service Mode].

2) Select [COPIER] > [FUNCTION] > [CLEAR] > [ERDS-DAT] and press the [OK] key.

● Setting values and data to be initialized

The following E-RDS settings, internal data, and Alarm filtering information are initialized.
- COPIER > FUNCTION > INSTALL > ERDS
- COPIER > FUNCTION > INSTALL > RGW-PORT
- COPIER > FUNCTION > INSTALL > COM-LOG

■ Report output procedure

1) Start Service Mode.

2) Select [COPIER] > [FUNCTION] > [MISC-P] > [ERDS-LOG], and press [OK].

Output sample

```
12/03 2015 10:14AM
                        **********************
                        *** E-RDS-COM-LOG ***
                        **********************

No.01    DATE 12/03 2015    TIME 03:21 AM    CODE 05000003
     Information    SUSPEND: Communication test is not performed.

No.02    DATE 12/03 2015    TIME 03:21 AM    CODE 00000000
     Information    SUSPEND: mode changed.

No.03    DATE 12/03 2015    TIME 03:18 AM    CODE 05000003
     Information    SUSPEND: Communication test is not performed.

No.04    DATE 12/03 2015    TIME 03:18 AM    CODE 00000000
     Information    SUSPEND: mode changed.

No.05    DATE 12/03 2015    TIME 01:56 AM    CODE 05000003
     Information    SUSPEND: Communication test is not performed.
```

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● FAQ

No.1

Q: In what case does a communication test with UGW fail?

A: The following cases can be considered in the becoming "NG!" case.

- Name resolution was failed due to an incorrect host name or DNS server has been halted.
- Network cable is blocked off.
- Proxy server settings is not correct.

No.2

Q: When does E-RDS send counter information to UGW? How many data is sent?

A: The schedule of data transmitting, the start time are determined by settings in the UGW side. The send time cannot be specified on the E-RDS side. Data is sent once every 16 hours.
The data size of counter information is approx. 285 KB.

No.3

Q: Will data which failed to be sent due to an error in communication with UGW be resent?

A: Data shown below will be resent.

- Jam log
- Service call log
- Alarm log
- Service mode menu
The newest data is resent only when the settings are changed in service mode.
- Browser information
It is resent only when the web browser option is enabled.

Data is resent endlessly (after 5, 10, 15, 20, 25, and 30 minutes since the occurrence of communication error; once 30 minutes have passed, it is resent at 30-minute intervals) until it is sent successfully. Resend continues even if the power is turned OFF and then ON.

No.4

Q: What is the upper limit of the number of COM-LOGs?

A: Up to 5 log data can be saved.

No.5

Q: Although Microsoft ISA as a proxy server is introduced, the authentication check is failed. Can E-RDS adopt with Microsoft ISA?

A: E-RDS must comply with "Basic" while "Integrated" authentication is used for Microsoft ISA (as default); therefore, authentication with E-RDS is available if you change the setting to "Basic" authentication on the server.

No.6

Q: Can I turn this machine power off during the e-Maintenance/ imageWARE Remote system operation?

A: While operating the e-Maintenance/ imageWARE Remote system, the power of the device must be ON. If power OFF is needed, do not leave the device power OFF for long time. It will become "Device is busy, try later" errors if the power supply of network equipment such as HUB is made prolonged OFF.

No.7

Q: Although a Service call error may not be notified to UGW, the reason is what?

A: If a service technician in charge turns off the power supply of this machine immediately after error occurred once, It may be unable to notify to UGW because data processing does not take a time from the controller of this machine to NIC though, the data will be saved on the RAM.

If the power supply is blocked off while starting up, the data will be inevitably deleted.

No.8

Q: How does E-RDS operate while this machine is placed in the sleep mode?

A: While being in Real Deep Sleep, and if data to be sent is in E-RDS, the system wakes up asleep, then starts to send the data to the UGW. The system also waits for completion of data transmission and let the device to shift to asleep status again. However, transition time to the Real Deep Sleep depends on the device, and the transition to sleep won't be done if the next data transmission will be done within 10 minutes.

No.9

Q: Is E-RDS compatible with Department counter?

A: No, E-RDS does not support Department counter.

No.10

Q: Is there any setting to be made on the device side to enable the service mode menu transmission function? Moreover, what is Service mode menu set as the object of transmission?

A: No steps peculiar to Transmitting Service mode menu. As for the data that applies to transmission of the service mode, see the "Service mode menu Transmission".

No.11

Q: Counter information could not be sent at the scheduled send time due to the power of this machine being turned OFF. Will the counter information be sent later when the power of this machine is turned ON?

A: Yes. When a scheduled send such as that for counter could not be executed due to the power of this machine being turned OFF, etc., and the scheduled send time has already passed at power-on, the send is executed immediately.

The following shows data send according to the status of this machine.

Send types	Status of this machine		
	Power ON	Power OFF	Sleep
Scheduled send	Sent	Not sent[*1]	Sent[*2]
Immediate send (Service call log / Alarm log / Jam log)	Sent	-	Sent[*2]

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*1: Immediately sent if the send time has already passed at power-on.

*2: Sent after recovery from sleep mode.

No.12

Q: What is the number of the network port used by E-RDS?

A: The port number used by E-RDS for communication with UGW is "443". If this setting is changed, an error occurs during communication with UGW. Therefore this setting should not be changed unless otherwise instructed.

No.13

Q: After the setting for E-RDS was made, the IP address of the host machine was changed. In that case, is it necessary to execute COM-TEST again?

A: It is not necessary to execute COM-TEST again because the IP address used by E-RDS is automatically changed. However, it is necessary to turn OFF and then ON the main power of this machine to reflect the change in the setting of the IP address

Troubleshooting

No.1
Symptom: A communication test (COM-TEST) results NG!

Cause: Initial settings or network conditions is incomplete.

Remedy 1: Check and take actions mentioned below.

1) Check network connections

   Is the status indicator LED for the HUB port to which this machine is connected ON?

   YES: Proceed to Step 2).

   NO: Check that the network cable is properly connected.

2) Confirm loop back address (* In case of IPv4)

   Select [Menu] > [Network Settings] and enter System Manager ID and PIN.

   Select [TCP/IP Settings] > [IPv4 Settings] > [PING Command], enter "127.0.0.1", and touch the [Apply] button.

   Does the screen display "Response from the host."? (See the next figure.)

   YES: Proceed to Step 3).

   NO: There is a possibility that this machine's network settings are wrong. Check the details of the IPv4 settings once more.

3) Confirmation from another PC connected to same network.

   Request the user to ping this machine from a PC connected to same network.

   Does this machine respond?

   YES: Proceed to Step 4).

   NO: Confirm the details of this machine's IP address and subnet mask settings.

4) Confirm DNS connection

   (a) Select [Menu] > [Network Settings] and enter System Manager ID and PIN.

   Select [TCP/IP Settings] > [IPv4 Settings] > [DNS Settings] > [DNS Server Settings] > [Primary DNS Server] and [Secondary DNS Server], write down the primary and secondary addresses of the DNS server, and press the [OK] key.

   (b) Select [IPv4 Settings] > [PING Command], enter the primary DNS server noted down in step a) as the IP address, and press the [OK] key.

   Does the screen display "Response from the host."?

   YES: Proceed to Remedy 2.

   NO: Enter the secondary DNS server noted down in step a) as the IP address, and then press the [OK] key.

   Does the screen display "Response from the host."?

   YES: Proceed to Remedy 2.

   NO: There is a possibility that the DNS server address is wrong. Reconfirm the address with the user's system administrator.

Remedy 2: Troubleshooting using communication error log (COM-LOG)

1) Start [Service Mode].

2) Select [COPIER] > [FUNCTION] > [INSTALL] > [COM-LOG].

   The communication error log list screen is displayed.

3) When a code is displayed, take an appropriate action referring to "Error code and strings".

No.2
Symptom: A communication test results NG! even if network setting is set properly.

Cause: The network environment is inappropriate, or RGW-PORT settings for E-RDS have been changed.

Remedy: The following points should be checked.

1) Check network conditions such as proxy server settings and so on.

2) Check the E-RDS setting values.

• Check the communication error log from COM-LOG.

• Check RGW-PORT settings has changed. If RGW-PORT settings has changed, restore initial values. For initial values, see "Service cautions".

No.3
Symptom: Registration information of the E-RDS machine was deleted from the device information on Web Portal, and then registered again. After that, if a communication test is left unperformed, the device setting in the UGW becomes invalid.

Cause: When the registration information of the E-RDS machine is deleted, information related to E-RDS is also deleted.

Therefore, when 7 days have passed without performing a communication test after registering the E-RDS machine again, the device setting becomes invalid.

Remedy: Perform a communication test before the device setting becomes invalid.

No.4

Symptom: There was a log, indicating "Network is not ready, try later" in error details of COM-LOG list.

Cause: A certain problem occurred in networking.

Remedy: Check and take actions mentioned below.

1) Check networking conditions and connections.

2) Turn on the power supply of this machine and perform a communication test about 60 seconds later.

No.5

Symptom: "Unknown error" is displayed though a communication test (COM-TEST) has done successfully.

Cause: It could be a problem at the UGW side or the network load is temporarily faulty.

Remedy: Try again after a period of time. If the same error persists, check the UGW status with a network and UGW administrator.

No.6

Symptom: When a communication test (COM-TEST) is repeatedly executed, an error occurs.

Cause: During communication conducted after execution of a COM-TEST, another COM-TEST was executed again.

Remedy: When repeatedly executing COM-TEST, execute COM-TEST at intervals of 5 minutes or more.

Error code and strings

The following error information is displayed on the communication error log details screen. (Here, "server" means UGW.)

- The error information are displayed in the following form.

  [*] [Character strings] [Functional classification (Method name)] [Error details provided by UGW]

> NOTE:
> "*" is added to the top of the error text in the case of an error in communication test (method name: getConfiguration or communicationTest) only.

No.	Code	Cause	Remedy
1	0000 0000	Unmatched Operation Mode	Initialize the E-RDS setting (ERDS-DAT).
2	0500 0003	Turning OFF and then ON the main power of this machine while the communication test had not been performed although E-RDS is enabled.	Perform a communication test (COM-TEST).
3	0xxx 0003	Blank schedule data have been received from UGW.	Perform and complete a communication test (COM-TEST).
4	0xxx 0003	Communication test has not completed.	Perform and complete a communication test (COM-TEST).
5	84xx 0003	A communication test has been attempted with the E-RDS switch being OFF.	Set E-RDS switch (ERDS) to 1, and then perform a communication test (COM-TEST).
6	8600 0002 8600 0003 8600 0101 8600 0201 8600 0305 8600 0306 8600 0401 8600 0403 8600 0414 8600 0415	Processing (event processing) within the device has failed.	Turn the device OFF/ ON. If the error persists, replace the device system software. (Upgrade)
7	8700 0306	Improper value is written in at the head of the NVMEM domain (nonvolatile memory domain) of E-RDS.	Turn the device OFF/ ON.
8	8700 0306	Improper value is written in at the head of the NVMEM domain (nonvolatile memory domain) of Ae-RDS.	Turn the device OFF/ ON.
9	8xxx 0004	Method which E-RDS is not supporting attempted.	Contact help desk.

No.	Code	Cause	Remedy
10	8xxx 0101	Communication with UGW has been successful, but an error of some sort has prevented UGW from responding. When (Null) is displayed at the end of the message, this indicates that there has been an error in the HTTPS communication method.	Perform and complete a communication test (COM-TEST).
11	8xxx 0201 8xxx 0202 8xxx 0203 8xxx 0204 8xxx 0206	During the communication test, there has been some kind of error in the schedule values passed from UGW.	When the error occurs, report the details to the support section. After the UGW side has responded, try the communication test again.
12	8xxx 0207 8xxx 0208	The schedule data in the inside of E-RDS is not right.	Perform a communication test (COM-TEST).
13	8xxx 0221	Alarm/Alert filtering error: The number of elements of the list specified by the server is over restriction value.	Alert filtering is not supported by UGW.
14	8xxx 0222	Alarm filtering error: Unjust value is included in the element of the list specified by the server.	Alert filtering is not supported by UGW.
15	8xxx 0304	The semaphore consumption error at the time of a communication test.	Try again a communication test after a period of time.
16	8xxx 0709	When upgrading firmware, the TrackingID notified by Updater differs from the thing of UGW designates.	Obtain the sublog, and contact the support department of the sales company.
17	8xxx 2000	Some other kind of communication error has occurred.	Perform and complete a communication test (COM-TEST).
18	8xxx 2001	The header of the URL of the registered UGW is not in https format.	Contact help desk.
19	8xxx 2002	A URL different to that specified by the UGW has been set.	Contact help desk.
20	8xxx 2003	Communication attempted without confirming network connection, just after turning OFF and then ON the main power of this machine in which the network preparations are not ready.	Check the network connection, as per the initial procedures described in the troubleshooting. Perform a communication test (COM-TEST) about 60 seconds later, after turn on the device.
21	8xxx 2004	Communication with UGW has been successful, but an error of some sort has prevented UGW from responding.	Try again after a period of time. Check detailed error code (Hexadecimal) and [Error details in UGW] from UGW displayed after the message.
22	8xxx 200A	• TCP/IP communication fault • The IP address of device is not set.	• Check the network connection, as per the initial procedures described in the troubleshooting. • When proxy is used, make the settings for proxy, and check the status of the proxy server.

No.	Code	Cause	Remedy
23	8xxx 200B	Server address name resolution has failed.	Check that Internet connection is available in the environment.
24	8xxx 2014	Could not connect to proxy server due to improper address.	Check proxy server address / port and re-enter as needed.
25	8xxx 2015	Could not connect to proxy server due to name resolution error of proxy address.	• Check that the proxy server name is correct. If the proxy server name is correct, check the DNS connection, as per the initial procedures described in the troubleshooting. • Specify the IP address as the proxy server name.
26	8xxx 201E	Proxy authentication is failed.	Check the user name and password required in order to login to the proxy, and re-enter as needed.
27	8xxx 2028	• No route certificate installed in device. • Certificate other than that initially registered in the user's operating environment is being used, but has not been registered with the device. • The date and time of the device is not correct.	• Install the latest device system software. (Upgrade) • Correctly set the date and time of the device.
28	8xxx 2029	The server certificate verification error occurred.	Contact help desk.
29	8xxx 2046	• The route certificate registered with the device has expired. • Certificate other than that initially registered in the user's operating environment is being used, but has not been registered with the device. • The device time and date is outside of the certificated period.	Check that the device time and date are correctly set. If the device time and date are correct, upgrade to the latest system software.
30	8xxx 2047	Due to network congestion, etc., the response from UGW does not come within the specified time. (HTTPS level time out)	If this error occurs when the communication test is being run or Service Browser is being set, try again after a period of time.
31	8xxx 2048	There is a mistake in the UGW URL, and UGW cannot be accessed. (Path is wrong)	Contact help desk.
32	8xxx 2052	The data which is not URL is inputted into URL field.	Contact help desk.
33	8xxx 2058	SOAP Client fails to obtain SOAP Response. Possibility of a problem in UGW or of a temporary problem in the network load.	Perform and complete a communication test (COM-TEST).
34	8xxx 2063	SOAP communication error has occurred.	Check that the value of port number of UGW (RGW-PORT) is 443.

No.	Code	Cause	Remedy
35	xxxx xxxx	An internal error, such as memory unavailable, etc., has occurred during a device internal error phase.	Turn the device OFF/ ON. Or replace the device system software. (Upgrade)
36	xxxx xxxx	Internal error occurred at the initiating E-RDS.	Turn the device OFF/ ON.

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*1:[Hexadecimal]: indicates an error code returned from UGW.

[Error details in UGW]: indicates error details returned from UGW.

Setting Information Export/Import Function (DCM)

Function Overview

This function (DCM: Device Configuration Management) is used to export/import setting value information in the host machine as a file (DCM file).

The following setting information is exported/imported.

- Setting information of [Settings/ Registration]
- Setting information of service mode
- Address Book

The DCM file is exported to a USB flash drive or PC local disk from the Control Panel or remote UI.

The exported DCM file can be returned to the original device or imported to a different device. When the file is returned to the original device, this can be used as a setting backup function, and when the file is imported to a different device, this can be used as a setting information migration function.

Data can also be imported to or exported from an iR-ADV machine by using iW EMC/MC DCM Plug-in.

In the case of the setting value backup function before DCM, an exported file could be imported to the same device, but the DCM function enables import of an exported file to a different device.

Image

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NOTE:
In order to export or import setting information using DCM, it is necessary that the device supports DCM.

■ Purpose for Using the Function

The purpose of using the DCM function is described below using three use cases.

Case	Export/import	Use Case
A	Export from and import to the same device	• Used as backup in preparation for a device failure • Used as backup before changing settings
B	Export from and import to a different device of the same model	• Collectively migrate data when replacing the host machine • Copy the settings to multiple devices (during kitting)
C	Export from and import to a different model	• Migrate the settings from the old model to the new model when replacing the host machine • Migrate the settings of the base machine to a different model for a large-scale user

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● Export from and Import to the Same Device (Case A)

In this use case, setting information is exported as backup in preparation for a device failure or backup before changing settings.
Information of various settings is backed up just in case.

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● Export from and Import to a Different Device of the Same Model (Case B)

In this use case, the exported setting information is copied to a different device of the same model. This enables efficient installation in the case of installing multiple devices of the same model at a time (for example, kitting).

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● Export from and Import to a Different Model (Case C)

In this use case, the exported setting information is copied to a device of a different model. Not that all the information that can be exported using DCM can be imported, but this is effective in the case of replacing an old device or copying the settings of the base machine in an environment where various models exist.

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■ Combination of Information Exported/Imported by DCM, Means, and Storage Locations

● Information Exported/Imported as a DCM File

A DCM file is exported and imported using the Control Panel, remote UI, or the iW EMC server, depending on the situation of the site.

The information exported/imported differs depending on the means.

Combinations of them are shown in the following table.

Menu used	Operation	Information exported		
		Setting values of menu options	Address book*1	Service mode setting values
[Settings/Registration] menu	Control panel	Yes (fixed) *2	Yes (fixed) *2	No
	Remote UI	Yes	Yes	With conditions *3
Service mode	Control Panel	No	No	Yes
	Remote UI	No	No	Yes
iW EMC DCM Plug-in		Yes	Yes	With conditions *4

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*1: Models without address books are excluded. In the case of a fax option model without SEND function, address books are exported only if a fax option is connected with the device.

*2: When the [Settings/ Registration] menu is used from the Control Panel, both the setting menu information and the address book are imported/exported. It is not possible to export/import only either of them.

Information which is not included in the data to be imported is not imported.

*3: Service mode is added to the data to be exported only when service mode level 1 > COPIER > OPTION > USER > SMD-EXPT is set.

For items to be imported, refer to "List of Items Which Can Be Imported".

*4: It is included only in the data to be imported. If service mode data is not included in the data to be imported, the data is not imported.

● DCM File Storage Location

DCM files are saved in the following locations.

Operation	Menu used	Storage destination
Control Panel	[Settings/ Registration] menu	USB flash drive
	Service mode	
Remote UI	[Settings/Registration] menu	PC local disk
	Service mode	
DCM Pug-in		Local disk of the iW EMC/MC server

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■ Compatibility

● Compatibility of DCM Files

Compatibility of DCM files differs depending on the export/import method as shown below.

Exported from	Imported to				
	iR series not supporting DCM	iR series supporting DCM		iR-ADV series	
	Remote UI	Via DCM Plug-in	Remote UI	DCM Plug-in	Remote UI/USB
iR series not supporting DCM	Yes	No	With conditions *1	No	No
iR series supporting DCM	No	Yes	Yes	With conditions *2	No
iR-ADV series	No	With conditions *2	No	Yes	Yes

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Yes: Compatible

With conditions *1: Address books can be imported. Other information cannot be imported.

With conditions *2: A part of address book can be imported using ABM Plug-in. Other information cannot be imported. Compatibility of the DCM file imported via DCM Plug-in depends on the specification of DCM Plug-in.

No: Incompatible

● Compatibility of Data

The following table shows compatibility of data in the case where the device from which the data is exported and the device to which the data is imported differ in model and/or serial number.

For items that are imported in Cases A, B, and C, refer to "List of Items Which Can Be Imported".

Model	Serial number	Import Process
Same	Same	Items corresponding to Case A are imported. *1
Same	Different *3	Items corresponding to Case B are imported. *1
Different	Different *3	Items corresponding to Case C are imported. *2
Different	Same	The file is judged to be invalid, and the process ends with an error.

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*1: If the firmware version at the time of import differs from that at the time of export, predetermined corrective processing may be performed.

*2: Predetermined corrective processing may be performed.

*3: If a serial number is missing, the serial numbers are judged to be mismatched.

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Specifications

■ Specifications Related to DCM Files

● Overall Specifications Related to DCM Files

• The DCM file to be exported is created directly under the root of the USB flash drive.
• The file name is not case sensitive.
• The DCM file exported/imported from the Control Panel or service mode is named as shown below:
  • Control Panel: compact.dcm
  • Service mode: service.dcm
• When the file is exported, if a file of the same name exists in the export destination, the behavior will be as shown below.
  • When the file is exported from the Control Panel: A message asking whether the user nts to overwrite appears.
• When the file is exported from service mode: The file is always overwritten.

● Import of an Invalid File

• When an invalid file is imported, the process ends with an error.
• When a file which does not contain any data to be imported is imported, the process ends with an error.
• When there is an error in the imported file, the import process ends with an error in some cases.
• When there is an error in the imported data, the data is skipped and the import process continues.
• When the imported file fails to be read in the middle of the reading process or when the format is invalid, the import process is stopped. In that case, the machine is not rebooted. The data is not rolled back to the state it was before import.

● Encryption Password

• It is necessary to set a password during the export process because data such as the password of the address book set by the user are encrypted when the DCM file is exported/imported.
• The password must consist of 32 or less ASCII characters. A password exceeding 32 characters cannot be entered.
• If a wrong password is entered at import, the encrypted setting values cannot be decoded, and the import of the setting values end with an error.
• It is necessary to specify a password even when the data to be exported does not contain any data to be encrypted. However, in the case of export from service mode, it is not necessary to enter the password, and the password (28282828) is entered automatically.。

■ Specifications Related to Department ID Management

• Department ID information is exported only when the Department ID management setting is enabled.
  Regardless of the state of the department ID management setting, the state of department ID management (enabled/disabled) and the system administrator information are exported. The department ID counter is not exported.
• When importing department ID information, the import process differs depending on the combination of the department ID set in the host machine and the department ID set in the data to be imported.

	"ID_1" has not been set in the host machine.	"ID_1" has been set in the host machine.
"ID_1" has been set in the data to be imported.	Information of "ID_1" is imported. The department ID counter is "0".	Information excluding the department ID counter information of "ID_1" in the host machine is imported.
"ID_1" has not been set in the data to be imported.	Not overwritten	Information of "ID_1" is deleted.
Department ID information has not been set in the data to be imported.	Not overwritten	Not overwritten

* ID_1 indicates a department ID.

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■ Specifications during Execution of a Process

● Control Panel/Remote UI during a Process

• During export or import, a screen is displayed to prohibit operation from the Control Panel and remote UI.
• During export or import, the keys excluding the energy saver key are disabled.

● Cancel during a Process

During export or import, the process cannot be canceled by user operation.

● Behavior when a Service Error Occurs

Even when a service error has occurred, export and import can be executed.
However, this does not include errors which disable the DCM function.

● Export/import process from service mode

When performing export/import process from service mode, no error is displayed even when an error has occurred.

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■ Process after Import

After the setting file is imported using the DCM function, the following process is performed.

Import method	Process
Operation Panel	When the import process is completed successfully, the device will be restarted in 25 seconds.
Remote UI	When the import process is completed successfully, the device will be restarted in 25 seconds. However, the device will not be restarted if only the address book is imported.
iW EMC DCM Plug-in	When the import process is completed successfully, the device will be restarted in 90 seconds (time for DCM Plug-in to obtain the import result). However, the device will not be restarted if only the address book is imported.

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■ Specifications Related to Address Books

● Import of an Address Book

- The address book is imported after the existing address book in the host machine has been cleared.
- If an error occurs during import, the data is not returned to the state of data cleared before import.
- Addresses which exceed the number of addresses that can be registered are not imported.
- Group addresses which include addresses that were not imported are not registered.
- When entering the password for the address book from the Control Panel, if authentication is skipped, the address book is excluded from the process.

● Import of an Address Book in an Old Format

It is possible to import an address book in an old format that was exported from a device not supporting DCM, but it is not possible to export an address book in an old format.

There is no encryption password for an address book of an old format, but something needs to be entered, therefore a dummy password (enter anything and the passwords will match) needs to be entered.

The specifications of import of an address book in an old format are as shown below.

- When an address book is imported, the consistency is checked while reading a record, not that the consistency of all records is checked before import.
- If an accidental error (such as power discontinuity during import) occurs during import, the address book data which was partially imported does not remain and returns to the state before import.
- Passwords such as the password for SMB are not recorded in an address book in an old format. Therefore these passwords are not set in the address book to be imported.

- When an address book is imported, the data previously stored is not cleared but overwritten with the records stored in the new address book. In other words, after the address book is overwritten with a new address book, some of the previously stored records remain in some cases. All the registered call keys will be cleared.

Image of overwriting an address book

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- Even if other data (settings of menu, service mode, etc.) is specified as data to be imported, only the address book is imported.
- Addresses whose required field shown below is not filled in are skipped and the import process is executed. In that case, the import process is continued without displaying an error message.

Type	Required field
Group address	Addresses included in the group
Fax	Dial number
E-mail	E-mail address
File server (SMB)	Host name (IP address) protocol

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- When an address book is imported, if there is a field with an attribute that is not any of the foregoing required fields and cannot be interpreted, import of only that attribute is skipped without abandoning the entire record. In that case, the import process is continued without displaying an error message.
- If the number of characters exceeds the upper limit at import, the excess characters are truncated on the right.

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⬤ Limitations

■ Job Control

Do not execute the following processes during import or export.
- Reception of a new job (Execution of calibration requested by the engine is allowed.)
- Firmware update (during which faxes cannot be received due to busy line.)

If any of the following conditions is met, import/export is not executed.
- A job exists. (If calibration is requested by the engine, import/export is executed, ignoring the calibration job.)
- A firmware update is being performed.
- Another import or export is being executed.

CAUTION:
During import, print/fax jobs from the PC are not received and are stuck in the spooler on the PC.
Those jobs stuck in the spooler may not be printed properly after reboot of the host machine. In that case, those jobs have not been received and are not even recorded in history.

■ Control Characters

If the character string to be exported (e.g. a destination name in the address book) includes an ASCII control character (0x01-0x08, 0xb, 0xc, 0xe-0x19, or 0x7f), the character string excluding the control character is exported.

■ Corrective Processing

When data is imported, corrective processing of setting values (changing a process to another process that can be performed) may be performed. Corrective processing is performed to process data so that it can be used by the import destination device.
Even when a setting value has been changed by corrective processing, the import process is treated as successful.
Examples are shown below. Please note that the following cases are just examples, and how each item is processed by corrective processing varies depending on the initial settings and the service mode settings.

- When the length of the character string exceeds the limit
  If a character string exceeding the length permitted by the import destination device is registered as, for example, a device name, only the length of the character string that can be registered on the import destination device is registered. The excess characters of the character string are deleted.

- When an out-of-range value is imported
  Since the value is not comprehensible to the import destination device, the out-of-range value is not imported.
  In that case, the default value is not set but the originally registered value remains effective.

- When a necessary license or software option does not exist
  In that case, the specification differs depending on the setting value.
  Depending on the type of the license or software option, import is executed without the license or software option in some cases. Therefore the following behaviors may occur.

<Assumption>
  There is "Setting 1" (default value: 0) which is required only when "License 1" has been activated.
  Device A: "License 1" activated, "Setting 1" set to "1"
  Device B: "License 1" not activated, "Setting 1" set to "0"
  Device C: "License 1" activated, "Setting 1" set to "2"

<Operation>
Export the settings of Device A and import them to Device B.
Export the settings of Device B and import them to Device C.

<Result>
  "Setting 1" of Device C is set to "1".
  The foregoing behavior may occur because the setting value related to the license is not always the default value in Device B where the license has not been activated.

Image of DCM file import

Device A	Device B	Device C
License 1: Activated	License 1: Not activated Disabled	License 1: Activated
Setting value: 1	Setting value: 1	Setting value: 2 > 1

Export/import → Export/import →

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- When a necessary hardware option does not exist
  The corrective processing performed is the same as that performed when an option has been changed during power discontinuity.

  <Example>

  Corrective processing performed when "Paper Source = Optional Deck" has been set as a favorite setting. Examples are shown below:
  - When this connection is released due to a failure of the optional deck, etc.
  - When a setting file exported from a device with an optional deck is imported to a device without an optional deck

  Please note that this rule does not always apply to all the setting values.

■ Power Supply Control

When power discontinuity occurs during export or import, the following behavior occurs.
- The import process that had been performed before the power discontinuity remains reflected, and the data is not rolled back.
- When power discontinuity occurs during an export process, export is not executed. Moreover, since the import/export history is not retained in the host machine, no records remain.

■ Sleep Operation during a Process

The device does not enter deep sleep mode during import or export.

Although this is not disclosed to users, sleep mode internally changes according to the usage conditions of the host machine.

Sleep mode ranges from energy saver mode where indicators such as LEDs are turned OFF to deep sleep mode where even the CPU stops.

Even if the conditions for entering deep sleep mode are met, the device does not enter deep sleep mode during export or import.

If a process is started from remote UI or iW EMC/MC, the host machine recovers to energy saver mode and performs the process. However, if service mode data is not included in the process, the process is started without waiting for recovery of the engine.

● Procedure for Exporting/Importing Service Mode Setting Information

This chapter describes the procedure for exporting/importing the service mode setting information using DCM.

For the procedure for exporting/importing [Settings/Registration] or address book data that can be performed by users, refer to the User's Guide (e-Manual).

■ Procedure for Export/Import Using the Control Panel (Service Mode)

By operating from the Control Panel (service mode), it is possible to export/import a file (service.dcm) containing service mode setting information from/to a USB flash drive connected to the host machine.

The following USB flash drives can be used as the export destination.
- USB flash drive in FAT 16 format (storage capacity: 2 GB)
- USB flash drive in FAT 32 format (storage capacity: 32 GB)

● Procedure for Export Using Service Mode

1) Connect a USB memory device to the USB memory port.

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2) Enter service mode, and execute the following service mode.

COPIER > FUNCTION > SYSTEM > EXPORT

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Technology > Setting Information Export/Import Function (DCM) > Procedure for Exporting/Importing Service Mode Setting Information > Procedure for Export/Import Using the Control Panel (Service Mode)

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3)The message shown below which is displayed during the process will disappear. When the display has returned to the original state, remove the USB flash drive.

Executing. . .

PANEL-UP
LOGWRITE
IMPORT
EXPORT

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The procedure for removing the USB flash drive is shown below.

1. Press the [Reset] key.
2. Press the [Status Monitor] key.
3. Select [Device Status] using the UP/Down key, and press [OK].
4. Select [Remove Memory Media], and press [OK].
5. Remove the USB flash drive.

CAUTION:

When exporting setting information using the [Settings/Registration] menu, if a USB flash drive is not connected, a message prompting the user to connect a USB flash drive will appear and the process cannot be executed.

On the other hand, when this function is used, export can be executed without connecting a USB flash drive, therefore be sure to connect a USB flash drive before executing export.

4)Check that a setting information file (service.dcm) exists in the directory directly under the root of the USB flash drive.

This completes the procedure for exporting a setting information file.

● Procedure for Import Using Service Mode

1)To the directory directly under the root of the USB flash drive, save a setting information file (service.dcm) to be imported.
2)Connect a USB flash drive to the USB port.

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3) Enter service mode, and execute the following service mode.

COPIER > FUNCTION > SYSTEM > IMPORT

SERVICE MODE
COPIER
FEEDER
FAX
TESTMODE

DISPLAY
IO
ADJUST
FUNCTION
OPTION

CCD
CLEAR
MISC-R
MISC-P
SYSTEM

PANEL-UP
LOGWRITE
IMPORT
EXPORT

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4)The message shown below which is displayed during the process will disappear. When the display has returned to the original state, remove the USB flash drive.

Executing. . .

PANEL-UP
LOGWRITE
IMPORT
EXPORT

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5)Enter service mode, and check that the setting information is reflected.

This completes the procedure for importing a setting information file.

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■ Procedure for Export/Import Using Remote UI (Service Mode)

By operating from the remote UI, it is possible to export/import a file containing service mode setting information from/to a USB flash drive connected to the host machine or the local disk on the PC.

● Procedure for Export Using Service Mode (Remote UI)

With this model, service mode can be used from the remote UI.

Setting information can be exported by remote control by following the procedure shown below.

Since the information can be output only to a USB flash drive connected to the host machine, this is not strictly remote operation.

The following USB flash drives can be used for export/import.

- USB flash drive in FAT 16 format (storage capacity: 2 GB)
- USB flash drive in FAT 32 format (storage capacity: 32 GB)

1) Connect a USB memory device to the USB memory port.

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2) Enter service mode, and execute the following service mode.

Access service mode (remote UI), select COPIER > FUNCTION > SYSTEM > EXPORT, and click [EXEC].

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CAUTION:

When it is executed without connecting USB flash drive, the error message is not displayed.

Processing doesn't export anywhere of any though it seems to have completed it correctly.

Confirm USB memory device has been connected before it executes it from the above-mentioned reason without fail.

3) The message shown below which is displayed during the process will disappear. When the display has returned to the original state, remove the USB flash drive.

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4) Check that a setting information file (service.dcm) exists in the directory directly under the root of the USB flash drive.

This completes the procedure for exporting a setting information file.

● Procedure for Import Using Service Mode (Remote UI)

Import the service mode setting file that was exported to the USB flash drive in the previous procedure into the host machine.

1) To the directory directly under the root of the USB flash drive, save a setting information file (service.dcm) to be imported.

2) Connect a USB memory device to the USB memory port.

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3) Enter service mode, and execute the following service mode.

Access service mode (remote UI), select COPIER > FUNCTION > SYSTEM > EXPORT, and click [EXEC].

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4) The message shown below which is displayed during the process will disappear. When the display has returned to the original state, remove the USB flash drive.

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5) Enter service mode, and check that the setting information is reflected.

This completes the procedure for importing a setting information file.

■ **Procedure for Export/Import Using Remote UI ([System Management Settings] Menu)**

● Procedure for Export Using Remote UI ([System Management Settings] Menu)

Service mode setting information can be exported from the [System Management Settings] menu by setting the following service mode setting value to "1".

1) Enter service mode, and set the following item to "1".

COPIER > OPRION > USER > SMC-EXPT

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NOTE:
The [SMC-EXPT] setting can be specified either from the Control Panel or from the remote UI.

2) Exit service mode, and start the remote UI and log on in System Manager Mode.

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3) Click [Settings/Registration].

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4) Click [Import/Export] > [Export].

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5) Specify the settings for exporting, and click [Start Exporting].

Enter the encryption password and click [Start Exporting]. The menu options data will be exported.

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Address Book	Select the check box to export the Address Book data.
Settings/Registration	Select the check box to export the setting data of the menu options.
Service Mode	Selected and grayed out. If this item does not exist, perform step 1 again
Encryption Password	Enter up to 32 alphanumeric characters for the encryption password. For confirmation, enter the same password in the [Confirm:] text box. This password will be required when you import the data to the machine.

6) Follow the on-screen instructions to specify the location where the exported data is saved.

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● Procedure for Import Using Remote UI ([System Management Settings] Menu)

Import the service mode setting information file that was exported in the previous procedure.

1) Enter service mode, and check that the following item is set to "1".
   COPIER > OPRION > USER > SMC-EXPT

TNRB-SW	: 0
SCALL-SW	: 0
SCALLCMP	: 0
PC-MODE	: 0
SMD-EXPT	: 1

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NOTE:
The [SMC-EXPT] setting can be specified either from the Control Panel or from the remote UI.

2) Exit service mode, and start the remote UI and log on in System Manager Mode.

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3) Click [Settings/Registration].

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4) Click[Import/Export] > [Export].

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2 Technology > Setting Information Export/Import Function (DCM) > Procedure for Exporting/Importing Service Mode Setting Information > Procedure for Export/Import Using Remote UI ([System Management

5) Specify the settings for exporting, and click [Start Exporting].

Enter the encryption password and click [Start Exporting]. The menu options data will be exported.

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[Browse..]button	Click to select the file to import.
Decryption Password	Enter up to 32 alphanumeric characters for the password that was set when the file was exported.
Address Book	Select the check box to import the Address Book data.
Address Book PIN	If the Address Book PIN is set, enter the PIN in the [Address Book PIN:] text box. Setting a PIN for Address Book
Settings/Registration	Select the check box to import the setting data of the menu options.

6) A dialog box asking whether the user wants to execute import will appear. Click [OK].

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7) A message will appear to indicate that the process has been completed. Click the [OK] button.

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8) Restart the host machine, enter service mode, and then check that the setting information is reflected.

2

Technology > Setting Information Export/Import Function (DCM) > List of Items Which Can Be Imported > Settings/Registration Basic Information

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List of Items Which Can Be Imported

The following shows the items to be imported for this model.

Note that the setting values are not imported in cases such as below:

- Items which are originally not included in a DCM file (e.g.:"Settings/Registration Basic Information" of a DCM file exported using service mode)
- Not included in the import coverage (Cases A to C)
- There are no options and functions related to setting values

The import coverage shown in the table below is as shown below. Those that are not described here cannot be imported.

Import coverage	Description
Case A: The same machine	Import to the same machine (for backup and restoration, etc.)
Case B: The same model	Import to a different machine of the same model (the same series)
Case C: Different model	Import to a different machine of a different model (a different series)

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■ Settings/Registration Basic Information

Setting Information	Case A	Case B	Case C
Preferences			
Sound Volume Control			
Fax Tone	Yes	Yes	Yes
Ring Tone	Yes	Yes	Yes
TX Done Tone	Yes	Yes	Yes
RX Done Tone	Yes	Yes	Yes
Scanning Done Tone	Yes	Yes	Yes
Entry Tone	Yes	Yes	Yes
Invalid Entry Tone	Yes	Yes	Yes
Restock Supplies Tone	Yes	Yes	Yes
Warning Tone	Yes	Yes	Yes
Job Done Tone	Yes	Yes	Yes
Energy Saver Alert	Yes	Yes	Yes
Original in Feeder Detection Tone	Yes	Yes	Yes
Display Settings			
Default Screen after Startup/Restoration	Yes	Yes	Yes
Language	Yes	Yes	Yes
Remote UI Language	Yes	Yes	Yes
Brightness	Yes	Yes	Yes
Contrast	Yes	Yes	-
Invert Screen Colors	Yes	Yes	Yes
Millimeter/Inch Entry	Yes	Yes	Yes
Gram/Pound Switch	Yes	Yes	Yes
Notify to Clean Original Scanning Area	Yes	Yes	Yes

Setting Information	Case A	Case B	Case C
Message Display Time	Yes	Yes	Yes
Scrolling Speed	Yes	Yes	Yes
Cursor Movement	Yes	Yes	Yes
English Keyboard Layout	Yes	Yes	Yes
Timer Settings			
Date Format	Yes	Yes	-
Date Format	Yes	Yes	Yes
Time Format	Yes	Yes	Yes
Current Date (DD/MM YYYY)	Yes	Yes	-
Current Time (hh:mm)	Yes	Yes	-
Time Zone	Yes	Yes	Yes
Use Daylight Saving Time	Yes	Yes	Yes
Start	Yes	Yes	Yes
End	Yes	Yes	Yes
Auto Sleep Time	Yes	Yes	Yes
Auto Reset Time	Yes	Yes	Yes
Function After Auto Reset	Yes	Yes	Yes
Auto Offline Time	Yes	Yes	Yes
Auto Shutdown Time	Yes	Yes	Yes
Common Settings			
Paper Drawer Auto Selection			
Copy			
Multi-Purpose Tray	Yes	Yes	Yes
Drawer 1	Yes	Yes	Yes
Drawer 2	Yes	Yes	Yes
Printer			
Drawer 1	Yes	Yes	Yes
Drawer 2	Yes	Yes	Yes
Fax			
Multi-Purpose Tray	Yes	Yes	Yes
Drawer 1	Yes	Yes	Yes
Drawer 2	Yes	Yes	Yes
Other			
Multi-Purpose Tray	Yes	Yes	Yes
Drawer 1	Yes	Yes	Yes
Drawer 2	Yes	Yes	Yes
Switch Paper Feed Method			
Multi-Purpose Tray	Yes	Yes	-
Drawer 1	Yes	Yes	-
Drawer 2	Yes	Yes	-
Copy Settings			
Default Settings	Yes	Yes	-

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2 Technology > Setting Information Export/Import Function (DCM) > List of Items Which Can Be Imported > Settings/Registration Basic Information

2 Technology > Setting Information Export/Import Function (DCM) > List of Items Which Can Be Imported > Settings/Registration Basic Information

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Setting Information	Case A	Case B	Case C
Fax Settings			
Basic Settings			
Unit Telephone Number	Yes	Yes	-
Select Line Type:	Yes	Yes	Yes
Pluse	Yes	Yes	Yes
Tone	Yes	Yes	Yes
Off-Hook Alarm	Yes	Yes	Yes
TX Function Settings			
2-Sided Original	Yes	Yes	Yes
Resolution	Yes	Yes	Yes
Density	Yes	Yes	Yes
Sharpness	Yes	Yes	Yes
Unit Name	Yes	Yes	Yes
ECM TX	Yes	Yes	Yes
Set Pause Time	Yes	Yes	Yes
Auto Redial	Yes	Yes	Yes
Number of Times to Redial	Yes	Yes	Yes
Redial Interval	Yes	Yes	Yes
Redial When Error Occurs	Yes	Yes	Yes
Add TX Terminal ID	Yes	Yes	Yes
Print Position	Yes	Yes	Yes
Mark Number as	Yes	Yes	Yes
Check Dial Tone Before Sending	Yes	Yes	Yes
RX Function Settings			
ECM RX	Yes	Yes	Yes
Use Incoming Ring	Yes	Yes	Yes
Number of Rings	Yes	Yes	Yes
Remote RX	Yes	Yes	Yes
Remote RX ID	Yes	Yes	Yes
Remote RX ID	Yes	Yes	Yes
Ring Time Until Auto RX	Yes	Yes	Yes
RX Print Settings			
Print on Both Sides	Yes	Yes	Yes
Reduce RX Size	Yes	Yes	Yes
Reduction Mode	Yes	Yes	Yes
Reduction Ratio	Yes	Yes	Yes
Reduction Direction	Yes	Yes	Yes
Add RX Page Footer	Yes	Yes	Yes
Use K-Paper	Yes	Yes	Yes

Setting Information	Case A	Case B	Case C
Scan Settings			
E-Mail			
Unit Name	Yes	Yes	Yes
Scan Size	Yes	Yes	Yes
Color Mode	Yes	Yes	Yes
File Format	Yes	Yes	Yes
Density	Yes	Yes	Yes
Original Orientation	Yes	Yes	Yes
Original Type	Yes	Yes	Yes
2-Sided Original	Yes	Yes	Yes
Sharpness	Yes	Yes	Yes
Data Size	Yes	Yes	Yes
Subject	Yes	Yes	Yes
Message	Yes	Yes	Yes
Reply-to	Yes	Yes	Yes
Priority	Yes	Yes	Yes
Unit Name	Yes	Yes	Yes
File			
Scan Size	Yes	Yes	Yes
Color Mode	Yes	Yes	Yes
File Format	Yes	Yes	Yes
Density	Yes	Yes	Yes
Original Orientation	Yes	Yes	Yes
Original Type	Yes	Yes	Yes
2-Sided Original	Yes	Yes	Yes
Sharpness	Yes	Yes	Yes
Data Size	Yes	Yes	Yes
USB Memory Settings			
Scan Size	Yes	Yes	Yes
Color Mode	Yes	Yes	Yes
File Format	Yes	Yes	Yes
Density	Yes	Yes	Yes
Original Orientation	Yes	Yes	Yes
Original Type	Yes	Yes	Yes
2-Sided Original	Yes	Yes	Yes
Sharpness	Yes	Yes	Yes
Data Size	Yes	Yes	Yes
Output File Image Settings			
YCbCr TX Gamma Value	Yes	Yes	-
PDF (Compact) Image Quality Level			
Image Level in Text/Photo Mode or Photo Mode	Yes	Yes	Yes
Image Level in Text Mode	Yes	Yes	Yes

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2 Technology > Setting Information Export/Import Function (DCM) > List of Items Which Can Be Imported > Settings/Registration Basic Information

2 Technology > Setting Information Export/Import Function (DCM) > List of Items Which Can Be Imported > Settings/Registration Basic Information

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Setting Information	Case A	Case B	Case C
OCR (Text Searchable) Settings			
Smart Scan	Yes	Yes	-
PDF Encryption Type Settings			
256-bit AES Settings for Encrypted PDF	Yes	Yes	Yes
Memory Media Print Settings			
Default Display Settings	Yes	Yes	Yes
File Sort Default Settings	Yes	Yes	Yes
File Name Display Format	Yes	Yes	Yes
Printer Settings			
Custom Settings			
Copies	Yes	Yes	Yes
2-Sided Printing	Yes	Yes	Yes
Paper	Yes	Yes	-
Default Paper Size	Yes	Yes	-
Default Paper Type	Yes	Yes	-
Paper Size Override	Yes	Yes	Yes
Print Quality	Yes	Yes	Yes
Image Refinement	Yes	Yes	Yes
Density	Yes	Yes	Yes
Fine Adjust	Yes	Yes	Yes
Toner Save	Yes	Yes	Yes
Layout			
Binding Location	Yes	Yes	Yes
Gutter	Yes	Yes	Yes
Offset Short Edge (Front)	Yes	Yes	Yes
Offset Long Edge (Front)	Yes	Yes	Yes
Offset Short Edge (Back)	Yes	Yes	Yes
Offset Long Edge (Back)	Yes	Yes	Yes
Auto Error Skip	Yes	Yes	Yes
Timeout	Yes	Yes	Yes
Personality	Yes	Yes	Yes

Setting Information	Case A	Case B	Case C
PCL			
Paper Save	Yes	Yes	Yes
Orientation	Yes	Yes	Yes
Font Number	Yes	Yes	Yes
Point Size	Yes	Yes	Yes
Pitch	Yes	Yes	Yes
Form Lines	Yes	Yes	Yes
Character Code	Yes	Yes	Yes
Custom Paper	Yes	Yes	Yes
Unit of Measure	Yes	Yes	Yes
X dimension	Yes	Yes	Yes
Y dimension	Yes	Yes	Yes
Append CR to LF	Yes	Yes	Yes
Enlarge A4 Print Width	Yes	Yes	Yes
Halftones			
Text	Yes	Yes	Yes
Graphics	Yes	Yes	Yes
Image	Yes	Yes	Yes
BarDIMM	Yes	Yes	Yes
FreeScape	Yes	Yes	Yes
PS			
Job timeout	Yes	Yes	Yes
Print PS Error	Yes	Yes	Yes
Halftones			
Text	Yes	Yes	Yes
Graphics	Yes	Yes	Yes
Image	Yes	Yes	Yes
Grayscale Conversion	Yes	Yes	Yes
Adjustment/Maintenance			
Printer Density	Yes	Yes	-
Toner Saver Mode	Yes	Yes	-
Black Text Processing for Color			
Feeder	Yes	Yes	Yes
Platen Glass	Yes	Yes	Yes
Special Processing			
Special Mode P	Yes	Yes	-
Special Mode X	Yes	Yes	-
Special Mode Z	Yes	Yes	-
Special Mode M	Yes	Yes	-
Special Mode N	Yes	Yes	-
Special Mode O	Yes	Yes	-
Special Mode S	Yes	Yes	-
Special Mode Y	Yes	Yes	-
Remove Streaks from Orig. Scanning Area	Yes	Yes	Yes

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2 Technology > Setting Information Export/Import Function (DCM) > List of Items Which Can Be Imported > Settings/Registration Basic Information

2 Technology > Setting Information Export/Import Function (DCM) > List of Items Which Can Be Imported > System Management Settings

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Setting Information	Case A	Case B	Case C
Report Settings			
Fax TX Result Report	Yes	Yes	-
Only When Error Occurs	Yes	Yes	-
E-Mail/File TX Result Report	Yes	Yes	-
Communication Management Report			
Auto Print (40 Transmissions)	Yes	Yes	-
Separate TX/RX	Yes	Yes	-
RX Result Report	Yes	Yes	-

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■ System Management Settings

● System Management

Setting Information	Case A	Case B	Case C
System Manager Information			
System Manager ID	Yes	Yes	Yes
System Manager PIN	Yes	Yes	Yes
System Manager Name	Yes	Yes	Yes
Contact Information	Yes	Yes	Yes
E-Mail Address	Yes	Yes	Yes
System Manager Comment	Yes	Yes	Yes
Device Information			
Device Name	Yes	-	-
Location	Yes	-	-
Support Link	Yes	Yes	Yes
Display Job Log			
Display Job Log	Yes	Yes	Yes
USB Device Settings			
Use as USB Device	Yes	Yes	Yes
Memory Media Settings			
Store to Memory Media	Yes	Yes	Yes
Memory Media Print	Yes	Yes	Yes
DL Selection (Plug and Play)			
USB	Yes	Yes	-
Secure Print Settings			
Secure Print	Yes	Yes	Yes
Secure Print Deletion Time	Yes	Yes	Yes

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● Department ID Management

Setting Information	Case A	Case B	Case C
New Department (The settings can be configured only from the remote UI.)	Yes	Yes	Yes
Department ID	Yes	Yes	Yes
Set PIN	Yes	Yes	Yes
PIN	Yes	Yes	Yes
Restrict Functions			
Black & White Copy	Yes	Yes	Yes
Black & White Print	Yes	Yes	Yes
Scan	Yes	Yes	Yes
Fax	Yes	Yes	Yes
Allow Print Jobs with Unknown IDs	Yes	Yes	Yes
Allow Scan Jobs with Unknown IDs	Yes	Yes	Yes

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2 Technology > Setting Information Export/Import Function (DCM) > List of Items Which Can Be Imported > System Management Settings

2 Technology > Setting Information Export/Import Function (DCM) > List of Items Which Can Be Imported > System Management Settings

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● Network Settings

Setting Information				Case A	Case B	Case C
TCP/IP Settings						
	IPv4 Settings					
		IP Address Settings				
			Auto Acquire	Yes	Yes	Yes
			Select Protocol	Yes	Yes	Yes
			Auto IP	Yes	Yes	Yes
			IP Address	Yes	Yes	Yes
			Subnet Mask	Yes	Yes	Yes
			Gateway Address	Yes	Yes	Yes
		DNS Settings				
			Primary DNS Server	Yes	Yes	Yes
			Secondary DNS Server	Yes	Yes	Yes
			Host Name	Yes	-	-
			Domain Name	Yes	-	-
			DNS Dynamic Update	Yes	Yes	Yes
			DNS Dynamic Update Interval	Yes	Yes	Yes
		mDNS Settings				
			Use mDNS	Yes	-	-
			mDNS Name	Yes	-	-
		DHCP Option Settings		Yes	-	-
			Acquire Host Name	Yes	Yes	Yes
			DNS Dynamic Update	Yes	Yes	Yes
	IPv6 Settings					
		IP Address Settings				
			Use IPv6	Yes	Yes	Yes
			Stateless Address	Yes	Yes	Yes
			Use Manual Address (The settings can be configured only from the remote UI.)	Yes	-	-
			IP Address (The settings can be configured only from the remote UI.)	Yes	-	-
			Prefix Length (The settings can be configured only from the remote UI.)	Yes	-	-
			Default Router Address (The settings can be configured only from the remote UI.)	Yes	-	-
			Use DHCPv6	Yes	Yes	Yes

Setting Information				Case A	Case B	Case C
		DNS Settings				
			Primary DNS Server Address (The settings can be configured only from the remote UI.)	Yes	Yes	Yes
			Secondary DNS Server Address (The settings can be configured only from the remote UI.)	Yes	Yes	Yes
			Use Same Host Name/Domain Name as IPv4	Yes	-	-
			Host Name	Yes	-	-
			Domain Name	Yes	-	-
		DNS Dynamic Update				
			Register Manual Address	Yes	Yes	Yes
			Register Stateful Address	Yes	Yes	Yes
			Register Stateless Address	Yes	Yes	Yes
			DNS Dynamic Update Interval	Yes	Yes	Yes
	mDNS Settings					
		Use mDNS		Yes	-	-
		Use Same mDNS Name as IPv4		Yes	-	-
		mDNS Name		Yes	-	-
WINS Settings						
	WINS Resolution			Yes	Yes	Yes
	WINS Server Address			Yes	Yes	Yes
	Scope ID			Yes	Yes	Yes
LPD Settings						
	Use LPD Printing			Yes	Yes	Yes
	RX Timeout			Yes	Yes	Yes
RAW Settings						
	Use RAW Printing			Yes	Yes	Yes
	RX Timeout			Yes	Yes	Yes
WSD Settings						
	Use WSD Printing			Yes	Yes	Yes
		Use WSD Browsing		Yes	Yes	Yes
	Use WSD Scanning					
		Use WSD Scanning		Yes	Yes	Yes
		Use Computer Scanning		Yes	Yes	Yes
	Use Multicast Discovery			Yes	Yes	Yes
FTP PASV Mode Settings						
Use FTP PASV Mode				Yes	Yes	Yes
HTTP Settings						
	Use HTTP			Yes	Yes	Yes

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2 Technology > Setting Information Export/Import Function (DCM) > List of Items Which Can Be Imported > System Management Settings

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Technology > Setting Information Export/Import Function (DCM) > List of Items Which Can Be Imported > System Management Settings

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Setting Information	Case A	Case B	Case C
Port Number Settings			
LPD	Yes	Yes	Yes
RAW	Yes	Yes	Yes
WSD Multicast Discovery	Yes	Yes	Yes
HTTP	Yes	Yes	Yes
Multicast Discovery	Yes	Yes	Yes
POP3	Yes	Yes	Yes
SMTP	Yes	Yes	Yes
FTP	Yes	Yes	Yes
SNMP	Yes	Yes	Yes
MTU Size Settings			
MTU Size	Yes	Yes	Yes
SNTP Settings			
Use SNTP	Yes	Yes	Yes
NTP Server Name	Yes	Yes	Yes
Polling Interval	Yes	Yes	Yes
Multicast Discovery Settings			
Respond to Discovery	Yes	Yes	Yes
Scope Name:	Yes	Yes	Yes
Sleep Mode Notification Settings			
Sleep Mode Notification	Yes	Yes	Yes
Port Number	Yes	Yes	Yes
Number of Routers to Traverse	Yes	Yes	Yes
Notification Interval	Yes	Yes	Yes
Proxy Settings			
Use Proxy	Yes	Yes	Yes
HTTP Proxy Server Address	Yes	Yes	Yes
HTTP Proxy Server Port Number	Yes	Yes	Yes
Use Proxy within Same Domain	Yes	Yes	Yes
Use Proxy Authentication	Yes	Yes	Yes
User Name	Yes	Yes	Yes
Password	Yes	Yes	Yes
Canon Mobile Scanning Settings			
Use Canon Mobile Scanning:	Yes	Yes	Yes
E-Mail Settings			
E-Mail Settings			
SMTP Server Addres	Yes	Yes	Yes
E-Mail Address	Yes	Yes	Yes
Authentication/Encryption Settings			
Use POP Authentication Before Sending	Yes	Yes	Yes
User Name	Yes	Yes	Yes
Password	Yes	Yes	Yes
POP Server	Yes	Yes	Yes

Setting Information	Case A	Case B	Case C
Use SSL	Yes	Yes	Yes
Confirm Certificate	Yes	Yes	Yes
Add CN to Verification Items	Yes	Yes	Yes
Use APOP Authenticatio	Yes	Yes	Yes
Use SMTP Authentication (SMTP AUTH)	Yes	Yes	Yes
User Name	Yes	Yes	Yes
Set/Change Password	Yes	Yes	Yes
Use SSL	Yes	Yes	Yes
Confirm Certificate for SMTP Sending	Yes	Yes	Yes
Add CN to Verification Items	Yes	Yes	Yes
SMB Settings			
NetBIOS Name	Yes	-	-
Workgroup Name	Yes	-	-
SNMP Settings			
SNMPv1 Settings			
Use SNMPv1	Yes	Yes	Yes
Set Community Name 1			
Set Community Name 1	Yes	Yes	Yes
Community Name	Yes	Yes	Yes
MIB Access Permission	Yes	Yes	Yes
Set Community Name 2			
Use Community Name 2	Yes	Yes	Yes
Community Name	Yes	Yes	Yes
MIB Access Permission	Yes	Yes	Yes
Dedicated Community Settings	Yes	Yes	Yes
Use Dedicated Community	Yes	Yes	Yes
MIB Access Permission	Yes	Yes	Yes
SNMPv3 Settings			
Use SNMPv3	Yes	Yes	Yes
Enable User			
User Name	Yes	Yes	Yes
MIBAccess Permission	Yes	Yes	Yes
Security Settings	Yes	Yes	Yes
Authentication Agorithm	Yes	Yes	Yes
Encryption Agorithm	Yes	Yes	Yes
Authentication Password	Yes	Yes	Yes
Encryption Password	Yes	Yes	Yes
Context Settings			
Context Name	Yes	Yes	Yes
Acquire Printer Management Information from Host	Yes	Yes	Yes
Dedicated Port Settings			
Use Dedicated Port:	Yes	Yes	Yes
Waiting Time for Connection at Startup	Yes	Yes	Yes

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Technology > Setting Information Export/Import Function (DCM) > List of Items Which Can Be Imported > System Management Settings

2 Technology > Setting Information Export/Import Function (DCM) > List of Items Which Can Be Imported > System Management Settings

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Setting Information	Case A	Case B	Case C
Ethernet Driver Settings			
Waiting Time for Connection at Startup	Yes	Yes	Yes
Communication Mode	Yes	Yes	Yes
Ethernet Type	Yes	Yes	Yes
Settings for Device Settings Management			
Use Device Settings Management	Yes	Yes	Yes
Firmware Update Settings			
Use SSL	Yes	Yes	Yes
Local CDS URL	Yes	Yes	Yes
LDAP Server Settings			
LDAP Server (For Search)			
Server Name	Yes	Yes	Yes
Server Address	Yes	Yes	Yes
Position to Start Search	Yes	Yes	Yes
Port Number	Yes	Yes	Yes
Search Timeout	Yes	Yes	Yes
Login Information	Yes	Yes	Yes
User Name	Yes	Yes	Yes
Password	Yes	Yes	Yes
Domain Name	Yes	Yes	Yes
Display Authentication Screen When Searching	Yes	Yes	Yes
Use Same Authentication Information as When Send Operation Started	Yes	Yes	Yes
LDAP Server (For Authentication)			
Server Name	Yes	Yes	Yes
Server Address	Yes	Yes	Yes
Position to Start Search	Yes	Yes	Yes
Port Number	Yes	Yes	Yes
Search Timeout	Yes	Yes	Yes
User Name Attribute	Yes	Yes	Yes
E-Mail Address Attribute	Yes	Yes	Yes
Login Information	Yes	Yes	Yes
Use System Manager ID	Yes	Yes	Yes
User Name	Yes	Yes	Yes
Password	Yes	Yes	Yes
Use SS	Yes	Yes	Yes
Domain Name	Yes	Yes	Yes

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● Security Settings

Setting Information	Case A	Case B	Case C
IPv4 Address Filter			
Outbound Filter			
Use Filter	Yes	Yes	Yes
Default Policy	Yes	Yes	Yes
Exception Addresses	Yes	Yes	Yes
Inbound Filter			
Use Filter	Yes	Yes	Yes
Default Policy	Yes	Yes	Yes
Exception Addresses	Yes	Yes	Yes
IPv6 Address Filter			
Outbound Filter			
Use Filter	Yes	Yes	Yes
Default Policy	Yes	Yes	Yes
Exception Addresses	Yes	Yes	Yes
Inbound Filter			
Use Filter	Yes	Yes	Yes
Default Policy	Yes	Yes	Yes
Exception Addresses	Yes	Yes	Yes
MAC Address Filter			
Outbound Filter			
Use Filter	Yes	Yes	Yes
Default Policy	Yes	Yes	Yes
Exception Addresses	Yes	Yes	Yes
Inbound Filter			
Use Filter	Yes	Yes	Yes
Default Policy	Yes	Yes	Yes
Exception Addresses	Yes	Yes	Yes
Authentication Settings for Send Function			
Basic Settings			
Display Authentication Screen When Sending Operation Starts	Yes	Yes	Yes
Display Confirmation Screen When Logging Out	Yes	Yes	Yes
E-Mail Sending Settings			
E-Mail Sending	Yes	Yes	Yes
Authentication Method	Yes	Yes	Yes
Specify Authentication User Destination as Sender	Yes	Yes	Yes
File Sending Settings			
File Sending	Yes	Yes	Yes
When Sending File to Destination Registered in Address Book			
Authentication Method	Yes	Yes	Yes

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2 Technology > Setting Information Export/Import Function (DCM) > List of Items Which Can Be Imported > System Management Settings

Setting Information	Case A	Case B	Case C
When Sending File to Myself			
Authentication Method	Yes	Yes	Yes
Display Authentication Screen	Yes	Yes	Yes
Specify Destination Folder	Yes	Yes	Yes
Host Name	Yes	Yes	Yes
Folder Path	Yes	Yes	Yes
Add User Name	Yes	Yes	Yes
Fax Sending Settings			
Fax Sending	Yes	Yes	Yes

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● Communication Management Settings/Forwarding Settings

Setting Information	Case A	Case B	Case C
Fax Settings			
TX Start Speed	Yes	Yes	Yes
RX Start Speed	Yes	Yes	Yes
R-Key Setting	Yes	Yes	Yes
PBX	Yes	Yes	Yes
Prefix Code	Yes	Yes	Yes
Memory Lock Settings			
Set/Change PIN	Yes	Yes	Yes
Use Memory Lock	Yes	Yes	Yes
Print Report	Yes	Yes	Yes
Specify Memory Lock Time	Yes	Yes	Yes
Start Time: hh	Yes	Yes	Yes
Start Time: mm	Yes	Yes	Yes
End Time: hh	Yes	Yes	Yes
End Time: mm	Yes	Yes	Yes
Store/Print When Forwarding			
Print Images	Yes	Yes	Yes
Store Images in Memory	Yes	Yes	Yes
Restrict TX Function			
Address Book PIN	Yes	Yes	Yes
Restrict New Destinations	Yes	Yes	Yes
Allow Fax Driver TX	Yes	Yes	Yes
Restrict Resending from Log	Yes	Yes	Yes
Confirm Entered Fax Number	Yes	Yes	Yes
Confirm When Using Coded Dial TX	Yes	Yes	Yes
Restrict Sequential Broadcast	Yes	Yes	Yes

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■ Preferences

● Paper Settings

Setting Information	Case A	Case B	Case C
Multi-Purpose Tray			
Paper Size	Yes	Yes	-
Paper Type	Yes	Yes	-
Drawer 1			
Paper Size	Yes	Yes	-
Paper Type	Yes	Yes	-
Drawer 2			
Paper Size	Yes	Yes	-
Paper Type	Yes	Yes	-
Custom:	Yes	Yes	-

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● Address Book Settings (Model with FAX and/or SEND)

Setting Information	Case A	Case B	Case C
Selecting Destinations Using One-Touch Keys			
FAX			
Fax Number	Yes	Yes	Yes
Name	Yes	Yes	Yes
Details	Yes	Yes	Yes
Long Distans	Yes	Yes	Yes
Sending Speed	Yes	Yes	Yes
ECM TX	Yes	Yes	Yes
E-Mail			
E-Mail Address	Yes	Yes	Yes
Name	Yes	Yes	Yes
File : SMB			
Host Name	Yes	Yes	Yes
Name	Yes	Yes	Yes
Folder path	Yes	Yes	Yes
User Name	Yes	Yes	Yes
Password	Yes	Yes	Yes
File : FTP			
Host Name	Yes	Yes	Yes
Name	Yes	Yes	Yes
Folder path	Yes	Yes	Yes
User Name	Yes	Yes	Yes
Password	Yes	Yes	Yes

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2 Technology > Setting Information Export/Import Function (DCM) > List of Items Which Can Be Imported > Service Mode Settings

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■ Service Mode Settings

● COPIER

Large	Middle	Small	Case A	Case B	Case C
ADJUST					
	IMG-REG				
		MAGV-C1	Yes	-	-
		MAGV-C2	Yes	-	-
		MAGV-MF1	Yes	-	-
		MAGV-MF2	Yes	-	-
		MAGV-DU1	Yes	-	-
		MAGV-DU2	Yes	-	-
	HV-PRI				
		OFST1-DC	Yes	-	-
		OFST1-AC	Yes	-	-
	FEED-ADJ				
		ADJ-C1	Yes	-	-
		ADJ-C2	Yes	-	-
		ADJ-MF	Yes	-	-
		ADJ-REFE	Yes	-	-
		REG-MF	Yes	-	-
		REG-CST	Yes	-	-
		REG-CST2	Yes	-	-
		REG-DUP	Yes	-	-
		REG-MF2	Yes	-	-
		REG-DUP4	Yes	-	-
		LOOP-CST	Yes	-	-
		LOOP-MF	Yes	-	-
		LOOP-OP	Yes	-	-
		LOOP-DU	Yes	-	-
		LOOP-THK	Yes	-	-
	BLANK				
		BLANK-T	Yes	-	-
		BLANK-B	Yes	-	-
	DEVELOP				
		DE-OFST	Yes	-	-

Large	Middle	Small	Case A	Case B	Case C
FUNCTION					
	SPLMAN				
		SPL14159	Yes	Yes	Yes
		SPL93822	Yes	Yes	Yes
		SPL78788	Yes	Yes	Yes
		SPL00171	Yes	Yes	Yes
		SPL80100	Yes	Yes	Yes
		SPL84194	Yes	Yes	Yes
	INSTALL				
		ERDS	Yes	Yes	Yes
		RGW-PORT	Yes	Yes	Yes
OPTION					
	BODY				
		MIBCOUNT	Yes	Yes	Yes
		NS-CMD5	Yes	-	-
		NS-PLN	Yes	-	-
		NS-LGN	Yes	-	-
		SLPMODE	Yes	Yes	Yes
		SDTM-DSP	Yes	Yes	Yes
	FNC-SW				
		T-DLV-BK	Yes	-	-
		D-DLV-BK	Yes	-	-
		DLVFN-SW	Yes	-	-
		LCDSFLG	Yes	Yes	Yes
		T-END-BK	Yes	Yes	-
	CUSTOM				
		TEMP-TBL	Yes	Yes	-
		FLK-RD	Yes	Yes	-
	DSPLY-SW				
		DRM-WARN	Yes	-	-
		DF-DSP	Yes	Yes	-
	CLEANING				
		FX-CN-SW	Yes	-	-
	IMG-FIX				
		TMP-TBL2	Yes	-	-
		TMP-TBL4	Yes	-	-
		TMP-TBL6	Yes	-	-
		EDG-WAIT	Yes	-	-
		FIX-SMR	Yes	-	-
		TMP-TBLC	Yes	-	-
		TMPTBLC2	Yes	-	-
		TMP-TB14	Yes	-	-

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2 Technology > Setting Information Export/Import Function (DCM) > List of Items Which Can Be Imported > Service Mode Settings

2 Technology > Setting Information Export/Import Function (DCM) > List of Items Which Can Be Imported > Service Mode Settings

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Large	Middle	Small	Case A	Case B	Case C
	IMG-LSR				
		SC-PR-SW	Yes	-	-
	IMG-TR				
		TR-BS-SW	Yes	-	-
		SP-BS-SW	Yes	-	-
		FX-SP-H	Yes	-	-
		HUM-SW	Yes	-	-
		FX-BSSW1	Yes	-	-
		FX-BSSW2	Yes	-	-
	USER				
		COUNTER1	Yes	-	-
		COUNTER2	Yes	-	-
		COUNTER3	Yes	-	-
		COUNTER4	Yes	-	-
		COUNTER5	Yes	-	-
		COUNTER6	Yes	-	-
		CNT-SW	Yes	-	-
		CONTROL	Yes	-	-
		CTCHKDSP	Yes	-	-
		TNRB-SW	Yes	-	-
		SCALL-SW	Yes	Yes	Yes
		SMD-EXPT	Yes	-	-
		ACC-SLP	Yes	Yes	Yes
		DRMRP-SW	Yes	Yes	-
	ACC				
		CARD-SW	Yes	-	-
		CC-SPSW	Yes	-	-
	ENV-SET				
		IMG-BLD1	Yes	-	-
		IMG-BLD2	Yes	-	-
		IMG-BLD3	Yes	-	-

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● FAX (Only Machines with Fax Function)

Large	Middle	Small	Case A	Case B	Case C
SSSW					
	SW01		Yes	-	-
	SW02		Yes	-	-
	SW03		Yes	-	-
	SW04		Yes	-	-
	SW05		Yes	-	-
	SW06		Yes	-	-
	SW07		Yes	-	-
	SW08		Yes	-	-
	SW09		Yes	-	-
	SW10		Yes	-	-
	SW11		Yes	-	-
	SW12		Yes	-	-
	SW13		Yes	-	-
	SW14		Yes	-	-
	SW15		Yes	-	-
	SW16		Yes	-	-
	SW17		Yes	-	-
	SW18		Yes	-	-
	SW19		Yes	-	-
	SW20		Yes	-	-
	SW21		Yes	-	-
	SW22		Yes	-	-
	SW23		Yes	-	-
	SW24		Yes	-	-
	SW25		Yes	-	-
	SW26		Yes	-	-
	SW27		Yes	-	-
	SW28		Yes	-	-
	SW29		Yes	-	-
	SW30		Yes	-	-
	SW31		Yes	-	-
	SW32		Yes	-	-
MENU					
	005		Yes	-	-
	006		Yes	-	-
	007		Yes	-	-
	008		Yes	-	-
	009		Yes	-	-
	010		Yes	-	-

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2 Technology > Setting Information Export/Import Function (DCM) > List of Items Which Can Be Imported > Service Mode Settings

2 Technology > Setting Information Export/Import Function (DCM) > List of Items Which Can Be Imported > Service Mode Settings

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Large	Middle	Small	Case A	Case B	Case C
NUM					
	002		Yes	-	-
	003		Yes	-	-
	004		Yes	-	-
	005		Yes	-	-
	006		Yes	-	-
	008		Yes	-	-
	010		Yes	-	-
	011		Yes	-	-
	012		Yes	-	-
	013		Yes	-	-
	015		Yes	-	-
	016		Yes	-	-
	017		Yes	-	-
	018		Yes	-	-
	019		Yes	-	-
	020		Yes	-	-
	021		Yes	-	-
	022		Yes	-	-
	023		Yes	-	-
	024		Yes	-	-
	025		Yes	-	-
	026		Yes	-	-
	027		Yes	-	-
	029		Yes	-	-
	049		Yes	-	-
	051		Yes	-	-
	053		Yes	-	-
	054		Yes	-	-
NCU					
	TONE				
		001	Yes	-	-
		002	Yes	-	-
	PULSE				
		FORM	Yes	-	-
		001	Yes	-	-
		002	Yes	-	-
		003	Yes	-	-
		004	Yes	-	-

Large	Middle	Small	Case A	Case B	Case C
	DIALTONE				
		BIT	Yes	-	-
		001	Yes	-	-
		002	Yes	-	-
		003	Yes	-	-
		004	Yes	-	-
		005	Yes	-	-
		006	Yes	-	-
		007	Yes	-	-
		008	Yes	-	-
	2ND DLTN				
		BIT	Yes	-	-
		001	Yes	-	-
		002	Yes	-	-
		003	Yes	-	-
		004	Yes	-	-
		005	Yes	-	-
		006	Yes	-	-
		007	Yes	-	-
		008	Yes	-	-
	BUSTONE0				
		BIT	Yes	-	-
		001	Yes	-	-
		002	Yes	-	-
		003	Yes	-	-
		004	Yes	-	-
		005	Yes	-	-
		006	Yes	-	-
		007	Yes	-	-
		008	Yes	-	-
	BUSTONE1				
		BIT	Yes	-	-
		001	Yes	-	-
		002	Yes	-	-
		003	Yes	-	-
		004	Yes	-	-
		005	Yes	-	-
		006	Yes	-	-
		007	Yes	-	-
		008	Yes	-	-

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2 Technology > Setting Information Export/Import Function (DCM) > List of Items Which Can Be Imported > Service Mode Settings

2 Technology > Setting Information Export/Import Function (DCM) > List of Items Which Can Be Imported > Service Mode Settings

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Large	Middle	Small	Case A	Case B	Case C
	REORDRTN				
		BIT	Yes	-	-
		001	Yes	-	-
		002	Yes	-	-
		003	Yes	-	-
		004	Yes	-	-
		005	Yes	-	-
		006	Yes	-	-
		007	Yes	-	-
		008	Yes	-	-
	AUTO RX				
		001	Yes	-	-
		002	Yes	-	-
		003	Yes	-	-
		004	Yes	-	-
		005	Yes	-	-
		006	Yes	-	-
		007	Yes	-	-
		008	Yes	-	-
		009	Yes	-	-
	CNGDTCT				
		001	Yes	-	-
		002	Yes	-	-
		006	Yes	-	-
		007	Yes	-	-
		008	Yes	-	-
		009	Yes	-	-
		011	Yes	-	-
		012	Yes	-	-
	SPECIALB				
		SW01	Yes	-	-
		SW02	Yes	-	-
		SW03	Yes	-	-
		SW04	Yes	-	-
		SW05	Yes	-	-
		SW06	Yes	-	-
		SW07	Yes	-	-
		SW08	Yes	-	-
		SW09	Yes	-	-
		SW10	Yes	-	-
		SW11	Yes	-	-
		SW12	Yes	-	-
		SW13	Yes	-	-

Large	Middle	Small	Case A	Case B	Case C
		SW14	Yes	-	-
		SW15	Yes	-	-
		SW16	Yes	-	-
		SW17	Yes	-	-
		SW18	Yes	-	-
		SW19	Yes	-	-
		SW20	Yes	-	-
		SW21	Yes	-	-
		SW22	Yes	-	-
		SW23	Yes	-	-
		SW24	Yes	-	-
		SW25	Yes	-	-
		SW26	Yes	-	-
		SW27	Yes	-	-
		SW28	Yes	-	-
		SW29	Yes	-	-
		SW30	Yes	-	-
	SPECIALN				
		004	Yes	-	-
		005	Yes	-	-
		006	Yes	-	-
		007	Yes	-	-
		008	Yes	-	-
		009	Yes	-	-
		011	Yes	-	-
		012	Yes	-	-
		013	Yes	-	-
		014	Yes	-	-
		015	Yes	-	-
		016	Yes	-	-
		017	Yes	-	-
		019	Yes	-	-
		020	Yes	-	-
		024	Yes	-	-
		025	Yes	-	-
		026	Yes	-	-
		027	Yes	-	-
		030	Yes	-	-
		040	Yes	-	-
		041	Yes	-	-
		042	Yes	-	-
		044	Yes	-	-
		045	Yes	-	-

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2 Technology > Setting Information Export/Import Function (DCM) > List of Items Which Can Be Imported > Service Mode Settings

 2 Technology > Setting Information Export/Import Function (DCM) > List of Items Which Can Be Imported > Service Mode Settings

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Large	Middle	Small	Case A	Case B	Case C
		046	Yes	-	-
		047	Yes	-	-
		048	Yes	-	-
		065	Yes	-	-
		066	Yes	-	-
	RKEY				
		001	Yes	-	-
		002	Yes	-	-
	PBXDIALT				
		BIT	Yes	-	-
		001	Yes	-	-
		002	Yes	-	-
		003	Yes	-	-
		004	Yes	-	-
		005	Yes	-	-
		006	Yes	-	-
		007	Yes	-	-
		008	Yes	-	-
	PBXBUSYT				
		BIT	Yes	-	-
		001	Yes	-	-
		002	Yes	-	-
		003	Yes	-	-
		004	Yes	-	-
		005	Yes	-	-
		006	Yes	-	-
		007	Yes	-	-
		008	Yes	-	-

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 2 Technology > Setting Information Export/Import Function (DCM) > List of Items Which Can Be Imported > Service Mode Settings

3

Periodic Service

■ Periodical Service
   Operation Item

Periodical Service Operation Item

Periodically Replaced Parts

None

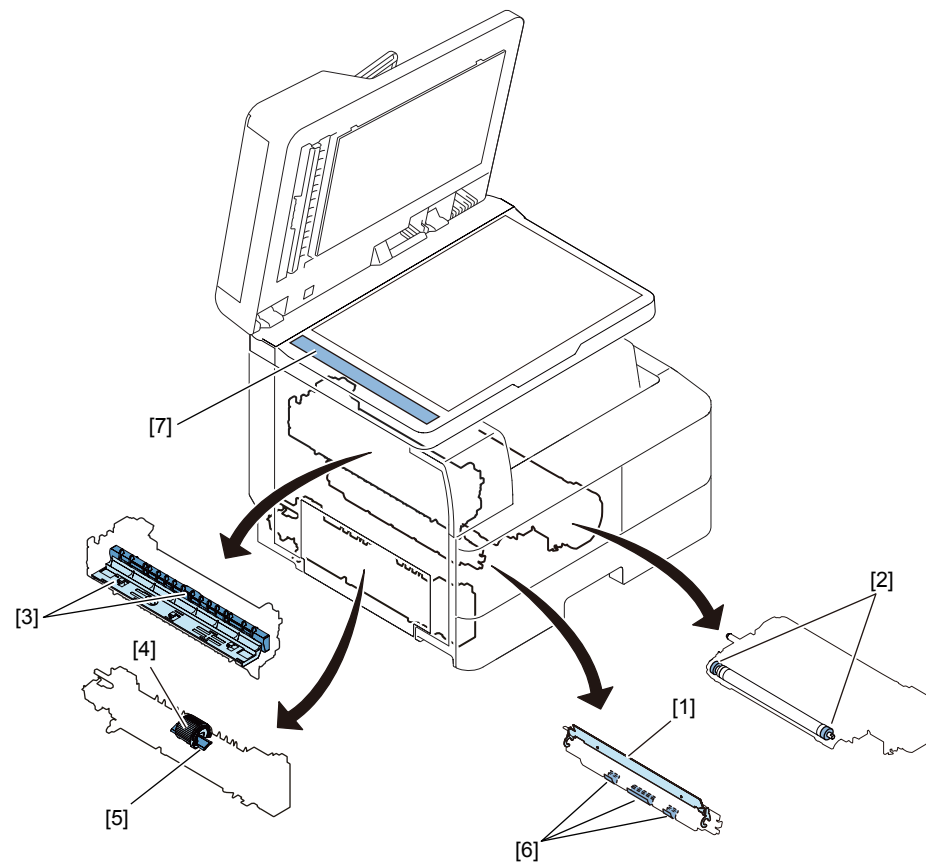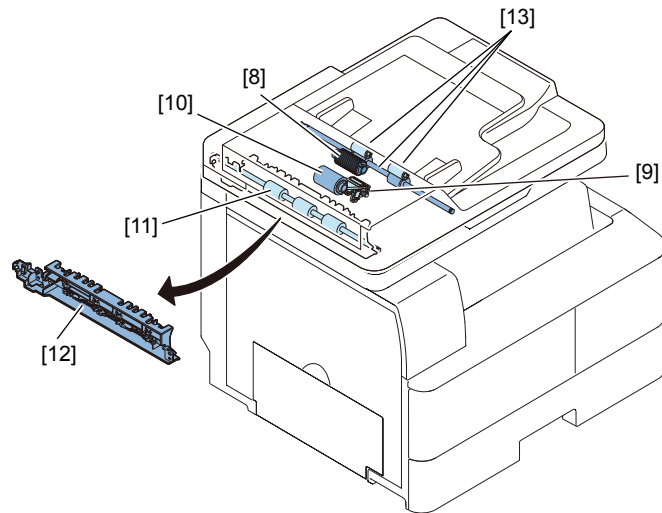## Consumable Parts

None

List of Periodical Servicing

None

Cleaning

F-3-1

F-3-2

No	Part name	Category	Interval	Cleaning item
[11]	ADF Delivery Roller	ADF Unit	Timely	Lint-free paper soaked with alcohol
[12]	Feed Guide / Rib	ADF Unit	Timely	Lint-free paper soaked with alcohol
[13]	Delivery Roller / Roller	ADF Unit	Timely	Lint-free paper soaked with alcohol
-	Various Rollers / Slave Rollers	ADF Unit	Timely	Lint-free paper soaked with alcohol

T-3-1

No	Part name	Category	Interval	Cleaning item
[1]	Transfer Guide	Developing Assembly	Timely	Lint-free paper soaked with alcohol
[2]	Transfer Roller	Developing Assembly	Timely	Lint-free paper soaked with alcohol
[3]	Fixing Inlet Guide	Fixing Assembly	Timely	Lint-free paper soaked with alcohol
[4]	Multi-purpose Tray Pickup Roller	Main Unit	Timely	Lint-free paper soaked with alcohol
[5]	Multi-purpose Tray Separation Pad	Main Unit	Timely	Lint-free paper soaked with alcohol
[6]	Pre-registration Guide Separation Static Charge Eliminator	Main Unit	Timely	Lint-free paper soaked with alcohol
[7]	Stream Reading Glass	Reader Unit	Timely	Oil glass cleaner
[8]	ADF Pickup Roller	ADF Unit	Timely	Lint-free paper soaked with alcohol
[9]	ADF Separation Pad	ADF Unit	Timely	Lint-free paper soaked with alcohol
[10]	ADF Separation Roller	ADF Unit	Timely	Lint-free paper soaked with alcohol

4

Parts Replacement and Cleaning

- ■ Parts List
- ■ External Cover/Interior System
- ■ Original Exposure and Feed System (Reader)
- ■ Original Exposure and Feed System (ADF)
- ■ Controller System
- ■ Laser Exposure System
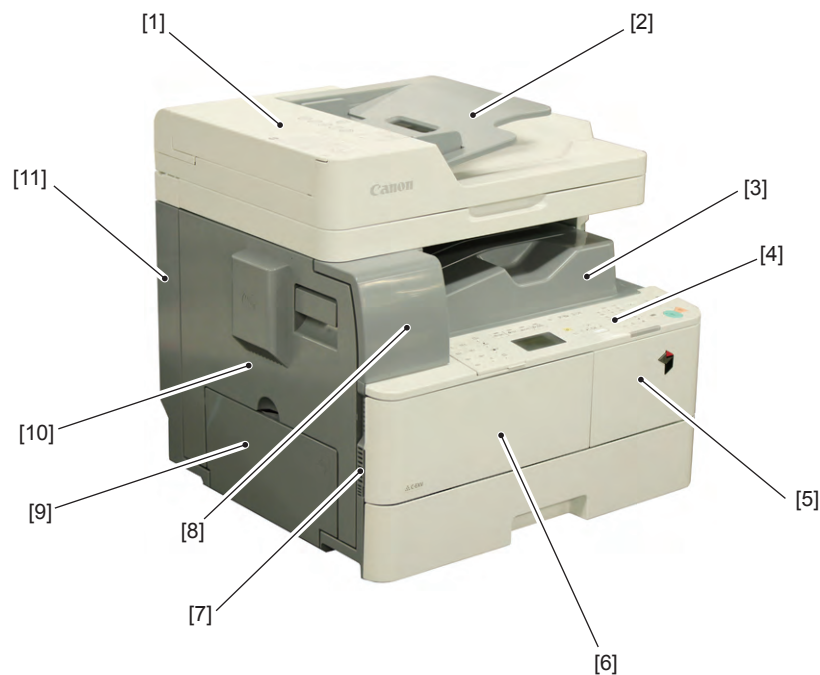- ■ Image Formation System
- ■ Fixing System
- ■ Pickup/Feed System

Parts List

● External / Internal Cover

■ Front

F-4-1

No.	Name	Reference
[1]	Feeder Cover	p. 4-14
[2]	Document Tray	p. 4-15
[3]	Delivery Tray	p. 4-13
[4]	Control Panel	p. 4-13
[5]	Front Right Cover	p. 4-12
[6]	Front Cover Unit	p. 4-9
[7]	Left Front Cover	p. 4-11
[8]	Front Upper Cover	p. 4-11
[9]	Multi-purpose Tray	p. 4-54
[10]	Left Door Unit	p. 4-53
[11]	Left Rear Cover	p. 4-12

T-4-1

■ Rear

F-4-2

No.	Name	Reference
[12]	Rear Cover	p. 4-9
[13]	Right Cover	p. 4-10

T-4-2

Main Unit

Main Unit

F-4-3

No.	Name	Reference
[1]	ADF Unit	p. 4-21
[2]	ADF Pickup Feed Unit	p. 4-23
[3]	Scanner Unit	p. 4-16
[4]	CIS Unit	p. 4-19
[5]	Copyboard Glass Unit	p. 4-18

T-4-3

F-4-4

No.	Name	Reference
[6]	Control Panel Unit	p. 4-13
[7]	Cassette 1	-
[8]	Left Door Unit	p. 4-53
[9]	Multi-purpose Tray	p. 4-54
[10]	Multi-purpose Tray Pickup Unit	p. 4-54
[11]	Fixing Assembly	p. 4-45
[12]	Laser Scanner Unit	p. 4-36
[13]	Developing Assembly	p. 4-38

T-4-4

F-4-5

No.	Name	Reference
[14]	Main Drive Unit	p. 4-56
[15]	Fixing Drive Unit	p. 4-58
[16]	Main Controller PCB	p. 4-30
[17]	Engine Controller PCB	p. 4-32

T-4-5

PCB

F-4-6

No.	Name	Main Unit	Reference	Remarks
PCB1	Engine Controller PCB	Main Unit	p. 4-32	
PCB2	Main Controller PCB	Main Unit	p. 4-30	
PCB3	AC Driver PCB	Main Unit	-	
PCB4	Power Supply PCB	Main Unit	p. 4-33	
PCB5	Control Panel PCB	Main Unit	p. 4-35	
PCB6	HVT PCB	Main Unit	p. 4-34	
PCB9	Modem PCB	Main Unit	-	iF model only
PCB10	USB PCB	Main Unit	-	except J model

T-4-6

Solenoid

F-4-7
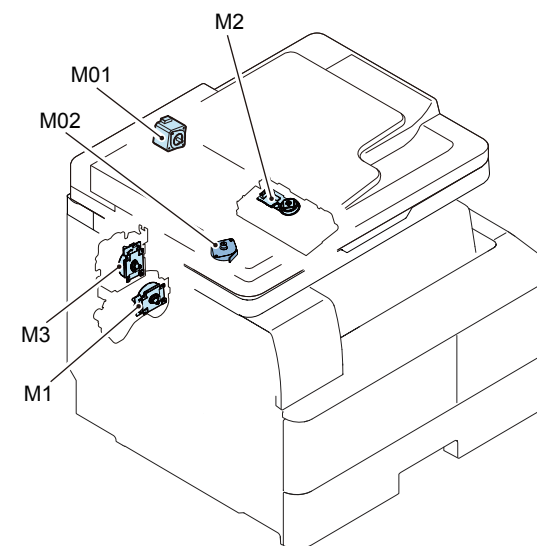
No.	Name	Main Unit
SL1	Duplex Solenoid	Main Unit
SL2	Cassette 1 Pickup Solenoid	Main Unit
SL5	Multi-purpose Tray Pickup Solenoid	Multi-purpose Tray Unit
SL01	ADF Disengagement Solenoid	ADF Unit

T-4-7

Motor

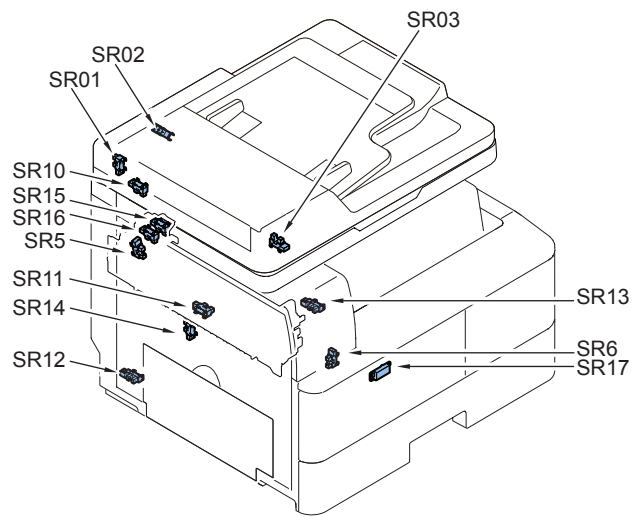
F-4-8

No.	Name	Main Unit
M1	Main Motor	Main Drive Unit
M2	Polygon Motor	Laser Scanner Unit
M3	Fixing Motor	Fixing Drive Unit
M01	ADF Motor	ADF Unit
M02	Reader Motor	Reader Unit

T-4-8

Sensor

F-4-9

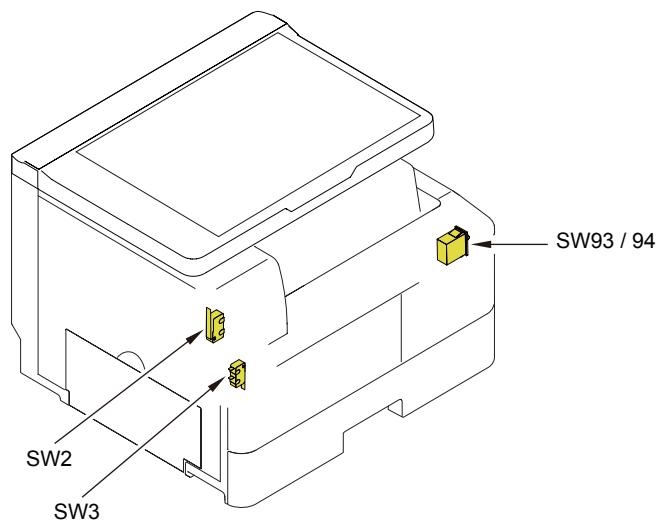| No.	Name	Main Unit
SR01	Document End Sensor	ADF Unit
SR02	Document Sensor	ADF Unit
SR03	CIS Unit HP Sensor	Reader Unit
SR5	Fixing Delivery Sensor	Fixing Assembly
SR6	Waste Toner Full Sensor	Main Unit
SR10	Delivery Full Sensor	Main Unit
SR11	Pre-registration Sensor	Main Unit
SR12	Multi-purpose Tray Paper Sensor	Multi-purpose Tray Unit
SR13	Cassette 1 Paper Sensor	Main Unit
SR14	Arch Sensor	Main Unit
SR15	Fixing Pressure Release Sensor 1	Fixing Assembly
SR16	Fixing Pressure Release Sensor 2	Fixing Assembly
SR17	Toner Sensor	Main Unit

T-4-9

Fan

F-4-10

No.	Name	Main Unit
FM1	Delivery Cooling Fan	Left Door Unit
FM2	Power Supply Cooling Fan	Main Unit
FM3	Image Formation Part Cooling Fan	Main Unit

T-4-10

● Switch

SW93 / 94

SW2

SW3

F-4-11

No.	Name	Main Unit	Remarks
SW2	Left Cover Switch	Main Unit	
SW3	Front Cover Switch	Main Unit	
SW93	Main Switch	Main Unit	EUR only
SW94	Main Switch	Main Unit	Except EUR

T-4-11

● Clutch

CL1

F-4-12

No.	Name	Main Unit
CL1	Registration Clutch	Main Drive Unit

T-4-12

Others

TP2 / 3

H1

[1]

TH1

TH2

[2]

F-4-13

No.	Name	Main unit	Reference
[1]	Fixing Film Unit	Fixing Assembly	p. 4-45
[2]	Pressure Roller	Fixing Assembly	p. 4-50
H1	Fixing Heater	Fixing Assembly	-
TP2/3	Thermo Switch	Fixing Assembly	-
TH1	Fixing Main Thermistor	Fixing Assembly	-
TH2	Fixing Sub Thermistor	Fixing Assembly	-

T-4-13

External Cover/Interior System

Removing the Front Cover Unit

■ Procedure

1) Remove the Front Cover

F-4-14

2) Remove the Front Cover Unit.
- 1 Screw
- 2 Claws

F-4-15

Removing the Rear Cover

■ Procedure

1) Remove the Rear Cover.
- 3 Screws
- 5 Bosses

F-4-16

Removing the Right Cover

■ Preparation

1)Remove the Rear Cover. "Removing the Rear Cover"(page 4-9).

2)Draw out the Cassette 1 in 10cm.

■ Procedure

1)Remove the Blindfold Cover.

• 2 Claws

F-4-17

2)Remove the screws.

• 4 Screws

F-4-18

3)Remove the Right Cover.

• 5 Claws

Clow

BOTTOM VIEW

F-4-19

Removing the Front Upper Cover

■ Preparation

1) Open the Left Door.

F-4-20

■ Procedure

1) Remove the Front Upper Cover.
- 2 Screws
- 2 Claws

F-4-21

Removing the Left Front Cover

■ Preparation

1) Open the Left Door.
2) Open the Front Cover Unit.
2) Draw out the Cassette 1 in 10cm.

■ Procedure

1) Remove the Left Front Cover.
- 2 Screws
- 1 Claw

F-4-22

NOTE :
Open and hold the Left Door to remove the claw with ease.

Removing the Left Rear Cover

■ Preparation

1) Open the Left Door.
2) Remove the Rear Cover. "Removing the Rear Cover"(page 4-9).

■ Procedure

1) Remove the Left Rear Cover
• 2 Screws

F-4-23

NOTE :
Open and hold the Left Door to remove bottom part of the Left Rear Cover with ease.

Removing the Front Right Cover

■ Preparation

1) Draw out the Cassette 1.
2) Remove the Rear Cover. "Removing the Rear Cover"(page 4-9).
3) Remove the Right Cover. "Removing the Right Cover"(page 4-10).
4) Remove the Front Cover Unit. "Removing the Front Cover Unit"(page 4-9).

■ Procedure

1) Remove the Front Right Cover.
• 2 Bosses
• 2 Claws

BOTTOM VIEW

F-4-24

Removing the Delivery Tray

■ Preparation

1) Draw out the Cassette 1.
2) Remove the Rear Cover. "Removing the Rear Cover"(page 4-9).
3) Remove the Right Cover. "Removing the Right Cover"(page 4-10).
4) Remove the Front Cover Unit. "Removing the Front Cover Unit"(page 4-9).
5) Remove the Front Right Cover. "Removing the Front Right Cover"(page 4-12).
6) Remove the Front Upper Cover. "Removing the Front Upper Cover"(page 4-11).
7) Remove the Control Panel Unit. "Removing the Control Panel Unit"(page 4-13).

■ Procedure

1) Remove the Delivery Tray.
• 2 Bosses

F-4-25

Removing the Control Panel Unit

■ Preparation

1) Draw out the Cassette 1.
2) Remove the Rear Cover. "Removing the Rear Cover"(page 4-9).
3) Remove the Right Cover. "Removing the Right Cover"(page 4-10).
4) Remove the Front Cover Unit. "Removing the Front Cover Unit"(page 4-9).
5) Remove the Front Right Cover. "Removing the Front Right Cover"(page 4-12).
6) Remove the Front Upper Cover. "Removing the Front Upper Cover"(page 4-11).

■ Procedure

1) Remove the Control Panel Unit.
• 2 Screws
• 1 Flat Cable

F-4-26

NOTE :
Remove the Control Panel Unit in the direction of the arrow to release the 5 bosses.

Removing the Feeder Cover

■ Procedure

1) Open the Feeder Cover.

F-4-27

2) Loosen the screw and remove the Feeder Cover.

- 2 Shafts

F-4-28

Removing the ADF Rear Cover

■ Procedure

1) Open the Feeder Cover.

F-4-29

2) Remove the ADF Rear Cover.

- 1 Boss
- 5 Hooks

F-4-30

Removing the Document Tray

■ Procedure

1) Open the Feeder Cover.

REAR VIEW

F-4-31

2) Remove the Document Tray while releasing the claw.
   - 1 Claw

F-4-32

Original Exposure and Feed System (Reader)

Layout

F-4-33

No.	Name	Main Unit	Reference
[1]	Scanner Unit	Main Unit	p. 4-16
[2]	Reader Unit	Main Unit	p. 4-18
[3]	CIS Unit	Reader Unit	p. 4-19

T-4-14

Removing the Scanner Unit

■ Preparation

1) Draw out the Cassette 1.
2) Remove the Front Upper Cover. "Removing the Front Upper Cover"(page 4-11).
3) Remove the Rear Cover. "Removing the Rear Cover"(page 4-9).
4) Remove the Right Cover. "Removing the Right Cover"(page 4-10).

■ Procedure

1) Loosen the 4 screws and remove the Controller Cover.

REAR VIEW

F-4-34

4 Parts Replacement and Cleaning > Original Exposure and Feed System (Reader) > Removing the Scanner Unit > Procedure

4-17

2) Remove the screw at the earth terminal.

• 1 Screw

F-4-35

3) Remove the flat cable and the connectors.

• 1 Flat Cable

• 2 Connectors

F-4-36

4) Remove the Scanner Unit.

• 4 Screws

CAUTION :

Be careful not to drop the Scanner Unit.

F-4-37

RIGHT VIEW

F-4-38

4-17

4 Parts Replacement and Cleaning > Original Exposure and Feed System (Reader) > Removing the Scanner Unit > Procedure

4 Parts Replacement and Cleaning > Original Exposure and Feed System (Reader) > Removing the Copyboard Glass Unit > Adjustment after Replacement

4-18

Removing the Copyboard Glass Unit

Procedure

> CAUTION :
>
> Be careful not to touch the glass with fingers when handling the Copyboard Glass Unit.
>
> F-4-39

1) Open the ADF.
2) Remove the Copyboard Glass Unit.
- 2 Screws

F-4-40

Adjustment after Replacement

4-18

4 Parts Replacement and Cleaning > Original Exposure and Feed System (Reader) > Removing the Copyboard Glass Unit > Adjustment after Replacement

Cleaning the Copyboard Glass Unit

■ Preparation

1) Remove the Copyboard Glass Unit. "Removing the Copyboard Glass Unit"(page 4-18).

■ Procedure

1) Clean inside and outside of the Copyboard Glass with lint-free paper.
2) Clean the white plate.

Cleaning the Stream Reading Glass

■ Preparation

1) Remove the Copyboard Glass Unit. "Removing the Copyboard Glass Unit"(page 4-18).

■ Procedure

1) Clean inside and outside of the Stream Reading Glass with lint-free-paper.
2) Apply the oil glass cleaner oil on the Stream Reading Glass.

Removing the CIS Unit

■ Preparation

1) Remove the Copyboard Glass Unit. "Removing the Copyboard Glass Unit"(page 4-18).

■ Procedure

1) Remove the Holder.
• 1 Claw

F-4-41

4 Parts Replacement and Cleaning > Original Exposure and Feed System (Reader) > Removing the CIS Unit > Adjustment after Replacement

4-20

2) Remove the CIS Unit.

- 1 Flat Cable

CAUTION :

Be careful not to touch the sensor part when handling the CIS unit.

F-4-42

CAUTION :

The groove of the CIS unit must be hooked on the belt when attaching the CIS unit.

F-4-44

1x

1 2

F-4-43

■ Adjustment after Replacement

"Actions when Replacing Parts"(page 5-4).

4-20

4 Parts Replacement and Cleaning > Original Exposure and Feed System (Reader) > Removing the CIS Unit > Adjustment after Replacement

Original Exposure and Feed System (ADF)

Layout

F-4-45

No.	Name	Main Unit	Reference
[1]	ADF Unit	Main Unit	p. 4-21
[2]	ADF Pickup Unit	ADF Unit	p. 4-23
[3]	ADF Separation Pad	ADF Unit	p. 4-24
[4]	ADF Pickup Feed Unit	ADF Unit	p. 4-26
[5]	ADF Feed Drive Unit	ADF Pickup Feed Unit	p. 4-28

T-4-15

Removing the ADF Unit

■ Preparation

1) Remove the Rear Cover. "Removing the Rear Cover"(page 4-9).

2) Loosen the 4 screws and remove the controller cover.

REAR VIEW

F-4-46

■ Procedure

1) Remove the screw at the earth terminal.

• 1 Screw

F-4-47

4 Parts Replacement and Cleaning > Original Exposure and Feed System (ADF) > Removing the ADF Unit > Adjustment after Replacement

4-22

2) Remove the connector.

• 1 Connector

F-4-48

3) Remove the reuse band.

• 1 Reuse Band.

F-4-49

4) Remove the ADF Unit while releasing the harness.

• 1 Harness guide

CAUTION :

Be careful not to damage the harness as it hooks while releasing.

F-4-50

■ Adjustment after Replacement

4-22

4 Parts Replacement and Cleaning > Original Exposure and Feed System (ADF) > Removing the ADF Unit > Adjustment after Replacement

4 Parts Replacement and Cleaning > Original Exposure and Feed System (ADF) > Removing the ADF Pickup Unit > Procedure

4-23

Removing the ADF Pickup Unit

■ Procedure

CAUTION :

Be careful not to touch the ADF Pickup Roller when handling the ADF Pickup Unit.

F-4-51

1) Open the Feeder Cover.

FRONT VIEW

F-4-52

2) Remove the ADF Pickup Unit.
- 1 Claw
- 1 Shaft

F-4-53

4-23

4 Parts Replacement and Cleaning > Original Exposure and Feed System (ADF) > Removing the ADF Pickup Unit > Procedure

4 Parts Replacement and Cleaning > Original Exposure and Feed System (ADF) > Removing the ADF Separation Pad > Procedure

4-24

Cleaning the ADF Pickup Unit

■ Procedure

1) Open the Feeder Cover.

FRONT VIEW

F-4-54

2) Clean the surface of the ADF Pickup Roller using lint-free paper soaked with alcohol.

Removing the ADF Separation Pad

■ Procedure

CAUTION :

Be careful not to touch the ADF Separation Pad while handling it.

F-4-55

1) Open the Feeder Cover.

FRONT VIEW

F-4-56

4-24

4 Parts Replacement and Cleaning > Original Exposure and Feed System (ADF) > Removing the ADF Separation Pad > Procedure

4 Parts Replacement and Cleaning > Original Exposure and Feed System (ADF) > Cleaning the ADF Separation Pad > Procedure

4-25

2) Remove the ADF Separation Pad
- 2 Claws

F-4-57

Cleaning the ADF Separation Pad

■ Preparation

1) Remove the ADF Separation Pad. "Removing the ADF Separation Pad"(page 4-24).

■ Procedure

1) Clean the surface of the ADF Separation Pad using lint-free paper soaked with alcohol.

4-25

4 Parts Replacement and Cleaning > Original Exposure and Feed System (ADF) > Cleaning the ADF Separation Pad > Procedure

4 Parts Replacement and Cleaning > Original Exposure and Feed System (ADF) > Removing the ADF Pickup Feed Unit > Procedure

4-26

Removing the ADF Pickup Feed Unit

■ Preparation

1) Remove the original tray. "Removing the Document Tray"(page 4-15).

2) Remove the ADF rear cover. "Removing the ADF Rear Cover"(page 4-14).

■ Procedure

CAUTION :

Be careful not to damage the White Plate when handling the ADF Pickup Feed Unit.

F-4-58

1) Open the ADF Unit and remove the white Plate.

• 4 Hooks

F-4-59

2) Remove the 2 screws and close the ADF Unit.

• 2 Screws

2x

F-4-60

3) Remove the screw from the earth.

• 2 Screws

1x

F-4-61

4-26

4 Parts Replacement and Cleaning > Original Exposure and Feed System (ADF) > Removing the ADF Pickup Feed Unit > Procedure

4 Parts Replacement and Cleaning > Original Exposure and Feed System (ADF) > Removing the ADF Pickup Feed Unit > Procedure

4-27

4) Remove the connector.

• 4 connectors

4x

F-4-62

5) Remove the screws and close the feeder cover.

• 4 Screws

4x

F-4-63

6) Remove the ADF Pickup Feed Unit.

CAUTION :

Be careful not to touch the ADF Delivery Roller when handling the ADF Pickup Feed Unit.

F-4-64

F-4-65

4-27

4 Parts Replacement and Cleaning > Original Exposure and Feed System (ADF) > Removing the ADF Pickup Feed Unit > Procedure

4 Parts Replacement and Cleaning > Original Exposure and Feed System (ADF) > Removing the ADF Feed Drive Unit > Procedure

4-28

Removing the ADF Feed Drive Unit

■ Preparation

1) Remove the ADF Pickup Feed Unit. "Removing the ADF Pickup Feed Unit"(page 4-26).

■ Procedure

1) Loosen the screw and remove the Feeder Cover.
- 2 Shafts

F-4-66

2) Remove the ADF Feed Drive Unit.
- 1 Harness guide
- 5 Screws

F-4-67

CAUTION :

- Be careful not to shift the phase of the inner gear when handling the ADF Feed Drive

F-4-68

- Be careful not to put the arm edge on top of the coupling when assembling the ADF Feed Drive Unit.

F-4-69

4-28

4 Parts Replacement and Cleaning > Original Exposure and Feed System (ADF) > Removing the ADF Feed Drive Unit > Procedure

4 Parts Replacement and Cleaning > Original Exposure and Feed System (ADF) > Cleaning the ADF Delivery Roller > Procedure

4-29

Cleaning the ADF Delivery Roller

■ Preparation

1) Remove the ADF Pickup Feed Unit. "Removing the ADF Pickup Feed Unit"(page 4-26).

■ Procedure

1) Clean the surface of the ADF Delivery Roller using lint-free paper soaked with alcohol.

BOTTOM VIEW

F-4-70

4-29

4 Parts Replacement and Cleaning > Original Exposure and Feed System (ADF) > Cleaning the ADF Delivery Roller > Procedure

Controller System

Removing the Main Controller PCB

■ Preparation

Back up user data (settings, registered data, etc.) and service mode data for setting and registration after PCB replacement. Take notes if data is unable to back up.

1) In Remote UI, perform the following procedure to export the user data (login in administrator mode).
   In Setting/Registration > Import/Export > Menu > Export, select an item and then start export.
2) In service mode, perform the following procedure to export the service mode data (and then import it after replacement).
   COPIER > FUNCTION > SYSTEM > EXPORT
3) Record the default settings shown on the service label (these are entered after replacement).
4) Remove the Rear Cover. "Removing the Rear Cover"(page 4-9).

■ Procedure

1) Loosen the 4 screws and remove the controller cover.

4x

F-4-71

2) Remove all flat cables and connectors and then remove the Main Controller PCB.
- 10 Connectors
- 4 Flat Cables
- 7 Screws

14x

7x

LEFT VIEW

F-4-72

NOTE :
Numbers of connectors and flat cables are different from each specification of the host machine.

4 Parts Replacement and Cleaning > Controller System > Removing the Main Controller PCB > After Replacing the Main Controller PCB

4-31

■ After Replacing the Main Controller PCB

> NOTE:
> In the case of a model without the reader, start from step 5).

1) Turning ON the power.
2) Execute COPIER > FUNCTION > CLEAR > R-CON.
3) Entering the Setting Value from the Service Label (W-PLT-X/Y/Z)
   3-1)   Enter the setting value of W-PLT-X/Y/Z from the service label printed inside of the rear cover by following service mode.
     • COPIER> ADJUST> CCD> W-PLT-X/Y/Z

F-4-73

4) Automatic Gain Offset Adjustment for the CIS unit
   4-1)   Rewrite "1000" for the setting value on following service mode.
     • COPIER >ADJUST > CCD > LED-BW-R, BW-G, BW-B = 1000
   4-2)   Rewrite "1100" for the setting value on following service mode.
     • COPIER >ADJUST > CCD > LED-CL-R, CL-G, CL-B = 1100
   4-3)   Press "OK" for each on following service mode.
     • COPIER > FUNCTION > CCD > CL-AGC, BW-AGC
   4-4)   After the automatic adjustment, "executing" disappears.
   4-5)   Check the setting value is changed. When it is not changed, readjust from procedure 4-1) to 4-4).

5) Enter the All Setting Value other than W-PLT-X/Y/Z from the Service Label
   5-1)   Enter the all setting value other than W-PLT-X/Y/Z from the service label printed inside of the rear cover.

F-4-74

6) Set the and paper size group.
   • COPIER > OPTION > BODY > SIZE-LC (setting the paper size group)
   [Setting value]
   1: AB configuration, 2: Inch configuration, 3: A configuration, 4: AB/Inch configuration
7) Clearing the Settings/Registration data
   Execute COPIER > FUNCTION > CLEAR > ALL.
   When executing this item, the following data is cleared according to the values of SIZE-LC set in step 6).
     • Settings/Registration data
     • Service mode data
     • Job ID
     • Each log data
     • Date data

   Note that the following data is not cleared.
     • Service counter
     • Adjustment value of Reader/DADF
8) Execute COPIER > FUNCTION > VIFFNC > STOR-DCN (the setting value of Engine Controller is backed up.)
9) Turn OFF and then ON the power.
10)   Import the service mode data backed up before replacement.
   Insert the USB memory storage device to the slot of the machine, and execute COPIER > FUNCTION > SYSTEM > IMPORT.
11)   Import user data using remote UI.

4 Parts Replacement and Cleaning > Controller System > Removing the Main Controller PCB > After Replacing the Main Controller PCB

4-31

4 Parts Replacement and Cleaning > Controller System > Removing the Engine Controller PCB > After Replacing the Engine Controller PCB

4-32

12)   Uninstall Old Drivers.
- Printer Driver
- FAX Driver
- Scanner Driver
- Network Scan Utility. (for machines with network connection)
    * For details on the uninstallation procedures, see the driver installation manuals that are included with the drivers.
13)   Install the drivers which have been uninstalled in step 12).
    * For details on the installation procedures, see the driver installation manuals that are included with the drivers.

> NOTE:
> MAC address information is changed after replacement of the Main Controller PCB. Therefore, when the PC and the machine are connected by the network, the PC will not be able to recognize the machine on the network. When the PC and the machine are connected by the USB memory device, the PC will not be able to recognize the machine if the USB ID is changed. It becomes therefore necessary to reinstall the driver.

In the case of a model without fax for EUR , perform the following works.

> NOTE:
> After replacing the Main Controller PCB, the value of the service mode (SDTM-DSP) to set whether to display or hide the automatic shutdown menu becomes "0" (default value).
> In that case, the automatic shutdown menu is not displayed on the LUI of the machine. To display the automatic shutdown menu on the LUI of the machine, it is necessary to execute this process.

1) Setting of automatic shutdown menu display
    Set 1 for automatic shutdown menu display in service mode (default: 0).
    COPIER > OPTION > BODY > SDTM-DSP
2) Turn OFF and then ON the main power.
3) Checking the setting of Auto Sleep Time
    In setting menu, check that the setting value of Auto Sleep Time is 1. (If the setting value is 0, automatic shutdown does not work.)
    Menu > Timer Settings > Auto Shutdown Time

Removing the Engine Controller PCB

■ Preparation

1) Backup of Engine Controller PCB service mode setting value. Execute the following
    - COPIER > FUNCTION > VIFFNC > STOR-DCN
2) Turn OFF the main power when the above work is complete.
3) Remove the Rear Cover. "Removing the Rear Cover"(page 4-9).

■ Procedure

1) Remove the Engine Controller PCB.
- 15 Connectors
- 3 Flat Cables
- 4 Screws

18x   4x

F-4-75

■ After Replacing the Engine Controller PCB

1) Restore the backup data.
    Execute the following: COPIER > FUNCTION > VIFFNC > RSTR-DCN
2) When backup data cannot be uploaded before replacement due to reasons such as damage of the Engine Controller PCB, enter the value of each service mode item described on the service label.
3) Turn OFF and then ON the power (For accurate reflection of the restored items).

4-32

4 Parts Replacement and Cleaning > Controller System > Removing the Engine Controller PCB > After Replacing the Engine Controller PCB

Removing the Power Supply PCB

■ Preparation

1) Remove the Rear Cover. "Removing the Rear Cover"(page 4-9).
2) Remove the Right Cover. "Removing the Right Cover"(page 4-10).
3) Remove the Front Cover Unit. "Removing the Front Cover Unit"(page 4-9).
4) Remove the Front Right Cover. "Removing the Front Right Cover"(page 4-12).

■ Procedure

1) Remove the Power Supply PCB.
- 2 Claws

F-4-76

2) Remove the Main Switch.
- 2 Screws
- 1 Edge Saddle

F-4-77

3) Remove connectors from the Power Supply PCB.
- 4 Connectors

F-4-78

4) Remove the Power Supply PCB.
- 2 Screws

F-4-79

CAUTION :

Be careful not to hang the power switch on the frame while removing the Power Supply PCB or it may be damaged.

Removing the HVT PCB

■ Preparation

1) Draw out the Cassette 1
2) Remove the Rear Cover. "Removing the Rear Cover"(page 4-9).
3) Remove the Right Cover. "Removing the Right Cover"(page 4-10).
4) Remove the Front Cover Unit. "Removing the Front Cover Unit"(page 4-9).
5) Remove the Front Right Cover. "Removing the Front Right Cover"(page 4-12).
6) Remove the Front Upper Cover. "Removing the Front Upper Cover"(page 4-11).
7) Remove the Control Panel Unit. "Removing the Control Panel Unit"(page 4-35)
8) Remove the Delivery Tray. "Removing the Delivery Tray"(page 4-13).

■ Procedure

1) Remove the Heat Exhaust Fan Duct.
• 2 Claws

F-4-80

2) Remove the HVT PCB.
• 1 Connector
• 1 Flat Cable
• 2 Screws

F-4-81

3) Remove the PCB stay.
• 3 Screws

F-4-82

Removing the Control Panel PCB

■ Preparation

1) Remove the Rear Cover. "Removing the Rear Cover"(page 4-9).

2) Remove the Right Cover. "Removing the Right Cover"(page 4-10).

3) Remove the Front Cover Unit. "Removing the Front Cover Unit"(page 4-9).

4) Remove the Front Right Cover. "Removing the Front Right Cover"(page 4-12).

5) Remove the Front Upper Cover. "Removing the Front Upper Cover"(page 4-11).

6) Remove the Control Panel Unit. "Removing the Control Panel Unit"(page 4-13).

■ Procedure

1) Reverse the Control Panel and remove the stay.

• 5 Screws

F-4-83

2) Remove the Control Panel PCB.

• 8 Screws

F-4-84

Laser Exposure System

Removing the Laser Scanner Unit

■ Preparation

1) Remove the Rear Cover. "Removing the Rear Cover"(page 4-9).

2) Remove the Right Cover. "Removing the Right Cover"(page 4-10).

3) Remove the Front Upper Cover. "Removing the Front Upper Cover"(page 4-11).

4) Remove the Front Cover Unit. "Removing the Front Cover Unit"(page 4-9).

5) Remove the Front Right Cover. "Removing the Front Right Cover"(page 4-12).

6) Remove the Control Panel Unit. "Removing the Control Panel Unit"(page 4-13).

7) Remove the Delivery Tray. "Removing the Delivery Tray"(page 4-13).

■ Procedure

CAUTION :

Be sure not to disassemble the Laser Scanner Unit as specific adjustment is needed.

A malfunction may occur when it is disassembled without the adjustment.

1) Remove the sponges.

• 6 Sponges

F-4-85

2) Remove the Laser Scanner Unit.

• 1 Connector

• 1 Flat Cable

• 4 Screws

F-4-86

Image Formation System

Removing the Toner Cartridge

■ Procedure

1) Remove the Front Cover
2) Remove the Toner Cartridge by turning the knob in the direction of the arrow.

F-4-87

Removing the Drum Unit

■ Procedure

CAUTION:
• Be careful not to touch the drum part when handling the Drum Unit.

F-4-88

• Be sure to block light to the drum part covering with paper when the Drum Unit is removed from the host machine.

F-4-89

1) Open the Left Door.

> **CAUTION:**
>
> Open the Left Door to the 2nd step until the Drum Unit is unlocked. It may damage or deform the Drum Unit when removing the Drum Unit at 1st step.
>
>
>
> 1st Step   2nd Step
>
> F-4-90

2) Remove the Drum Unit.

F-4-91

Remove the Developing Assembly

■ Preparation

1) Open the Left Door.
2) Remove the Drum Unit. "Removing the Drum Unit"(page 4-37).
3) Remove the Toner Cartridge. "Removing the Toner Cartridge"(page 4-37).Toner Cartridge"Removing the Toner Cartridge"(page 4-37).
4) Remove the Front Cover Unit. "Removing the Front Cover Unit"(page 4-9).)

■ Procedure

1) Remove the Fan Frame.
- 2 Screws
- 2 Connectors
- 1 Wire Saddle

2x
2x
1x

F-4-92

NOTE :
Hold the Toner Sensor Holder while removing the screw on the right side of the Fan Frame.

F-4-93

F-4-95

2) Remove the Developing Assembly.

• 2 Wire Saddles

• 1 Connector

CAUTION:

Be careful not to touch or shock the Developing Cylinder when handling the Developing Assembly.

F-4-94

■ Adjustment after Replacement

Execute following service mode when replacing the Developing Assembly.

> NOTE :
> When abnormal termination occurs while stirring toner due to following cause, turn OFF/ON the main power and re-execute "TONER-S" in the service mode.
> • Door open
> • Service call error
> • Time out of stirring toner (Toner is not detected in 2 minutes).

● Removing the Developing Cylinder

■ Preparation

1) Remove the Developing Assembly. <u>"Remove the Developing Assembly"(page 4-38).</u>

■ Procedure

> CAUTION:
>
> Be careful not to touch or shock the Developing Cylinder when handling the Developing Assembly.
>
>
>
> F-4-96

1) Remove the Holder.

• 4 Screws

F-4-97

2) Remove the Electrode Plate and the Gear.

F-4-98

3) Remove the Bearing.

• 2 Screws

F-4-99

4) Remove the Positioning guide.

• 1 Screw

F-4-100

5) Remove the Bearing.
* 2 Screws

F-4-101

6) Remove the 2 Rollers and the Developing Cylinder.

F-4-102

Removing the Transfer Roller

■ Procedure

CAUTION:

Be careful not to touch the Transfer Roller when handling the Developing Assembly.

F-4-103

1) Open the Left Door.

2) Remove the Transfer Roller while releasing the claw.

F-4-104

Removing the Separation Static Charge Eliminator

■ Preparation

1) Remove the Left Front Cover.

■ Procedure

1) Draw out the Separation Static Charge Eliminator.

F-4-105

Cleaning the Transfer Guide

■ Procedure

1) Open the Left Door.
2) Clean the surface of the Transfer Guide using lint-free paper soaked with alcohol.

F-4-130

Fixing System

Removing the Fixing Assembly

> ⚠ CAUTION :
> It may cause burn injury to handle the Fixing Assembly just after turning OFF the host machine. Be sure to cool down the Fixing Assembly before handling.

■ Preparation

1) Remove the Front Upper Cover.

■ Procedure

1) Remove the Front / Rear Fixing Cover.
- 2 Claws
- 2 Hooks

F-4-107

2)Remove the Fixing Assembly.

• 3 Connectors

• 5 Screws

3x

5x

F-4-108

Remove the Fixing Film Unit

■Preparation

1)Remove the Fixing Assembly.

■Procedure

1)Turn the Fixing Assembly so that the [A] part faces to the bottom.

[A]

F-4-109

2)Remove the Bearing Holder Unit.

• 2 Screws

2x

F-4-110

3) Remove the wire saddle.

• 1 Wire saddle

1x

F-4-111

4) Remove the Sensor Holder.

• 2 Claws

• 3 Bosses

• 1 Screw

1x

F-4-112

5) Remove the Front Pressure Release Cam.

• 1 Claw

REAR VIEW

F-4-113

6) Remove the shaft.

F-4-114

7) Remove the Fixing Stay.

• 5 Screws

• 4 Bosses

5x

REAR VIEW

F-4-115

8) Release the wire.

1x

REAR VIEW

F-4-116

9) Remove the Fixing Contact Unit.
- 3 Claws
- 1 Boss

Boss

F-4-117

NOTE :
Slide the Fixing Contact Unit while holding the boss.

10) Remove the Earth Holder Unit.

- 1 Claw
- 2 Bosses
- 1 Spring

CAUTION :

Do not hook the spring, or it may be deformed.

REAR VIEW

F-4-118

11) Remove the Front / Rear Pressure Plate.

- 1 Spring for each
- 1 Claw for each

NOTE :
Record positions of the springs for re-assembly.

REAR VIEW

F-4-119

12) Remove the Fixing Film Unit.

CAUTION :

Be careful not to touch the Fixing Film Unit while assembling / disassembling.

F-4-120

F-4-121

Removing the Pressure Roller

■ Preparation

1) Remove the Fixing Assembly. "Removing the Fixing Assembly"(page 4-45).
2) Remove the Fixing Film Unit. "Remove the Fixing Film Unit"(page 4-45).

■ Procedure

1) Remove the Lower Transfer Guide.
- 3 Claws
- 1 Boss

F-4-122

NOTE :
Slide the Lower Transfer Guide while holding the boss.

2) Remove the gears and the bearing.

- 2 Bearings
- 2 Gears
- 1 Cam

F-4-123

3) Remove the Pressure Roller.

F-4-124

NOTE :
Slide the Lower Transfer Guide while holding the boss.

4) Remove the E ring.

- 1 E Ring

CAUTION :

Be careful not to touch the Pressure Roller while assembling / disassembling.

F-4-125

F-4-126

Cleaning the Fixing Inlet Guide

■ Preparation

1) Remove the Drum Unit. "Removing the Drum Unit"(page 4-37).

■ Procedure

1) Clean the surface of the Fixing Inlet Guide using lint-free paper soaked with alcohol.

F-4-127

Pickup/Feed System

● Removing the Left Door Unit

■ Preparation

1) Remove the Left Front Cover. "Removing the Left Front Cover"(page 4-11).
2) Remove the Left Rear Cover "Removing the Left Rear Cover"(page 4-12).
3) Remove the Multi-purpose Tray. "Removing the Multi-purpose Tray"(page 4-54).

■ Procedure

1) Remove the connector.
- 1 Connector
- 1 Wire Saddle

F-4-128

2) Remove the link arm and the stopper.
- 1 Screw

F-4-129

3) Remove the Left Door Unit.

F-4-130

Removing the Multi-purpose Tray

■ Preparation

1) Remove the Left Front Cover. "Removing the Left Front Cover"(page 4-11).

■ Procedure

1) Open the Multi-purpose Tray.
2) Expand the Multi-purpose Tray and remove the link part.

F-4-131

3) Remove the Multi-purpose Tray.
- 2 Bosses

F-4-132

Remove the Multi-purpose Tray Pickup Unit

■ Preparation

1) Remove the Left Front Cover. "Removing the Left Front Cover"(page 4-11).
2) Remove the Rear Cover. "Removing the Rear Cover"(page 4-9).
3) Remove the Left Rear Cover. "Removing the Left Rear Cover"(page 4-12).
4) Remove the Multi-purpose Tray. "Removing the Multi-purpose Tray"(page 4-54).
5) Remove the Left Door Unit. "Removing the Left Door Unit"(page 4-53).

■ Procedure

1) Remove the connectors.
- 2 Connectors

F-4-133

2) Remove the screw at the earth terminal.

• 1 Screw

F-4-134

3) Remove the Multi-purpose Tray.

• 5 Screws

F-4-135

NOTE :
Remove the Multi-purpose Tray in direction of the arrow while avoiding the spring plate.

F-4-136

● Removing the Main Drive Unit

■ Preparation

1) Remove the Rear Cover. "Removing the Rear Cover"(page 4-9).

■ Procedure

1) Remove the Drive Cover.
- 4 Screws

4x

F-4-137

2) Remove the gears.
- 3 Gears

F-4-138

3) Remove the spring and the gear.
- 1 Spring
- 1 Gear

F-4-139

4) Remove the Drive Support Plate.
- 4 Screws

4x

F-4-140

5) Remove the clutch.
- 1 Connector
- 1 Resin Ring

F-4-141

6) Remove the bearing.
- 1 Claw

F-4-142

7) Release the cable guide.
- 1 Screw
- 1 Claw

F-4-143

8) Remove the connectors.
- 2 Connectors

F-4-144

9) Release the cable guide.

- 1 Boss
- 2 Claws

F-4-145

10) Remove the Main Drive Unit.

- 1 Connector
- 4 Screws

F-4-146

Removing the Fixing Drive Unit

■ Preparation

1) Remove the Rear Cover. "Removing the Rear Cover"(page 4-9).
2) Remove the Left Rear Cover. "Removing the Left Rear Cover"(page 4-12).

■ Procedure

1) Remove the connectors.

- 4 Connectors.

F-4-147

2) Remove the cable guide.

- 1 Claw

F-4-148

3) Remove the Fixing Drive Unit.

• 4 Screws

4x

F-4-149

NOTE :
Do not remove the screw (TP; M3 x 6).

Removing the Delivery/Reverse Unit

■ Preparation

1) Draw out the Cassette 1
2) Remove the Rear Cover. "Removing the Rear Cover"(page 4-9).
3) Remove the Right Cover. "Removing the Right Cover"(page 4-10).
4) Remove the Front Cover Unit. "Removing the Front Cover Unit"(page 4-9).
5) Remove the Front Right Cover. "Removing the Front Right Cover"(page 4-12).
6) Remove the Front Upper Cover. "Removing the Front Upper Cover"(page 4-11).
7) Remove the Delivery Tray. "Removing the Delivery Tray"(page 4-13).
8) Remove the ADF Unit. "Removing the ADF Unit"(page 4-21).

■ Procedure

1) Remove the cover.

• 1 Boss
• 2 Hooks

F-4-150

2) Remove the Delivery/Reverse Unit.

• 2 Claws

• 1 Connector

REAR VIEW

F-4-151

Removing the Cassette 1 Pickup Roller

■ Procedure

CAUTION :

Do not tilt the host machine when removing the Cassette 1 Pickup Roller as toner leakage might occur.

F-4-152

1) Draw out the Cassette 1.

2) Remove the Cassette 1 Pickup Roller.

F-4-153

Removing the Cassette 1 Feed Roller

■ Procedure

CAUTION :

Do not tilt the host machine when removing the Cassette 1 Feed Roller as toner leakage might occur.

F-4-154

1)Draw out the Cassette 1.

2)Remove the Cassette 1 Feed Roller Unit.

F-4-155

3)Remove the black bearing.

• 1 Boss

F-4-156

NOTE :
Remove the bearing fitting boss of it with notch of the shaft hole.

F-4-157

4) Remove the shaft.

> **CAUTION :**
>
> Be careful not to drop the Cassette 1 Feed Roller.

> **NOTE :**
> 2 different sizes of bosses are equipped with the shaft. Remove the thinner boss fitting with notch of the shaft hole.

F-4-158

F-4-159

5) Remove the Cassette 1 Feed Roller.

> **CAUTION :**
>
> Do not touch surface of the Cassette 1 Feed Roller as decrement of separation power might occur.

F-4-160

4 Parts Replacement and Cleaning > Pickup/Feed System > Removing the Cassette 1 Feed Roller > Installation of the Cassette 1 Feed Roller Unit

4-65

■ Installation of the Cassette 1 Feed Roller Unit

1) Insert the shaft of the Cassette 1 Feed Roller Unit in the driving link part.

F-4-161

> NOTE :
> To insert it with ease, hold pressure part of the Cassette 1 Separation Roller Unit with fingers.

2) Set the Cassette 1 Feed Roller Unit.

F-4-162

3) Install the Cassette 1 Feed Roller Unit.

• 2 Hooks

> CAUTION :
>
> Push the Cassette 1 Feed Roller Unit until a click made.
>
>
>
> F-4-163

4-65

4 Parts Replacement and Cleaning > Pickup/Feed System > Removing the Cassette 1 Feed Roller > Installation of the Cassette 1 Feed Roller Unit

Removing the Cassette 1 Separation Roller

■ Preparation

1) Draw out the Cassette 1.
2) Remove the Cassette 1 Feed Roller Unit. "Removing the Cassette 1 Feed Roller"(page 4-61).

■ Procedure

CAUTION :

Do not tilt the host machine when removing the Cassette 1 Separation Roller as toner leakage might occur.

F-4-164

1) Remove the Cassette 1 Separation Roller Unit.

F-4-165

2) Remove the black bearing.

- 1 Boss

F-4-166

> NOTE :
> Remove the bearing fitting boss of it with notch of the shaft hole.
>
> F-4-167

3) Remove the shaft.

> CAUTION :
> - Be careful not to drop the torque limiter and the Cassette 1 Separation Roller.
> - Do not install dropped torque limiter.

F-4-168

4 Parts Replacement and Cleaning > Pickup/Feed System > Removing the Cassette 1 Separation Roller > Installation of the Cassette 1 Separation Roller

4-68

4) Remove the Cassette 1 Separation Roller.

> CAUTION :
>
> Do not touch surface of the Cassette 1 Separation Roller as decrement of separation power might occur.

F-4-169

> NOTE :
> For installation of the Cassette 1 Separation Roller, fit boss of the shaft with notch of the torque limiter as the removed shaft at procedure 2) might not be attached.

F-4-170

■ Installation of the Cassette 1 Separation Roller

1) Insert the shaft of the Cassette 1 Separation Roller Unit in the driving link part.

F-4-171

> NOTE :
> To insert it with ease, hold pressure part of the Cassette 1 Separation Roller Unit with fingers.

4-68

4 Parts Replacement and Cleaning > Pickup/Feed System > Removing the Cassette 1 Separation Roller > Installation of the Cassette 1 Separation Roller

2) Install the Cassette 1 Separation Roller Unit.

• 4 Bosses

CAUTION :

Push the Cassette 1 Feed Separation until a click made.

F-4-172

Removing the Registration Roller

■ Preparation

1) Remove the Rear Cover. "Removing the Rear Cover"(page 4-9).
2) Remove the Drum Unit. "Removing the Drum Unit"(page 4-37).

■ Procedure

1) Remove the Drive Support Plate.

• 4 Screws

4x

F-4-173

2) Remove the clutch.
- 1 Connector
- 1 Resin Ring

F-4-174

3) Remove the bearing.
- 1 Claw

F-4-175

4) Remove the Registration Roller.
- 1 Bearing

F-4-176

NOTE :
Be careful that the step of the roller shaft is not hang on the shaft hole while moving the Registration Roller toward "2" in the above figure.

F-4-177

Removing the Multi-purpose Tray Pickup Roller

■ Preparation

1) Draw out the Cassette 1.
2) Remove the Left Front Cover. "Removing the Left Front Cover"(page 4-11).

■ Procedure

1) Remove the Blindfold Cover.

- 1 Screw
- 1 Boss
- 1 Shaft

1x

F-4-178

NOTE :
Bend the Left door stopper while removing the Blindfold Cover.

F-4-179

2) Remove the bearing and then remove the Multi-purpose Tray Pickup Roller.

- 1 Claw

F-4-180

Removing the Multi-purpose Tray Separation Pad

■ Preparation

1) Remove the Multi-purpose Tray Pickup Roller . "Removing the Multi-purpose Tray Pickup Roller"(page 4-70).

■ Procedure

1) Remove the bearings.
   - 1 Claw

F-4-181

2) Remove the Multi-purpose Tray Separation Pad.
   - 5 Claws

F-4-182

Removing the Duplex Roller

■ Procedure

1) Open the Left door.
2) Remove the Duplex Roller Gear Unit.
   - 1 Claw

REAR VIEW

F-4-183

3) Release the bosses on the bearing.
   - 2 Bosses

FRONT VIEW

F-4-184

4) Remove the Duplex Roller.
   - 4 Bosses

F-4-185

Removing the Delivery Reverse Roller

■ Preparation

1) Remove the Delivery/Reverse Unit. "Removing the Delivery/Reverse Unit"(page 4-59).

■ Procedure

1) Reverse the Delivery/Reverse Unit and remove the Delivery/Reverse Lower Guide.
- 1 Screw
- 4 Bosses

F-4-186

2) Remove the Bearing.
- 2 Resin Bearings

F-4-187

3) Remove the Gear.
- 1 Gear

F-4-188

4) Remove the Delivery Reverse Roller.

F-4-189

4 Parts Replacement and Cleaning > Pickup/Feed System > Removing the Multi-purpose Tray Vertical Path Roller > Procedure

4-75

Removing the Multi-purpose Tray Vertical Path Roller

■ Preparation

1) Remove the Multi-purpose Tray Pickup Unit."Remove the Multi-purpose Tray Pickup Unit"(page 4-54).

■ Procedure

1) Remove the Multi-purpose Tray Pickup guide.
- 2 Screws

2x

F-4-190

> NOTE :
> Engage the link when assembling the Multi-purpose Tray Vertical Path Roller.

F-4-191

2) Remove the Multi-purpose Tray Vertical Path Roller.

F-4-192

4-75

4 Parts Replacement and Cleaning > Pickup/Feed System > Removing the Multi-purpose Tray Vertical Path Roller > Procedure

5

Adjustment

- ■ Basic Adjustment
- ■ Actions when Replacing Parts
- ■ Adjustment of Image Position

Basic Adjustment

Adjustment when Replacing the Parts

Adjustment required in the field service works when following parts are replaced. The parts are classified by 3 function blocks.

Category	Parts	Reference
Original Exposure and Feed System (Reader Unit)	CIS Unit	"Actions when Replacing Parts"(page 5-4).
	Copyboard Glass Unit	"Actions when Replacing the Copyboard Glass Unit"(page 5-6).
Original Exposure and Feed System (ADF Unit)	ADF Unit	"Actions when Replacing the ADF Unit"(page 5-8).
Controller	Main Controller PCB	"Actions when Replacing the Main Controller PCB"(page 5-9).
	Engine Controller PCB	"Actions when Replacing the Engine Controller PCB"(page 5-11).

T-5-1

Adjustment of Image Position

Procedures for adjustment of image position is described below.

■ Pickup Feed System

Item	Standard	Reference
Adjustment of image leading edge margin	$L1 = 2.5 +/- 1.5$ (mm), back side: $2.5 +/- 2.0$ (mm)	"Adjustment of Image Leading Edge Margin (front side)"(page 5-12). "Adjustment of Image Leading Edge Margin (back side)"(page 5-13).
Adjustment of left edge margin of the Image	$L1 =$ front side: $2.5 +/- 1.5$ (mm), back side: $2.5 +/- 2.0$ (mm)	"Adjustment of Left Edge Margin of the Image (front side)"(page 5-13). "Adjustment of Left Edge Margin of the Image (back side)"(page 5-14).

T-5-2

■ Original Exposure and Feed System (Reader Unit)

Item	Standard	Reference
Adjustment of image leading edge margin	L1 = 1-sided: 2.5 +/- 2.0 (mm)	"Adjustment of Image Leading Edge Margin (1-sided)"(page 5-14).
Adjustment of left edge margin of the Image	L1 = 1-sided: 2.5 +/- 1.5 (mm)	"Adjustment of Left Edge Margin of the Image (1-side)"(page 5-15).

T-5-3

■ Original Exposure and Feed System (ADF Unit)

Item	Standard	Reference
Adjustment of image leading edge margin	L1 = 1-sided: 2.5 +/- 1.5 (mm), front side: 2.5 +/- 2.0 (mm), back side: 2.5 +/- 2.0 (mm)	"Adjustment of Image Leading Edge Margin (1-sided)"(page 5-15). "Adjustment of Image Leading Edge Margin (front side)"(page 5-16). "Adjustment of Image Leading Edge Margin (back side)"(page 5-16).
Adjustment of left edge margin of the Image	L1 = front side: 2.5 +/- 2.0 (mm), back side: 2.5 +/- 2.0 (mm)	"Adjustment of Left Edge Margin of the Image (front side)"(page 5-17). "Adjustment of Left Edge Margin of the Image (back side)"(page 5-17).
Adjustment of magnification ratio	L1 = front side:+/-0.5%, back side:+/-0.5%	"Adjustment of Magnification Ratio (front side)"(page 5-18). "Adjustment of Magnification Ratio (back side)"(page 5-18).

T-5-4

5 Adjustment > Actions when Replacing Parts > Original Exposure and Feed System (Reader Unit) > Actions when Replacing the CIS Unit

5-4

Actions when Replacing Parts

Original Exposure and Feed System (Reader Unit)

Actions when Replacing the CIS Unit

Execute following procedure when replacing the CIS Unit.

No.	Item	Reference
1	Automatic gain offset adjustment for the CIS unit	"Automatic Gain Offset Adjustment for the CIS unit"(page 5-4).
2	Adjust of image reading start position	"Adjustment of Image Reading Start Position"(page 5-4).
3	Automatic white level adjustment	"Automatic White Level Adjustment"(page 5-5).
4	Adjustment of image position	"Original Exposure and Feed System (Reader Unit)"(page 5-14).

T-5-5

● Automatic Gain Offset Adjustment for the CIS unit

1) Rewrite "1000" for the setting value on following service mode.
- COPIER >ADJUST > CCD > LED-BW-R, BW-G, BW-B = 1000

2) Rewrite "1100" for the setting value on following service mode.
- COPIER >ADJUST > CCD > LED-CL-R, CL-G, CL-B = 1100

3) Press "OK" for each on following service mode.
- COPIER > FUNCTION > CCD > CL-AGC, BW-AGC

4) After the automatic adjustment, "executing" disappears.

5) Check the setting value is changed. When it is not changed, readjust from procedure 1) to 4).

● Adjustment of Image Reading Start Position

> CAUTION:
>
> After the setting value is changed, write the changed value on the service label.

1) Enter "-20" for the setting value on following service mode.
- COPIER > ADJUST > ADJ-XY > STRD-POS = -20

2) Select following service mode.
- COPIER > FUNCTION > INSTALL > STRD-POS

3) Press OK key and then the automatic adjustment is executed. After the automatic adjustment, "executing" disappears.

4) Check the setting value is changed. When it is not changed, readjust from procedure 1) to 3).

5-4

5 Adjustment > Actions when Replacing Parts > Original Exposure and Feed System (Reader Unit) > Actions when Replacing the CIS Unit

5 Adjustment > Actions when Replacing Parts > Original Exposure and Feed System (Reader Unit) > Actions when Replacing the CIS Unit

5-5

● Automatic White Level Adjustment

CAUTION:

1. The adjustment is executed when ADF is installed.
2. The adjustment is to match white level by stream reading with white level by copyboard reading. It may occur following error without the adjustment.
   • Inappropriate background density of images in stream reading
   • Dust detection error in stream reading

1) Enter the setting value for each on following service mode.
   • COPIER > ADJUST > CCD > DFTAR-R = 209
   • COPIER > ADJUST > CCD > DFTAR-G = 309
   • COPIER > ADJUST > CCD > DFTAR-B = 307
   • COPIER > ADJUST > CCD > DFTAR-BW = 315
2) Set white paper used by user as usual on the Copyboard glass unit and then close the ADF unit.
3) Select following service mode.
   • COPIER > FUNCTION > CCD > DF-WLVL1
4) Press OK key and then the automatic adjustment is executed. After the automatic adjustment, "executing" disappears.
5) Remove the paper from the copyboard glass unit and then set it on the document tray of the ADF Unit.
6) Select following service mode.
   • COPIER > FUNCTION > CCD > DF-WLVL2
7) Press OK key and then the automatic adjustment is executed. After the automatic adjustment, "executing" disappears.
8) Check the setting value is changed. When it is not changed, readjust from procedure 1) to 7).
9) Test copy with paper used by user as usual. When image error occurs, readjust procedure from 1) to 8).
10) Set white paper used by user as usual on the copyboard glass unit and then close the ADF unit.
11) Select following service mode.
   • COPIER > FUNCTION > CCD > DF-WLVL3
12) Press OK key and then the automatic adjustment is executed. After the automatic adjustment, "executing" disappears.
13) Remove the paper from the copyboard glass unit and then set it on the document tray of the ADF Unit.
14) Select following service mode.

   • COPIER > FUNCTION > CCD > DF-WLVL4
15) Press OK key and then the automatic adjustment is executed. After the automatic adjustment, "executing" disappears.
16) Check the setting value is changed. When it is not changed, readjust from procedure 10) to 15).
17) Test copy with paper used by user as usual. When image error occurs, readjust procedure from 10) to 16).

● Adjustment of Image Position

5-5

5 Adjustment > Actions when Replacing Parts > Original Exposure and Feed System (Reader Unit) > Actions when Replacing the CIS Unit

5 Adjustment > Actions when Replacing Parts > Original Exposure and Feed System (Reader Unit) > Actions when Replacing the Copyboard Glass Unit

5-6

■ Actions when Replacing the Copyboard Glass Unit

Execute following procedure when replacing the copyboard glass unit.

No.	Item	Reference
1	Entering white level data of the standard white plate	"Entering White Level Data of the Standard White Plate"(page 5-6).
2	Automatic gain offset adjustment for the CIS unit	"Automatic Gain Offset Adjustment for the CIS unit"(page 5-6).
3	Adjust of image reading start position	"Adjustment of Image Reading Start Position"(page 5-6).
4	Automatic white level adjustment	"Automatic White Level Adjustment"(page 5-7).
5	Adjustment of image position	"Original Exposure and Feed System (Reader Unit)"(page 5-14).

T-5-6

● Entering White Level Data of the Standard White Plate

1) Select following service mode.
   • COPIER> ADJUST> CCD> W-PLT-X/Y/Z
2) Enter the value from the barcode label on the Copyboard Glass.

● Automatic Gain Offset Adjustment for the CIS unit

1) Rewrite "1000" for the setting value on following service mode.
   • COPIER >ADJUST > CCD > LED-BW-R, BW-G, BW-B = 1000
2) Rewrite "1000" for the setting value on following service mode.
   • COPIER >ADJUST > CCD > LED-CL-R, CL-G, CL-B = 1100
3) Select following service mode.
   • COPIER > FUNCTION > CCD > CL-AGC, BW-AGC
4) Press OK key and then the automatic adjustment is executed. After the automatic adjustment, "executing" disappears.
5) Check the setting value is changed. When it is not changed, readjust from procedure 1) to 4).

● Adjustment of Image Reading Start Position

> CAUTION:
>
> After the setting value is changed, write the changed value on the service label.

1) Enter "-20" for the setting value on following service mode.
   • COPIER > ADJUST > ADJ-XY >STRD-POS = -20
2) Select following service mode.
   • COPIER >FUNCTION > INSTALL > STRD-POS
3) Press OK key and then the automatic adjustment is executed. After the automatic adjustment, "executing" disappears.
4) Check the setting value is changed. When it is not changed, readjust from procedure 1) to 4).

5 Adjustment > Actions when Replacing Parts > Original Exposure and Feed System (Reader Unit) > Actions when Replacing the Copyboard Glass Unit

5-6

5 Adjustment > Actions when Replacing Parts > Original Exposure and Feed System (Reader Unit) > Actions when Replacing the Copyboard Glass Unit

5-7

● Automatic White Level Adjustment

> **CAUTION:**
>
> The adjustment is to match white level by stream reading with white level by copyboard reading. It may occur following error without the adjustment.
>
> - Inappropriate background density of images in stream reading
> - Dust detection error in stream reading

1) Enter the setting value for each on following service mode.
   - COPIER > ADJUST > CCD > DFTAR-R = 209
   - COPIER > ADJUST > CCD > DFTAR-G = 309
   - COPIER > ADJUST > CCD > DFTAR-B = 307
   - COPIER > ADJUST > CCD > DFTAR-BW = 315
2) Set white paper used by user as usual on the copyboard glass unit and then close the ADF unit.
3) Select following service mode.
   - COPIER > FUNCTION > CCD > DF-WLVL1
4) Press OK key and then the automatic adjustment is executed. After the automatic adjustment, "executing" disappears.
5) Remove the paper from the copyboard glass unit and then set it on the document tray of the ADF Unit.
6) Select following service mode.
   - COPIER > FUNCTION > CCD > DF-WLVL2
7) Press OK key and then the automatic adjustment is executed. After the automatic adjustment, "executing" disappears.
8) Test copy with paper used by user as usual. When image error occurs, readjust procedure from 1) to 7).
9) Set white paper used by user as usual on the copyboard glass unit and then close the ADF unit.
10) Select following service mode.
   - COPIER > FUNCTION > CCD > DF-WLVL3
11) Press OK key and then the automatic adjustment is executed. After the automatic adjustment, "executing" disappears.
12) Remove the paper from the copyboard glass unit and then set it on the document tray of the ADF Unit.
13) Select following service mode.
   - COPIER > FUNCTION > CCD > DF-WLVL4
14) Press OK key and then the automatic adjustment is executed. After the automatic adjustment, "executing" disappears.
15) Test copy with paper used by user as usual. When image error occurs, readjust procedure from 9) to 14).
16) Exit service mode.

● Adjustment of Image Position

5-7

5 Adjustment > Actions when Replacing Parts > Original Exposure and Feed System (Reader Unit) > Actions when Replacing the Copyboard Glass Unit

5 Adjustment > Actions when Replacing Parts > Original Exposure and Feed System (ADF) > Actions when Replacing the ADF Unit

5-8

Original Exposure and Feed System (ADF)

■ Actions when Replacing the ADF Unit

Execute following procedure when replacing ADF Unit.

No.	Item	Reference
1	Automatic White Level Adjustment	"Automatic White Level Adjustment"(page 5-8).
2	Adjustment of image position	"Original Exposure and Feed System (Reader Unit)"(page 5-14).

T-5-7

● Automatic White Level Adjustment

CAUTION:

The adjustment is to match white level by stream reading with white level by copyboard reading. It may occur following error without the adjustment.
- Inappropriate background density of images in stream reading
- Dust detection error in stream reading

1) Enter the setting value for each on following service mode.
   - COPIER > ADJUST > CCD > DFTAR-R = 209
   - COPIER > ADJUST > CCD > DFTAR-G = 309
   - COPIER > ADJUST > CCD > DFTAR-B = 307
   - COPIER > ADJUST > CCD > DFTAR-BW = 315
2) Set white paper used by user as usual on the copyboard glass unit and then close the ADF unit.
3) Select following service mode.
   - COPIER > FUNCTION > CCD > DF-WLVL1
4) Press OK key and then the automatic adjustment is executed. After the automatic adjustment, "executing" disappears.
5) Remove the paper from the copyboard glass unit and then set it on the document tray of the ADF Unit.
6) Select following service mode.
   - COPIER > FUNCTION > CCD > DF-WLVL2
7) Press OK key and then the automatic adjustment is executed. After the automatic adjustment, "executing" disappears.
8) Test copy with paper used by user as usual. When image error occurs, readjust procedure from 1) to 7).

9) Set white paper used by user as usual on the copyboard glass unit and then close the ADF unit.
10) Select following service mode.
   - COPIER > FUNCTION > CCD > DF-WLVL3
11) Press OK key and then the automatic adjustment is executed. After the automatic adjustment, "executing" disappears.
12) Remove the paper from the copyboard glass unit and then set it on the document tray of the ADF Unit.
13) Select following service mode.
   - COPIER > FUNCTION > CCD > DF-WLVL4
14) Press OK key and then the automatic adjustment is executed. After the automatic adjustment, "executing" disappears.
15) Test copy with paper used by user as usual. When image error occurs, readjust procedure from 9) to 14).
16) Exit service mode.

● Adjustment of Image Position

"Original Exposure and Feed System (Reader Unit)"(page 5-14).

5-8

5 Adjustment > Actions when Replacing Parts > Original Exposure and Feed System (ADF) > Actions when Replacing the ADF Unit

Main Controller PCB

■ Actions when Replacing the Main Controller PCB

< Preparation >

Back up user data (settings, registered data, etc.) and service mode data for setting and registration after PCB replacement. Take notes if data is unable to back up.

1) In Remote UI, perform the following procedure to export the user data (login in administrator mode).
   In Setting/Registration > Import/Export > Menu > Export, select an item and then start export.
2) In service mode, perform the following procedure to export the service mode data (and then import it after replacement).
   COPIER > FUNCTION > SYSTEM > EXPORT
3) Record the default settings shown on the service label (these are entered after replacement).

< Procedure >

> NOTE:
> In the case of a model without the reader, start from step 5).

1) Turning ON the power.
2) Execute COPIER > FUNCTION > CLEAR > R-CON.
3) Entering the Setting Value from the Service Label (W-PLT-X/Y/Z)
   3-1) Enter the setting value of W-PLT-X/Y/Z from the service label printed inside of the rear cover by following service mode.
   • COPIER> ADJUST> CCD> W-PLT-X/Y/Z

F-5-1

4) Automatic Gain Offset Adjustment for the CIS unit
   4-1) Rewrite "1000" for the setting value on following service mode.
   • COPIER >ADJUST > CCD > LED-BW-R, BW-G, BW-B = 1000
   4-2) Rewrite "1100" for the setting value on following service mode.
   • COPIER >ADJUST > CCD > LED-CL-R, CL-G, CL-B = 1100
   4-3) Press "OK" for each on following service mode.
   • COPIER > FUNCTION > CCD > CL-AGC, BW-AGC
   4-4) After the automatic adjustment, "executing" disappears.
   4-5) Check the setting value is changed. When it is not changed, readjust from procedure 4-1) to 4-4).

5) Enter the All Setting Value other than W-PLT-X/Y/Z from the Service Label
   5-1) Enter the all setting value other than W-PLT-X/Y/Z from the service label printed inside of the rear cover.

F-5-2

6) Set the paper size group.
   • COPIER > OPTION > BODY > SIZE-LC (setting the paper size group)
   [Setting value]
   1: AB configuration, 2: Inch configuration, 3: A configuration, 4: AB/Inch configuration

7) Clearing the Settings/Registration data

Execute COPIER > FUNCTION > CLEAR > ALL.

When executing this item, the following data is cleared according to the values of SIZE-LC set in step 6).

- Settings/Registration data
- Service mode data
- Job ID
- Each log data
- Date data

Note that the following data is not cleared.

- Service counter
- Adjustment value of Reader/DADF

8) Execute COPIER > FUNCTION > VIFFNC > STOR-DCN (the setting value of Engine Controller is backed up.)

9) Turn OFF and then ON the power.

10)   Import the service mode data backed up before replacement.

Insert the USB memory storage device to the slot of the machine, and execute COPIER > FUNCTION > SYSTEM > IMPORT.

11)   Import user data using remote UI.

12)   Uninstall Old Drivers.

- Printer Driver
- FAX Driver
- Scanner Driver
- Network Scan Utility. (for machines with network connection)

* For details on the uninstallation procedures, see the driver installation manuals that are included with the drivers.

13)   Install the drivers which have been uninstalled in step 12.

* For details on the installation procedures, see the driver installation manuals that are included with the drivers.

NOTE:
MAC address information is changed after replacement of the Main Controller PCB. Therefore, when the PC and the machine are connected by the network, the PC will not be able to recognize the machine on the network. When the PC and the machine are connected by the USB memory device, the PC will not be able to recognize the machine if the USB ID is changed. It becomes therefore necessary to reinstall the driver.

In the case of a model without fax for EUR , perform the following works.

NOTE:
After replacing the Main Controller PCB, the value of the service mode (SDTM-DSP) to set whether to display or hide the automatic shutdown menu becomes "0" (default value).
In that case, the automatic shutdown menu is not displayed on the LUI of the machine. To display the automatic shutdown menu on the LUI of the machine, it is necessary to execute this process.

1) Setting of automatic shutdown menu display

Set 1 for automatic shutdown menu display in service mode (default: 0).

COPIER > OPTION > BODY > SDTM-DSP

2) Turn OFF and then ON the main power.

3) Checking the setting of Auto Sleep Time

In setting menu, check that the setting value of Auto Sleep Time is 1. (If the setting value is 0, automatic shutdown does not work.)

Menu > Timer Settings > Auto Shutdown Time

5 Adjustment > Actions when Replacing Parts > Engine Controller PCB > Actions when Replacing the Engine Controller PCB

5-11

● Engine Controller PCB

■ Actions when Replacing the Engine Controller PCB

< Preparation >

1) Backup of Engine Controller PCB service mode setting values.

Execute the following: COPIER > FUNCTION > VIFFNC > STOR-DCN

2) Turn OFF the main power when the above work is complete.

< Procedure >

1) Restore the backup data.

Execute the following: COPIER > FUNCTION > VIFFNC > RSTR-DCN

2) When backup data cannot be uploaded before replacement due to reasons such as

damage of the Engine Controller PCB, enter the value of each service mode item described

on the service label.

3) Turn OFF and then ON the power (For accurate reflection of the restored items).

5-11

5 Adjustment > Actions when Replacing Parts > Engine Controller PCB > Actions when Replacing the Engine Controller PCB

5 Adjustment > Adjustment of Image Position > Pickup/ Feed System > Adjustment of Image Leading Edge Margin (front side)

5-12

Adjustment of Image Position

Pickup/ Feed System

> CAUTION:
>
> After the setting value is changed in the service mode, write the changed value on the service label.

Print 10 sheets of paper by 1-sided / 2-sided from each pickup parts. Check that the image margin and the non-image width are within the standard. Execute adjustment as follows when it is out of standard.

■ Adjustment of Image Leading Edge Margin (front side)

● Adjustment for Each Cassette and Multi-purpose Tray

Print sheets of paper from each pickup parts and then check that L1 (image leading edge margin) on front side is within 2.5+/-1.5mm. Execute adjustment as follows when it is out of standard.

F-5-3

Adjustment Procedure

1) Adjustment the setting value on following service mode.
   - Cassette 1: COPIER > ADJUST > FEED-ADJ > REG-CST
   - Cassette 2: COPIER > ADJUST > FEED-ADJ > REG-CST2
   - Multi-purpose tray: COPIER > ADJUST > FEED-ADJ > REG-MF, REG-MF2

> NOTE:
> - Setting range: -12 to 12 (0.5mm by 1 setting value)
> - L1 increases 0.5mm by setting value 1.

2) Exit service mode.
3) Print sheets of paper by 1-sided from each pickup parts and then check that L1 on front side is within the 2.5+/-1.5mm. Return to procedure 1) when it is out of standard.
4) After the setting value is changed, write the changed value on the service label.

5-12

5 Adjustment > Adjustment of Image Position > Pickup/ Feed System > Adjustment of Image Leading Edge Margin (front side)

5 Adjustment > Adjustment of Image Position > Pickup/ Feed System > Adjustment of Left Edge Margin of the Image (front side)

5-13

■ Adjustment of Image Leading Edge Margin (back side)

Print sheets of paper from each pickup parts and then check that L1 (image leading edge margin) on back side is within 2.5+/-2.0mm. Execute adjustment as follows when it is out of standard.

L1

F-5-4

Adjustment Procedure

1) Adjustment the setting value on following service mode.
   - 2-sided: COPIER > ADJUST > FEED-ADJ > REG-DUP (rear)

NOTE:
- Setting range: -12 to 12 (0.5mm by 1 setting value)
- L1 increases 0.5mm by setting value 1.

2) Exit service mode.
3) Print sheets of paper by 2-sided from each pickup parts and then check that L1 on back side is within 2.5+/-2.0mm. Return to procedure 1) when it is out of standard.
4) After the setting value is changed, write the changed value on the service label.

■ Adjustment of Left Edge Margin of the Image (front side)

● Adjustment for Each Cassette and Multi-purpose Tray

Print sheets of paper from each cassette and multi-purpose tray. Check that L1 (left edge margin) on front side is within 2.5+/-1.5mm. Execute adjustment as follows when it is out of standard.

NOTE:
Adjusting L1 on front side is also applied to the back side.

L1

F-5-5

1) Adjustment the setting value on following service mode.
   - Cassette 1: COPIER > ADJUST > FEED-ADJ > ADJ-C1
   - Cassette 2: COPIER > ADJUST > FEED-ADJ > ADJ-C2
   - Multi-purpose tray: COPIER > ADJUST > FEED-ADJ > ADJ-MF

NOTE:
- Setting range: -12 to 12 (0.25mm by 1 setting value)
- L1 increases 0.25mm by setting value 1.

2) Exit service mode.
3) Print sheets of paper from each cassette and multi-purpose tray. Check that L1 on front side is within 2.5+/-1.5mm. Return to procedure 1) when it is out of standard.
4) After the setting value is changed, write the changed value on the service label.

5-13

5 Adjustment > Adjustment of Image Position > Pickup/ Feed System > Adjustment of Left Edge Margin of the Image (front side)

5 Adjustment > Adjustment of Image Position > Original Exposure and Feed System (Reader Unit) > Adjustment of Image Leading Edge Margin (1-sided)

5-14

■ Adjustment of Left Edge Margin of the Image (back side)

Print sheets of paper by 2-sided from cassette 1 and then check that L1 (left edge margin) on back side is within 2.5+/-2.0mm. Execute adjustment as follows when it is out of standard.

> NOTE:
> Adjusting L1 on back side is also applied to the back side from all pickup parts.

L1

F-5-6

1) COPIER > ADJUST > FEED-ADJ > ADJ-REFE Adjust the setting value on following service mode.

> NOTE:
> • Setting range: -12 to 12 (0.25mm by 1 setting value)
> • L1 increases 0.25mm by setting value 1.

2) Exit service mode.

3) Print sheets of paper by 2-sided from cassette 1 and then check that L1 on back side is within 2.5+/-2.0mm. Return to procedure 1) when it is out of standard.

4) After the setting value is changed, write the changed value on the service label.

● Original Exposure and Feed System (Reader Unit)

Set the test chart on the reader unit and then print 1 sheet of paper. Check that the image margin and the non-image width are within the standard. Execute adjustment as follows when it is out of standard.

> CAUTION:
> After the setting value is changed in the service mode, write the changed value on the service label.

■ Adjustment of Image Leading Edge Margin (1-sided)

Check that L1 (image leading edge margin) is within 2.5 +/- 2.0 mm. Execute adjustment as follows when it is out of standard.

Adjustment Procedure

1) Adjust the setting value on following service mode.
  • COPIER > ADJUST > ADJ-XY > ADJ-X

> NOTE:
> • Setting range: -30 to 30 (0.1mm by 1 setting value)
> • L1 increases 0.1mm by setting value 1.

L1

F-5-7

2) Exit service mode.

3) Print sheets of paper by 1-sided on the reader unit and then check that L1 is within 2.5+/-1.5mm. Return to procedure 1) when it is out of standard.

4) After the setting value is changed, write the changed value on the service label.

5-14

5 Adjustment > Adjustment of Image Position > Original Exposure and Feed System (Reader Unit) > Adjustment of Image Leading Edge Margin (1-sided)

5 Adjustment > Adjustment of Image Position > Original Exposure and Feed System (ADF Unit) > Adjustment of Image Leading Edge Margin (1-sided)

5-15

■ Adjustment of Left Edge Margin of the Image (1-side)

Check that L1 (left edge margin of the image) is within 2.5 +/- 2.0 mm. Execute adjustment as follows when it is out of standard.

Adjustment Procedure

1) Adjust the setting value on following service mode.
   - COPIER > ADJUST > ADJ-XY > ADJ-Y

NOTE:
- Setting range: -16 to 16 (0.1mm by 1 setting value)
- L1 increases 0.1mm by setting value 1.

F-5-8

2) Exit service mode.
3) Print sheets of paper by 1-sided on the reader unit and then check that L1 is within 2.5+/- 2.0mm. Return to procedure 1) when it is out of standard.
4) After the setting value is changed, write the changed value on the service label.

● Original Exposure and Feed System (ADF Unit)

CAUTION:

After the setting value is changed in the service mode, write the changed value on the service label.

Set the test chart on the ADF unit and then print 1 sheet of paper. Check that the image margin and the non-image width are within the standard. Execute adjustment as follows when it is out of standard.

■ Adjustment of Image Leading Edge Margin (1-sided)

Check that L1 (image leading edge margin) is within 2.5 +/- 1.5mm. Execute adjustment as follows when it is out of standard.

Adjustment Procedure

1) Adjust the setting value on following service mode.
   - FEEDER > ADJUST > DOCST

NOTE:
- Setting range: -50 to 50 (0.1mm by 1 setting value)
- L1 decreases 0.1mm by setting value 1.

F-5-9

2) Exit service mode.
3) Print sheets of paper by 1-sided on the ADF unit and then check that L1 is within 2.5+/- 1.5mm. Return to procedure 1) when it is out of standard.
4) After the setting value is changed, write the changed value on the service label.

5-15

5 Adjustment > Adjustment of Image Position > Original Exposure and Feed System (ADF Unit) > Adjustment of Image Leading Edge Margin (1-sided)

5 Adjustment > Adjustment of Image Position > Original Exposure and Feed System (ADF Unit) > Adjustment of Image Leading Edge Margin (back side)

5-16

■ Adjustment of Image Leading Edge Margin (front side)

Check that L1 (image leading edge margin) on front side is within 2.5 +/- 2.0mm. Execute adjustment as follows when it is out of standard.

Adjustment Procedure

1) Adjust the setting value on following service mode.
   - FEEDER > ADJUST > DOCSTDUP

NOTE:
- Setting range: -50 to 50 (0.1mm by 1 setting value)
- L1 decreases 0.1mm by setting value 1.

L1

F-5-10

2) Exit service mode.
3) Print sheets of paper by 2-sided on the ADF unit and then check that L1 on front side is within 2.5+/-2.0mm. Return to procedure 1) when it is out of standard.
4) After the setting value is changed, write the changed value on the service label.

■ Adjustment of Image Leading Edge Margin (back side)

Check that L1 (image leading edge margin) on back side is within 2.5 +/- 2.0mm. Execute adjustment as follows when it is out of standard.

Adjustment Procedure

1) Adjust the setting value on following service mode.
   - FEEDER > ADJUST > DOCST2

NOTE:
- Setting range: -50 to 50 (0.1mm by 1 setting value)
- L1 decreases 0.1mm by setting value 1.

L1

F-5-11

2) Exit service mode.
3) Print sheets of paper by 2-sided on the ADF unit and then check that L1 on back side is within 2.5+/-2.0mm. Return to procedure 1) when it is out of standard.
4) After the setting value is changed, write the changed value on the service label.

5-16

5 Adjustment > Adjustment of Image Position > Original Exposure and Feed System (ADF Unit) > Adjustment of Image Leading Edge Margin (back side)

5   Adjustment > Adjustment of Image Position > Original Exposure and Feed System (ADF Unit) > Adjustment of Left Edge Margin of the Image (back side)

5-17

■ Adjustment of Left Edge Margin of the Image (front side)

Check that L1 (left edge margin of the image) on front side is within 2.5 +/- 2.0mm. Execute adjustment as follows when it is out of standard.

Adjustment Procedure

1) Adjust the setting value on following service mode.
   - COPIER > ADJUST > ADJ-XY > ADJ-Y-DF

> NOTE:
> - Setting range: -16 to 16 (0.1mm by 1 setting value)
> - L1 increases 0.1mm by setting value 1.

L1

F-5-12

2) Exit service mode.
3) Print sheets of paper by 2-sided on the ADF unit and then check that L1 on front side is within 2.5+/-2.0mm. Return to procedure 1) when it is out of standard.
4) After the setting value is changed, write the changed value on the service label.

■ Adjustment of Left Edge Margin of the Image (back side)

Check that L1 (left edge margin of the image) on back side is within 2.5 +/- 2.0mm. Execute adjustment as follows when it is out of standard.

Adjustment Procedure

1) Adjust the setting value on following service mode.
   - COPIER > ADJUST > ADJ-XY > ADJ-Y-DF2

> NOTE:
> - Setting range: -16 to 16 (0.1mm by 1 setting value)
> - L1 increases 0.1mm by setting value 1.

L1

F-5-13

2) Exit service mode.
3) Print sheets of paper by 2-sided on the ADF unit and then check that L1 on back side is within 2.5+/-2.0mm. Return to procedure 1) when it is out of standard.
4) After the setting value is changed, write the changed value on the service label.

5-17

5   Adjustment > Adjustment of Image Position > Original Exposure and Feed System (ADF Unit) > Adjustment of Left Edge Margin of the Image (back side)

5 Adjustment > Adjustment of Image Position > Original Exposure and Feed System (ADF Unit) > Adjustment of Magnification Ratio (back side)

5-18

■ Adjustment of Magnification Ratio (front side)

Check that L1 (magnification ratio) on front side is within +/-0.5%. Execute adjustment as follows when it is out of standard.

Adjustment Procedure

1) Adjust the setting value on following service mode.
  • FEEDER > ADJUST > LA-SPD

> NOTE:
> • Setting range: -200 to 200 (0.01% by 1 setting value)
> • The image decreases 0.01% in vertical direction by setting value 1.

L1

F-5-14

2) Exit service mode.
3) Print sheets of paper by 1-sided on the ADF unit and then check that L1 on front side is within +/-0.5%. Return to procedure 1) when it is out of standard.
4) After the setting value is changed, write the changed value on the service label.

■ Adjustment of Magnification Ratio (back side)

Check that L1 (magnification ratio) on back side is within +/-0.5%. Execute adjustment as follows when it is out of standard.

Adjustment Procedure

1) Adjust the setting value on following service mode.
  • FEEDER > ADJUST > LA-SPD2

> NOTE:
> • Setting range: -200 to 200 (0.01% by 1 setting value)
> • The image decreases 0.01% in vertical direction by setting value 1.

L1

F-5-15

2) Exit service mode.
3) Print sheets of paper by 2-sided on the ADF unit and then check that L1 on back side is within +/-0.5%. Return to procedure 1) when it is out of standard.
4) After the setting value is changed, write the changed value on the service label.

5-18

5 Adjustment > Adjustment of Image Position > Original Exposure and Feed System (ADF Unit) > Adjustment of Magnification Ratio (back side)

6

Troubleshooting

- ■Initial Check
- ■Test Print
- ■Troubleshooting Items
- ■Version Upgrade
- ■Debug Log

Initial Check

Initial Check Item List

Item	No.	Detail	Check
Site Environment	1	The voltage of the power supply is as rated (+/-10%).	
	2	The site is not a high temperature / humidity environment (near a water faucet, water boiler, humidifier), and it is not in a cold place. The machine is not near a source of fire or dust.	
	3	The site is not subject to ammonium gas.	
	4	The site is not exposed to direct rays of the sun. (Otherwise, provide curtains.)	
	5	The site is well ventilated, and the floor keeps the machine level.	
	6	The machine's power plug remains connected to the power outlet.	
Checking the Paper	7	The paper is of a recommended type.	
	8	The paper is not moist. Try paper fresh out of package.	
Checking the Placement of Paper	9	Check the cassette and the manual feed tray to see if the paper is not in excess of a specific level.	
	10	If a transparency is used, check to make sure that it is placed in the correct orientation in the manual feed tray.	
Checking the Durables	11	Check the table of durables to see if any has reached the end of its life.	
Checking the Periodically Replaced Parts	12	Check the scheduled servicing table and the periodically replaced parts table, and replace any part that has reached the time of replacement.	

T-6-1

Each Unit / Function System Check Item List

Item	No.	Detail	Check
Reader	1	Check that there is no cut, dirt or any foreign particle on the scanner system parts.	
	2	Check that the CIS unit moves smoothly and there is no dirt on the rail.	
	3	Check that the lump light does not blink.	
	4	Check that there is no dew condensation found on the scanning system parts.	
Image formation system	1	Check that the drum unit and developing assembly are properly installed.	
	2	Check that there is no cut and dirt on the photosensitive drum.	
	3	Check that the transfer roller is not worn and deformed and has no cut/dirt.	

Item	No.	Detail	Check
Fixing system	1	Check that the fixing film and pressure roller is not worn and deformed and has no cut/dirt.	
	2	Check that the fixing thermistor wire is not cut.	
	3	Check that there is electrical conductivity among thermo switch.	
Pickup feed system	1	Check that there is no foreign particle such as paper dust etc.	
	2	Check that the pickup/feed/separation roller does not accumulate the paper dust. Check that these rollers are not worn and deformed and have no cut/dirt.	
	3	Check that the registration roller/paper path roller is not worn and deformed and has no cut/dirt.	
	4	Check that the feed guide is not worn and deformed and has no cut/dirt.	
	5	Check that there is no edge fold/curl/wave/moisture absorption occurred on the paper.	
	6	Check if using Canon recommended paper/transparency makes it better or not.	
Drive system	1	Check that the drive system does not get heavy load.	
	2	Check that the gear is not worn and not get chipped.	
Cassette	1	Check that the cassette is installed properly and the paper size is configured properly. Check if the symptom appears or not after replacing the cassette with the cassette that works normally.	
	2	Check that the cassette middle plate moves smoothly and is not deformed.	
	3	Check that the cassette side guide plate/ trailing edge guide plate is properly set.	
General	1	Check that the sensor/clutch/motor/solenoid works properly (Make sure to check the power source and signal transmission route with the general circuit diagram).	
	2	Check that there is no wire wedged/screw loosened.	
	3	Check that all the external covers are installed.	
	4	Check that the main power switch/control panel power switch is ON.	
	5	Check that the wiring of power cable/signal cable to each option is properly installed.	
	6	Check that the fuse on each PCB does not burn out.	
	7	Check that there is no error in customer's usage method.	

Item	No.	Detail	Check
Others	1	If moving the machine from the cold place such as storage etc to a warm place abruptly, dew condensation is generated inside machine and it may cause various troubles. • E100 occurs due to dew condensation on BD sensor. • Low image density in the vertical scanning direction due to dew condensation on the dust-proof glass. • Low image density due to dew condensation on the reader CIS and copyboard glass. • Paper feed failure due to dew condensation on the pickup, feed guide.	
	2	If the symptom appears described above, wipe the pickup/feed unit with dry cloth. Moreover, if storing the toner container/developing assembly/drum unit in the cold place and unpacking them abruptly in warm place, dew condensation may be generated. To prevent dew condensation, place them in warm place sufficiently (for 1 to 2 hours) before unpacking.	

T-6-2

Test Print

Overview

The host machine is equipped with following "test print TYPE" and an image failure can be checked with each test print TYPE which is processed on the main controller PCB (PCB2). If an image failure is not occured on the test print at normal printing, the error may be caused by the PDL input or reader side.

Select the Test Print TYPE

PG-TYPE	TYPE Pattern	Items									
		Gradation	Fogging	Transfer Fault	Black line	White line	Uneven Pitch	Front/Rear Uneven Density	Right Angle	Straight Lines	Magnification Ration
0	Grid	-	-	-	-	-	-	-	Yes	Yes	Yes
1	Half Tone	-	-	Yes	Yes	Yes	Yes	Yes	-	-	-
2	Solid Density (black)	-	-	Yes	-	Yes	Yes	Yes	-	-	-
3	Solid Density (white)	-	-	-	Yes	-	-	-	-	-	-
4	17-Gradation	Yes	Yes	-	-	Yes	-	Yes	-	-	-
5 to 7	(For R&D)	-	-	-	-	-	-	-	-	-	-

T-6-3

■ Procedure

1) Select PG TYPE on the following service mode.

- TESTMODE > PRINT > PG-TYPE

How to View the Test Print

■ Grid (TYPE = 0)

F-6-1

Check item	Check method	Assumed cause
Right angle accuracy/ Straight line accuracy	Check whether lines in the horizontal/ vertical scanning directions are paralleled to the paper and these lines are at right angles to one another.	Feed system failure or Laser Scanner Unit failure is considered.
Magnification ratio	Check whether the grid is printed at 9.99mm intervals. (Check the image on the second side at duplex printing.)	Roller's feed system failure or laser exposure system failure (drum, Laser Scanner) is considered.

T-6-4

■ Halftone (TYPE = 1)

F-6-2

Check item	Check method	Assumed cause
Transfer failure	Check the evenness of halftone density. Check whether uneven image or foggy image appears.	Transfer system failure or transfer roller failure is considered.
Black line	Check whether black lines appear on the image.	Laser light path failure, grid failure, developing system failure, cleaning (drum) failure or transfer roller failure is considered.
White line	Check whether white lines appear on the image.	Developing system failure is considered.
Uneven pitch	Check whether lines appear on the image in the horizontal scanning direction.	Drum failure, developing system failure, laser exposure system failure or drive related failure is considered.
Uneven density	Check the density difference between the front and rear sides.	Drum failure or developing system failure is considered.

T-6-5

■ Solid black (TYPE = 2)

F-6-3

Check item	Check method	Assumed cause
Transfer failure	Check the evenness of halftone density. Check whether uneven image or foggy image appears.	Transfer system failure or transfer roller failure is considered.
White line	Check whether white lines appear on the image.	Developing system failure is considered.
Uneven pitch	Check whether lines appear on the image in the horizontal scanning direction.	Drum failure, developing system failure, laser exposure system failure or drive related failure is considered.
Uneven density	Check the density difference between the front and rear sides.	Drum failure or developing system failure is considered.

T-6-6

■ Solid white (TYPE = 3)

F-6-4

Check item	Check method	Assumed cause
Black line	Black line Check whether black lines appear on the image.	Laser light path failure, developing system failure, cleaning (drum) failure or transfer roller failure is considered.

T-6-7

■ 17 gradations (TYPE = 4)

F-6-5

Check item	Check method	Assumed cause
Gradation	Check whether gradation in density is made appropriately.	Drum failure, laser exposure system failure or developing system failure is considered.
Fogging	Check whether foggy image appears in the blank area.	Drum failure, laser exposure system failure or developing system failure is considered.
Black line	Black line Check whether black lines appear on the image.	Laser light path failure, developing system failure, cleaning (drum) failure or transfer roller failure is considered.
Transfer failure	Check the evenness of halftone density. Check whether uneven image or foggy image appears.	Transfer system failure or transfer roller failure is considered.

T-6-8

Troubleshooting Items

Troubleshooting Items

Category		Item	Reference
Image failure	Dirt	Edge dirt	p. 6-8
	Void	Feed failure	p. 6-9
	-	Irregular pitch (94mm) of the drum unit	p. 6-9
Operation failure	Paper jam	Large curl	p. 6-10

T-6-9

Image Failure

■ Edge Dirt

F-6-6

● Location

Paper path

● Cause

Floating toner in the host machine stains paper by paper feeding.

● Condition

When floating toner occurs.

● Field Remedy

Clean paper path.

■ Feed Failure

F-6-7

● Location

Feed roller

● Cause

Amount of charge, only at a part where the roller contacts, is changed by friction between the feed roller and paper so that amount of toner, transfers to paper, is changed.

● Condition

It occurs at high printing chart such as halftone and black when static electricity eliminating is decreased.

● Field Remedy

Adjustment/Maintenance > Special Processing > Special Mode M (Transfer failure prevention mode)

■ Irregular pitch (94mm) of the drum unit

F-6-8

● Location

Drum unit : approx. 94mm pitch

● Cause

Remaining toner adheres surface of the drum unit by vibration caused when the drum unit is re-installed or re-rotates, as amount of toner adhesion is larger than the developing process, the drum unit is vibrated by load while the cleaning blade is removing remaining toner. As a result, laser beam exposure is blurred by the vibration and an irregular pitch occurs.

● Condition

High temperature / High humidity

● Field Remedy

Adjustment/Maintenance > Special Processing > Special Mode Y (Extend initial rotation mode)

Operation Failure

■ Large Curl

● Location

Fixing Assembly

● Cause

Curl is increased when water amount of the paper on surface and back are changed by high fixing temperature.

● Condition

Paper stored at high temperature and high humidity for a long time.

● Field Remedy

Adjustment/Maintenance > Special Processing > Special Mode N (Curl correction mode)

Special mode (User mode)

The setting of the special mode in user mode is described below.

- Settings/Registration > Adjustment/Maintenance > Special Processing Settings/Registration > Adjustment/Maintenance > Special Processing

Special Mode O	
Outline	Separation priority mode
Use case	When separation failure from the drum unit occurs
Details	Increase separation bias output in a area of leading edge of paper at -2500V (duty 89.2%). Other than the above area is used separation bias output on separation bias setting mode or normal mode.
Set range	OFF, ON
Default value	OFF
Special Mode M	
Outline	Transfer failure prevention mode
Use case	When transfer failure occurs by low / high transfer output
Details	Change transfer current value setting.
Set range	HIGH DOWN, DOWN, OFF, UP, HIGH UP
Default value	OFF
Special Mode N	
Outline	Curl correction mode
Use case	When paper jam occurs in 2-sided printing using the curled paper and absorbed moisture paper.
Details	Paper jam frequently occurs when performing 2-sided printing, especially with the curled paper and absorbed moisture paper. In this case, change the setting value to Mode 1 (N1 mode) or Mode 2 (N3 mode). • N1 mode: Lower the fixing target temperature for plain paper. • N3 mode: The through-put decreases during the wait.
Set range	AUTO, OFF, N1 Mode, N3 Mode
Default value	AUTO

Special Mode S	
Outline	Performance priority mode
Use case	Shorten the wait after changing paper size
Details	Cooling down operation is controlled without dropping the through-put as far as possible. The temperature judgement value of the fixing sub thermistor is changed between the start of cooling down and the end in the last rotation.
Set range	OFF(190 deg C), ON(220 deg C)
Default value	OFF

Special Mode P	
Outline	Thin paper mode
Use case	When paper cling or high-temperature offset occurs with out-of-specific thin paper.
Details	Control paper cling while changing following conditions. Transfer • Turns ON at 8mm inside of paper. • Turns OFF at the sheet-to-sheet. Separation • -2500V until 6mm inside of paper (leading edge strong bias) • -1500V other than the above (weak bias) Fixing temperature control • The target temperature in the "Thin paper mode" is set -10 deg C less than the target temperature during the wait, printing and sheet to sheet.
Set range	OFF, ON
Default value	OFF

Special Mode G	
Outline	Special setting for fixing mode
Use case	When electrostatic offsetting (adhere toner on the film) occurs.
Details	Extend initial rotation by sheet to sheet after print setting and charge positive film bias in order to remove the charge from the film.
Set range	Default, Low (processed by 38 sheet to sheet), High (processed by 6 sheet to sheet)
Default value	Default

Special Mode Y	
Outline	Extend initial rotation mode
Use case	When irregular pitch (94mm) horizontal streak occurs caused by shock as startup.
Details	Extend initial rotation to discharge frictional charging caused as remaining toner adheres surface of the drum unit at startup.
Set range	0: OFF 1: Mode 1 - Extend initial rotation in 3 sec 2: Mode 2 - Extend initial rotation in 7 sec
Default value	OFF

Special Mode X	
Outline	Streaks reduction mode (only for media printing and printing from PS/PCL printer driver)
Use case	When black streaks appears.
Details	Black streaks appears on printouts in condition of paper type or print environment. In such case, change the setting value. • Paper curl or crinkle may be improved without the setting when changing paper type or print environment. • Print speed becomes slow when Mode2 is set.
Set range	OFF, Mode1 (Effect: low), Mode2 (Effect: High)
Default value	OFF

Special Mode Z	
Outline	Streaks reduction mode (only for copying)
Use case	When black streaks appears.
Details	Black streaks appears on printouts in condition of paper type or print environment. In such case, change the setting value. • Paper curl or crinkle may be improved without the setting when changing paper type or print environment. • Print speed becomes slow when Mode2 is set.
Set range	OFF, Mode1 (Effect: low), Mode2 (Effect: High)
Default value	OFF

T-6-10

Version Upgrade

Overview

This machine supports the following two methods for upgrading the firmware.
1. User Support Tool (UST)
2. Via Internet

Upgrading by UST

Firm ware

USB cable

PC

F-6-9

Firmware configuration

Firmware	Function	Stored in
Boot ROM	Start the main controller.	Main controller PCB
Main Controller	Control overall performance.	Main controller PCB
LANGUAGE	Manage languages used in panel / Remote UI and font data.	Main controller PCB
DCON	Control the printer unit.	DC controller PCB

T-6-11

Some UST versions meet less numbers of firmware than those listed above.

■ System Requirements

- OS (one of the following)
    - Microsoft Windows Server 2003
    - Microsoft Windows Vista
    - Microsoft Windows Server 2008
    - Microsoft Windows 7
    - Microsoft Windows Server 2012
    - Microsoft Windows 8

- PC
    - Compatible to the selected OS
    - Memory (RAM): 32MB or more free space
    - Hard Disk: 100MB or more free space
    - Display: 640x480 pixels or more in resolution, 256 tones or more
    - With USB ports

- UST file for this product*
    - *: Download the corresponding file from the system CD or the service site (ask the service technician in charge for details)

- USB cable (USB1.1/2.0)

■ Preparation

1) Start the PC.
2) Connect the device to the PC with the USB cable.
3) Turn on the device on standby.
4) Press [Menu] key to upgrade firmware in User mode.
   System Settings > Update Firmware
   The message, "Will you restart the device to upgrade firmware?", is shown on the display.
   Select [Yes].
5) Press [OK] to automatically restart the device. "***DOWNLOAD MODE***" is shown on the display.
6) Wait for the motor of the host machine to stop.

> NOTE:
> Press STOP key to cancel Download mode and return to the normal operation.

■ Downloading System Software

1) Open UST.

USTUPD.exe

F-6-10

2) Take a note of the firmware version to upgrade and click [Next] button.

F-6-11

3) Click [Next] button.

F-6-12

4) Select [USB Device] and click [Next] button.

F-6-13

5) Click [Start] button.

F-6-14

6) Click [Yes] button for the warning message to start download.

F-6-15

7) Click [OK] button when download is completed.

F-6-16

8) Turn off and on the power to restart the device.

9) Output the spec report from Service mode to confirm if the firmware version is the same as that on the note taken in Step 2).

COPIER> FUNCTION> MISC-P> SPEC

Upgrading via Internet

Select to automatically install the firmware update without using a computer.

Preparation

1) Check that there are no other jobs being executed.
2) In an environment where access is obtained via a proxy server, the proxy setting is made from the remote UI.
3) Check that the serial number of the host machine is shown on the Main Controller PCB.

> NOTE:
> To upgrade the firmware of the host machine via Internet, the serial number of the machine need to be written on the Main Controller PCB.
> Execute COPIER > FUNCTION > MISC-P> SPEC, and check that the BODY No. is registered.
> If the BODY No. has not been registered, register the serial number.

Procedure

1) Press the [Menu] key, and update the firmware via the Internet in user mode.

System Management Settings > Update Firmware > Via Internet

> NOTE:
> • Refer to the User's Manual of the device for how to connect the device to the external network.
> • This is applicable either in a wired LAN environment or a wireless LAN environment.

Messages

The message displayed on the device operation panel is as follows.

No.	Error message	The timing of occurrence	Remedy
1	Job in progress... Wait a moment, then try again.	If there is a job being executed:	1. Wait until the job is completed. 2. Cancel the job.
2	Cannot check the firmware version. (Server communication error.)	Network error	1. Check whether the device can be connected to the external network. 2. Check whether the proxy setting has been made (in case of access via a proxy server).
3	Cannot download the firmware. (Error during download.)		1. Check whether the device can be connected to the external network. 2. Check whether the proxy setting has been made (in case of access via a proxy server). 3. Check that the serial number of the host machine is shown on the Main Controller PCB.
4	***DOWNLOAD MODE*** NETWORK AVAILABLE IP ADRESS IP address of the machine PRESS STOP KEY TO EXIT	If update (writing) of the firmware has ended in failure:	1. Update the firmware again using UST.
5	***DOWNLOAD MODE*** FAILED TO UPDATE		
6	***DOWNLOAD MODE*** UPDATE IS COMPLETE	If the update of the firmware is successful	-

T-6-12

Debug Log

Overview

■ Function Overview

The debug log is a log that analyzes the program behavior of the machine to enable developers to identify problems.
This machine is embedded with a function that compiles the log of the behavior of each software module as debug log and outputs it as integrated log for analyzing problems.
Be sure to collect the debug log when the Support Dept. of sales company so instructs. Note that there is no need for service technicians to check the content of collected debug log.

● Cases in which collection of debug log is effective

Collection of debug log is effective in the following cases:
- Neither the Support Dept. of sales company nor CINC can reproduce the trouble that occurred at the customer site
- When the error frequency is low
- When the failure is suspected to be due to firmware rather than a mechanical/electrical failure.

> NOTE:
> If the procedure for reproducing the failure is clear and the Support Dept. of sales company and CINC can reproduce it, collection of debug log is not necessary.

■ Conditions for collecting logs

● Conditions for not being able to collect logs

In the following cases, the procedure for obtaining logs is not required because logs cannot be obtained.
- Service mode screen cannot be accessed
- The machine cannot recognize a USB flash drive
- No USB port is installed in the machine (when the model has only a copy function)

● What is necessary to collect logs

A USB flash drive that satisfies the following conditions is required to obtain the debug logs of the machine:
- Formatted in FAT 16/FAT32
- With sufficient free space (of several MB)
- Can be recognized by the machine

■ Collection procedure

The following shows the procedure for collecting the debug log from the Control Panel.
1) Connect a USB flash drive to the machine.
2) Execute the following service mode from the Control Panel or remote UI.
   COPIER > FUNCTION > SYSTEM > LOGWRITE

   "Executing..." is displayed while log collection is executed. When it is completed, the screen shows the service mode screen again.
3) Remove the USB flash drive by the correct procedure.
   Connect the USB flash memory to the PC, and check that the log file (SUBLOG.TXT) has been saved.

> CAUTION:
> The debug log file (SUBLOG.TXT) that can be collected from the machine is saved in clear text data that is not encrypted.
> As this data may contain information attributed to the user, it is necessary to gain approval from the user before collecting it.
> Also, the collected file needs to be handled in the same manner as that for user data necessary for reproduction.

> NOTE:
> The following information is not included in the debug log of the machine:
> - Job list (job name, user name, address)
> - Communications log (address, user name)
> - Job log (user name, job name)

7

Error Code

- ■ Overview
- ■ Error Code
- ■ Jam Code
- ■ Alarm Code

Overview

Outline

This chapter describes various codes displayed on the control panel when a failure occurs on the host machine. These are classified into 3 codes as follows.

Type	Item	Reference
Error code	Displays when an error occurs from the host machine. *1. 20 errors are maximum numbers to display.	p. 7-3
Jam code	Displays when a jam occurs in the host machine. *2. 20 errors are maximum numbers to display.	p. 7-8
Alarm code	Displays when a part of function is lost. *3. 30 errors are maximum numbers to display.	p. 7-10

T-7-1

*1 Errors are displayed on the control panel on the following service mode.
- COPIER> DISPLAY> ERR

*2 Jams are displayed on the control panel on the following service mode.
- COPIER> DISPLAY> JAM

*3 Alarms are not displayed on the control panel. To check the alarms, print error log report on the following service mode.
- COPIER> FUNCTION> MISC-P> ERR-LOG

Error Log

Meaning of each section of a error log displayed on the control panel is described below.

F-7-1

Jam Log

Meaning of each section of a jam log displayed on the control panel is described below.

F-7-2

Location Code

Jam code includes location and occurrence division information. Location and occurrence division information are displayed as 1-digit number as follows.

Device	Location Code
Host machine	3
ADF	4

T-7-2

Pickup Position Code

When a jam occurs, pickup location is indicated by following pickup position code.

Device	Pickup Position Code
ADF	-
Multi-purpose Tray	0
Cassette 1	1
Cassette 2	2
Duplex	7

T-7-3

Error Code

Error Code

E Code	Detail Code	Item	Description
E000	0000	Title	Fixing assembly temperature rising error during the startup
		Detection description	The fixing assembly does not rise to the constant temperature within specified time.
		Remedy	1. Clear error on the following service mode. Turn OFF and then ON the main power switch. COPIER> FUNCTION> CLEAR> ERR 2. Check connection between the fixing assembly and the engine controller PCB (PCB1). 3. Check connection between the fixing assembly and the power supply PCB (PCB4). 4. Check connection between the engine contorller PCB (PCB1) and the power supply PCB (PCB4). 5. Replace the fixing assembly. 6. Replace the engine controller PCB (PCB1). 7. Replace the power supply PCB (PCB4).
E001	0000	Title	Fixing assembly abnormal high temperature (main thermistor)
		Detection description	Abnormal high temperature is detected at the main thermistor in the fixing assembly.
		Remedy	1. Clear error on the following service mode. Turn OFF and then ON the main power switch. COPIER> FUNCTION> CLEAR> ERR 2. Check connection between the fixing assembly and the engine controller PCB (PCB1). 3. Check connection between the fixing assembly and the power supply PCB (PCB4). 4. Check connection between the engine contorller PCB (PCB1) and the power supply PCB (PCB4). 5. Replace the fixing assembly. 6. Replace the engine controller PCB (PCB1). 7. Replace the power supply PCB (PCB4).

E Code	Detail Code	Item	Description
E001	0001	Title	Fixing assembly abnormal high temperature (sub thermistor)
		Detection description	Abnormal high temperature is detected at the sub thermistor in the fixing assembly.
		Remedy	1. Clear error on the following service mode. Turn OFF and then ON the main power switch. COPIER> FUNCTION> CLEAR> ERR 2. Check connection between the fixing assembly and the engine controller PCB (PCB1). 3. Check connection between the fixing assembly and the power supply PCB (PCB4). 4. Check connection between the engine contorller PCB (PCB1) and the power supply PCB (PCB4). 5. Replace the fixing assembly. 6. Replace the engine controller PCB (PCB1). 7. Replace the power supply PCB (PCB4).
E002	0000	Title	Fixing assembly temperature rising error
		Detection description	The fixing assembly does not rise to the constant temperature within specified time.
		Remedy	1. Clear error on the following service mode. Turn OFF and then ON the main power switch. COPIER> FUNCTION> CLEAR> ERR 2. Check connection between the fixing assembly and the engine controller PCB (PCB1). 3. Check connection between the fixing assembly and the power supply PCB (PCB4). 4. Check connection between the engine contorller PCB (PCB1) and the power supply PCB (PCB4). 5. Replace the fixing assembly. 6. Replace the engine controller PCB (PCB1). 7. Replace the power supply PCB (PCB4).
E003	0000	Title	Fixing assembly abnormal low temperature (main thermistor)
		Detection description	The main thermistor detects abnormal low temperature.
		Remedy	1. Clear error on the following service mode. Turn OFF and then ON the main power switch. COPIER> FUNCTION> CLEAR> ERR 2. Check connection between the fixing assembly and the engine controller PCB (PCB1). 3. Check connection between the fixing assembly and the power supply PCB (PCB4). 4. Check connection between the engine contorller PCB (PCB1) and the power supply PCB (PCB4). 5. Replace the fixing assembly. 6. Replace the engine controller PCB (PCB1). 7. Replace the power supply PCB (PCB4).

E Code	Detail Code	Item	Description
E003	0001	Title	Fixing assembly abnormal low temperature (sub thermistor)
		Detection description	The sub thermistor detects abnormal low temperature.
		Remedy	1. Clear error on the following service mode. Turn OFF and then ON the main power switch. COPIER> FUNCTION> CLEAR> ERR 2. Check connection between the fixing assembly and the engine controller PCB (PCB1). 3. Check connection between the fixing assembly and the power supply PCB (PCB4). 4. Check connection between the engine contorller PCB (PCB1) and the power supply PCB (PCB4). 5. Replace the fixing assembly. 6. Replace the engine controller PCB (PCB1). 7. Replace the power supply PCB (PCB4).
E004	0000	Title	Error in fixing power supply drive circuit.
		Detection description	When thermistor disconnection is detected. Abnormally high temperature detected by thermistor.
		Remedy	1. Check connection of the thermistor relay connector. -Main thermistor relay connector: J37 -Sub thermistor relay connector: J37 2. Check connection between the fixing assembly and the engine controller (PCB1). 3. Replace the fixing assembly. 4. Replace the engine controller PCB (PCB1).
E010	0000	Title	Main motor (M1) rotation error
		Detection description	"Speed lock signal =1" is not detected more than 2.0 sec or more after the main motor (M1) starts to drive.
		Remedy	1. Check connection to the main motor (M1). 2. Replace the main motor (M1). 3. Replace the engine controller PCB (PCB1).
E010	0001	Title	Main motor (M1) start error
		Detection description	"Speed lock signal =0" is detected more than 1.0 sec continuously after the main motor (M1) starts to drive and "Speed lock signal =1" is detected.
		Remedy	1. Check connection to the main motor (M1). 2. Replace the main motor (M1). 3. Replace the engine controller PCB (PCB1).
E014	0000	Title	Fixing motor (M3) start error
		Detection description	"Speed lock signal =1" is not detected more than 2.0 sec or more after the fixing motor (M3) starts to drive.
		Remedy	1. Check connection to the fixing motor (M3). 2. Replace the fixing motor (M3). 3. Replace the engine controller PCB (PCB1).

E Code	Detail Code	Item	Description
E014	0001	Title	Fixing motor (M3) rotation error
		Detection description	Fixing motor (M3) rotation error
		Remedy	1. Check connection to the fixing motor (M3). 2. Replace the fixing motor (M3). 3. Replace the engine controller PCB (PCB1).
E014	0002	Title	Fixing motor (M3) pressure releasing error
		Detection description	"Speed lock signal =0" is detected more than 1.0 sec continuously after the fixing motor (M3) starts to drive and "Speed lock signal =1" is detected.
		Remedy	1. Check connection to the fixing motor (M3). 2. Replace the fixing motor (M3). 3. Replace the engine controller PCB (PCB1).
E014	0003	Title	Fixing motor (M3) pressure error
		Detection description	Fixing pressure is never detected more than 3 sec or more by the fixing pressure release sensor (SR15/16) after fixing pressure drives.
		Remedy	1. Check connection to the fixing motor (M3). 2. Replace the fixing motor (M3). 3. Replace the engine controller PCB (PCB1).
E024	0000	Title	Developing Assembly error
		Detection description	Disconnection is detected 10 times in 10 ms cycle by connection detection signal of the toner sensor (SR17).
		Remedy	1. Check connection between the Developing Assembly and the engine controller PCB (PCB1). 2. Replace the Developing Assembly 3. Replace the engine controller PCB (PCB1).
E110	0000	Title	Polygon motor (M2) rotation error
		Detection description	The laser scanner unit is not prepared after controlling the polygon motor rotation speed starts.
		Remedy	1. Check connection to the polygon motor (M2). 2. Replace the laser scanner unit. 3. Replace the engine controller PCB (PCB1).
E196	0000	Title	Error of reading data in the EEPROM
		Detection description	Fail to read EEPROM data at startup.
		Remedy	1. Update the set of main controller firmware 2. Replace Engine controller PCB
E196	0001	Title	Error of access data in the EEPROM
		Detection description	Fail to access EEPROM data.
		Remedy	Replace the engine controller PCB (PCB1).
E196	0002	Title	Error of writing data in the EEPROM
		Detection description	Fail to write EEPROM data.
		Remedy	Replace the engine controller PCB (PCB1).

E Code	Detail Code	Item	Description
E196	1000	Title	Main Controller PCB reading/writing error
		Description	Error in reading/writing of main program in the Main Controller PCB
		Remedy	1. Install the set of the controller firmware. 2. Replace the Main Controller PCB.
E196	2000	Title	Main Controller PCB reading/writing error
		Description	Error in reading/writing of setting values storage area in the Main Controller PCB
		Remedy	1. Install the set of the controller firmware. 2. Replace the Main Controller PCB.
E202	0001	Title	CIS unit HP error
		Detection description	When the CIS unit is not detected by the CIS unit HP sensor (SR03).
		Remedy	1. Replace the CIS unit HP sensor (SR03). 2. Replace the reader motor (M02). 3. Replace the main controller PCB (PCB2).
E202	0002	Title	CIS unit HP error
		Detection description	When the CIS unit is not moved from the CIS unit HP sensor (SR03).
		Remedy	1. Replace the CIS unit HP sensor (SR03). 2. Replace the reader motor (M02). 3. Replace the main controller PCB (PCB2).
E225	0001	Title	CIS unit light intensity is under the standard level
		Detection description	CIS unit light intensity is under the standard level while shading.
		Remedy	1. Remove/connect the flat cable. 2. Replace the flat cable. 3. Replace the CIS unit. 4. Replace the main controller PCB (PCB2).
E246	0000	Title	System error
		Detection description	System error
		Remedy	Contact to the sales companies.
E247	0000	Title	System error
		Detection description	System error
		Remedy	Contact to the sales companies.
E248	0001	Title	Error in access to backup data for Reader (reading error at power-on)
		Detection description	The Reader-related adjustment values could not be read.
		Remedy	1. Clear the backup RAM of RCON. Execute COPIER>FUNCTION>CLEAR>RCON. 2. Enter all the values written on the service label in service mode again. 3. Turn OFF and then ON the main power.

E Code	Detail Code	Item	Description
E250	0000	Title	One-touch Key Cover sensor error
		Detection description	One-touch Key Cover sensor error
		Remedy	1. Check the One-touch Key Cover sensor. 2. Turn OFF and then ON the main power. 3. Replace Control Panel PCB.
E261	0000	Title	Driving circuit error
		Detection description	Zero cross detection error
		Remedy	1. Check connection of the connectors. 2. Replace the engine controller PCB (PCB1). 3. Replace the AC driver PCB (PCB3).
E280	0005	Title	System error
		Detection description	System error
		Remedy	Contact to the sales companies.
E350	0000	Title	System error
		Detection description	System error
		Remedy	Contact to the sales companies.
E351	0000	Title	System error
		Detection description	System error
		Remedy	1. Turn OFF and then ON the main power. 2. Replace main controller PCBs
E354	0000	Title	System error
		Detection description	System error
		Remedy	Contact to the sales companies.
E355	0000	Title	System error
		Detection description	System error
		Remedy	Contact to the sales companies.
E355	0004	Title	System error
		Detection description	System error
		Remedy	Contact to the sales companies.
E355	0005	Title	System error
		Detection description	System error
		Remedy	Contact to the sales companies.

E Code	Detail Code	Item	Description
E719	0000	Title	Card Reader communication error (serial communication)
		Detection description	Communication with the Card Reader could not be started at startup.
		Remedy	1. Check the connection of the Card Reader-F1, and turn OFF and then ON the main power switch. 2. Remove the Card Reader-F1. NOTE: After performing the remedy work above, go through the following to clear the error: COPIER> FUNCTION> CLEAR> E719-CLR.
E732	0000	Title	Scanner communication error
		Detection description	Scanner communication error
		Remedy	1. Install the set of the controller firmware. 2. Replace the Main Controller PCB.
E733	0000	Title	Error in printer communication
		Detection description	Failure between DC controller PCB and controller PCB
		Remedy	1. Check connectors of DC controller PCB and main controller PCB 2. Replace DC controller PCBs 3. Replace main controller PCBs
E736	0000	Title	Error in CCU communication
		Detection description	Error in CCU-modem communication
		Remedy	1. Update the set of main controller firmware 2. Replace FAX-NCU PCBs 3. Replace main controller PCBs
E744	0001	Title	Language file version error
		Detection description	Language file version was not matched with the main program.
		Remedy	Install the set of the controller firmware.
E744	0002	Title	Language file size error
		Detection description	The size of the language file exceeded the upper limit.
		Remedy	Install the set of the controller firmware.
E744	1001	Title	Firmware version error
		Detection description	Version of the main program and the version of the start-up program was not matched.
		Remedy	Install the set of the controller firmware.

E Code	Detail Code	Item	Description
E744	4000	Title	Engine ID error
		Detection description	Invalid engine connection was detected.
		Remedy	1. Turn OFF and then ON the main power. 2. Check the Engine Controller PCB. 3. Install the Engine Controller PCB. 4. Install the set of the controller firmware. 5. Check the model code. (When the model code and the engine code are mismatched, E744-4000 occurs.)
E744	5000	Title	Error in the Control Panel PCB
		Detection description	Error in the Control Panel PCB (microcomputer).
		Remedy	1. Check the Control Panel PCB, and install the firmware (PANEL). 2. Install the set of the controller firmware. 3. Replace the Main Controller PCB.
E746	0000	Title	Error in main controller PCBs
		Detection description	Communication error occurred in main controller PCB (other than scanner-related)
		Remedy	Replace main controller PCBs
E766	xxxx *1	Title	Firmware error
		Detection description	An error due to the controller software occurred so that print could not be proceeded.
		Remedy	Due to firmware error, the possibility of solving the error by replacing the Main Controller PCB is low. Check the installed engine again.
E766	8000	Title	Digital registration error
		Detection description	Information at digital registration could not be obtained.
		Remedy	1. Install the Engine Controller firmware. 2. Install the set of the controller firmware. 3. Replace the Engine Controller PCB.
E804	0004	Title	Controller Fan error
		Detection description	Since the startup of the Controller Fan, the Fan was locked for a specified consecutive period of time.
		Remedy	1. Check power supply to the Controller Fan. 2. Replace the Controller Fan.
E805	0000	Title	Delivery cooling fan (FM1) error
		Detection description	• FAN driving: When "Lock signal = High" is detected more than 5 sec or more continuously. • FAN suspended: When "Lock signal = Low" is detected more than 10 sec or more continuously
		Remedy	1. Check connection to the delivery cooling fan (FM1). 2. Replace the delivery cooling fan (FM1).

E Code	Detail Code	Item	Description
E805	0001	Title	Image formation part cooling fan (FM3) error
		Detection description	• FAN driving: When "Lock signal = High" is detected more than 5 sec or more continuously. • FAN suspended: When "Lock signal = Low" is detected more than 10 sec or more continuously.
		Remedy	1. Check connection to the Image formation part cooling fan (FM3). 2. Replace the Image formation part cooling fan (FM3).
E805	0002	Title	Power supply cooling fan (FM2) error
		Detection description	• FAN driving: When "Lock signal = High" is detected more than 5 sec or more continuously. • FAN suspended: When "Lock signal = Low" is detected more than 10 sec or more continuously.
		Remedy	1. Check connection to the power supply cooling fan (FM2). 2. Replace the power supply cooling fan (FM2).
E996	0071	Title	Sequence jam error
		Detection description	30 sec JAM timer (timing error jam), which sets at the timing when ADF motor is driven, occurs time out.
		Remedy	1. Check connection of the connectors. 2. Replace the main controller PCB (PCB2). 3. Replace the reader unit.

T-7-4

Jam Code

Jam Type

Type	Description
DELAY	Delay jam
STNRY	Stationary jam
OVERLAP	Double feed detection
TIMING	Timing error
OHP NG	Incorrect paper
ADF OP	ADF open
COVER OP	Cover open
RESIDUAL	Residual jam
PICKUP NG	Pickup error
POWER ON	Power ON
DOOR OP	Door open
SEQ NG	Sequence jam
DELAY ESC	Delay jam while ejecting to the escape delivery tray
OTH JAM	Other jams
STNRY ESC	Stationary jam while ejecting to the escape delivery tray
STP	Staple
SDL STP	Saddle stitch staple
INIT ROT	Residual (at initial rotation)
UP DEVICE	Upper stream device jam
OTHER	Others
ERROR	Error
RETRY ERR	Retry error
STOP	Press Stop key
ROT	Keeps rotating
PROGRAM	Program
TIME OUT	Time-out
PUNCH	Punch
MEDIA NG	Misprint

T-7-5

Main Unit (including Cassette Feeding Module-AC1)

F-7-3

ACC ID	Jam code	Type	Sensor ID	Sensor Name
4	0001	DELAY	SR01	Document End Sensor
4	0002	STNRY	SR01	Document End Sensor
4	0004	DELAY	SR01	Document End Sensor
4	0005	STNRY	SR01	Document End Sensor
4	0071	SEQ NG *1	-	-
4	0094	POWER ON	SR01 SR02	Document End Sensor/ Document Sensor
4	0095	PICKUP NG	SR02	Document Sensor

ACC ID	Jam code	Type	Sensor ID	Sensor Name
3	0104	DELAY	SR11	Pre-registration Sensor
3	0144		SR5/SR10/ SR11	Fixing Delivery Sensor/ Delivery Full Sensor/ Pre-registration Sensor
3	0184		SR11	Pre-registration Sensor
3	01C4		SR5/SR10/ SR11	Fixing Delivery Sensor/ Delivery Full Sensor/ Pre-registration Sensor
3	010C		SR11	Pre-registration Sensor
3	014C		SR5/SR10/ SR11	Fixing Delivery Sensor/ Delivery Full Sensor/ Pre-registration Sensor
3	018C		SR11	Pre-registration Sensor
3	01CC		SR5/SR10/ SR11	Fixing Delivery Sensor/ Delivery Full Sensor/ Pre-registration Sensor
3	0208	STNRY	SR11	Pre-registration Sensor
3	0248		SR5/SR11	Fixing Delivery Sensor/ Pre-registration Sensor
3	0288		SR11	Pre-registration Sensor
3	02C8		SR5/SR11	Fixing Delivery Sensor/ Pre-registration Sensor
3	0210		SR11	Pre-registration Sensor
3	0250		SR5/SR11	Fixing Delivery Sensor/ Pre-registration Sensor
3	0290		SR11	Pre-registration Sensor
3	02D0		SR5/SR11	Fixing Delivery Sensor/ Pre-registration Sensor
3	1014	POWER ON	SR11	Pre-registration Sensor
3	1054		SR5/SR11/ SR14	Fixing Delivery Sensor/ Pre-registration Sensor/ Arch Sensor
3	1094		SR11	Pre-registration Sensor
3	10D4		SR5/SR11/ SR14	Fixing Delivery Sensor/ Pre-registration Sensor/ Arch Sensor
3	1118	DOOR OP	SR11	Pre-registration Sensor
3	1158		SR5/SR10/ SR11/SR14	Fixing Delivery Sensor/ Delivery Full Sensor/ Pre-registration Sensor/ Arch Sensor
3	1198		SR11	Pre-registration Sensor
3	11D8		SR5/SR10/ SR11/SR14	Fixing Delivery Sensor/ Delivery Full Sensor/ Pre-registration Sensor/ Arch Sensor

T-7-6

*1: The state is recovered by opening / closing the doors, or turning OFF / ON the power supply.

Alarm Code

Alarm Code

Alarm Code	Title	A. Operation / B. Cause / C. Action
10-0020	Toner low alarm	The host machine requests UGW for pre-delivery of the toner either when remaining quantity of the toner reaches to the setting value (%) or toner empty is detected by the toner sensor (SR17). The alarm log is reported on the following service mode. • COPIER > FUNCTION > MISC-P > ERR-LOG
10-0100	Toner cartridge replacement alarm	When the toner cartridge replacement is detected. The alarm log is reported on the following service mode. • COPIER > FUNCTION > MISC-P > ERR-LOG
35-0073	Drum unit replacement completion alarm	When the drum unit replacement completion is detected. The alarm log is reported on the following service mode. • COPIER > FUNCTION > MISC-P > ERR-LOG
35-0091	ADF pickup roller unit replacement completion alarm	ADF pickup roller unit replacement completion is notified.
35-0092	ADF separation pad replacement completion alarm	ADF separation pad replacement completion is notified.
40-0073	Drum low alarm	The host machine requests UGW for pre-delivery of the drum unit either when life of the drum unit reaches to the setting value (%) or full of waste toner is detected by the waste toner full sensor (SR6). The alarm log is reported on the following service mode. • COPIER > FUNCTION > MISC-P > ERR-LOG
85-0001	System error	Contact the sales company.
85-0002	System error	Contact the sales company.
85-0003	System error	Contact the sales company.
85-0004	System error	Auto recovery due to replacement with a new Main Controller PCB, which is a service part.
85-0005	System error	Auto recovery due to replacement with a used Main Controller PCB.

T-7-7

8

Service Mode

■Outline
■COPIER
■FEEDER
■TESTMODE
■FAX

Outline

Outline of Service Mode

Service mode

COPIER — Service mode for copier

DISPLAY — State display mode

I/O — I/O display mode

ADJUST — Adjustment mode

FUNCTION — Operation / inspection mode

OPTION — Specification setting mode

COUNTER — Counter mode

FEEDER — ADF service mode

ADJUST — Adjustment mode

FUNCTION — Operation / inspection mode

FAX — FAX service mode

SSSW — Bit switch registration mode

MENU — Menu switch registration mode

NUM — Numeric parameter setting mode

NCU — NCU parameter setting mode

(Service adjustment is not available)

TESTMODE — Service mode for test print, operation check, etc.

PRINT — Print test mode

FAX — FAX test mode

F-8-1

Back Up of Service Mode

Each device is adjusted at the time of shipment and the adjusted values are written on the service label. When replacing the main controller PCB, engine controller PCB or clearing RAM, ADJUST and OPTION values are reset to default. Re-adjustment must be executed in field and ensure to write the changed setting values on the service label. If the corresponding item is not found on the service label, write the setting values on the blank space.

- The service label is affixed inside the rear cover.

F-8-2

Service Mode Structure

User screen

↕

Initial screen

1)Up-arrow / down-arrow key
2)OK key

Return key

Category ⟷ Category
Up-arrow / down-arrow key

1)Up-arrow / down-arrow key
2)OK key

Return key

Sub category ⟷ Sub category
Up-arrow / down-arrow key

1)Up-arrow / down-arrow key
2)OK key

Return key

Item ⟷ Item

1)Up-arrow / down-arrow key
2)OK key

OK / Return key

Setting screen

F-8-3

Screen Flow of Service Mode

- Initial / Category / Sub category screen

Select the item	: ▼/▲ key
Go to Sub category screen	: OK key
Go to Initial screen	: Return key

```
SERVICE MODE
COPIER
FEEDER
FAX
TESTMODE
```

F-8-4

- Item selection screen

Select the item	: ▼/▲ key
Go to Setting screen	: OK key
Go to Sub category screen	: Return key

```
ADJ-X        :0
ADJ-Y        :0
ADJ-Y-DF     :0
ADJ-X-MG     :0
STRD-POS     :0
```

F-8-5

- Input value screen

Enter the setting value	: Numeric key
Increment the setting value one by one	: ▲
Decrease the setting value one by one	: ▼
Nullify the setting value	: Clear key
Change the setting	: OK key
Maintain the setting	: Return key
Change the +/- of the setting value	: * key

```
ADJ-X
          ▲
        [ 0 ]
          ▼
      (-30 - 30)
```

F-8-6

Caution when Changing the Setting Value

When the setting value is changed in the service mode, check and overwrite the value every 5 sec. When turning OFF the main power within 5 sec after changing the value, it is not saved.

CAUTION:

Wait 10 seconds from when "executing..." disappears to when the main power is turned OFF.

● Remote UI Service Mode

■ Function Overview

Remote UI can be used to display, set and implement various service mode in addition to rebooting the machine. In this case, machine's UI displays "Remote service mode".

■ Operating Condition

Operation of service mode using remote UI becomes possible in the following cases:
- Service mode is not used on LUI.
- There is no user who has been logged in to the remote UI service mode (this function).
- Remote UI is enabled in the setting of LUI.
  Setting Menu > System Management Settings > Remote UI On/Off
- "RMT-SW" is enabled in service mode (Enabled when the setting value is "1".)
  COPIER > OPTION > BODY > RMT-SW (remote UI service mode function)
  0: OFF, 1: ON (default)

■ Usage Method

1. Activate the Web browser.
2. Enter the following URL in the address input field.
   http://<IP address of the machine or host name>/servicemode.html
3. Enter the password and click "Log In".
   * Password required for authentication differs depending on the service mode setting.
   COPIER > OPTION > BODY > PSWD-SW

PSWD-SW	Password required for authentication
0	1. Password of RUI service mode
1	1. Password of RUI service mode 2. Password of service mode
2	1. Password of RUI service mode 2. User's system administrator ID 3. Password of system administrator 4. Password of service mode

T-8-1

* Password of service mode can be changed in COPIER > OPTION > BODY > SM-PSWD.

● Authentication Screen

1) PSWD-SW: 0

LOGIN

F-8-7

2) PSWD-SW: 1

Service Mode PIN:

LOGIN

F-8-8

3) PSWD-SW: 2

System Manager ID:

System Manager PIN:

Service Mode PIN:

LOGIN

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4) Click "Logout" to end the operation.

NOTE :
After login, if you close the browser without "logout", it is recognized that you have been "logged in". Therefore, in order to log in to service mode again, you must wait for a certain period of time (3 minutes) from the last access to make the system timeout or turn OFF/ON the power.

COPIER

DISPLAY

■ MISC

COPIER > DISPLAY > MISC	
TNRB-IDK	Display of Bk-color Toner Container ID
Details	Display the ID of installed Bk-color Toner Container
Use case	Check the barcode ID on the Toner Container is read correctly
Adj/set/operate method	None (Display only)
Display/adj/set range	12 decimal digits 000000000000 to 999999999999
Default value	000000000000

T-8-2

■ CCD

COPIER > DISPLAY > CCD	
TARGET-B	Display of Blue shading target value
Details	Display the shading target value of Blue. Continuous display of 128 (minimum) or 384 (maximum) is a failure of the CIS unit.
Use case	- When replacing the CIS Unit. - When scanning image failure occurs.
Adj/set/operate method	None (Display only)
Display/adj/set range	128 to 384
Default value	282
Related service mode	COPIER > ADJUST > CCD > W-PLT-X COPIER > ADJUST > CCD > W-PLT-Y COPIER > ADJUST > CCD > W-PLT-Z
TARGET-G	Display of Green shading target value
Details	Display the shading target value of Green. Continuous display of 128 (minimum) or 384 (maximum) is a failure of the CIS unit.
Use case	- When replacing the CIS Unit. - When scanning image failure occurs.
Adj/set/operate method	None (Display only)
Display/adj/set range	128 to 384
Default value	277
Related service mode	COPIER > ADJUST > CCD > W-PLT-X COPIER > ADJUST > CCD > W-PLT-Y COPIER > ADJUST > CCD > W-PLT-Z

COPIER > DISPLAY > CCD	
TARGET-R	Display of Red shading target value
Details	Display the shading target value of Red. Continuous display of 128 (minimum) or 384 (maximum) is a failure of the CIS unit.
Use case	- When replacing the CIS Unit. - When scanning image failure occurs.
Adj/set/operate method	None (Display only)
Display/adj/set range	128 to 384
Default value	272
Related service mode	COPIER > ADJUST > CCD > W-PLT-X COPIER > ADJUST > CCD > W-PLT-Y COPIER > ADJUST > CCD > W-PLT-Z
TARGETBW	Display of BW shading target value
Details	Display the shading target value of BW. Continuous display of 128 (minimum) or 384 (maximum) is a failure of the CIS unit.
Use case	- When replacing the CIS Unit. - When scanning image failure occurs.
Adj/set/operate method	None (Display only)
Display/adj/set range	128 to 384
Default value	278
Related service mode	COPIER > ADJUST > CCD > W-PLT-Y

T-8-3

■ VERSION

COPIER > DISPLAY > VERSION		
MAIN	Display of MAIN (main program) version	
	Details	To display the firmware version of Main Controller PCB.
	Use case	When upgrading the firmware
	Adj/set/operate method	N/A (Display only)
	Display/adj/set range	00.00 to 99.99
	Default value	0
BOOT	Boot ROM version	
	Details	To display the version of Boot ROM (BOOT program).
	Use case	When upgrading the firmware
	Adj/set/operate method	N/A (Display only)
	Display/adj/set range	00.01 to 99.99
	Default value	0
LANG	Language pack version	
	Details	To display the version of language pack.
	Use case	When upgrading the firmware
	Adj/set/operate method	N/A (Display only)
	Display/adj/set range	00.00 to 99.99
	Default value	0
DEMODATA	Demo print data version	
	Details	To display the version of demo print data. Since this machine does not have demo print function, "FF.FF" is displayed.
	Use case	When upgrading the firmware
	Adj/set/operate method	N/A (Display only)
	Display/adj/set range	00.00 to 99.99
	Default value	0
ECONT	Display of the recording engine's ROM version	
	Details	Display of the recording engine's ROM version
	Use case	When upgrading the firmware
	Adj/set/operate method	N/A (Display only)
		00.00 to 99.99
	Default value	0

COPIER > DISPLAY > VERSION		
PANEL	PANEL version	
	Details	To display the version of PANEL.
	Use case	When upgrading the firmware
	Adj/set/operate method	N/A (Display only)
	Display/adj/set range	00.00 to 99.99
	Default value	0
	Related service mode	COPIER> FUNCTION> SYSTEM> PANEL-UP

T-8-4

■ USER

COPIER > DISPLAY > USER	
SPDTYPE	splay of Ctrollr Board engine speed type
Details	To display the engine speed type (ppm) of Controller Board.
Use case	When checking the engine speed type
Adj/set/operate method	None (display only)
Display/adj/set range	25 to 35

T-8-5

■ ERR

COPIER > DISPLAY > ERR	
ERR	Display of error log
Details	To display the errors that occurred in the past and the date and time they occurred.
Adj/set/operate method	None (display only)

T-8-6

■ JAM

COPIER > DISPLAY > JAM	
JAM	Display of jam log
Details	To display the jam that occurred in the past and the date and time they occurred.
Adj/set/operate method	None (display only)

T-8-7

⬤ ADJUST

■ ADJ-XY

COPIER > ADJUST > ADJ-XY	
ADJ-X	Adjustment of image position in book mode: vertical scan
Details	- Adjust the image reading start position in the vertical scanning direction for copyboard reading. - The image position is moved 0.1mm to rear side by setting value 1.
Use case	When replacing the Main Controller PCB / clearing RAM data.
Ad/set/operate method	Enter the setting value (switch negative/positive by * key) and then press OK key.
Caution	Do not use for usual service. After the setting value is changed, write the changed value on the service label.
Display/ad/set range	-30 to 30
Unit	0.1 mm
Default value	0
ADJ-Y	Adjustment of image position in book mode: horizontal scan
Details	- Adjust the image reading start position in the horizontal scanning direction for copyboard reading. - The image position is moved 0.1mm to front side by setting value 1.
Use case	When replacing the Main Controller PCB / clearing RAM data.
Ad/set/operate method	Enter the setting value (switch negative/positive by * key) and then press OK key.
Caution	After the setting value is changed, write the changed value on the service label.
Display/ad/set range	-16 to 16
Unit	0.1 mm
Default value	0
ADJ-Y-DF	Adjustment of image position in ADF mode: horizontal scan [front side]
Details	- Adjust the image reading start position in the horizontal scanning direction for ADF reading. - The front image position is moved 0.1mm to rear side by setting value 1.
Use case	When replacing the Main Controller PCB / clearing RAM data.
Ad/set/operate method	Enter the setting value (switch negative/positive by * key) and then press OK key.
Caution	After the setting value is changed, write the changed value on the service label.
Display/ad/set range	-16 to 16
Unit	0.1mm
Default value	0

COPIER > ADJUST > ADJ-XY	
ADJ-Y-DF2	Adjustment of image position in ADF mode: horizontal scan [back side]
Details	- Adjust the image reading start position in the horizontal scanning direction for ADF reading. - The rear image position is moved 0.1mm to rear side by setting value 1.
Use case	When replacing the Main Controller PCB / clearing RAM data.
Ad/set/operate method	Enter the setting value (switch negative/positive by * key) and then press OK key.
Caution	After the setting value is changed, write the changed value on the service label.
Display/ad/set range	-16 to 16
Unit	0.1mm
Default value	0
ADJ-X-MG	Fine Adjustment of image magnification ratio in book mode: vertical scan
Details	- Fine-adjust image magnification ratio in vertical scanning direction for copyboard reading by changing speed of the reader motor. - The image magnification ratio is increased/decreases 0.1% by setting value 1. +: Reduction -: Enlargement
Use case	When replacing the Main Controller PCB / clearing RAM data.
Ad/set/operate method	Enter the setting value (switch negative/positive by * key) and then press OK key.
Caution	The Fine-adjustment over the image magnification standard in vertical direction may occur image error.
Display/ad/set range	-100 to 100
Unit	0.01%
Default value	0
STRD-POS	Adjustment of reading position for ADF reading: vertical scan
Details	Adjust reading position in vertical scanning for ADF reading
Use case	When replacing the Main Controller PCB / clearing RAM data.
Ad/set/operate method	Enter the setting value (switch negative/positive by * key) and then press OK key.
Caution	After the setting value is changed, write the changed value on the service label.
Display/ad/set range	-20 to 20
Unit	0.1mm
Default value	0
Related service mode	COPIER > FUNCTION > INSTALL > STRD-POS

T-8-8

■ CCD

COPIER > ADJUST > CCD	
W-PLT-X	Entering white level data (X) of the standard white plate
Details	- Enter white level data (X) of the standard white plate. - When replacing the Main Controller PCB / clearing RAM data, enter the value from the service label. - When replacing the Copyboard Glass Unit, enter the value from the barcode label on the Copyboard Glass.
Use case	- When replacing the Copyboard Glass Unit / the Main Controller PCB. - When clearing RAM data.
Ad/set/operate method	Enter the setting value and then press OK key.
Caution	After the setting value is changed, write the changed value on the service label.
Display/ad/set range	7000 to 9999
Default value	8290
Related service mode	COPIER > DYSPLAY > CCD > TARGET-R COPIER > DYSPLAY > CCD > TARGET-G COPIER > DYSPLAY > CCD > TARGET-B
W-PLT-Y	Entering white level data (Y) of the standard white plate
Details	- Enter white level data (Y) of the standard white plate. - When replacing the Main Controller PCB / clearing RAM data, enter the value from the service label. - When replacing the Copyboard Glass Unit, enter the value from the barcode label on the Copyboard Glass.
Use case	- When replacing the Copyboard Glass Unit / the Main Controller PCB. - When clearing RAM data.
Ad/set/operate method	Enter the setting value and then press OK key.
Caution	After the setting value is changed, write the changed value on the service label.
Display/ad/set range	7000 to 9999
Default value	8746
Related service mode	COPIER > DYSPLAY > CCD > TARGET-R COPIER > DYSPLAY > CCD > TARGET-G COPIER > DYSPLAY > CCD > TARGET-B COPIER > DYSPLAY > CCD > TARGETBW

COPIER > ADJUST > CCD	
W-PLT-Z	Entering white level data (Z) of the standard white plate
Details	- Enter white level data (Z) of the standard white plate. - When replacing the Main Controller PCB / clearing RAM data, enter the value from the service label. - When replacing the Copyboard Glass Unit, enter the value from the barcode label on the Copyboard Glass.
Use case	- When replacing the CIS Unit / the Main Controller PCB. - When clearing RAM data.
Ad/set/operate method	Enter the setting value and then press OK key.
Caution	After the setting value is changed, write the changed value on the service label.
Display/ad/set range	7000 to 9999
Default value	9451
Related service mode	COPIER > DYSPLAY > CCD >TARGET-R COPIER > DYSPLAY > CCD >TARGET-G COPIER > DYSPLAY > CCD >TARGET-B
DFTAR-R	Adjustment of shading target value (Red color for ADF)
Details	- Adjust red shading target value for ADF reading - When replacing the Main Controller PCB, enter the value from the service label - After executing COPIER > FUNCTION > CCD > DF-WLVL1, DF-WLVL2, write the automatic adjustment value on the service label.
Use case	When replacing the Reader Unit / the CIS Unit / the Copyboard Glass Unit / the Main Controller PCB.
Ad/set/operate method	Enter the setting value and then press OK key.
Display/ad/set range	128 to 384
Default value	299
Related service mode	COPIER > FUNCTION > CCD > DF-WLVL1, DF-WLVL2
DFTAR-G	Adjustment of shading target value (Green color for ADF)
Details	- Adjust green shading target value for ADF reading - When replacing the Main Controller PCB, enter the value from the service label - After executing COPIER > FUNCTION > CCD > DF-WLVL1, DF-WLVL2, write the automatic adjustment value on the service label.
Use case	When replacing the Reader Unit / the CIS Unit / the Copyboard Glass Unit / the Main Controller PCB.
Ad/set/operate method	Enter the setting value and then press OK key.
Display/ad/set range	128 to 384
Default value	309
Related service mode	COPIER > FUNCTION > CCD > DF-WLVL1, DF-WLVL2

COPIER > ADJUST > CCD	
DFTAR-B	Adjustment of shading target value (Blue color for ADF)
Details	- Adjust blue shading target value for ADF reading - When replacing the Main Controller PCB, enter the value from the service label - After executing COPIER > FUNCTION > CCD > DF-WLVL1, DF-WLVL2, write the automatic adjustment value on the service label.
Use case	When replacing the Reader Unit / the CIS Unit / the Copyboard Glass Unit / the Main Controller PCB.
Ad/set/operate method	Enter the setting value and then press OK key.
Display/ad/set range	128 to 384
Default value	307
Related service mode	COPIER > FUNCTION > CCD > DF-WLVL1, DF-WLVL2
DFTAR-BW	Adjustment of shading target value (BW color for ADF)
Details	- Adjust BW shading target value for ADF reading - When replacing the Main Controller PCB, enter the value from the service label - After executing COPIER > FUNCTION > CCD > DF-WLVL1, DF-WLVL2, write the automatic adjustment value on the service label.
Use case	When replacing the Reader Unit / the CIS Unit / the Copyboard Glass Unit / the Main Controller PCB.
Ad/set/operate method	Enter the setting value and then press OK key.
Display/ad/set range	128 to 384
Default value	315
Related service mode	COPIER > FUNCTION > CCD > DF-WLVL1, DF-WLVL2
50-RG	None
50-GB	None
100-RG	None
100-GB	None
50DF-RG	None
50DF-GB	None
100DF-RG	None
100DF-GB	None
OFST-BW0	CIS offset level adjustment: BW, rear
Details	Adjust rear side of CIS offset level when original BW reading.
Use case	Check that the adjusted CIS offset value is appropriate in case that an image failure occurs due to CIS error.
Ad/set/operate method	Enter the setting value and then press OK key.
Display/ad/set range	0 to 255
Default value	246
Related service mode	COPIER > FUNCTION > CCD > BW-AGC

COPIER > ADJUST > CCD	
OFST-BW1	CIS offset level adjustment: BW, center
Details	Adjust center of CIS offset level when original BW reading.
Use case	Check that the adjusted CIS offset value is appropriate in case that an image failure occurs due to CIS error.
Ad/set/operate method	Enter the setting value and then press OK key.
Display/ad/set range	0 to 255
Default value	246
Related service mode	COPIER > FUNCTION > CCD > BW-AGC
OFST-BW2	CIS offset level adjustment: BW, front
Details	Adjust front side of CIS offset level when original BW reading.
Use case	Check that the adjusted CIS offset value is appropriate in case that an image failure occurs due to CIS error.
Ad/set/operate method	Enter the setting value and then press OK key.
Display/ad/set range	0 to 255
Default value	246
Related service mode	COPIER > FUNCTION > CCD > BW-AGC
OFST-CL0	CIS offset level adjustment: CL, rear
Details	Adjust rear side of CIS offset level when original color reading.
Use case	Check that the adjusted CIS offset value is appropriate in case that an image failure occurs due to CIS error.
Ad/set/operate method	Enter the setting value and then press OK key.
Display/ad/set range	0 to 255
Default value	2
Related service mode	COPIER > FUNCTION > CCD > CL-AGC
OFST-CL1	CIS offset level adjustment: CL, center
Details	Adjust center of CIS offset level when original color reading.
Use case	Check that the adjusted CIS offset value is appropriate in case that an image failure occurs due to CIS error.
Ad/set/operate method	Enter the setting value and then press OK key.
Display/ad/set range	0 to 255
Default value	2
Related service mode	COPIER > FUNCTION > CCD > CL-AGC
OFST-CL2	CIS offset level adjustment: CL, front
Details	Adjust front side of CIS offset level when original color reading.
Use case	Check that the adjusted CIS offset value is appropriate in case that an image failure occurs due to CIS error.
Ad/set/operate method	Enter the setting value and then press OK key.
Display/ad/set range	0 to 255
Default value	2
Related service mode	COPIER > FUNCTION > CCD > CL-AGC

COPIER > ADJUST > CCD	
GAIN-BW0	CIS gain level adjustment: BW
Details	Adjust CIS gain level when original BW reading.
Use case	- When replacing the CIS Unit. - When image failure occurs for original BW reading.
Ad/set/operate method	Enter the setting value and then press OK key.
Display/ad/set range	1 to 255
Default value	18
Related service mode	COPIER > FUNCTION > CCD > BW-AGC
GAIN-CL0	CIS gain level adjustment: CL
Details	Adjust CIS gain level when original color reading.
Use case	- When replacing the CIS Unit. - When image failure occurs for color reading.
Ad/set/operate method	Enter the setting value and then press OK key.
Display/ad/set range	1 to 255
Default value	69
Related service mode	COPIER > FUNCTION > CCD > CL-AGC
LED-BW-R	Red color LED lighting time adjustment for original BW reading
Details	Adjust red color LED lighting time for original BW reading.
Use case	When replacing the Main Controller PCB / clearing RAM data related to reader.
Ad/set/operate method	Enter the setting value and then press OK key.
Display/ad/set range	1 to 2500
Default value	2155
Related service mode	COPIER > FUNCTION > CCD > BW-AGC
LED-BW-G	Green color LED lighting time adjustment for original BW reading
Details	Adjust green color LED lighting time for original BW reading.
Use case	When replacing the Main Controller PCB / clearing RAM data related to reader.
Ad/set/operate method	Enter the setting value and then press OK key.
Display/ad/set range	1 to 2500
Default value	2117
Related service mode	COPIER > FUNCTION > CCD > BW-AGC
LED-BW-B	Blue color LED lighting time adjustment for original BW reading
Details	Adjust blue color LED lighting time for original BW reading.
Use case	When replacing the Main Controller PCB / clearing RAM data related to reader.
Ad/set/operate method	Enter the setting value and then press OK key.
Display/ad/set range	1 to 2500
Default value	2019
Related service mode	COPIER > FUNCTION > CCD > BW-AGC

COPIER > ADJUST > CCD	
LED-CL-R	Red color LED lighting time adjustment for original color reading
Details	Adjust red color LED lighting time for original color reading.
Use case	When replacing the Main Controller PCB / clearing RAM data related to reader.
Ad/set/operate method	Enter the setting value and then press OK key.
Display/ad/set range	1 to 2500
Default value	1834
Related service mode	COPIER > FUNCTION > CCD > CL-AGC
LED-CL-G	Green color LED lighting time adjustment for original color reading
Details	Adjust green color LED lighting time for original color reading.
Use case	When replacing the Main Controller PCB / clearing RAM data related to reader.
Ad/set/operate method	Enter the setting value and then press OK key.
Display/ad/set range	1 to 2500
Default value	2155
Related service mode	COPIER > FUNCTION > CCD > CL-AGC
LED-CL-B	Blue color LED lighting time adjustment for original color reading
Details	Adjust blue color LED lighting time for original color reading.
Use case	When replacing the Main Controller PCB / clearing RAM data related to reader.
Ad/set/operate method	Enter the setting value and then press OK key.
Display/ad/set range	1 to 2500
Default value	2060
Related service mode	COPIER > FUNCTION > CCD > CL-AGC

T-8-9

■ IMG-REG

COPIER > ADJUST > IMG-REG	
MAGV-C1	Adjustment of magnification ratio: CST1
Details	Adjust magnification ration in vertical scanning direction magnification ratio is decreased 0.01% by setting value 1 as feed speed is increased and an image size is decreased.
Use case	When replacing the Engine Controller PCB.
Ad/set/operate method	Enter the setting value (switch negative/positive by * key) and then press OK key.
Caution	Paper size error may occur when extra change of the initial value is performed.
Display/ad/set range	-35 to 35
Default value	6
MAGV-C2	Adjustment of magnification ratio: CST2
Details	Adjust magnification ration in vertical scanning direction magnification ratio is decreased 0.01% by setting value 1 as feed speed is increased and an image size is decreased.
Use case	When replacing the Engine Controller PCB.
Ad/set/operate method	Enter the setting value (switch negative/positive by * key) and then press OK key.
Caution	Paper size error may occur when extra change of the initial value is performed.
Display/ad/set range	-35 to 35
Default value	0
MAGV-MF1	Adjustment of magnification ratio: 1/1 SPD, MP
Details	Adjust magnification ration in vertical scanning direction magnification ratio is decreased 0.01% by setting value 1 as feed speed is increased and an image size is decreased.
Use case	When replacing the Engine Controller PCB.
Ad/set/operate method	Enter the setting value (switch negative/positive by * key) and then press OK key.
Caution	Paper size error may occur when extra change of the initial value is performed.
Display/ad/set range	-35 to 35
Default value	4

COPIER > ADJUST > IMG-REG	
MAGV-MF2	Adjustment of magnification ratio: 1/2 SPD, MP
Details	Adjust magnification ration in vertical scanning direction magnification ratio is decreased 0.15% by setting value 1 as feed speed is increased and an image size is decreased.
Use case	When replacing the Engine Controller PCB.
Ad/set/operate method	Enter the setting value (switch negative/positive by * key) and then press OK key.
Caution	Paper size error may occur when extra change of the initial value is performed.
Display/ad/set range	-20 to 20
Default value	4
MAGV-DU1	Adjustment of magnification ratio: 1/1 SPD, back side, MP
Details	Adjust magnification ration in vertical scanning direction magnification ratio is decreased 0.01% by setting value 1 as feed speed is increased and an image size is decreased.
Use case	When replacing the Engine Controller PCB.
Ad/set/operate method	Enter the setting value (switch negative/positive by * key) and then press OK key.
Caution	Paper size error may occur when extra change of the initial value is performed.
Display/ad/set range	-35 to 35
Default value	0
MAGV-DU2	Adjustment of magnification ratio: 1/2 SPD, back side, MP
Details	Adjust magnification ration in vertical scanning direction magnification ratio is decreased 0.15% by setting value 1 as feed speed is increased and an image size is decreased.
Use case	When replacing the Engine Controller PCB.
Ad/set/operate method	Enter the setting value (switch negative/positive by * key) and then press OK key.
Caution	Paper size error may occur when extra change of the initial value is performed.
Display/ad/set range	-20 to 20
Default value	0

T-8-10

■ PASCAL

COPIER > ADJUST > PASCAL	
OFST-P-K	Bk density adjustment at test print reading
Details	- Adjust the Bk-color offset when test print is read at the auto gradation adjustment (full adjustment). - The more the value is increased, the more image becomes dark. - When replacing the Main Controller PCB, enter the value from the service label.
Use case	When replacing the Main Controller PCB.
Ad/set/operate method	Enter the setting value (switch negative/positive by * key) and then press OK key.
Caution	After the setting value is changed, write the changed value on the service label.
Display/ad/set range	-32 to 32
Unit	0.5mm
Default value	0

T-8-11

■ FEED-ADJ

COPIER > ADJUST > FEED-ADJ	
ADJ-C1	Adjustment of image left edge margin: CST1
Details	Image left edge margin is increased/decreased 0.25mm by setting value 1. +: Image left edge margin is increased (An image moves rigt). -: Image left edge margin is decreased (An image moves left).
Use case	- When adjusting an image position. - When replacing the Engine Controller PCB.
Ad/set/operate method	Enter the setting value (switch negative/positive by * key) and then press OK key.
Caution	After the setting value is changed, write the changed value on the service label.
Display/ad/set range	-12 to 12
Unit	0.25mm
Default value	0

COPIER > ADJUST > FEED-ADJ	
ADJ-C2	Adjustment of image left edge margin: CST2
Details	Image left edge margin is increased/decreased 0.25mm by setting value 1. +: Image left edge margin is increased (An image moves rigt). -: Image left edge margin is decreased (An image moves left).
Use case	- When adjusting an image position. - When replacing the Engine Controller PCB.
Ad/set/operate method	Enter the setting value (switch negative/positive by * key) and then press OK key.
Caution	After the setting value is changed, write the changed value on the service label.
Display/ad/set range	-12 to 12
Unit	0.25mm
Default value	0
ADJ-MF	Adjustment of image left edge margin: MP
Details	Image left edge margin is increased/decreased 0.25mm by setting value 1. +: Image left edge margin is increased (An image moves rigt). -: Image left edge margin is decreased (An image moves left).
Use case	- When adjusting an image position. - When replacing the Engine Controller PCB.
Ad/set/operate method	Enter the setting value (switch negative/positive by * key) and then press OK key.
Caution	After the setting value is changed, write the changed value on the service label.
Display/ad/set range	-12 to 12
Unit	0.25mm
Default value	0
ADJ-REFE	Adjustment of image left edge margin: 2-sided
Details	Image left edge margin is increased/decreased 0.25mm by setting value 1. +: Image left edge margin is increased (An image moves rigt). -: Image left edge margin is decreased (An image moves left).
Use case	- When adjusting an image position. - When replacing the Engine Controller PCB.
Ad/set/operate method	Enter the setting value (switch negative/positive by * key) and then press OK key.
Caution	After the setting value is changed, write the changed value on the service label.
Display/ad/set range	-12 to 12
Unit	0.25mm
Default value	0
REG-MF	Adjustment of image leading edge margin: 1/1 SPD, MP

COPIER > ADJUST > FEED-ADJ	
Details	Image leading edge margin is increased/decreased 0.5mm by setting value 1. +: Image leading edge margin is increased (An image moves downward). -: Image leading edge margin is decreased (An image moves upward).
Use case	- When adjusting an image position. - When replacing the Engine Controller PCB.
Ad/set/operate method	Enter the setting value (switch negative/positive by * key) and then press OK key.
Caution	After the setting value is changed, write the changed value on the service label.
Display/ad/set range	-12 to 12
Unit	0.5mm
Default value	0
REG-CST	Adjustment of image leading edge margin: CST1
Details	Image leading edge margin is increased/decreased 0.5mm by setting value 1. +: Image leading edge margin is increased (An image moves downward). -: Image leading edge margin is decreased (An image moves upward).
Use case	- When adjusting an image position. - When replacing the Engine Controller PCB.
Ad/set/operate method	Enter the setting value (switch negative/positive by * key) and then press OK key.
Caution	After the setting value is changed, write the changed value on the service label.
Display/ad/set range	-12 to 12
Unit	0.5mm
Default value	0

COPIER > ADJUST > FEED-ADJ	
REG-CST2	Adjustment of image leading edge margin: CST2
Details	Image leading edge margin is increased/decreased 0.5mm by setting value 1. +: Image leading edge margin is increased (An image moves downward). -: Image leading edge margin is decreased (An image moves upward).
Use case	- When adjusting an image position. - When replacing the Engine Controller PCB.
Ad/set/operate method	Enter the setting value (switch negative/positive by * key) and then press OK key.
Caution	After the setting value is changed, write the changed value on the service label.
Display/ad/set range	-12 to 12
Unit	0.5mm
Default value	0
REG-DUP	Adjustment of image leading edge margin
Details	Image leading edge margin is increased/decreased 0.5mm by setting value 1. +: Image leading edge margin is increased (An image moves downward). -: Image leading edge margin is decreased (An image moves upward).
Use case	- When adjusting an image position. - When replacing the Engine Controller PCB.
Ad/set/operate method	Enter the setting value (switch negative/positive by * key) and then press OK key.
Caution	After the setting value is changed, write the changed value on the service label.
Display/ad/set range	-12 to 12
Unit	0.5mm
Default value	0
REG-MF2	Adjustment of image leading edge margin: 1/2 SPD, MP

COPIER > ADJUST > FEED-ADJ	
Details	Image leading edge margin is increased/decreased 0.5mm by setting value 1. +: Image leading edge margin is increased (An image moves downward). -: Image leading edge margin is decreased (An image moves upward).
Use case	- When adjusting an image position. - When replacing the Engine Controller PCB.
Ad/set/operate method	Enter the setting value (switch negative/positive by * key) and then press OK key.
Caution	After the setting value is changed, write the changed value on the service label.
Display/ad/set range	-12 to 12
Unit	0.5mm
Default value	0
REG-DUP4	Adjustment of image leading edge margin: 1/2 SPD, back side
Details	Image leading edge margin is increased/decreased 0.5mm by setting value 1. +: Image leading edge margin is increased (An image moves downward). -: Image leading edge margin is decreased (An image moves upward).
Use case	- When adjusting an image position. - When replacing the Engine Controller PCB.
Ad/set/operate method	Enter the setting value (switch negative/positive by * key) and then press OK key.
Caution	After the setting value is changed, write the changed value on the service label.
Display/ad/set range	-24 to 24
Unit	0.5mm
Default value	0
LOOP-CST	Adjustment of registration loop amount: CST1
Details	Paper feed distance is increased/decreased 0.5mm by setting value 1. +: The loop amount is increased. -: The loop amount is decreased.
Use case	- When replacing the Engine Controller PCB/clearing RAM data. - When paper skew occurs from the CST1.
Ad/set/operate method	Enter the setting value and then press OK key.
Display/ad/set range	0 to 20
Unit	0.5mm
Default value	10

COPIER > ADJUST > FEED-ADJ	
LOOP-MF	Adjustment of registration loop amount: MP
Details	Paper feed distance is increased/decreased 0.5mm by setting value 1. +: The loop amount is increased. -: The loop amount is decreased.
Use case	- When replacing the Engine Controller PCB/clearing RAM data. - When paper skew occurs from the MP.
Ad/set/operate method	Enter the setting value and then press OK key.
Display/ad/set range	0 to 20
Unit	0.5mm
Default value	8
LOOP-OP	Adjustment of registration loop amount: CST2
Details	Paper feed distance is increased/decreased 0.5mm by setting value 1. +: The loop amount is increased. -: The loop amount is decreased.
Use case	- When replacing the Engine Controller PCB/clearing RAM data. - When paper skew occurs from the CST2.
Ad/set/operate method	Enter the setting value and then press OK key.
Display/ad/set range	0 to 20
Unit	0.5mm
Default value	8
LOOP-DU	Adjustment of registration loop amount: back side
Details	Paper feed distance is increased/decreased 0.5mm by setting value 1. +: The loop amount is increased. -: The loop amount is decreased.
Use case	- When replacing the Engine Controller PCB/clearing RAM data. - When paper skew occurs at the back side setting.
Ad/set/operate method	Enter the setting value and then press OK key.
Display/ad/set range	0 to 20
Default value	4

COPIER > ADJUST > FEED-ADJ	
LOOP-THK	Adjustment of registration loop amount: MP
Details	Paper feed distance is increased/decreased 0.5mm by setting value 1. +: The loop amount is increased. -: The loop amount is decreased.
Use case	- When replacing the Engine Controller PCB/clearing RAM data. - When paper skew occurs on heavy paper 1, heavy paper 2, envelope, OHP and label.
Ad/set/operate method	Enter the setting value and then press OK key.
Display/ad/set range	0 to 20
Unit	0.5mm
Default value	8

T-8-12

■ HV-PRI

COPIER > ADJUST > HV-PRI	
OFST1-DC	Adjustment of DC offset at primary charge
Details	Adjust the DC offset at the primary charge. The less the value is decreased, the more image becomes dark.
Ad/set/operate method	Enter the setting value (switch negative/positive by * key) and then press OK key.
Display/ad/set range	-128 to 127
Unit	0.4% (duty)
Default value	0
OFST1-AC	Adjustment of AC offset at primary charge
Details	Adjust the AC offset at the primary charge. The less the value is decreased, the more image becomes dark.
Ad/set/operate method	Enter the setting value (switch negative/positive by * key) and then press OK key.
Display/ad/set range	-128 to 127
Unit	0.4% (duty)
Default value	0

T-8-13

■ DEVELOP

COPIER > ADJUST > DEVELOP	
DE-OFST	Entering offset value determined by developing DC bias
Details	Enter the offset value determined by the developing DC bias with manual. +: Increment -: Decrement The less the value is decreased, the more image becomes dark.
Use case	Image error (fogging, low image density)
Ad/set/operate method	Enter the setting value (switch negative/positive by * key) and then press OK key.
Display/ad/set range	-128 to 127
Unit	0.4% (duty)
Default value	0

T-8-14

■ CST-ADJ

COPIER > ADJUST > CST-ADJ	
ADJ-C1	Adjustment of the left edge registration: CST1
Details	As the input value is incremented by 1, the margin on the left edge of paper is increased by 0.25 mm. +: Left margin becomes larger. -: Left margin becomes smaller.
Use case	- When adjusting image position - When clearing RAM of the Main Controller PCB or replacing the PCB
Adj/set/operate method	Enter the setting value (switch negative/positive by * key) and press OK key.
Caution	After the setting value is changed, write the changed value in the service label.
Display/adj/set range	12 to -12
Unit	Approx. 0.25 mm
Default value	-2

COPIER > ADJUST > CST-ADJ	
ADJ-C2	Adjustment of the left edge registration: CST2
Details	As the input value is incremented by 1, the margin on the left edge of paper is increased by 0.25 mm. +: Left margin becomes larger. -: Left margin becomes smaller.
Use case	- When adjusting image position - When clearing RAM of the Main Controller PCB or replacing the PCB
Adj/set/operate method	Enter the setting value (switch negative/positive by * key) and press OK key.
Caution	After the setting value is changed, write the changed value in the service label.
Display/adj/set range	12 to -12
Unit	Approx. 0.25 mm
Default value	-4
ADJ-MF	Adjustment of the left edge registration: MP
Details	As the input value is incremented by 1, the margin on the left edge of paper is increased by 0.25 mm. +: Left margin becomes larger. -: Left margin becomes smaller.
Use case	- When adjusting image position - When clearing RAM of the Main Controller PCB or replacing the PCB
Adj/set/operate method	Enter the setting value (switch negative/positive by * key) and press OK key.
Caution	After the setting value is changed, write the changed value in the service label.
Display/adj/set range	12 to -12
Unit	0.25mm
Default value	-4
ADJ-REFE	Adjustment of the left edge registration: 2-sided
Details	As the input value is incremented by 1, the margin on the left edge of paper is increased by 0.25 mm. +: Left margin becomes larger. -: Left margin becomes smaller.
Use case	- When adjusting image position - When clearing RAM of the Main Controller PCB or replacing the PCB
Adj/set/operate method	Enter the setting value (switch negative/positive by * key) and press OK key.
Caution	After the setting value is changed, write the changed value in the service label.
Display/adj/set range	12 to -12
Unit	0.25mm
Default value	-4

T-8-15

■ BLANK

COPIER > ADJUST > BLANK	
BLANK-T	Adjustment of leading edge margin
Details	To adjust the margin on the leading edge of paper. As the value is incremented by 1, the margin is increased toward the center of the paper by 1 pixel (0.0423mm).
Use case	- When reducing the margin upon user's request - When enlarging the margin for transfer separation/fixing separation
Ad/set/operate method	Enter the setting value, and then press OK key.
Display/ad/set range	0 to 1000
Default value	59
BLANK-B	Adjustment of trailing edge margin
Details	To adjust the margin on the trailing edge of paper. As the value is incremented by 1, the margin is increased toward the center of the paper by 1 pixel (0.0423mm).
Use case	- When reducing the margin upon user's request - When enlarging the margin for transfer separation/fixing separation
Ad/set/operate method	Enter the setting value (switch negative/positive by * key) and then press OK key.
Display/ad/set range	Enter the setting value, and then press OK key.
Unit	0.4% (duty)
Default value	59

T-8-16

● FUNCTION

■ CCD

COPIER > FUNCTION > CCD	
DF-WLVL1	White level adjustment in copyboard reading: Color
Details	Automatic white level adjustment for copyboard scanning by scanning white paper used by user as usual.
Use case	When replacing the Copyboard Glass Unit / the CIS Unit / the ADF Unit.
Adj/set/operate method	1) Set paper on the Copyboard Glass. 2) Select the item and then press OK key.
Caution	Execute DF-WLVL2 continuously.
Related service mode	COPIER > ADJUST > CCD > DFTAR-R, DFTAR-G, DFTAR-B COPIER > FUNCTION > CCD > DF-WLVL2
DF-WLVL2	White level adjustment in ADF mode: Color
Details	Automatic white level adjustment for ADF scanning by scanning white paper used by user as usual.
Use case	When replacing the Copyboard Glass Unit / the CIS Unit / the ADF Unit.
Adj/set/operate method	1) Set paper on the ADF Unit. 2) Select the item and then press OK key.
Caution	Execute after DF-WLVL1.
Related service mode	COPIER > ADJUST > CCD > DFTAR-R, DFTAR-G, DFTAR-B COPIER > FUNCTION> CCD > DF-WLVL1
DF-WLVL3	White level adjustment in copyboard reading: BW
Details	Automatic white level adjustment for copyboard scanning by scanning white paper used by user as usual.
Use case	When replacing the Copyboard Glass Unit / the CIS Unit / the ADF Unit.
Adj/set/operate method	1) Set paper on the Copyboard Glass. 2) Select the item and then press OK key.
Caution	Execute DF-WLVL4 continuously.
Related service mode	COPIER > ADJUST > CCD > DFTAR-BW COPIER > FUNCTION > CCD > DF-WLVL4
DF-WLVL4	White level adjustment in ADF mode: BW
Details	Automatic white level adjustment for ADF scanning by scanning white paper used by user as usual.
Use case	When replacing the Copyboard Glass Unit / the CIS Unit / the ADF Unit.
Adj/set/operate method	1) Set paper on the ADF Unit. 2) Select the item and then press OK key.
Caution	Execute after DF-WLVL3.
Related service mode	COPIER > ADJUST > CCD > DFTAR-BW COPIER > FUNCTION > CCD > DF-WLVL3

COPIER > FUNCTION > CCD	
CL-AGC	Light intensity adjustment for CIS in copyboard reading: Color
Details	Automatic adjustment in copyboard reading for gain adjustment value and LED light intensity.
Use case	When replacing the Copyboard Glass Unit / the CIS Unit.
Adj/set/operate method	Select the item and then press OK key.
Required time	Approx. 5 seconds
Related service mode	COPIER >ADJUST > CCD > LED-CL-R COPIER >ADJUST > CCD > LED-CL-G COPIER >ADJUST > CCD > LED-CL-B
BW-AGC	Light intensity adjustment for CIS in copyboard reading: BW
Details	Automatic adjustment in copyboard reading for gain adjustment value and LED light intensity.
Use case	When replacing the Copyboard Glass Unit / the CIS Unit.
Adj/set/operate method	Select the item and then press OK key.
Required time	Approx. 5 seconds
Related service mode	COPIER > ADJUST > CCD > LED-BW-R COPIER > ADJUST > CCD > LED-BW-G COPIER > ADJUST > CCD > LED-BW-B

T-8-17

■ MISC-P

COPIER > FUNCTION > MISC-P	
SRVC-DAT	Output of system data list/system dump list
Details	To execute report output of the system data list and the system dump list. System data list: The service software switches and parameters used in FAX function System dump list: The number of sends/receives, the number of pages sent/received, the number of sheets printed/read, the number of errors, etc.
Adj/set/operate method	Select the item, and then press OK key.
SYS-DAT	Output of system data list
Details	To execute report output of the system data list. The service software switches and parameters used in FAX function are output.
Adj/set/operate method	Select the item, and then press OK key.

COPIER > FUNCTION > MISC-P	
SYS-DMP	Output of system dump list
Details	To execute report output of the system dump list. The number of sends/receives, the number of pages sent/received, the number of sheets printed/read, the number of errors, etc. are output.
Adj/set/operate method	Select the item, and then press OK key.
CNTR	Output of counter report
Details	To output the counter report. Counter values that indicate usage of functions (reading, recording, communication and copy) are displayed.
Adj/set/operate method	Select the item, and then press OK key.
ERR-LOG	Output of error log report
Details	To output the error log report.
Adj/set/operate method	Select the item, and then press OK key.
SPEC	Output of the spec report
Details	To output the spec report. The current device specifications such as the location, model information, and ROM version are output.
Adj/set/operate method	Select the item, and then press OK key.
ERDS-LOG	Output of the log information of E-RDS
Details	To execute report output of the log relating to Embedded-RDS. The date, time, code, and details (up to 130 characters) of each error that occurred are output.
Use case	When using Embedded-RDS
Adj/set/operate method	Select the item, and then press OK key.
TNRB-PRT	Output of the Bottle ID log report
Details	To output the Bottle ID log report.

T-8-18

■ MISC-R

COPIER > FUNCTION > MISC-R	
SCANLAMP	Check LED light up of the CIS Unit
Details	- Light up LED of the CIS Unit for 3 seconds. - Light up in the following order: R->G->B->R->G-B
Use case	When replacing the Copyboard Glass Unit / the CIS Unit.
Adj/set/operate method	Enter the setting value (switch negative/positive by * key) and then press OK key.
Required time	3 seconds
SCAN-ON	Copyboard reading operation
Details	Operate the reading an original on the copyboard
Use case	When replacing the CIS Unit.
Adj/set/operate method	1) Set paper on the Copyboard Glass. 2) Select the item and then press OK key.
Display/adj/set range	0 to 1
Default value	0

T-8-19

■ VIFFNC

COPIER > FUNCTION > VIFFNC	
STOR-DCN	Backup NVRAM on the Engine Controller PCB
Details	Backup the setting data from the NVRAM on the Engine Controller PCB
Use case	When replacing the Engine Controller PCB for troubleshoot.
Adj/set/operate method	Select the item and then press OK key.
Caution	Operate it during standby when the Main Motor stops.
Related service mode	COPIER > FUNCTION > VIFFNC > RSTR-DCN
RSTR-DCN	Restore to NVRAM on the Engine Controller PCB
Details	Restore the backup setting data from the NVRAM on the Engine Controller PCB.
Use case	When replacing the Engine Controller PCB for troubleshoot.
Adj/set/operate method	Select the item and then press OK key.
Caution	- Operate it during standby when the Main Motor stops. - Wait 10 seconds from when "executing..." disappears to when the main power is turned OFF. - Turn OFF/ON the main power after the above procedure.
Related service mode	COPIER > FUNCTION > VIFFNC > STOR-DCN

T-8-20

■ SPLMAN

COPIER > FUNCTION > SPLMAN	
SPL41971	Decrement of downward curl during heavy paper feeding
Details	Decrease downward curl during heavy paper feeding.
Adj/set/operate method	Enter the setting value and then press OK key.
Display/ad/set range	0 to 1 0: OFF 1: ON
Default value	0
SPL14159	Fixation of USB device ID
Details	To fix the USB device ID to "000000000000". Driver for each machine is installed to a PC. However, by fixing the serial number, the PC considers that any connected machine to be the same machine; thus, there will be no need to install the drivers many times.
Adj/set/operate method	1) Enter the value, and then press OK key. 2) Turn OFF/ON the main power switch.
Display/adj/set range	0 to 1 0: OFF, 1: ON
Default value	0
SPL65677	Switching of the leading edge margin (enlarge)
Details	Switching of the leading edge margin (enlarge) The leading edge margin is enlarged. When the leading edge margin is already set to small beforehand, the margin will be standard.
Display/adj/set range	0 to 20
Unit	0.1mm
Default value	0
SPL68676	Switching of the leading edge margin (reduce)
Details	Switching of the leading edge margin (reduce) The leading edge margin is reduced. When the leading edge margin is already set to large beforehand, the margin will be standard.
Display/adj/set range	0 to 20
Unit	0.1mm
SPL68677	Switching of the right and left edge margins (reduce)
Details	Switching of the right and left edge margins (reduce) The right and left margins of the printed paper are reduced. When the right and left edge margins are already set to large beforehand, the margins will be standard.
Display/adj/set range	0 to 20
Unit	0.1mm
Default value	0

COPIER > FUNCTION > SPLMAN	
SPL25607	Switching of the right and left edge margins (reduce)
Details	Switching of the right and left edge margins (reduce) The right and left margins of the printed paper are reduced. When the right and left edge margins are already set to large beforehand, the margins will be standard.
Display/adj/set range	0 to 20
Unit	0.1mm
Default value	0
SPL80925	Maximum value of the number of hosts retained at the time of pseudo Push Scan
Details	Maximum value of the number of hosts retained at the time of pseudo Push Scan
Display/adj/set range	0 to 1
Default value	0
SPL93822	Setting of department ID count all clear
Details	To set whether to disable clearing of all department ID counts.
Use case	Used to prevent the value of the department ID counter from being unintentionally cleared
Adj/set/operate method	Enter the setting value, and then press OK key.
Caution	Be sure to perform this mode after consulting with the system administrator at user's site.
Display/adj/set range	0 to 1 0: Enabled, 1: Disabled
Default value	0
Related service mode	COPIER> FUNCTION> SPLMAN> SPL78788
SPL78788	Setting of department ID count clear
Details	To set whether to disable clearing of department ID count.
Use case	Used to prevent the value of the department ID counter from being unintentionally cleared
Adj/set/operate method	Enter the setting value, and then press OK key.
Caution	Be sure to perform this mode after consulting with the system administrator at user's site.
Display/adj/set range	0 to 1 0: Enabled, 1: Disabled
Default value	0
Related service mode	COPIER> FUNCTION> SPLMAN> SPL93822
SPL71100	Setting of the duty of Off-hook PCB
Details	To set the duty of Off hook PCB. This is the mode to make handsets of particular manufacturers to ring when fax reception mode is set to "Fax/Tel (Auto Switch)".
Display/adj/set range	1 to 99
Default value	50

COPIER > FUNCTION > SPLMAN	
SPL00171	Change of the maximum auto sleep shift time
Details	To change the maximum value of auto sleep shift time in Settings/ Registration> Timer Settings> Auto Sleep Time.
Use case	When changing the setting time to shift to auto sleep mode
Adj/set/operate method	1) Enter the setting value, and then press OK key. 2) Turn OFF/ON the main power switch.
Display/adj/set range	0 to 1 0: 0 to 60, 1: 0 to 240
Default value	0 (For Europe), 1 (For locations other than Europe)
SPL80100	Mask setting at copyboard scanning
Details	To cancel the image mask occurs on the left edge at copyboard scanning.
Use case	Upon request from user who does not satisfy with the mask on the left edge
Adj/set/operate method	Enter the setting value, and then press OK key.
Display/adj/set range	0: Mask value according to the specifications of each job 1: No mask (0 mm)
Default value	0
SPL27354	For R&D use
Details	For R&D use
Default value	Default value is not changed.
SPL84194	ON/OFF of Embedded-RDS
Details	To set ON/OFF of Embedded-RDS function.
Use case	When using Embedded-RDS
Adj/set/operate method	1) Enter the value, and then press OK key. 2) Turn OFF/ON the main power switch.
Display/adj/set range	0 to 1 0: OFF, 1: ON
Default value	0
Related service mode	COPIER> FUNCTION> INSTALL> RGW-PORT, COM-TEST, COM-RSLT, COM-LOG
Supplement/memo	Embedded-RDS: Function to send device information such as the device counter, failure, and consumables to UGW via SOAP protocol UGW (Universal Gate Way): Remote monitoring service system
SPL32620	PC-less update
Details	Switching to enable/disable PC-less update
Display/adj/set range	0: Disable 1: Enable (default)
Default value	1

T-8-21

■ INSTALL

COPIER > FUNCTION > INSTALL	
STRD-POS	Adjustment of read position in ADF mode
Details	Adjust the read position in ADF mode
Use case	When replacing or removing the ADF unit.
Adj/set/operate method	1) Select the item and then press OK key. 2) Write the changed value of COPIER > FUNCTION > INSTALL > STRD-POS on the service label.
Caution	After the setting value is changed, write the changed value on the service label.
Related service mode	COPIER > ADJUST > ADJ-XY > STRD-POS
TONER-S	Toner supply to Developing Assembly
Details	Execute all operations for supplying toner to the Developing Assembly/Toner Supply area including preparing Developing Cylinder, Toner Stirring/Feed Member, Photosensitive Drum and output developing bias. After the executing, the operation stops automatically.
Use case	- For installation - When replacing the Developing Assembly.
Adj/set/operate method	Select the item and then press OK key.
Display/adj/set range	Operating: xxx sec (estimated time), Complete: END
Required time	Approx. 120 seconds
DRM-INIT	For R&D
CARD-NUM	Card first number setting
Details	To set the card first number to be used for Copy Card Reader-F1.
Use case	At installation of the Card Reader-F1
Adj/set/operate method	Enter the value, and then press OK key.
Display/adj/set range	1 to 2701
Default value	1
CARD	Setting of Card Reader management information
Details	To set the following management information at installation of the Card Reader-F1. - Register numbers of 300 cards from the number set in CARD-NUM to the department ID. - Initialize ID and password of the system administrator.
Use case	- At installation of the Card Reader-F1
Adj/set/operate method	1) Select the item, and then press OK key. 2) Turn OFF/ON the main power switch.
Default value	0
Related service mode	COPIER> FUNCTION> INSTALL> CARD-NUM

COPIER > FUNCTION > INSTALL	
ERDS	ON/OFF of Embedded-RDS
Details	To set ON/OFF of Embedded-RDS function.
Use case	When using Embedded-RDS
Adj/set/operate method	1) Enter the value, and then press OK key. 2) Turn OFF/ON the main power switch.
Caution	Be sure to use ERDS, RGW-PORT, COM-TEST, COM-RSLT, and COM-LOG as a set.
Display/adj/set range	0 to 1 0: OFF, 1: ON
Default value	0
Related service mode	COPIER> FUNCTION> INSTALL> RGW-PORT, COM-TEST, COM-RSLT, COM-LOG
Supplement/memo	Embedded-RDS: Function to send device information such as the device counter, failure, and consumables to UGW via SOAP protocol UGW (Universal Gate Way): Remote monitoring service system
RGW-PORT	Setting of UGW port number when using E-RDS
Details	To display the USW port (which can be changed)
Use case	When using Embedded-RDS
Adj/set/operate method	1) Enter the value, and then press OK key. 2) Turn OFF/ON the main power switch.
Caution	Be sure to use ERDS, RGW-PORT, COM-TEST, COM-RSLT, and COM-LOG as a set.
Display/adj/set range	1 to 65535
Default value	443
Related service mode	COPIER> FUNCTION> INSTALL> ERDS, COM-TEST, COM-RSLT, COM-LOG
Supplement/memo	Embedded-RDS: Function to send device information such as the device counter, failure, and consumables to UGW via SOAP protocol UGW (Universal Gate Way): Remote monitoring service system
COM-TEST	Execution of Embedded-RDS communication test
Details	To execute Embedded-RDS communication test. If the connection fails, the information is added to the communication error log.
Use case	When using Embedded-RDS
Adj/set/operate method	Select the item, and then press OK key.
Caution	Be sure to use ERDS, RGW-PORT, COM-TEST, COM-RSLT, and COM-LOG as a set.
Default value	0
Related service mode	COPIER> FUNCTION> INSTALL> ERDS, RGW-PORT, COM-RSLT, COM-LOG
Supplement/memo	Embedded-RDS: Function to send device information such as the device counter, failure, and consumables to UGW via SOAP protocol UGW (Universal Gate Way): Remote monitoring service system

COPIER > FUNCTION > INSTALL	
COM-RSLT	Embedded-RDS communication test result
Details	To display the Embedded-RDS communication test result.
Use case	When using Embedded-RDS
Adj/set/operate method	N/A (Display only)
Caution	Be sure to use ERDS, RGW-PORT, COM-TEST, COM-RSLT, and COM-LOG as a set.
Display/adj/set range	When not in execution: Unknown, When connection is completed: OK, When connection is failed: NG
Default value	Unknown
Related service mode	COPIER> FUNCTION> INSTALL> ERDS, RGW-PORT, COM-TEST, COM-LOG
Supplement/memo	Embedded-RDS: Function to send device information such as the device counter, failure, and consumables to UGW via SOAP protocol UGW (Universal Gate Way): Remote monitoring service system
COM-LOG	Display of E-RDS communication error log
Details	To display the Embedded-RDS communication error log. The dates, times, and error codes of the latest 5 errors that occurred are displayed. As for the error detail information, the report can be output by executing COPIER> FUNCTION> MISC-P> ERDS-LOG.
Use case	When using Embedded-RDS
Adj/set/operate method	Select the item, and then press OK key.
Caution	Be sure to use ERDS, RGW-PORT, COM-TEST, COM-RSLT, and COM-LOG as a set.
Display/adj/set range	No.: 2 digits, Date: 8 digits, Time: 4 digits, Error code: 8 digits
Related service mode	COPIER> FUNCTION> INSTALL> ERDS, RGW-PORT, COM-TEST, COM-RSLT COPIER> FUNCTION> MISC-P> ERDS-LOG
Supplement/memo	Embedded-RDS: Function to send device information such as the device counter, failure, and consumables to UGW via SOAP protocol UGW (Universal Gate Way): Remote monitoring service system

T-8-22

■ CLEAR

COPIER > FUNCTION > CLEAR	
R-CON	Initializing the setting value for reader /ADF
Details	Initialize the setting value for reader /ADF
Use case	• When replacing the Main Controller PCB • When E248-0001 occurs.
Adj/set/operate method	1) Select the item and then press OK key. 2) Turn OFF/ON the main power.

COPIER > FUNCTION > CLEAR	
ERR	Clearing error code
Details	Clear error code (E000, E001, E002, E003)
Use case	When error occurs
Adj/set/operate method	Select the item and then press OK key.
SRVC-DAT	Clearing service counter
Details	To clear the service mode setting values. The user mode setting values are not cleared. The factory adjustment values of the Reader/ADF are not initialized.
Adj/set/operate method	1) Select the item, and then press OK key. 2) Turn OFF/ON the main power switch.
COUNTER	Clearing of parts counters
Details	To clear the counter by maintenance/part/mode. The numerator printed on a system dump list becomes 0.
Adj/set/operate method	1) Select the item, and then press OK key. 2) Turn OFF/ON the main power switch.
HIST	Clear of logs
Details	To clear the communication management/print/jam/error log.
Use case	When clearing logs
Adj/set/operate method	1) Select the item, and then press OK key. 2) Turn OFF/ON the main power switch.
CARD	Clearing Card Reader connection information
Details	To clear the information on connection of the Copy Card Reader-F1. The data related to the card ID (department) is cleared, and the ID and password of the system administrator are initialized.
Adj/set/operate method	When removing the Card Reader-F1 1) Disable the department ID management. 2) Select the item, and then press OK key. 3) Execute E719-CLR. 4) Turn OFF the main power switch. 5) Remove the Card Reader-F1. 6) Turn ON the main power switch.
Related service mode	COPIER> FUNCTION> CLEAR> E719-CLR
E719-CLR	Clearing E719 error
Details	To clear E719 error (communication error with the Card Reader).
Use case	When removing the Card Reader-F1
Adj/set/operate method	1) Select the item, and then press OK key. 2) Turn OFF/ON the main power switch.
Related service mode	COPIER> FUNCTION> CLEAR> CARD

COPIER > FUNCTION > CLEAR	
ALL	Clearing setting information
Details	- User mode setting values - Service mode setting values (excluding the Service counter) - ID and password of the system administrator - Communication management/print/jam/error log - E719 error the following items are not cleared/initialized. - Service counter - Factory adjustment values of the Reader/ADF
Use case	When replacing the Main Controller PCB.
Adj/set/operate method	1) Select the item, and then press OK key. 2) Turn OFF/ON the main power switch.
Related service mode	COPIER> OPTION> BODY> SIZE-LC
ERDS-DAT	Initialization of Embedded-RDS setting value
Details	To initialize the Embedded-RDS setting values. ON/OFF of Embedded-RDS, UGW (remote monitoring service system) port number, and communication error log set in service mode are initialized.
Use case	When upgrading the Bootable in the Embedded-RDS environment
Adj/set/operate method	Select the item, and then press OK key.
Caution	The method of using the SRAM in Embedded-RDS differs depending on the Bootable version. Therefore, unless initialization is executed at the time of version upgrade, data inconsistency occurs.
Related service mode	COPIER> FUNCTION> INSTALL> E-RDS, RGW-PORT, COM-LOG
Supplement/memo	Embedded-RDS: Function to send device information such as the device counter, failure, and consumables to UGW via SOAP protocol UGW (Universal Gate Way): Remote monitoring service system

T-8-23

■ SYSTEM

COPIER > FUNCTION > SYSTEM	
DOWNLOAD	Switching to the mode for downloading from USB flash drive
Details	Switching to the mode for downloading from USB flash drive
Display/adj/set range	0 to 1
Default value	0
PANEL-UP	Download from USB memory (PANEL)
Details	To perform downloading when PANEL exists in the root directory of the USB memory.
Use case	At upgrade
Adj/set/operate method	1) Install the USB memory. 2) Select the item, and then press OK key. 3) Turn OFF/ON the main power switch.
Caution	Do not turn OFF/ON the power before "Executing..." disappears.
LOGWRITE	Writing sublog to USB memory
Details	To write sublog that includes the following information to the USB memory. - Job list (job names, user names, and destinations) - Communications log (destinations and user names) - Job log (user names and job names)
Use case	When analyzing the cause of a problem
Adj/set/operate method	1) Install the USB memory. 2) Select the item, and then press OK key. 3) Turn OFF/ON the main power switch.
Caution	Do not turn OFF/ON the power before "Executing..." disappears.
IMPORT	Reading of service mode setting value from USB memory
Details	To write the service mode setting values (excluding those related to Reader/ADF) to the USB memory.
Use case	When replacing the Main Controller PCB as a measure against failures
Adj/set/operate method	1) Install the USB memory. 2) Select the item, and then press OK key. 3) Turn OFF/ON the main power switch.
Caution	Do not turn OFF/ON the power before "Executing..." disappears.
EXPORT	Writing service mode setting value to USB memory
Details	To write the service mode setting values (excluding those related to Reader/ADF) to the USB memory.
Use case	When replacing the Main Controller PCB as a measure against failures
Adj/set/operate method	1) Install the USB memory. 2) Select the item, and then press OK key.
Caution	"Executing..." disappears when writing is completed.

T-8-24

OPTION

■BODY

COPIER > OPTION > BODY	
DFDST-L1	Adjustment of dust detect level: paper interval, ADF
Details	Adjustment of the black line correction level with the dust detection correction control at paper interval in ADF reading. Increase the value when the black line occurs. The more the value is increased, the more the black line disappears.
Use case	- When the black line occurs due to dust. - User request
Adj/set/operate method	Enter the setting value and then press OK key.
Caution	Excessive increment of the value displays frequent cleaning instruction as extra small dust which is not shown on the image is even detected. Excessive decrement of the value may cause the black line on the image.
Display/adj/set range	0 to 255
Default value	210
Supplement/memo	Black line occurs on the image by dust. The dust detection correction control corrects the image to prevent black line when dust is detected.
DFDST-L2	Adjustment of dust detect level: after job, ADF
Details	Dust detection with the dust detection correction control after job completion in ADF reading. Decrease the value when frequent cleaning instruction displays. Increase the value when the black line occurs, the more value is increased, the more small dust is detected.
Use case	- When the black line occurs due to dust. - User request
Adj/set/operate method	Enter the setting value and then press OK key.
Caution	Excessive increment of the value displays frequent cleaning instruction as extra small dust which is not shown on the image is even detected. Excessive decrement of the value may cause the black line on the image.
Display/adj/set range	0 to 255
Default value	210
Supplement/memo	Black line occurs on the image by dust. The dust detection correction control corrects the image to prevent black line when dust is detected.

COPIER > OPTION > BODY	
JM-ERR-R	Display "0071" jam as error
Details	Display "0071" jam as E996-0071. Displaying log as error to acquire log when "0071" jam occurs at a specific user. Log acquisition is available when "E996-0071" occurs.
Use case	Acquiring log when "0071" jam occurs.
Adj/set/operate method	Enter the setting value and then press OK key.
Display/adj/set range	0: Display as jam 1: Display as error
Default value	0
SIZE-LC	Setting of paper size configuration
Details	To set the paper size configuration. At installation in areas other than Japan, perform the following procedure to match the setting information with that of the location.
Use case	- At installation - Upon user's request
Adj/set/operate method	1) Set the location under LOCALE. 2) Enter the setting value under SIZE-LC, and then press OK key. 3) Execute COPIER> FUNCTION> CLEAR> ALL. 4) Turn OFF/ON the main power switch.
Caution	Since COPIER> FUNCTION> CLEAR> ALL is executed when changing the location, the setting information of user mode, service mode, etc. is initialized. The setting information of this item is not initialized.
Display/adj/set range	1 to 4 1: AB configuration, 2: Inch configuration, 3: A configuration, 4: AB/Inch configuration
Related service mode	COPIER> FUNCTION> CLEAR> ALL COPIER> OPTION> BODY> LOCALE
MIBCOUNT	Setting of MIB collection charge counter
Details	To set the range of charge counter information that can obtain MIB (Management Information Base).
Use case	When preventing the Charge Counter MIB from being used by a third party
Adj/set/operate method	1) Enter the setting value, and then press OK key. 2) Turn OFF/ON the main power switch.
Display/adj/set range	0 to 2 0: All charge counters are obtained, 1: Only the displayed counter* is obtained, 2: All charge counters are not obtained * : Counter specified by the following: COPIER > OPTION > USER > COUNTER 1 to 6
Default value	0
Related service mode	COPIER> OPTION> USER> COUNTER1 to 6

COPIER > OPTION > BODY	
NS-CMD5	Setting of CRAM-MD5 authentication method at SMTP authentication
Details	To restrict use of CRAM-MD5 authentication method at the time of SMTP authentication. When 1 is set, CRAM-MD5 authentication method is not used.
Use case	Upon user's request
Adj/set/operate method	1) Enter the setting value, and then press OK key. 2) Turn OFF/ON the main power switch.
Display/adj/set range	0 to 1 0: Used (SMTP server-dependent), 1: Not used
Default value	0
Supplement/memo	SMTP authentication: Protocol in which user authentication function is added to SMTP, which is the protocol to be used for e-mail transmission. At the time of e-mail transmission, this protocol executes authentication of the user account and the password between the SMTP server and the user to approve e-mail transmission only when it's authenticated.
NS-PLN	Setting of plaintext authentication at SMTP authentication
Details	To restrict use of PLAIN/LOGIN authentication, which is plaintext authentication, at the time of SMTP authentication under the environment where the communication packet is not encrypted. When 1 is set, plaintext authentication is not used.
Use case	Upon user's request
Adj/set/operate method	1) Enter the setting value, and then press OK key. 2) Turn OFF/ON the main power switch.
Display/adj/set range	0 to 1 0: Used (SMTP server-dependent), 1: Not used
Default value	0
Supplement/memo	SMTP authentication: Protocol in which user authentication function is added to SMTP, which is the protocol to be used for e-mail transmission. At the time of e-mail transmission, this protocol executes authentication of the user account and the password between the SMTP server and the user to approve e-mail transmission only when it's authenticated.

COPIER > OPTION > BODY	
NS-LGN	Setting of LOGIN authentication at SMTP authentication
Details	To restrict use of LOGIN authentication at the time of SMTP authentication. When 1 is set, LOGIN authentication is not used.
Use case	Upon user's request
Adj/set/operate method	1) Enter the setting value, and then press OK key. 2) Turn OFF/ON the main power switch.
Display/adj/set range	0 to 1 0: Used (SMTP server-dependent), 1: Not used
Default value	0
Supplement/memo	SMTP authentication: Protocol in which user authentication function is added to SMTP, which is the protocol to be used for e-mail transmission. At the time of e-mail transmission, this protocol executes authentication of the user account and the password between the SMTP server and the user to approve e-mail transmission only when it's authenticated.
SLPMODE	Setting of shift to sleep mode
Details	To restrict shift to sleep mode 1/sleep mode 3. When 1 is set, the machine does not shift to sleep mode.
Use case	When sleep failure occurs
Adj/set/operate method	1) Enter the setting value, and then press OK key. 2) Turn OFF/ON the main power switch.
Display/adj/set range	0 to 1 0: Shift is available., 1: Shift is not available.
Default value	0
SDTM-DSP	Setting of automatic shutdown menu display
Details	When setting COPIER> OPTION> BODY> SDTM-DSP to 1, menu is displayed. When 0 is set, menu is hidden.
Use case	When setting the automatic shutdown menu display
Adj/set/operate method	1) Enter the setting value, and then press OK key. 2) Turn OFF/ON the main power switch.
Display/adj/set range	0 to 1 0: Menu is hidden., 1: Menu is displayed.
Default value	0
Supplement/memo	Even with the fax model for locations other than Europe, the service mode is displayed. However, the menu will not be displayed on UI even 1 is set.

COPIER > OPTION > BODY	
RMT-SW	ON/OFF setting of RUI service mode function
Details	To set ON/OFF of RUI service mode function.
Use case	When setting ON/OFF of RUI service mode function
Adj/set/operate method	1) Enter the setting value, and then press OK key.
Display/adj/set range	0 to 1 0: OFF, 1: ON
Default value	1
PSWD-SW	Setting of service mode password level
Details	To set the password level required to get into service mode.
Use case	When getting into service mode
Adj/set/operate method	1) Enter the setting value, and then press OK key. 2) Turn OFF/ON the main power switch.
Display/adj/set range	0 to 2 0: Password is not required (RUI service mode password only) 1: Password for service engineer is required 2: Passwords for service engineer and system administrator at user's site are required
Default value	0
SM-PSWD	Password for service engineer
Details	To set the password required to enter when the level is set to 1 or 2 in PSWD-SW at the time of getting into service mode.
Use case	When the level is set to 1 or 2 in PSWD-SW at the time of getting into service mode.
Adj/set/operate method	1) Enter the setting value, and then press OK key. 2) Turn OFF/ON the main power switch.
Display/adj/set range	1 to 99,999,999
Default value	11111111

T-8-25

COPIER > OPTION > FNC-SW	
D-DLV-BK	Set drum low alarm notice timing
Details	Set timing of the drum low alarm. When COPIER > COUNTER > LF > K-DRM-LF reaches to the setting value (%), the alarm (35-0073) is notified to the UGW.
Use case	When changing the timing to notify the end of life.
Adj/set/operate method	Enter the setting value and then press OK key.
Display/adj/set range	50 to 200
Unit	%
Default value	100
Related service mode	COPIER > COUNTER > LF > K-DRM-LF
DLVFN-SW	Set the delivery cooling fan operation
Details	Deodorize exhaust air to stop the delivery cooling fan operation
Use case	When smell of exhaust air is consideration.
Adj/set/operate method	Enter the setting value and then press OK key.
Display/adj/set range	0 to 1 0: Operate the fan following the specifications. 1: Stop operation of the fan.
Default value	0
LCDSFLG	Setting of local CDS server usage
Details	To set whether to use the local CDS server.
Use case	When using the local CDS server
Adj/set/operate method	Enter the setting value, and then press OK key.
Display/adj/set range	0 to 1 0: Not used, 1: Used
Default value	0
Supplement/memo	iW EMC device firmware update plug-in is required to use local CDS.
T-END-BK	For R&D

T-8-26

■ FNC-SW

COPIER > OPTION > FNC-SW	
T-DLV-BK	Set toner low alarm notice timing
Details	Set timing of the toner low alarm. When the toner level in the Toner Container reaches to the setting value (%), the alarm is notified.
Use case	When changing the timing to notify the end of life.
Adj/set/operate method	Enter the setting value and then press OK key.
Caution	Count error may occur as remaining toner is calculate by toner supply count.
Display/adj/set range	0 to 40
Unit	%
Default value	EUR: 0, Others: 26

■ CUSTOM

COPIER > OPTION > CUSTOM	
TEMP-TBL	Fixing temperature setting at plain, 1/1 speed
Details	Offset the fixing temperature at plain, 1/1 speed. The temperature is increased 1 to 2 deg C by setting value 1. Increase the value when fixing error occurs, decrease the value when the offset occurs.
Use case	- When fixing error occurs at plain, 1/1 speed. - When adjusting the print temperature by slip or paper curl prevention.
Adj/set/operate method	Enter the setting value (switch negative/positive by * key) and then press OK key.
Display/adj/set range	-9 to 9
Default value	0
FLK-RD	Flicker reduction mode
Details	Change the fixing temperature control to cancel fluorescent flicking during printing
Use case	When the fluorescent flicking occurs during printing.
Adj/set/operate method	Enter the setting value and then press OK key.
Display/adj/set range	0: OFF 1: ON
Default value	0

T-8-27

■ DSPLY-SW

COPIER > OPTION > DSPLY-SW	
DRM-WARN	Display / Hide a drum unit replacement message
Details	Set display or hide a drum unit replacement message in LUI, either when the day elapsed 7 days after the full of the waste toner warning 1, or the point in time when the waste toner reaches to full.
Use case	When a user needs to know a drum unit replacement timing.
Adj/set/operate method	Enter the setting value and then press OK key.
Display/adj/set range	0 to 1 0: Hide, 1: Display
Default value	0
Related service mode	COPIER > OPTION > FNC-SW > D-DLV-BK
DF-DSP	ON/OFF of ADF Roll counter initial scrn
Details	To set whether to display the ADF Roller on the counter initialization screen in Settings/Registration menu.
Use case	When the user does not replace the parts
Adj/set/operate method	Enter the setting value, and then press OK key.
Display/adj/set range	0 to 1 0: OFF, 1: ON
Default value	1
Related user mode	Settings/Registration > Adjustment/Maintenance > Initialize After Replacing Parts > ADF Pickup Roller and ADF Separation Pad

T-8-28

■ CLEANING

COPIER > OPTION > CLEANING	
FX-CN-SW	Set the fixing eject setting
Details	Reduce the motor drive volume by stopping the fixing eject sequence operation.
Use case	Set ON when receiving a complaint about the motor drive noise during the fixing eject sequence operation.
Adj/set/operate method	Enter the setting value and then press OK key.
Display/adj/set range	0: OFF, 1: ON
Default value	0

T-8-29

■ IMG-FIX

COPIER > OPTION > IMG-FIX	
TMP-TBL2	Fixing temperature setting (heavy paper 1, 1/2speed)
Details	Set fixing temperature for heavy paper 1, heavy paper 2 and label. The temperature is increased / decreased 1 to 2 deg C by setting value 1. Increase the setting value when fixing error occurs, decrease the value when offset occurs.
Use case	- When poor fixing occurs on the fixing mode for heavy paper 1, heavy paper 2 and label. - When adjusting the print temperature by slip or paper curl prevention.
Ad/set/operate method	Enter the setting value (switch negative/positive by * key) and then press OK key.
Display/ad/set range	-9 to 9
Default value	0
TMP-TBL4	Adjustment of pickup timing
Details	Change temperature to pickup
Use case	- When poor fixing occurs on default fixing mode. - When adjusting the print temperature by slip or paper curl prevention.
Ad/set/operate method	Enter the setting value (switch negative/positive by * key) and then press OK key.
Display/ad/set range	-9 to 9
Default value	0
TMP-TBL6	Fixing temperature setting (envelope)
Details	Set fixing temperature for envelopes. The temperature is increased / decreased 1 to 2 deg C by setting value 1. Increase the setting value when fixing error occurs, decrease the value when hot offset occurs.
Use case	- When hot offset occurs for envelope - When fixing error occurs
Ad/set/operate method	Enter the setting value (switch negative/positive by * key) and then press OK key.
Display/ad/set range	-9 to 9
Default value	0

COPIER > OPTION > IMG-FIX	
EDG-WAIT	Edge temperature rise standby setting
Details	- Control edge temperature rise when printing small size paper. - Decrease down sequence shift temperature of the through-put.
Use case	- Decrease through-put control - Control edge temperature rise - Prevent high temperature offset
Ad/set/operate method	Enter the setting value and then press OK key.
Caution	Setting value "1" improves the edge temperature rise while through-put is decreased.
Display/ad/set range	0 to 1 0: OFF 1: ON
Default value	0
FIX-SMR	Decrement of fixing explosion setting
Details	Set density thin to decrease the fixing explosion. 2 steps are shifted from the default value to low density when the value is turned ON.
Use case	- Set as standby mode when the fixing explosion is occurred by paper condition. - Decrease quantity of stuck toner.
Ad/set/operate method	Enter the setting value and then press OK key.
Display/ad/set range	0 to 1 0: OFF, 1: ON
Default value	0
TMP-TBLC	The fixing surface temperature setting on Special Mode N
Details	Increase/decrease the setting value set by target temperature at sheet-to-sheet distance, sheet feed permission temperature during the printing in Special Mode N. The fixing temperature is increased/decreased 1 deg C by setting value 1.
Use case	Control the fixing temperature when the fixing error or offset occurs by paper condition.
Ad/set/operate method	Enter the setting value (switch negative/positive by * key) and then press OK key.
Display/ad/set range	-9 to 9
Default value	0
Supplement/memo	It is available only when Special Mode N is set.
TMPTBLC2	Paper curl correction mode: 2nd
Details	Increase/decrease the setting value set by target temperature at sheet-to-sheet distance. The fixing temperature is increased/decreased 5 deg C by setting value 1.
Use case	When stacking failure occurs due to paper curl
Ad/set/operate method	Enter the setting value and then press OK key.
Display/ad/set range	0 to 4
Default value	2
Supplement/memo	It is not available when the flicker reduction mode is set.

COPIER > OPTION > IMG-FIX	
TMP-TB14	Fixing temperature setting (plain, thin paper, OHP, 1/2speed)
Details	- Offset fixing temperature for plain, thin paper and OHP at 1/2speed. '- The temperature is increased / decreased 1 to 2 deg C by setting value 1. Increase the setting value when fixing error occurs, decrease the value when offset occurs.
Use case	- When poor fixing occurs on the fixing mode for plain, thin paper, OHP, 1/2speed. - When adjusting the print temperature by slip or paper curl prevention.
Ad/set/operate method	Enter the setting value (switch negative/positive by * key) and then press OK key.
Display/ad/set range	-9 to 9
Default value	0

T-8-30

■ IMG-LSR

COPIER > OPTION > IMG-LSR	
SC-PR-SW	Scanner last rotation shortening time mode
Details	Stop the polygon motor immediately after the last rotation to reduce noise from the polygon motor.
Use case	When receiving a complaint about the scanner motor drive noise after a job is finished.
Adj/set/operate method	Enter the setting value and then press OK key.
Display/adj/set range	0 to 1 0: OFF, 1: ON
Default value	0

T-8-31

■ IMG-TR

COPIER > OPTION > IMG-TR	
TR-BS-SW	Transfer bias setting at highland environment
Details	Control the transfer bias for printing to prevent it from exceeding specific level.
Use case	When the black spot occurs on the image by leak at low pressure area such as high latitude, also, the environment is under -5 deg C.
Adj/set/operate method	Enter the setting value and then press OK key.
Caution	When installation site is changed from highland to lowland, set OFF
Display/adj/set range	0: OFF 1: ON
Default value	0
SP-BS-SW	Separation bias setting
Details	improve the separation performance by changing separation bias.
Use case	When feeding specific paper such as thin paper.
Adj/set/operate method	Enter the setting value and then press OK key.
Caution	Set OFF for feeding plain
Display/adj/set range	1 to 4 1: HIGH DOWN 2: DOWN 3: Default 4: UP
Default value	3
FX-SP-H	Paper trailing edge tension setting
Details	Change the fixing motor speed while controlling loop to prevent bounce of rear end of OHP.
Use case	When bounce of rear end of OHP occurs.
Adj/set/operate method	Enter the setting value and then press OK key.
Display/adj/set range	0 to 1 0: OFF 1: ON
Default value	0
HUM-SW	Transfer current output control setting
Details	Control transfer current output by setting environment when the environment sensor is damaged.
Use case	When the environment sensor is damaged.
Adj/set/operate method	Enter the setting value and then press OK key.
Display/adj/set range	0 to 3 0: OFF 1: N/L (23 deg C, Humidity: 5%) 2: N/N (23 deg C, Humidity: 50%) 3: H/H (30 deg C, Humidity: 80%)
Default value	0

COPIER > OPTION > IMG-TR	
FX-BSSW1	Adjustment of fixing bias
Details	Control positive fixing bias by the setting environment when electrostatic offsetting occurs.
Use case	When electrostatic offsetting is occurred by paper condition.
Adj/set/operate method	Enter the setting value and then press OK key.
Display/adj/set range	0 to 4 0: OFF 1: 200V 2: 400V 3: 600V 4: 700V
Default value	3
FX-BSSW2	Adjustment of fixing bias
Details	Control negative fixing bias by the setting environment when electrostatic offsetting occurs.
Use case	When electrostatic offsetting is occurred by paper condition.
Adj/set/operate method	Enter the setting value and then press OK key.
Display/adj/set range	0 to 4 0: OFF 1: -300V 2: -480 to -500V 3: -600V 4: -700V
Default value	2

T-8-32

■ USER

COPIER > OPTION > USER	
DRMRP-SW	Display of drum unit replacement setting
Display/adj/set range	0 to 1 0: Display "End" 1: Display "End" and the replacement require
Default value	0
COUNTER1	Display of counter 1 type
Details	To display counter type for counter 1 on the Counter Check
Use case	Upon user/dealer's request
Adj/set/operate method	N/A (Display only)
Caution	No change is available.
Display/adj/set range	0 to 999
Default value	The value differs according to the location.
COUNTER2	Display of counter 2 type
Details	To display counter type for counter 2 on the Counter Check screen.
Use case	Upon user/dealer's request
Adj/set/operate method	1) Enter the setting value, and then press OK key. 2) Turn OFF/ON the main power switch.
Display/adj/set range	0 to 999 0: No registration
Default value	The value differs according to the location.
COUNTER3	Display of counter 3 type
Details	To display counter type for counter 3 on the Counter Check
Use case	screen.
Adj/set/operate method	1) Enter the setting value, and then press OK key. 2) Turn OFF/ON the main power switch.
Display/adj/set range	0 to 999 0: No registration
Default value	The value differs according to the location.
COUNTER4	Display of counter 4 type
Details	To display counter type for counter 4 on the Counter Check screen.
Use case	Upon user/dealer's request
Adj/set/operate method	1) Enter the setting value, and then press OK key. 2) Turn OFF/ON the main power switch.
Display/adj/set range	0 to 999 0: No registration
Default value	0

COPIER > OPTION > USER	
COUNTER5	Display of counter 5 type
Details	To display counter type for counter 5 on the Counter Check screen.
Use case	Upon user/dealer's request
Adj/set/operate method	1) Enter the setting value, and then press OK key. 2) Turn OFF/ON the main power switch.
Display/adj/set range	0 to 999 0: No registration
Default value	0
COUNTER6	Display of counter 6 type
Details	To display counter type for counter 6 on the Counter Check screen.
Use case	Upon user/dealer's request
Adj/set/operate method	1) Enter the setting value, and then press OK key. 2) Turn OFF/ON the main power switch.
Display/adj/set range	0 to 999 0: No registration
Default value	0
CNT-SW	Setting of charge counter display method
Details	To set display method of the charge counter on the Counter Check screen. Set 1 to 3 to select a new method.
Use case	Upon user's request
Adj/set/operate method	1) Enter the setting value, and then press OK key. 2) Turn OFF/ON the main power switch.
Display/adj/set range	0 to 3 0: Conventional method (type 1), 1: New method (type 2), 2: New method (type 3), 3: New method (type 4)
Default value	0
CONTROL	Setting of PDL job charge method by CC-VI
Details	To set charge method for PDL job by the control card interface "CC-VI" When outputting at insertion of the control card, set 1 (not counted)/2 (counted)
Use case	Upon user's request
Adj/set/operate method	Enter the setting value, and then press OK key.
Display/adj/set range	0 to 2 0: Output is available without control card. Not counted. 1: Output is available at insertion of the card. Not counted. 2: Output is available at insertion of the card. Counted.
Default value	0

COPIER > OPTION > USER	
CTCHKDSP	ON/OFF of charge counter print
Details	To set whether to print the charge counter on the Counter Check screen in the System Manager Data List. When 1 is set, the charge counter is printed.
Use case	Upon user's request
Adj/set/operate method	Enter the setting value, and then press OK key.
Display/adj/set range	0 to 1 0: OFF, 1: ON
Default value	1
TNRB-SW	ON/OFF of toner replacement counter display
Details	To set whether to display the toner replacement counter on the Counter Check screen. When 1 is set, the user can check the toner replacement counter
Use case	Upon user's request
Adj/set/operate method	1) Enter the setting value, and then press OK key. 2) Turn OFF/ON the main power switch.
Display/adj/set range	0 to 1 0: OFF, 1: ON
Default value	0
SCALL-SW	ON/OFF of Service Call button display
Details	To set whether to display or hide the Service Call button on the Touch Panel. When 1 is set, the button is displayed.
Use case	When the sales company supports service initiated by the Service Call button
Adj/set/operate method	Enter the setting value, and then press OK key.
Display/adj/set range	0 to 1 0: OFF, 1: ON
Default value	0
SCALLCMP	Setting of Service Call complete notice
Details	To set whether to notify the completion of Service Call. With this setting enabled, a notification of repair completion is sent to UGW to clear the Service Call status that is retained internally.
Use case	When service technician uses this mode after completing repair
Adj/set/operate method	Enter the setting value, and then press OK key.
Caution	After executing "1: Notified", the setting value becomes 0 immediately.
Display/adj/set range	0 to 1 0: Not notified, 1: Notified
Default value	0

COPIER > OPTION > USER	
PS-MODE	Compatible mode setting at PS usage
Details	To set for compatibility with existing machine regarding image process or print specification with PS print. Setting of a value other than the setting values means that multiple settings are combined. (Example: 44=4+8+32)
Use case	At replacement
Adj/set/operate method	1) Enter the setting value, and then press OK key. 2) Turn OFF/ON the main power switch.
Display/adj/set range	0 to 63 1: Not used 2: Not used 4: Compatible with EFI at PS 2-sided delivery 8: StrokeAdjust default value is changed 16: DeferredMediaSelection default value is changed 32: SmallText horizontal line printing accuracy is changed
Default value	0
SMD-EXPT	Setting of export target data: remote UI
Details	To set whether to display "service mode data" as the target data of export on remote UI. When 1 is set, the same service mode data can be registered in the case of installing more than a machine at the same time.
Use case	When installing more than a machine at the same time
Adj/set/operate method	1) Enter the setting value, and then press Start key. 2) Turn OFF/ON the main power switch.
Display/adj/set range	0 to 1 0: OFF, 1: ON
Default value	0
ACC-SLP	Switching of the restriction to shift to sleep mode 3 when the card is connected
Details	Switching of the restriction to shift to sleep mode 3 when the card is connected
Display/adj/set range	0 to 1 0: The machine does not shift to sleep mode 3. 1: The machine shifts to sleep mode 3.
Default value	1

T-8-33

■ ENV-SET

COPIER > OPTION > ENV-SET	
IMG-BLD1	Extend initial rotation mode
Details	Extend initial rotation to prevent condensation caused by sharp temperature rise.
Use case	When condensation occurs.
Adj/set/operate method	Enter the setting value and then press OK key.
Display/adj/set range	0 to 3 0: OFF 1: Extend initial rotation in 30 sec 2: Extend initial rotation in 60 sec 3: Extend initial rotation in 180 sec
Default value	0
IMG-BLD2	Adjustment of charge frequency mode
Details	Adjust charge frequency to prevent moire on a specific image pattern and high charge frequency by accelerating of the print speed.
Use case	- When moire occurs. - When improving high charge frequency.
Adj/set/operate method	Enter the setting value and then press OK key.
Display/adj/set range	0 to 2 1/1 speed 1/2 speed 0: 1680Hz 840Hz 1: 1264Hz 840Hz 2: 1680Hz 985Hz
Default value	0
IMG-BLD3	Black band mode
Details	Operate black band sequence by setting number of paper.
Use case	When image smear occurs.
Adj/set/operate method	Enter the setting value and then press OK key.
Caution	Toner consumption increment causes dirt on the transfer roller.
Display/adj/set range	0 to 3 0: no black band 1: 75 sheets 2: 50 sheets 3: 25 sheets
Default value	0

T-8-34

■ ACC

COPIER > OPTION > ACC	
CARD-SW	Setting of the screen display when the Coin Manager is connected
Details	Setting of the screen display when the Coin Manager is connected
Display/adj/set range	0 to 2 0: "Insert the card." 1: "Use external device for authentication." 2: "Use the external device for payment."
Default value	0
CC-SPSW	Setting of Control Interface Kit
Details	To set whether to support the Control Interface Kit.
Use case	At installation of Coin Manager
Adj/set/operate method	1) Enter the setting value, and then press OK key. 2) Turn OFF/ON the main power switch.
Caution	Parallel use with Card Reader-F1 is not available.
Display/adj/set range	0 to 1 0: Not supported, 1: Supported
Default value	0
UNIF-OF	Setting of uniFLOW function
Details	To forcibly deactivate the uniFLOW function. If setting this switch to 1 and turning OFF and then ON the device power while the uniFLOW function is in active state, the uniFLOW function is forcibly deactivated. In addition, when this switch is set to 1, Activate/Deactivate request from the server is ignored.
Display/adj/set range	0 to 1 0: Disable 1: Enable
Default value	0

T-8-35

■ LCNS-TR

COPIER > OPTION > LCNS-TR	
ST-BRDIM	Disabling of license transfer of BarDIMM function
Details	To disable license transfer of barcode reading (BarDIMM) function. The function is turned OFF when changing the setting value from 1 to 0. The license key of this machine is disabled, but the transfer license key for transferring the license to another device is displayed under TR-BRDIM. Once 0 is set, the function is not turned ON even if returning the setting value to 1. The license key needs to be reissued from LMS to use the function again.
Use case	- When transferring the license to another device - When checking the installation status
Adj/set/operate method	1) Enter the setting value, and then press OK key. 2) Turn OFF/ON the main power switch.
Caution	The function is turned OFF after changing the setting value from 1 to 0 and turning OFF/ON the power.
Display/adj/set range	0 to 1 0: OFF, 1: ON
Default value	0
Supplement/memo	LMS (License Management Server): Server which issues licenses
TR-BRDIM	Transfer license key display of BarDIMM function
Details	To display the transfer license key issued when disabling the transfer of BarDIMM function. The transfer license key is used to transfer the license from this machine to another device to use the function in the device.
Use case	- When replacing the device
Adj/set/operate method	1) Select ST-BRDIM. 2) Enter 0, and then press OK key. The transfer license key is displayed under TR-BRDIM.
Display/adj/set range	24 digits
Default value	0

COPIER > OPTION > LCNS-TR		
ST-PCL	Disabling of license transfer of PCL function	
	Details	To disable license transfer of PCL function. The function is turned OFF when changing the setting value from 1 to 0. The license key of this machine is disabled, but the transfer license key for transferring the license to another device is displayed under TR-BRDIM. Once 0 is set, the function is not turned ON even if returning the setting value to 1. The license key needs to be reissued from LMS to use the function again.
	Use case	- When transferring the license to another device - When checking the installation status
	Adj/set/operate method	1) Enter the setting value, and then press OK key. 2) Turn OFF/ON the main power switch.
	Caution	The function is turned OFF after changing the setting value from 1 to 0 and turning OFF/ON the power.
	Display/adj/set range	0 to 1 0: OFF, 1: ON
	Default value	0
	Supplement/memo	LMS (License Management Server): Server which issues license
TR-PCL	Transfer license key display of PCL function	
	Details	To display the transfer license key issued when disabling the transfer of PCL function. The transfer license key is used to transfer the license from this machine to another device to use the function in the device.
	Use case	- When replacing the device
	Adj/set/operate method	1) Select ST-PCL. 2) Enter 0, and then press OK key. The transfer license key is displayed under TR-PCL.
	Display/adj/set range	24 digits
	Default value	0

COPIER > OPTION > LCNS-TR		
ST-PS	Disabling of license transfer of PS function	
	Details	To disable license transfer of PS function. The function is turned OFF when changing the setting value from 1 to 0. The license key of this machine is disabled, but the transfer license key for transferring the license to another device is displayed under TR-PS. Once 0 is set, the function is not turned ON even if returning the setting value to 1. License key needs to be reissued from LMS to use the function again.
	Use case	- When transferring the license to another device - When checking the installation status
	Adj/set/operate method	1) Enter the setting value, and then press OK key. 2) Turn OFF/ON the main power switch.
	Caution	The function is turned OFF after changing the setting value from 1 to 0 and turning OFF/ON the power.
	Display/adj/set range	0 to 1 0: OFF, 1: ON
	Default value	0
	Supplement/memo	LMS (License Management Server): Server which issues licenses
TR-PS	Transfer license key display of PS function	
	Details	To display the transfer license key issued when disabling the transfer of PS function. The transfer license key is used to transfer the license from this machine to another device to use the function in the device.
	Use case	- When replacing the device
	Adj/set/operate method	1) Select ST-PS. 2) Enter 0, and then press OK key. The transfer license key is displayed under TR-PS.
	Display/adj/set range	24 digits
	Default value	0

COPIER > OPTION > LCNS-TR	
ST-MPPDF	Disabling of license transfer of Media Print PDF function
Details	To disable license transfer of Media Print PDF function. The function is turned OFF when changing the setting value from 1 to 0. The license key of this machine is disabled, but the transfer license key for transferring the license to another device is displayed under TR-MPPDF. Once 0 is set, the function is not turned ON even if returning the setting value to 1. License key needs to be reissued from LMS to use the function again.
Use case	- When transferring the license to another device - When checking the installation status
Adj/set/operate method	1) Enter the setting value, and then press OK key. 2) Turn OFF/ON the main power switch.
Caution	The function is turned OFF after changing the setting value from 1 to 0 and turning OFF/ON the power.
Display/adj/set range	0 to 1 0: OFF, 1: ON
Default value	0
Supplement/memo	LMS (License Management Server): Server which issues licenses
TR-MPPDF	Transfer license key display of Media Print PDF function
Details	To display the transfer license key issued when disabling the transfer of Media Print PDF function. The transfer license key is used to transfer the license from this machine to another device to use the function in the device.
Use case	- When replacing the device
Adj/set/operate method	1) Select ST-MPPDF. 2) Enter 0, and then press OK key. The transfer license key is displayed under TR-MPPDF.
Display/adj/set range	24 digits
Default value	0

COPIER > OPTION > LCNS-TR	
ST-ENPDF	Disabling of license transfer of Encryption PDF send function
Details	To disable license transfer of Encryption PDF send function. The function is turned OFF when changing the setting value from 1 to 0. The license key of this machine is disabled, but the transfer license key for transferring the license to another device is displayed under TR-ENPDF. Once 0 is set, the function is not turned ON even if returning the setting value to 1. License key needs to be reissued from LMS to use the function again.
Use case	- When transferring the license to another device - When checking the installation status
Adj/set/operate method	1) Enter the setting value, and then press OK key. 2) Turn OFF/ON the main power switch.
Caution	The function is turned OFF after changing the setting value from 1 to 0 and turning OFF/ON the power.
Display/adj/set range	0 to 1 0: OFF, 1: ON
Default value	0
Supplement/memo	LMS (License Management Server): Server which issues licenses
TR-ENPDF	Transfer license key display of Encryption PDF send function
Details	To display the transfer license key issued when disabling the transfer of Encryption PDF send function. The transfer license key is used to transfer the license from this machine to another device to use the function in the device.
Use case	- When replacing the device
Adj/set/operate method	1) Select ST-ENPDF. 2) Enter 0, and then press OK key. The transfer license key is displayed under TR-ENPDF.
Display/adj/set range	24 digits
Default value	0

COPIER > OPTION > LCNS-TR	
ST-DVPDF	Disabling of license transfer of device signature PDF send
Details	To disable license transfer of Edevice signature PDF send function. The function is turned OFF when changing the setting value from 1 to 0. The license key of this machine is disabled, but the transfer license key for transferring the license to another device is displayed under TR-DVPDF. Once 0 is set, the function is not turned ON even if returning the setting value to 1. License key needs to be reissued from LMS to use the function again.
Use case	- When transferring the license to another device - When checking the installation status
Adj/set/operate method	1) Enter the setting value, and then press OK key. 2) Turn OFF/ON the main power switch.
Display/adj/set range	0 to 1 0: OFF, 1: ON
Default value	0
Supplement/memo	LMS (License Management Server): Server which issues licenses
TR-DVPDF	Transfer license key display of device signature PDF send function
Details	To display the transfer license key issued when disabling the transfer of device signature PDF send function. The transfer license key is used to transfer the license from this machine to another device to use the function in the device.
Use case	- When replacing the device
Adj/set/operate method	1) Select ST-DVPDF. 2) Enter 0, and then press OK key. The transfer license key is displayed under TR-DVPDF.
Display/adj/set range	24 digits
Default value	0
ST-U-RDS	Not use
TR-U-RDS	Not use

T-8-36

■ LCNS-OF

COPIER > OPTION > LCNS-OF	
ST-BRDIM	Disabling of license no-transfer of BarDIMM function
Details	To disable license no-transfer of barcode reading (BarDIMM) function. The function is turned OFF when changing the setting value from 1 to 0, but the transfer license key is not issued. (The license is not transferred to other devices.) When 1 is set, the function is turned ON since the license key in use is enabled.
Use case	- When the function is turned OFF - When checking the installation status
Adj/set/operate method	1) Enter the setting value, and then press OK key. 2) Turn OFF/ON the main power switch.
Caution	The function is turned OFF after changing the setting value from 1 to 0 and turning OFF/ON the power. The function is not turned ON even if changing the setting from 0 to 1. (Reregistration of the license key is required.)
Display/adj/set range	0 to 1 0: OFF, 1: ON
Default value	0
ST-PCL	Disabling of license no-transfer of PCL function
Details	To disable license no-transfer of PCL function. The function is turned OFF when changing the setting value from 1 to 0, but the transfer license key is not issued. (The license is not transferred to other devices.) When 1 is set, the function is turned ON since the license key in use is enabled.
Use case	- When the function is turned OFF - When checking the installation status
Adj/set/operate method	1) Enter the setting value, and then press OK key. 2) Turn OFF/ON the main power switch.
Caution	The function is turned OFF after changing the setting value from 1 to 0 and turning OFF/ON the power. The function is not turned ON even if changing the setting from 0 to 1. (Reregistration of the license key is required.)
Display/adj/set range	0 to 1 0: OFF, 1: ON
Default value	0

COPIER > OPTION > LCNS-OF	
ST-PS	Disabling of license no-transfer of PS function
Details	To disable license no-transfer of PS function. The function is turned OFF when changing the setting value from 1 to 0, but the transfer license key is not issued. (The license is not transferred to other devices.) When 1 is set, the function is turned ON since the license key in use is enabled.
Use case	- When the function is turned OFF - When checking the installation status
Adj/set/operate method	1) Enter the setting value, and then press OK key. 2) Turn OFF/ON the main power switch.
Caution	The function is turned OFF after changing the setting value from 1 to 0 and turning OFF/ON the power. The function is not turned ON even if changing the setting from 0 to 1. (Reregistration of the license key is required.)
Display/adj/set range	0 to 1 0: OFF, 1: ON
Default value	0
ST-MPPDF	Disabling of license no-transfer of Media Print PDF function
Details	To disable license no-transfer of Media Print PDF function. The function is turned OFF when changing the setting value from 1 to 0, but the transfer license key is not issued. (The license is not transferred to other devices.) When 1 is set, the function is turned ON since the license key in use is enabled.
Use case	- When the function is turned OFF - When checking the installation status
Adj/set/operate method	1) Enter the setting value, and then press OK key. 2) Turn OFF/ON the main power switch.
Caution	The function is turned OFF after changing the setting value from 1 to 0 and turning OFF/ON the power. The function is not turned ON even if changing the setting from 0 to 1. (Reregistration of the license key is required.)
Display/adj/set range	0 to 1 0: OFF, 1: ON
Default value	0

COPIER > OPTION > LCNS-OF	
ST-ENPDF	Disabling of license no-transfer of Encryption PDF send function
Details	To disable license no-transfer of Encryption PDF send function. The function is turned OFF when changing the setting value from 1 to 0, but the transfer license key is not issued. (The license is not transferred to other devices.) When 1 is set, the function is turned ON since the license key in use is enabled.
Use case	- When the function is turned OFF - When checking the installation status
Adj/set/operate method	1) Enter the setting value, and then press OK key. 2) Turn OFF/ON the main power switch.
Caution	The function is turned OFF after changing the setting value from 1 to 0 and turning OFF/ON the power. The function is not turned ON even if changing the setting from 0 to 1. (Reregistration of the license key is required.)
Display/adj/set range	0 to 1 0: OFF, 1: ON
Default value	0
ST-DVPDF	Disabling of license no-transfer of device signature PDF send function
Details	To disable license no-transfer of device signature PDF send function. The function is turned OFF when changing the setting value from 1 to 0, but the transfer license key is not issued. (The license is not transferred to other devices.) When 1 is set, the function is turned ON since the license key in use is enabled.
Use case	- When the function is turned OFF - When checking the installation status
Adj/set/operate method	1) Enter the setting value, and then press OK key. 2) Turn OFF/ON the main power switch.
Caution	The function is turned OFF after changing the setting value from 1 to 0 and turning OFF/ON the power. The function is not turned ON even if changing the setting from 0 to 1. (Reregistration of the license key is required.)
Display/adj/set range	0 to 1 0: OFF, 1: ON
Default value	0
ST-U-RDS	Not use
Details	Not use

T-8-37

COUNTER

■ DRBL-1

COPIER > COUNTER > DRBL-1	
PT-DRM	Bk photosensitive drum parts counter
Details	Total counter value from the previous replacement
Use case	When checking the consumption level of parts / replacing the parts.
Display/adj/set range	0 to 99999999
Default value	0
C1-PU-RL	Cassette 1 pickup roller parts counter
Details	Total counter value from the previous replacement
Use case	When checking the consumption level of parts / replacing the parts.
Adj/set/operate method	When clearing the parts counter: Select the item and then enter 0.
Display/adj/set range	0 to 99999999
Default value	0
C1-SP-RL	Cassette 1 separation Roller parts counter
Details	Total counter value from the previous replacement
Use case	When checking the consumption level of parts / replacing the parts.
Adj/set/operate method	When clearing the parts counter: Select the item and then enter 0.
Display/adj/set range	0 to 99999999
Default value	0
C1-FD-RL	Cassette 1 feed roller parts counter
Details	Total counter value from the previous replacement
Use case	When checking the consumption level of parts / replacing the parts.
Adj/set/operate method	When clearing the parts counter: Select the item and then enter 0.
Display/adj/set range	0 to 99999999
Default value	0
M-PU-RL	MP pickup roller parts counter
Details	Total counter value from the previous replacement
Use case	When checking the consumption level of parts / replacing the parts.
Adj/set/operate method	When clearing the parts counter: Select the item and then enter 0.
Display/adj/set range	0 to 99999999
Default value	0

COPIER > COUNTER > DRBL-1	
FX-UNIT	Fixing unit parts counter
Details	Total counter value from the previous replacement
Use case	When checking the consumption level of parts / replacing the parts.
Adj/set/operate method	When clearing the parts counter: Select the item and then enter 0.
Caution	Clear the counter value after the replacement.
Display/adj/set range	0 to 99999999
Default value	0
TR-ROLL	Transfer roller parts counter
Details	Total counter value from the previous replacement
Use case	When checking the consumption level of parts / replacing the parts.
Adj/set/operate method	When clearing the parts counter: Select the item and then enter 0.
Caution	Clear the counter value after the replacement.
Display/adj/set range	0 to 99999999
Default value	0
SP-SC-EL	Static eliminator parts counter
Details	Total counter value from the previous replacement
Use case	When checking the consumption level of parts / replacing the parts.
Adj/set/operate method	When clearing the parts counter: Select the item and then enter 0.
Caution	Clear the counter value after the replacement.
Display/adj/set range	0 to 99999999
Default value	0
DV-UNT-K	Developing Assembly (Bk) parts counter
Details	Total counter value from the previous replacement
Use case	When checking the consumption level of parts / replacing the parts.
Adj/set/operate method	When clearing the parts counter: Select the item and then enter 0.
Caution	Clear the counter value after the replacement.
Display/adj/set range	0 to 99999999
Default value	0
REG-RL	Registration roller parts counter
Details	Total counter value from the previous replacement
Use case	When checking the consumption level of parts / replacing the parts.
Adj/set/operate method	When clearing the parts counter: Select the item and then enter 0.
Caution	Clear the counter value after the replacement.
Display/adj/set range	0 to 99999999
Default value	0

COPIER > COUNTER > DRBL-1	
M-SP-PD	MP separation pad parts counter
Details	Total counter value from the previous replacement
Use case	When checking the consumption level of parts / replacing the parts.
Adj/set/operate method	When clearing the parts counter: Select the item and then enter 0.
Caution	Clear the counter value after the replacement.
Display/adj/set range	0 to 99999999
Default value	0
V-FD-RL	Vertical path roller parts counter
Details	Total counter value from the previous replacement
Use case	When checking the consumption level of parts / replacing the parts.
Adj/set/operate method	When clearing the parts counter: Select the item and then enter 0.
Caution	Clear the counter value after the replacement.
Display/adj/set range	0 to 99999999
Default value	0
DP-FD-RL	Duplex roller parts counter
Details	Total counter value from the previous replacement
Use case	When checking the consumption level of parts / replacing the parts.
Adj/set/operate method	When clearing the parts counter: Select the item and then enter 0.
Caution	Clear the counter value after the replacement.
Display/adj/set range	0 to 99999999
Default value	0
EXIT-RL	Delivery roller parts counter
Details	Total counter value from the previous replacement
Use case	When checking the consumption level of parts / replacing the parts.
Adj/set/operate method	When clearing the parts counter: Select the item and then enter 0.
Caution	Clear the counter value after the replacement.
Display/adj/set range	0 to 99999999
Default value	0

T-8-38

■ DRBL-2

COPIER > COUNTER > DRBL-2	
C2-PU-RL	Cassette 2 Pickup Roller parts counter
Details	Total counter value from the previous replacement
Use case	When checking the consumption level of parts / replacing the parts.
Adj/set/operate method	When clearing the parts counter: Select the item and then enter 0.
Caution	Clear the counter value after the replacement.
Display/adj/set range	0 to 99999999
Default value	0
C2-SP-RL	Cassette 2 Separation Roller parts counter
Details	When clearing the parts counter: Select the item and then enter 0.
Use case	Clear the counter value after the replacement.
Adj/set/operate method	When clearing the parts counter: Select the item and then enter 0.
Caution	Clear the counter value after the replacement.
Display/adj/set range	0 to 99999999
Default value	0
C2-FD-RL	Cassette 2 Feed Roller parts counter
Details	Total counter value from the previous replacement
Use case	When checking the consumption level of parts / replacing the parts.
Adj/set/operate method	When clearing the parts counter: Select the item and then enter 0.
Caution	Clear the counter value after the replacement.
Display/adj/set range	0 to 99999999
Default value	0
C2-VP-RL	Cassette 2 vertical path roller parts counter
Details	Total counter value from the previous replacement
Use case	When checking the consumption level of parts / replacing the parts.
Adj/set/operate method	When clearing the parts counter: Select the item and then enter 0.
Caution	Clear the counter value after the replacement.
Display/adj/set range	0 to 99999999
Default value	0
DF-SP-PD	ADF Separation Pad parts counter:
Details	Total counter value from the previous replacement
Use case	When checking the consumption level of parts/replacing the parts.
Adj/set/operate method	To clear the counter value: Select the item, and then press Clear key.
Caution	Clear the counter value after replacement.
Display/adj/set range	0 to 99,999,999
Default value	0

COPIER > COUNTER > DRBL-2	
DF-PU-RL	ADF Pickup Roller parts counter
Details	Total counter value from the previous replacement
Use case	When checking the consumption level of parts/replacing the parts
Adj/set/operate method	To clear the counter value: Select the item, and then press Clear key.
Caution	Clear the counter value after replacement.
Display/adj/set range	0 to 99,999,999
Default value	0

T-8-39

■ LF

COPIER > COUNTER > LF	
K-DRM-LF	Display life of the Drum Unit
Details	Life of the drum unit is displayed by percent indication.
Use case	When checking life of the Drum Unit.
Display/adj/set range	0 to 999
Related service mode	COPIER > FUNCTION > FNC-SW > D-DLV-BK

T-8-40

■ TOTAL

COPIER > COUNTER > TOTAL	
SERVICE1	Service-purposed total counter 1
Details	To count up when the paper is delivered outside the machine. The counter is advanced regardless of the original size. The counter is not advanced by delivery in service mode.
Display/adj/set range	0 to 99,999,999
Unit	Number of sheets
Default value	0
SERVICE2	Service-purposed total counter 2
Details	To count up when the paper is delivered outside the machine. The counter is advanced regardless of the original size. The counter is not advanced by delivery in service mode.
Display/adj/set range	0 to 99,999,999
Unit	Number of sheets
Default value	0

COPIER > COUNTER > TOTAL	
TTL	Total counter
Details	To display the total of counters of copy, PDL print, FAX, report print and media print. (Total of COPY, PDL-PRT, FAX-PRT, RPT-PRT and MD-PRT in service mode described below)
Display/adj/set range	0 to 99,999,999
Unit	Number of sheets
Default value	0
COPY	Total copy counter
Details	To count up when the copy is delivered outside the machine. The counter is advanced regardless of the original size. The counter is not advanced by delivery in service mode.
Unit	0 to 99,999,999
Unit	Number of sheets
Required time	0
Related service mode	COPIER> COUNTER> TOTAL> TTL
PDL-PRT	Total copy counter
Details	To count up when the PDL print is delivered outside the machine/2-sided printout is stacked. The counter is advanced regardless of the original size. The counter is not advanced by blank paper or delivery in service mode.
Display/adj/set range	0 to 99,999,999
Unit	Number of sheets
Default value	0
Related service mode	COPIER> COUNTER> TOTAL> TTL
FAX-PRT	FAX reception print counter
Details	To count up when the FAX reception print is delivered outside the machine/2-sided printout is stacked. The counter is advanced regardless of the original size. The counter is not advanced by blank paper or delivery in service mode.
Display/adj/set range	0 to 99,999,999
Unit	Number of sheets
Default value	0
Related service mode	COPIER> COUNTER> TOTAL> TTL

COPIER > COUNTER > TOTAL	
RPT-PRT	Report print counter
Details	To count up when the report print is delivered outside the machine/2-sided printout is stacked. The counter is advanced regardless of the original size. The counter is not advanced by blank paper or delivery in service mode.
Display/adj/set range	0 to 99,999,999
Unit	Number of sheets
Default value	0
Related service mode	COPIER> COUNTER> TOTAL> TTL
MD-PRT	Media print counter
Details	To count up when the media print is delivered outside the machine. The counter is advanced regardless of the original size. The counter is not advanced by blank paper or delivery in service mode.
Display/adj/set range	0 to 99,999,999
Unit	Number of sheets
Default value	0
Related service mode	COPIER> COUNTER> TOTAL> TTL
2-SIDE	2-sided copy/print counter
Details	To count up the number of 2-sided copies/prints when the copy/printout is delivered outside the machine/2-sided copy/printout is stacked. The counter is advanced regardless of the original size. The counter is not advanced by blank paper or delivery in service mode.
Display/adj/set range	0 to 99,999,999
Unit	Number of sheets
Default value	0
SCAN	Scan counter
Details	To count up the number of scan operations when the scanning operation is complete. The counter is advanced regardless of the original size. The counter is not advanced by delivery in service mode.
Display/adj/set range	0 to 99,999,999
Unit	Number of sheets
Default value	0

T-8-41

■ PICK-UP

COPIER > COUNTER > PICK-UP	
C1	Cassette 1 pickup total counter
Details	To count up the number of sheets picked up from the Cassette 1 (standard Pickup Cassette). The counter is advanced regardless of the original size. The counter is advanced by printout in service mode.
Use case	When checking the Pickup counter
Display/adj/set range	0 to 99,999,999
Unit	Number of sheets
Default value	0
C2	Cassette 2 pickup total counter
Details	To count up the number of sheets picked up from the Cassette 2 (option Pickup Cassette). The counter is advanced regardless of the original size. The counter is advanced by printout in service mode.
Use case	When checking the Pickup counter
Display/adj/set range	0 to 99,999,999
Unit	Number of sheets
Default value	0
MF	Multi-purpose Tray pickup total counter
Details	To count up the number of sheets picked up from the Multi-purpose Tray Pickup Unit. The counter is advanced regardless of the original size. The counter is advanced by printout in service mode.
Use case	When checking the Pickup counter
Display/adj/set range	0 to 99,999,999
Unit	Number of sheets
Default value	0
2-SIDE	2-sided pickup total counter
Details	To count up the number of sheets picked up in duplex mode. The counter is advanced regardless of the original size. The counter is advanced by printout in service mode.
Use case	When checking the Pickup counter
Display/adj/set range	0 to 99,999,999
Unit	Number of sheets
Default value	0

T-8-42

■ FEEDER

COPIER > COUNTER > FEEDER	
FEED	ADF original pickup total counter
Details	To count up the number of originals picked up from the ADF. The counter is advanced regardless of the original size.
Use case	When checking the total counter of original pickup by ADF
Display/adj/set range	0 to 99,999,999
Unit	Number of sheets
Default value	0

T-8-43

■ JAM

COPIER > COUNTER > JAM	
TOTAL	Printer total jam counter
Details	To count up the number of total jam occurrences.
Use case	When checking the total jam counter of printer
Display/adj/set range	0 to 99,999,999
Unit	Number of times
Default value	0
FEEDER	ADF total jam counter
Details	When checking the total jam counter of ADF
Display/adj/set range	0 to 99,999,999
Unit	Number of times
Default value	0
2-SIDE	Duplex Unit jam counter
Details	To count up the number of jam occurrences in the Duplex Unit.
Use case	When checking the jam counter of Duplex Unit
Display/adj/set range	0 to 99,999,999
Unit	Number of times
Default value	0
MF	Multi-purpose Pickup Tray jam counter
Details	To count up the number of jam occurrences in the Multi-purpose Tray Pickup Unit. The counter is advanced by paper size mismatch or misprint.
Use case	When checking the jam counter of Multi-purpose Pickup Tray
Display/adj/set range	0 to 99,999,999
Unit	Number of times
Default value	0

COPIER > COUNTER > JAM	
C1	Cassette 1 pickup jam counter
Details	To count up the number of jam occurrences in the Cassette 1 (standard Pickup Cassette). The counter is advanced by paper size mismatch or misprint.
Display/adj/set range	0 to 99,999,999
Unit	Number of times
Default value	0
C2	Cassette 2 pickup jam counter
Details	To count up the number of jam occurrences in the Cassette 2 (option Pickup Cassette). The counter is advanced by paper size mismatch or misprint.
Display/adj/set range	0 to 99,999,999
Unit	Number of times
Default value	0

T-8-44

● I/O

■ R-CON

COPIER > IO > R-CON				
Address	bit	Name	Symbol	Remarks
None	0	Document End Sensor	SR01	0: paper presence
	1	Document Sensor	SR02	0: paper presence
	2	CIS Unit HP Sensor	SR03	1: left edge position of the CIS unit
	3	None		
	4	None		
	5	None		
	6	None		
	7	None		

T-8-45

FEEDER

ADJUST

DOCST

FEEDER > ADJUST > DOCST	
DOCST	Adjustment of ADF leading edge margin: 1-sided
Details	- Adjust leading edge margin at ADF reading when the output image is out of standard after ADF installation. - Leading edge margin is decreased 0.1mm by setting value 1 (The image moves upward). - When replacing the Main Controller PCB, enter the value from the service label.
Use case	- When installing the ADF. - When replacing the Main Controller PCB.
Adj/set/operate method	Enter the setting value (switch negative/positive by * key) and then press OK key.
Caution	After the setting value is changed, write the changed value on the service label.
Display/adj/set range	-50 to 50
Unit	0.1 mm
Default value	0

T-8-46

LA-SPD

FEEDER > ADJUST > LA-SPD	
LA-SPD	Fine adjustment of vertical scanning magnification at ADF stream reading: front side
Details	- Adjust leading edge margin at ADF reading when the output image is out of standard after ADF installation. - The image decreases 0.01% in vertical direction by setting value 1 as feed speed increases and the image decreases. - When replacing the Main Controller PCB, enter the value from the service label.
Use case	- When installing the ADF. - When replacing the Main Controller PCB.
Adj/set/operate method	Enter the setting value (switch negative/positive by * key) and then press OK key.
Caution	After the setting value is changed, write the changed value on the service label.
Display/adj/set range	-200 to 200
Unit	0.01%
Default value	0

T-8-47

DOCST2

FEEDER > ADJUST > DOCST2	
DOCST2	Adjustment of ADF leading edge margin: back side
Details	- Adjust leading edge margin at ADF reading when the output image is out of standard after ADF installation. - Leading edge margin is decreased 0.1mm by setting value 1 (The image moves upward). - When replacing the Main Controller PCB, enter the value from the service label.
Use case	- When installing the ADF. - When replacing the Main Controller PCB.
Adj/set/operate method	Enter the setting value (switch negative/positive by * key) and then press OK key.
Caution	After the setting value is changed, write the changed value on the service label.
Display/adj/set range	-50 to 50
Unit	0.1 mm
Default value	0

T-8-48

DOCST-R

FEEDER > ADJUST > DOCST-R	
DOCST-R	Adjustment of ADF trailing edge margin
Details	- Adjust trailing edge margin at ADF scanning when the output image is out of standard after ADF installation. - Trailing edge margin is decreased 0.1mm by setting value 1 (The image moves upward). - When replacing the Main Controller PCB, enter the value from the service label.
Use case	- When installing the ADF. - When replacing the Main Controller PCB. - When replacing the CIS Unit.
Adj/set/operate method	Enter the setting value (switch negative/positive by * key) and then press OK key.
Caution	After the setting value is changed, write the changed value on the service label.
Display/adj/set range	-30 to 30
Unit	0.1 mm
Default value	0

T-8-49

■ LA-SPD2

FEEDER > ADJUST > LA-SPD2	
LA-SPD2	Fine adjustment of vertical scanning magnification at ADF stream reading: back side
Details	- Adjust leading edge margin at ADF reading when the output image is out of standard after ADF installation. -The image decreases 0.01% in vertical direction by setting value 1 as feed speed increases and the image decreases. - When replacing the Main Controller PCB, enter the value from the service label.
Use case	- When installing the ADF. - When replacing the Main Controller PCB.
Adj/set/operate method	Enter the setting value (switch negative/positive by * key) and then press OK key.
Caution	After the setting value is changed, write the changed value on the service label.
Display/adj/set range	-200 to 200
Unit	0.01%
Default value	0

T-8-50

■ DOCSTDUP

FEEDER > ADJUST > DOCSTDUP	
DOCST-DUP	Adjustment of ADF 2-sided leading edge margin: 2-sided
Details	- Adjust leading edge margin at ADF reading when the output image is out of standard after ADF installation. - Leading edge margin is decreased 0.1mm by setting value 1 (The image moves upward). - When replacing the Main Controller PCB, enter the value from the service label.
Use case	- When installing the ADF. - When replacing the Main Controller PCB.
Adj/set/operate method	Enter the setting value (switch negative/positive by * key) and then press OK key.
Caution	After the setting value is changed, write the changed value on the service label.
Display/adj/set range	-50 to 50
Unit	0.1 mm
Default value	0

T-8-51

● FUNCTION

■ MTR-ON

FEEDER > FUNCTION > MTR-ON	
MTR-ON	Checking of ADF motor operation
Details	Check ADF motor operation. The motor operates for 3 seconds and then stops automatically.
Use case	When checking the operation.
Adj/set/operate method	Select the item and then press OK key.
Related service mode	Approx. 3 seconds

T-8-52

■ FEED-ON

FEEDER > FUNCTION > FEED-ON	
FEED-ON	Checking of ADF single print operation
Details	Check ADF single print operation set on FEED-CHK.
Use case	When checking the operation.
Adj/set/operate method	Select the item and then press OK key.
Related service mode	FEEDER > FUNCTION > FEED-CHK

T-8-53

■ FEED-CHK

FEEDER > FUNCTION > FEED-CHK	
FEED-CHK	ADF single print operation setting
Details	Set ADF single print operation. The operation starts by setting FEED-ON.
Use case	When checking the operation.
Adj/set/operate method	Select the item and then press OK key.
Related service mode	0 to 1 0: 1-sided print 1: 2-sided print
Default value	0
Related service mode	FEEDER > FUNCTION > FEED-ON

T-8-54

TESTMODE

PRINT

TESTMODE > PRINT	
PG-TYPE	Setting of PG number
Details	To set the PG number of the test print.
Use case	At trouble analysis
Adj/set/operate method	Enter the setting value, and then press OK key.
Display/adj/set range	0 to 7 0: Grid Bk 1: Halftone 2: Solid black 3: Solid white, 4: 17 gradations 5 to 7: (For R&D)
Default value	0
COUNT	Setting of PG output quantity
Details	To set the number of sheets for PG output.
Use case	At trouble analysis
Adj/set/operate method	Enter the setting value, and then press OK key.
Display/adj/set range	1 to 99
Unit	1 sheet
Default value	0
PHASE	Setting of PG 2-sided mode
Details	To set 1-sided/2-sided print for PG output. Even if 2-sided print is set for a machine that only supports 1-sided print, the setting is disabled.
Use case	At trouble analysis
Adj/set/operate method	Enter the setting value, and then press OK key.
Display/adj/set range	0 to 1 0: 1-sided, 1: 2-sided
Default value	0

TESTMODE > PRINT	
MODE	Setting of test print image formation method
Details	To set the image formation method for the test print. If PG-TYPE is 0/1, this setting is disabled because a specific image formation method is applied.
Use case	At trouble analysis
Adj/set/operate method	Enter the setting value, and then press OK key.
Display/adj/set range	0 to 3 0: T-MIC(T-MIC), 1: High screen ruling (SCA), 2: low screen ruling (SCB), 3:TBIC
Default value	0
THRU	Setting of image correction table at test print
Details	It is possible to check the density characteristics due to the density correction process when normal gamma LUT is used, and the density characteristics of the engine when the linear gamma LUT is used.
Use case	At trouble analysis
Adj/set/operate method	Enter the setting value, and then press OK key.
Display/adj/set range	0 to 1 0: Normal gamma LUT, 1: Through (linear) gamma LUI
Default value	0
Supplement/memo	Gamma LUT: Density gradation characteristic table
DENS	Adjustment of test print engine F value
Details	To adjust the engine F value for the test print. As the value is larger, the image gets darker.
Use case	At trouble analysis
Adj/set/operate method	Enter the setting value (switch negative/positive by -/+ key) and press OK key.
Display/adj/set range	-4 (light.) to 4 (dark)
Default value	0
Supplement/memo	F value: The value used as an index for indicating lens brightness
MABK	To switch skipping processing.
Details	The degree of skipping of each mode Mode1: Small Mode2: Medium Mode3: Large
Use case	At trouble analysis
Adj/set/operate method	nter the setting value, and then press OK key.
Display/adj/set range	0 : OFF 1 : Mode1 2 : Made2 3 : Made3
Default value	0

TESTMODE > PRINT	
FEED	Setting of paper source at test print
Details	To set the paper sources at the time of test print output. If this mode is set when there is no Cassette 2 (option Pickup Cassette), output is from Cassette 1 (standard Pickup Cassette). If color paper is loaded in the specified paper source, there is no output because the setting is disabled.
Use case	When outputting a test print
Adj/set/operate method	Enter the setting value, and then press OK key.
Caution	When performing printing with the Multi-purpose Tray, be sure to set the user mode before executing the service mode.
Display/adj/set range	0 to 2 0: Multi-purpose Tray, 1: Cassette 1, 2: Cassette 2
Default value	1
START	Output of test print
Details	To output a test print with the PG pattern set in PG-TYPE, etc.
Use case	At trouble analysis
Adj/set/operate method	Press OK key.

T-8-55

● FAX

■ MODEM

TESTMODE > FAX > MODEM	
RELAY-1	Test ON/OFF of port SW and relay on NCU Setting value: 0 : All OFF 1 : CML ON / OFF 2 : P ON / OFF 3 : S ON / OFF 4 : H ON / OFF 5 : HD ON / OFF 6 : R ON / OFF
RELAY-2	Test ON/OFF of port SW and relay on NCU Setting value: 0 : All OFF 1 : CIST2 ON / OFF 2 : C1 ON / OFF 3 : NORG ON / OFF 4 : HDCSEL ON / OFF 5 : DCLIM ON / OFF 6 : IPSEL1 ON / OFF 7 : IPSEL2 ON / OFF
FREQ	Transmit selected frequency in closed DC circuit using tone generation function of modem. Setting value: 0 : Output Stop 1 : 462 Hz 2 : 1,100 Hz 3 : 1,300 Hz 4 : 1,500 Hz 5 : 1,650 Hz 6 : 1,850 Hz 7 : 2,100 Hz
G3TX	Transmit selected signal pattern in closed DC circuit at selected frequency using G3 signal transmission function of modem. Setting value: 0 : Output Stop 1 : 300 bps 2 : 2,400 bps 3 : 4,800 bps 4 : 7,200 bps 5 : 9,600 bps 6 : TC 7.200 bps 7 : TC 9,600 bps 8 : 12,000 bps 9 : 14,400 bps

TESTMODE > FAX > MODEM	
DTMFTX	Transmit DTMF signal using DTMF transmission function of modem after DC circuit closure. Setting value: 0 : Output Stop 1 : " 1 " 2 : " 2 " 3 : " 3 " 4 : " 4 " 5 : " 5 " 6 : " 6 " 7 : " 7 " 8 : " 8 " 9 : " 9 " 10 : " 0 " 11 : " * " 12 : " # "
V34G3TX	Transmit selected frequency using G3 signal transmission function (V.34) after DC circuit closure. Setting value: 0 : Output Stop XYY (X : Baud Rate (baud) YY : Speed (bps)) X (Hundreds place) 1YY : 2,400 baud 2YY : 2,743 baud 3YY : 2,800 baud 4YY : 3,000 baud 5YY : 3,200 baud 6YY : 3,429 baud YY (tens place , Ones place) 01 : 2,400 bps 02 : 4,800 bps 03 : 7,200 bps 04 : 9,600 bps 05 : 12,000 bps 06 : 14,400 bps 07 : 16,800 bps 08 : 19,200 bps 09 : 21,600 bps 10 : 24,000 bps 11 : 26,400 bps 12 : 28,800 bps 13 : 31,200 bps 14 : 33,600 bps

T-8-56

■ FACULTY

TESTMODE > FAX > FACULTY	
G34800TX	Transmit the frequency of 4800bps using G3 signal transmission function after DC circuit closure. Setting value: 0 : Output Stop 1 : Output Start
DETECT1	Ring detection Check the status (ON, OFF) of hook and Ci, Fc from i line. Setting value: 0 : Output Stop 1 : Output Start
DETECT2	CNG detection test 1 Execute CNG signal check and FED check. Detect CNG after CML relay is ON. Setting value: 0 : Output Stop 1 : Output Start
DETECT3	CNG detection test 2 Execute CNG signal check and FED check. Detect CNG after CML relay is OFF. Setting value: 0 : Output Stop 1 : Output Start

T-8-57

FAX

List of SSSW

FAX > SSSW		
SSSW No.	Bit No.	Function
SW 01		(Errors, COPY functions)
	Bit 0	Output error codes for service technicians
	Bit 1	Error in memory dump
	Bit 2	Enter the password for transferring received confidential image
	Bit 3	Prohibit COPY
	Bit 4	Display No. 300s
	Bit 5	
	Bit 6	Prohibit users from setting date/time
	Bit 7	Collectively clear user setting prohibition
SW 02		(Setting for network connection criteria)
	Bit 0	Do not start when memory clear list is unable to output
	Bit 1	
	Bit 2	
	Bit 3	
	Bit 4	V34 CCRTN OFF
	Bit 5	
	Bit 6	
	Bit 7	Connect the terminal as F network type 2
SW 03		(Echo measures)
	Bit 0	Check EQM of TCF
	Bit 1	Apply echo protect tone to V.29
	Bit 2	
	Bit 3	
	Bit 4	Heard DIS twice
	Bit 5	First DIS interference
	Bit 6	Interfered DIS frequency
	Bit 7	Output 1080Hz before CED
SW 04		(Measures against communication troubles)
	Bit 0	Monitor LC
	Bit 1	Check CI signal frequency
	Bit 2	V21 end flag
	Bit 3	Prohibit T.30 node F kept by both parties
	Bit 4	T.30 node F echo timer
	Bit 5	Check CI signal frequency when setting PBX
	Bit 6	Do not send CNG for manual outgoing transmission
	Bit 7	Do not send CED for manual incoming transmission

FAX > SSSW		
SSSW No.	Bit No.	Function
SW 05		(Standard functions, DIS signal setting)
	Bit 0	
	Bit 1	mm/inch conversion (text mode)
	Bit 2	mm/inch conversion (text and picture / picture mode)
	Bit 3	Prohibit DIS from transmitting bit33 and the followings.
	Bit 4	Declare cut sheets
	Bit 5	Declare LRT/LGL in DIS
	Bit 6	Prohibit ECM outgoing transmission
	Bit 7	Prohibit ECM incoming transmission
SW 06		(Setting of reading criteria)
	Bit 0	Move from DES to pre-scan position
	Bit 1	Pre-scan at time other than power-ON
	Bit 2	Restrict document length
	Bit 3	Stamp option
	Bit 4	Reading width 0:A4 1: LTR
	Bit 5	Record memory copy time sharing
	Bit 6	Variable resolution at COPY
	Bit 7	Half tone + super fine
SW 07		Not in use
SW 08		Not in use
SW 09		Not in use
SW 10		Not in use
SW 11		Not in use
SW 12		(Page timer setting)
	Bit 0	1 page timeout (outgoing transmission)
	Bit 1	
	Bit 2	1 page timeout (HT transmission)
	Bit 3	
	Bit 4	1 page timeout (incoming transmission)
	Bit 5	
	Bit 6	
	Bit 7	1 page timeout
SW 13		
	Bit 0	Prohibit relay broadcasting / transfer while receiving relay / transfer
	Bit 1	Response to faulty image while receiving relay / transfer
	Bit 2	Convert mm/inch when transmitting received image
	Bit 3	
	Bit 4	
	Bit 5	
	Bit 6	
	Bit 7	

FAX > SSSW		
SSSW No.	Bit No.	Function
SW 14		
	Bit 0	
	Bit 1	Standard paper size type <NADA>COPIER > OPTION > BODY > MODEL-SZ
	Bit 2	Convert inch to mm in both main/vertical scanning directions or only in vertical scanning direction
	Bit 3	Convert inch to mm only for OCR transmission
	Bit 4	Declare resolution for Inch series
	Bit 5	
	Bit 6	
	Bit 7	
SW 15		
	Bit 0	
	Bit 1	Polarity memory timing at dial-in
	Bit 2	Receive incoming calls to ND circuit: device circuit
	Bit 3	
	Bit 4	
	Bit 5	
	Bit 6	Detect continuous signals when switching F/T
	Bit 7	
SW 16		Not in use
SW 17		Not in use
SW 18		
	Bit 0	Detect carrier disconnection between DCS and TCF
	Bit 1	Waiting time for carrier disconnection between DCS and TCF
	Bit 2	Prohibit communication control for IP network
	Bit 3	
	Bit 4	
	Bit 5	
	Bit 6	
	Bit 7	
SW 19		Not in use
SW 20		Not in use
SW 21		Not in use
SW 22		
	Bit 0	Prohibit NSX transmission
	Bit 1	Prohibit separated A4 record
	Bit 2	Prohibit broadcasting transmission
	Bit 3	Prohibit manual polling actions
	Bit 4	Prohibit manual transmission when transmitting archives
	Bit 5	
	Bit 6	With archive transmission function
	Bit 7	
SW 23		Not in use

FAX > SSSW		
SSSW No.	Bit No.	Function
SW 24		Not in use
SW 25		(Setting for report display function)
	Bit 0	Prioritize the received telephone number to the dialed number
	Bit 1	Prioritize the received abbreviated name to the dialed abbreviated name
	Bit 2	Regard a received blank CIS as an unreceived CIS
	Bit 3	Message language selection for user SW
	Bit 4	
	Bit 5	
	Bit 6	
	Bit 7	
SW 26		Not in use
SW 27		Not in use
SW 28		
	Bit 0	Prohibit calling party for V8 procedure
	Bit 1	Prohibit called party from V8 procedure
	Bit 2	Prohibit calling party from V8 late-start
	Bit 3	Prohibit called party from V8 late-start
	Bit 4	Prohibit V.34 called party from starting fallback
	Bit 5	Prohibit V.34 calling party from starting fallback
	Bit 6	
	Bit 7	
SW 29		Not in use
SW 30		
	Bit 0	Support for 1284 device ID
	Bit 1	
	Bit 2	
	Bit 3	
	Bit 4	
	Bit 5	New dial tone detection method
	Bit 6	
	Bit 7	
SW 31		Not in use
SW 32		
	Bit 0	Canon/NTT NSX switching SW
	Bit 1	
	Bit 2	
	Bit 3	
	Bit 4	
	Bit 5	0:NCU2004 1:NCU2002
	Bit 6	
	Bit 7	
SW 33		Not in use
SW 34		Not in use

FAX > SSSW		
SSSW No.	Bit No.	Function
SW 35		Not in use
SW 36		Not in use
SW 37		Not in use
SW 38		Not in use
SW 39		Not in use
SW 40		Not in use
SW 41		Not in use
SW 42		Not in use
SW 43		Not in use
SW 44		Not in use
SW 45		Not in use
SW 46		Not in use
SW 47		Not in use
SW 48		Not in use
SW 49		Not in use
SW 50		Not in use

T-8-58

List of MENU

Menu switch registration mode		
No.	Parameter	Selection
001	Not in use	
002	Not in use	
003	Not in use	
004	Not in use	
005	ON/OFF of NL equalizer	0: OFF 1: ON
006	Telephone line monitor	0-3 0: DIAL 1: SERVICEMAN 1 2: SERVICEMAN 2 3: OFF
007	Transmission level (ATT)	0-15
008	Upper limit of V.34 modulation speed	0-5 0: 3429BAUD 1: 3200BAUD 2: 3000BAUD 3: 2800BAUD 4: 2743BAUD 5: 2400BAUD
009	Upper limit of V.34 data speed	0-13 0: 33.6kbps 1:31.2 2: 28.8 3: 26.4 4: 24.0 5: 21.6 6: 19.2 7: 16.8 8: 14.4 9: 12.0 10: 9.6 11: 7.2 12: 4.8 13: 2.4
010	Pseudo-CI signal frequency	0-2 0: 50Hz 1: 25Hz 2: 17Hz
011	Not in use	
012	Not in use	
013	Not in use	
014	Not in use	
015	Not in use	
016	Not in use	
017	Not in use	

Menu switch registration mode		
No.	Parameter	Selection
018	Not in use	
019	Not in use	
020	Not in use	

T-8-59

List of NUM

Numeric parameter setting mode		
No.	Parameter	Allowable setting range
001	Not in use	
002	RTN transmission criteria X	1 to 99%
003	RTN transmission criteria n	2 to 99 times
004	RTN transmission criteria m	1 to 99 lines
005	NCC pause (before ID code)	1 to 60s
006	NCC pause (after ID code)	1 to 60s
007	Not in use	
008	Not in use	
009	Not in use	
010	T.30 T0 timer	55s principally
011	T.30 T1 timer (for incoming transmission)	0 to 9999 (France=3500, Others=3000)
012	Maximum incoming lines	0 to 65535 (line) 0: without limitation
013	T.30 EOL timer	500 to 3000 (set to 55s by default)
014	Not in use	
015	Threshold between hooking and on-hook	0 to 999
016	Lead time to the first response when switching between FAX and TEL	0 to 9
017	Duration to activate pseudo-RBT cadence	0 to 999
018	Duration to deactivate pseudo-RBT cadence (short)	0 to 999
019	Duration to deactivate pseudo-RBT cadence (long)	0 to 999
020	Duration to activate pseudo-ring cadence	0 to 999
021	Duration to deactivate pseudo-CI cadence (short)	0 to 999
022	Duration to deactivate pseudo-CI cadence (long)	0 to 999
023	CNG detection level when switching between FAX and TEL	0 to 7
024	Pseudo-RBT outgoing level when switching between FAX and TEL	10 to 20 (100v), 0 to 20 (120, 230v)
025	CNG monitor duration while the answering device is activated	0 to 999
026	No signal detection level while the answering device is activated	0 to 7
027	Duration to detect preamble of V21 low-speed flag	20 (*10ms)
028	Not in use	
029	Not in use	
030	Not in use	
031	Not in use	
032	Not in use	
033	Not in use	
034	Not in use	
035	Not in use	
036	Not in use	

Numeric parameter setting mode		
No.	Parameter	Allowable setting range
037	Not in use	
038	Not in use	
039	Not in use	
040	Not in use	
041	Not in use	
042	Not in use	
043	Not in use	
044	Not in use	
045	Not in use	
046	Not in use	
047	Not in use	
048	Not in use	
049	Not in use	
050	Not in use	
051	Threshold to detect hook	10 to 9999
052	Not in use	
053	Set DTMF calling counts when receiving FAX remotely	0 to 9999(*25)
054	Set BusyTone outgoing duration when using handset	0 to 9999
055	Not in use	
056	Not in use	
057	Not in use	
058	Not in use	
059	Not in use	
060	Not in use	
061	Not in use	
062	Not in use	
063	Not in use	
064	Not in use	
065	Not in use	
066	Not in use	
067	Not in use	
068	Not in use	
069	Not in use	
070	Not in use	
071	Not in use	
072	Not in use	
073	Not in use	
078	Exclusive use of a developer	
079	Exclusive use of a developer	
080	Exclusive use of a developer	

T-8-60

List of NCU

■ TONE

- Setting of Tone Parameters

  While "#NCU" is displayed, press "OK" key -> Select "#TONE" and press "OK" key so that it becomes tone parameter setting mode.

Item	Function	Setting range
001	Tone signal sending time (PSTN)	10 to 9999 (ms)
002	Minimum pause time (PSTN)	10 to 9999 (ms)

T-8-61

TONE/PULSE

■ PULSE

- Setting of Pulse Parameters

  While "#NCU" is displayed, press "OK" key -> Select "#PULSE" and press "OK" key so that it becomes pulse parameter setting mode.

Item	Function	Setting range
FORM	Pulse digit format	0 -> DP (N)
		1 -> DP (N+1)
		2 -> DP (10-N)
001	Pulse dial speed (10pps)	5 to 300 (x0.1pps)
002	Pulse dial speed (20pps)	5 to 300 (x0.1pps)
003	Pulse dial make ratio	10 to 90 (%)
004	Minimum pause time	10 to 9999 (ms)

T-8-62

■ DIAL TONE

1) Bit switch

Bit No.	Function	1	0
Bit 0	Frequency detection method	Modem	Tonal counter
Bit 1			
Bit 2	Signal frequency	Changed	Not changed
Bit 3			
Bit 4	Judgment of intermittent signal	Start from valid ON signal	Start from either valid ON signal or OFF signal
Bit 5			
Bit 6	Signal form	Continuous	Intermittent
Bit 7	Signal detection	Detected	Not detected

T-8-63

2) Numeric value parameter

Parameter No.	Function	Setting range
001	T0 timer	0 to 9999 (x10ms)
002	T1 timer	0 to 9999 (x10ms)
003	T2 timer	0 to 9999 (x10ms)
004	T3 timer	0 to 9999 (x10ms)
005	T4 timer	0 to 9999 (x10ms)
006	Signal detection table	0 to 16
007	Signal detection level	0 to 7
008	Number of valid tone detection	0 to 9999 (times)

T-8-64

■ 2nd DLTN

1) Bit switch

Bit No.	Function	1	0
Bit 0	Frequency detection method	Modem	Tonal counter
Bit 1			
Bit 2	Signal frequency	Changed	Not changed
Bit 3			
Bit 4	Judgment of intermittent signal	Start from valid ON signal	Start from either valid ON signal or OFF signal
Bit 5			
Bit 6	Signal form	Continuous	Intermittent
Bit 7	Signal detection	Detected	Not detected

T-8-65

2) Numeric value parameter

Parameter No.	Function	Setting range
001	T0 timer	0 to 9999 (x10ms)
002	T1 timer	0 to 9999 (x10ms)
003	T2 timer	0 to 9999 (x10ms)
004	T3 timer	0 to 9999 (x10ms)
005	T4 timer	0 to 9999 (x10ms)
006	Signal detection table	0 to 16
007	Signal detection level	0 to 7
008	Number of valid tone detection	0 to 9999 (times)

T-8-66

■ BUSTONE0

1) Bit switch

Bit No.	Function	1	0
Bit 0			
Bit 1			
Bit 2	Signal frequency	Changed	Not changed
Bit 3			
Bit 4	Judgment of intermittent signal	Start from valid ON signal	Start from either valid ON signal or OFF signal
Bit 5			
Bit 6	Signal form	Continuous	Intermittent
Bit 7	Signal detection	Detected	Not detected

T-8-67

2) Numeric value parameter

Parameter No.	Function	Setting range
001		
002	T1 timer	0 to 9999 (x10ms)
003	T2 timer	0 to 9999 (x10ms)
004	T3 timer	0 to 9999 (x10ms)
005	T4 timer	0 to 9999 (x10ms)
006	Signal detection table	0 to 16
007	Signal detection level	0 to 7
008	Number of valid tone detection	0 to 9999 (times)

T-8-68

■ BUSTONE1

1) Bit switch

Bit No.	Function	1	0
Bit 0			
Bit 1			
Bit 2	Signal frequency	Changed	Not changed
Bit 3	RBT signal detection	Detected	Not detected
Bit 4	Judgment of intermittent signal	Start from valid ON signal	Start from either valid ON signal or OFF signal
Bit 5	RBT signal check cycle	1 cycle	1/2 cycle
Bit 6	Signal form	Continuous	Intermittent
Bit 7	Signal detection	Detected	Not detected

T-8-69

2) Numeric value parameter

Parameter No.	Function	Setting range
001		
002	T1 timer	0 to 9999 (x10ms)
003	T2 timer	0 to 9999 (x10ms)
004	T3 timer	0 to 9999 (x10ms)
005	T4 timer	0 to 9999 (x10ms)
006	Signal detection table	0 to 16
007	Signal detection level	0 to 7
008	Number of valid tone detection	0 to 9999 (times)

T-8-70

■ REORDRTN

1) Bit switch

Bit No.	Function	1	0
Bit 0			
Bit 1	Signal detection method	FED	FR3
Bit 2	Signal frequency	Changed	Not changed
Bit 3			
Bit 4	Judgment of intermittent signal	Start from valid ON signal	Start from either valid ON signal or OFF signal
Bit 5			
Bit 6	Signal form	Continuous	Intermittent
Bit 7	Signal detection	Detected	Not detected

T-8-71

2) Numeric value parameter

Parameter No.	Function	Setting range
001		
002	T1 timer	0 to 9999 (x10ms)
003	T2 timer	0 to 9999 (x10ms)
004	T3 timer	0 to 9999 (x10ms)
005	T4 timer	0 to 9999 (x10ms)
006	Signal detection table	0 to 16
007	Signal detection level	0 to 7
008	Number of valid tone detection	0 to 9999 (times)

T-8-72

■ MULTI

1) Numeric value parameter

Parameter No.	Function	Setting range
001		0 to 9999
002		0 to 9999
003		0 to 9999
004		0 to 9999

T-8-73

■ AUTO RX

1) Numeric value parameter

Parameter No.	Function	Setting range
001	CI ON time	0 to 9999 (x10ms)
002	CI long off time	0 to 9999 (x10ms)
003	CI off time	0 to 9999 (x10ms)
004	CL long off time	0 to 9999 (x10ms)
005	CI MAX off time	0 to 9999 (x10ms)
006	CI wait time	0 to 9999 (x10ms)
007	CI frequency	0 to 9999 (cycle)
008	CI frequency lower limit	0 to 9999 (Hz)
009	CI frequency upper limit	0 to 9999 (Hz)

T-8-74

■ CNGDTCT

1) Numeric value parameter

Parameter No.	Function		Setting range
001	At F/T switching	CNG MIN ON time	0 to 9999 (x10ms)
002		CNG MAX ON time	0 to 9999 (x10ms)
003			
004			
005			
006		Hit ratio	0 to 9999 (%)
007	At direct connecting to answering phone	CNG MIN ON time	0 to 9999 (x10ms)
008		CNG MAX ON time	0 to 9999 (x10ms)
009		Tolerable time of instantaneous interruption	0 to 9999 (x10ms)
010			
011		Number of detection	0 to 9999 (Times)
012		Hit ratio	0 to 9999 (%)

T-8-75

■ SPECIALB

• Not in use

■ SPECIALN

• Not in use

■ RKEY

1) Numeric value parameter

Parameter No.	Function	Setting range
001	Connection time of flash	0 to 9999 (x10ms)
002	Connection time of grounding wire	0 to 9999 (x10ms)
003		

T-8-76

■ PBXDIALT

1) Bit switch

Bit No.	Function	1	0
Bit 0	Frequency detection method	Modem	Tonal counter
Bit 1			
Bit 2	Signal frequency	Changed	Not changed
Bit 3			
Bit 4	Judgment of intermittent signal	Start from valid ON signal	Start from either valid ON signal or OFF signal
Bit 5			
Bit 6	Signal form	Continuous	Intermittent
Bit 7	Signal detection	Detected	Not detected

T-8-77

2) Numeric value parameter

Parameter No.	Function	Setting range
001	T0 timer	0 to 9999 (x10ms)
002	T1 timer	0 to 9999 (x10ms)
003	T2 timer	0 to 9999 (x10ms)
004	T3 timer	0 to 9999 (x10ms)
005	T4 timer	0 to 9999 (x10ms)
006	Signal detection table	0 to 16
007	Signal detection level	0 to 9
008	Number of valid tone detection	0 to 9999 (times)

T-8-78

■ PBXBUSYT

1) Bit switch

Bit No.	Function	1	0
Bit 0			
Bit 1			
Bit 2	Signal frequency	Changed	Not changed
Bit 3			
Bit 4	Judgment of intermittent signal	Start from valid ON signal	Start from either valid ON signal or OFF signal
Bit 5			
Bit 6	Signal form	Continuous	Intermittent
Bit 7	Signal detection	Detected	Not detected

T-8-79

2) Numeric value parameter

Parameter No.	Function	Setting range
001	-	-
002	T1 timer	0 to 9999 (x10ms)
003	T2 timer	0 to 9999 (x10ms)
004	T3 timer	0 to 9999 (x10ms)
005	T4 timer	0 to 9999 (x10ms)
006	Signal detection table	0 to 16
007	Signal detection level	0 to 9
008	Number of valid tone detection	0 to 9999 (times)

T-8-80

9

Installation

- ■ How to Utilize This Installation Procedure
- ■ Checking before Installation
- ■ Points to Note on Installation
- ■ Checking the Contents
- ■ Installation Procedure
- ■ Copy Card Reader-F1
- ■ Control Interface Kit-C1
- ■ Handset-K1

How to Utilize This Installation Procedure

Symbols in the Illustration

The frequently-performed operations are described with symbols in this procedure.

Packaged Item   Unused Parts

Screw

Install   Remove   Tighten   Loosen

Harness
(Common for Guides and Clamps)   Connector   Power Cord

Install   Remove   Connect   Disconnect   Connect   Disconnect

Power

ON   OFF   Check the sound   Check visually   Check   Push   Cleaning

F-9-1

Illustrations Used in This Procedure

Illustrations used in this procedure are those of ADF Model unless otherwise specified.

Checking before Installation

Selecting the Site of Installation

The followings are the condition for installation environment.
It is better to see the planned location of installation before carrying the host machine in the user site.
1) The host machine can singly connect to the outlet of rated +/-10V, 15A or more.
2) The installation site must be in the following environment. Especially, avoid installing the machine near the faucet, water boiler, humidifier, or refrigerator.
   • Operating environment:Temperature: 10.0 to 30.0 deg C, Humidity: 20 to 80%
3) Avoid installing the machine near fire, in an area subject to dust or ammonia gas. When installing the machine in a place exposed to direct rays of the sun, it is recommended that curtains be hung over the windows.
4) The amount of ozone generated during use of the machine is below the harmful level. However, if the machine is used for a long time in a poor-ventilated room, ozone may smell. To keep the work environment comfortable, the room must be well-ventilated properly.
5) None of the machine feet should float. The machine must be held level constantly.
6) The machine must be installed at least 100mm away from the surrounding walls and there must be an adequate space for operating the machine.

100 mm or more

457 mm

327 mm

265 mm   520 mm

F-9-2

7) Install the machine in a well-ventilated place. Do not install the machine close to the ventilation duct of the room.

Points to Note on Installation

Be sure to go through the following before starting the work.

1) Imaging faults can result due to dew condensation that occurs when the machine is moved from a cold place to a warm place. Leave the unpacked machine as it is for at least two hours before installing it.
   (Dew condensation: When a metallic object is brought from a low-temperature place to a high-temperature place, water vapor around it is cooled abruptly and consequently water drops stick to the surface of the metallic object.)

2) The maximum weight of the machine is approx. 22.8kg (ADF model, not include a drum unit, a toner cartridge). Accordingly, two or more persons are required to lift the machine. Be sure to keep the machine in a horizontal position when lifting it.

● Message for Unidentified Toner Cartridge

This machine is equipped with the function which displays the following message after identifying the Toner Cartridge information by reading the IC Tag.

Message: "The remaining Toner information cannot be detected properly. A non-Canon Cartridge or a Cartridge with the wrong item number may be inserted, or no Cartridge is inserted."

Though the machine is continuously used after clearing the message, the function will not properly operate, such as the remaining Toner detection.

The cause of the message appearance will be as follows.

• No Cartridge is inserted.
• A non-Canon Cartridge may be inserted.
• A Cartridge with the wrong item number may be inserted.
• The IC Tag of the Toner Cartridge is fault.
• The IC Tag reading function of the machine is fault.

Unpacking

Unpacking the Machine and Removing the Packaging Materials

☐
1)

F-9-3

☐
2)

F-9-4

☐
3)

> **NOTE:**
> The Toner Cartridge may not be supplied depending on the models.

Toner Cartridge

Copyboard Cover Model and Printer Model Only

Cord and Plug

Label

Checking the Contents

NOTE:
• Hand the supplied LAN cable to a user, and then explain the usage of the LAN to refer to user's guide.
• When the length of the LAN cable is not enough, explain that purchase the cable (the shield type more than Category 5) of the off-the-shelf items and use it to the user.

[1] Toner Cartridge x 1 (For Korea / China and Europe (Copyboard Cover Model only))	[2] LAN Cable x 1 (For Asia except India)
[3] Glass Cleaning Label (ADF Model only, except for China and Korea)	[4] Power Cord x 1

[5] Telephone Cord x1 (2-Contact type) Fax Model only	[6] Telephone Cord x1 (6-Contact type; For EU) Fax Model only	[7] PTT Plug x1 (For EU, Use in Germany) Fax Model only
[8] PTT Plug x1 (For EU, Use in France) Fax Model only	[9] PTT Plug x1 (For EU, Use in UK) Fax Model only	[10] PTT Cable x1 (For KOREA) Fax Model only

F-9-5

< Documentations and CD >

There are cases in which the following names of the documentations and CD are different from the actual printed ones.
• Getting Started
• User Manual CD-ROM
• Notice for Latest Software
• Notice Regarding the LAN Cable Included with the Machine
  (For Asia except India and China)
• Main Unit Warranty (For Korea and China)
• Service Book (For China)
• Quality Certificate (For China)

Installation Procedure

NOTE:
When placing this machine on the Cassette Feeding Module, be sure to install the Cassette Feeding Module before installing this machine.
(About the procedure for installing the Cassette Feeding Module, refer to the Cassette Feeding Module Installation Procedure.)

☐
1)

F-9-6

2) Remove all packing tapes and cushioning materials from outside of the machine.

☐
3)

F-9-7

☐
4)

F-9-8

5)

F-9-9

6)

NOTE:
The Left Door can open fully by two steps.

F-9-10

7)

F-9-11

☐
8)

F-9-12

☐
10)

F-9-14

☐
9)

NOTE:
Check that the Left Door is fully opening when the Drum Unit cannot be removed.

F-9-13

☐
11)

F-9-15

☐
12)

F-9-16

☐
13)

> NOTE:
> Install the Drum Unit along the rails inside the Machine until it stops.

F-9-17

☐
14)

F-9-18

☐
15)

F-9-19

☐
16)

F-9-20

☐

17) Unpacking the Toner Cartridge.

F-9-21

CAUTION:

- Do not shake the Toner Cartridge.
- Do not touch the portions A, B, or C shown in the illustration.

F-9-22

☐

18)

NOTE:
Install the Toner Cartridge inside the machine until it stops.

F-9-23

□
19)

F-9-24

□
20)

F-9-25

□
21)

F-9-26

□
22)

NOTE:
The front cover cannot close when the Toner Cartridge is not set properly.

F-9-27

□
23)

2   1

F-9-28

□
24)

F-9-29

☐
25)

F-9-30

☐
26)

F-9-31

☐
27)

F-9-32

☐
28) Remove the Protection Sheet on the Control Panel.

Protection Sheet

F-9-33

Affixing the Label

■ ADF Model only (Except for China / Korea)

☐
1)

F-9-34

☐
2) Affix the label in the appropriate language.

• Glass Cleaning Label

Glass Cleaning Label

F-9-35

☐
3)

F-9-36

Connecting the Power Cord

1)

F-9-37

Turning ON the Power

ON

F-9-38

Host Machine Settings (Start Setup Guide)

The Start Setup Guide screen appears when the power is turned ON for the first time after the machine is installed. Follow the instructions displayed on the display to configure the settings of the Host Machine.

1) Connect the power plug of the Host Machine to the machine and the power outlet.
2) Turn ON the main power switch.
3) Select the appropriate language with the cursor keys (▲/▼), and press the OK key.
4) "Check that orange tape on the toner cartridge has been removed. , / Next" is displayed. Check it and press the OK key.
5) "Start mixing toner. Duration: Approx. 3 min. , / Start" is displayed. Check it and press the OK key.
6) Select the location with the cursor keys (▲/▼), and press the OK key.
7) "Load paper in Drawer. " is displayed. Check it and press the OK key.
8) Select the Time Zone with the cursor keys (▲/▼), and press the OK key.
9) Enter the Date and Time with the cursor keys (▲/▼), and press the OK key.

Checking the Operation and the Print Image

1) Place original on the copyboard glass, and then copy it by feeding paper from the cassette and manual-feed tray to check the operation and the resultant print image.
   - Check that abnormal sound is not generated.
   - Check the image quality at respective magnifications.
   - Check that the document is copied normally on the specified number of sheets.
   - When image adjustment is necessary, refer to the chapter of the adjustment.

9 Installation > Installation Procedure > Connecting to Telephone Line (Fax Model only) > Preparation of Telephone Cord

9-15

● Connecting to the Network (Network Model only)

This steps perform only for Network Model.

☐
1) Turn OFF the Main Power Switch.

☐
2) Connect the LAN Cable to the LAN port of the Host Machine and the Router, and then turn ON the Main Power Switch.

F-9-39

☐
3) Inform the system administrator at the installation site that installation of the Host Machine is complete, and then ask for the network setting.

NOTE:
- Hand the supplied LAN cable to a user, and then explain the usage of the LAN to refer to user's guide.
- When the length of the LAN cable is not enough, explain that purchase the cable (the shield type more than Category 5) of the off-the-shelf items and use it to the user.

NOTE:
Network setting cannot be executed unless logging in as an administrator.
Factory default password is as follows.
- Manager ID : 7654321 or 0
- PIN : 7654321 or 0

CAUTION:

To perform the network setting, the following Additional Functions items must be set "ON".

 ⊛ > [Network Settings] OK > Enter the Manager ID and PIN > ID > [TCP/IP Settings]

☐
4) Turn OFF the main power.

● Connecting to Telephone Line (Fax Model only)

This steps perform only for Fax Model.

■ Preparation of Telephone Cord

☐
1) Connect the PTT Plug matched the field or area to the Telephone Cord (6-contact type).

NOTE:
- This step performs only for Europe.
- Do not connect the Telephone Cord (2-contact type) with the PTT Plug.

1x

F-9-40

9-15

9 Installation > Installation Procedure > Connecting to Telephone Line (Fax Model only) > Preparation of Telephone Cord

■Basic Setting

> NOTE:
> When "System Manager Information Settings" is set, be sure to follow the direction of user administrator in order to log in as an administrator.

In this steps, make only minimum settings required for FAX communication.

☐
1) Turn ON the Main Power Switch.

☐
2) Specify the initial Fax Settings.


```
Perform Fax Setup?

  Set Up Now
  Set Up Later
```

F-9-41

> NOTE:
> When stopping the Fax settings on the way, push the Stop Key to exit the Fax setup screen.

Follow the instructions on the screen to specify a fax number, a unit name, and a receive mode. Refer to the User's Guides for details about each mode.

[How to use a user name]
When you send a document, the sender information that you registered is printed on the recipient's paper.

[Selecting <Set Up Later>]
If you select <Set Up Later>, the receive mode is set to <Auto>. Later, when you want to configure the fax settings, display the fax setup screen by pressing ⊛ > [Fax Settings] > OK > [Fax Setup Guide].

☐
3) When <Connect Telephone Line> appears on the display, connect the telephone cable as the following illustration.

Handset

Telephone

Telephone line connector

F-9-42

☐
4) Exit the fax setup screen, and then restart the machine.


```
End Fax Setup
Guide?

  Yes        No
```

```
Turn the main power
OFF and ON to apply
settings.
            OK
```

F-9-43

☐
5)Turn OFF the machine and wait for at least 10 seconds before turning it ON again. If the telephone line types are not detected automatically, see the User's Guides and set a telephone line manually.

Fax communication test

Perform the communication test to check if FAX function works correctly.

☐

1) Switch the control panel display to [Fax] screen.

2) Send the test document from this machine to another machine that can handle the
   communication test to check that this machine can send the data correctly.

3) Send the test document from the target to this machine to check if the machine can receive
   the document properly.

Copy Card Reader-F1

Check Item of the Contents

The parts with a diagonal line in the contents list will not be used during installation.

Points to Note on Installation

• To install this equipment, the Copy Card Reader Attachment-E1 is required.
• This equipment and the Handset cannot be used at the same time.

Check Items when Turning OFF the Power

Check that the main power switch is OFF.
1)Turn OFF the main power switch of the host machine.
2) Be sure that display in the Control Panel and the Power Supply Lamp are turned off, and
   then disconnect the power plug.

Installation Outline Drawing

F-9-44

Checking the Contents

■ Copy Card Reader-F1

[1] Card Reader Unit X 1	[2] Screw (RS tight; M4x10) X 1	[3] Toothed Washer X 1

F-9-45

■ Copy Card Reader Attachment-E1

[1] Card Reader Lower Mounting Plate X 1	[2] Card Reader Lower Cover X 1	[3] Card Reader Harness X 1
[4] Screw (Binding; M4x6) X 1	[5] Wire Saddle (Large)X 2	[6] Wire Saddle (Small) X 1
[7] Screw (TP; M4x16) X 2	[8] Edge Saddle X 1	[9] Cord Guide X 1

F-9-46

● Installation Procedure

■ Assembling the Card Reader

1)

F-9-47

2)

F-9-48

NOTE:
The removed Screw is used in step 4).

☐
3)

F-9-49

NOTE:
The removed Screw and Toothed Washer are used in step 5).

☐
4)

F-9-50

NOTE:
Use the Screw removed in step 2).

☐
5)

F-9-51

NOTE:
Use the Screw and the Toothed Washer removed in step 3).

☐
6)

F-9-52

■ Removing the Covers

1)

F-9-53

2)

F-9-54

3)

F-9-55

4)

F-9-56

5)

4x

F-9-57

6)

Clow

2

3

1

BOTTOM VIEW

F-9-58

7)

4x

F-9-59

■ Installing the Card Reader Unit

☐
1)

F-9-60

NOTE:
The removed screw is used in step 4).

☐
2)

F-9-61

☐
3)

1x

F-9-62

☐
4)

CAUTION:

When installing the Speaker, take care that it don't pinch or damage to the Speaker Harness.

1x

F-9-63

NOTE:
Use the Screw removed in step 1).

☐
5)

4x

F-9-64

☐
6)

BOTTOM VIEW

F-9-65

7)

3x

F-9-66

8)

F-9-67

9)

Wire Saddle（Small）

Wire Saddle（Large）

F-9-68

10) Install the Card Reader Unit.

TP
M4x16

2x

F-9-69

11)

F-9-70

12)

F-9-71

13)

CAUTION:

When installing the Card Reader Lower Cover, take care that it don't pinch or damage to the Card Reader Harness.

Bind
M4x6

F-9-72

14)

F-9-73

☐
15)

F-9-74

> NOTE:
> Be sure to check that there is no burr.

☐
16)

F-9-75

☐
17)

F-9-76

☐
18) Connect the power plug to the host machine and outlet.

☐
19) Turn ON the main power switch of the host machine.

Setting After Installation

☐

Configure the card management information settings in service mode.

1) Enter the Service mode: COPIER > FUNCTION > INSTALL > CARD-NUM, and enter the first number of the card used by the user.

2) Enter the Service mode: COPIER > FUNCTION > INSTALL > CARD, and press the OK key to enable the card. The 300 pieces of cards become available from the number set in step 1).

3) Execute the following menu to enable the Department ID management.
- Menu > System Management Settings > Department ID management On/Off > ON > OK

4) Turn OFF and then ON the main power switch to enable the settings.

5) Check that a message [Insert the card.] appears.

> NOTE:
> How to enter System Management Settings.
> 1) Enter the Manager ID : (Default value: 7654321 or 0)
> 2) Enter the PIN : (Default value: 7654321 or 0)
> 3) Press the "ID" key.

6) Insert a card which card number has been registered, and check that the machine operates normally.

> NOTE:
> When changing the number of cards after specifying the settings, specify the following settings.
> 1) Enter the Service mode: COPIER> FUNCTION> INSTALL> CARD-NUM, and enter the first number of the card used by the user.
> 2) Enter the Service mode: COPIER > FUNCTION > INSTALL > CARD, and press the OK key to enable the card.
> 3) Turn OFF and ON the main power switch to enable the settings.

Control Interface Kit-C1

Checking the Contents

[1] CC-VI Cable X1	[2] D-SUB Support Plate X1	[3] Washer (Large) X2
[4] Hexagonal Screw (Washer (Small),Nut) X2 Do not use a Nut		

F-9-77

Check Items when Turning OFF the Main Power

Check that the main power switch is OFF.

1) Turn OFF the main power switch of the host machine.

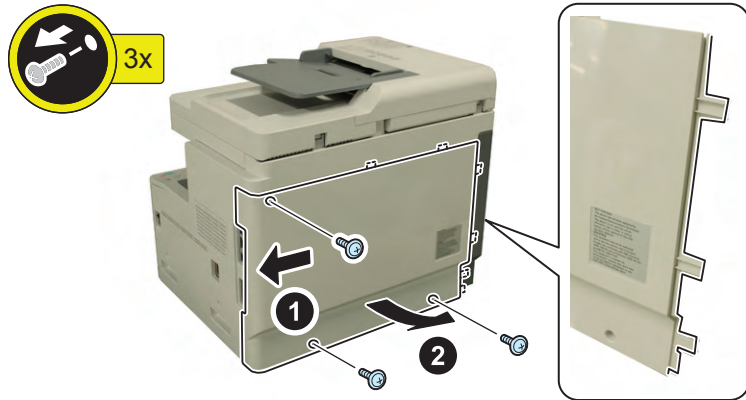2) Be sure that display in the Control Panel and the lamp of the main power supply are turned off, then disconnect the power plug.

Installation Outline Drawing

F-9-78

Installation Procedure

1)

3x

F-9-79

2)

NOTE :
Be sure to check that there is no burr.

F-9-80

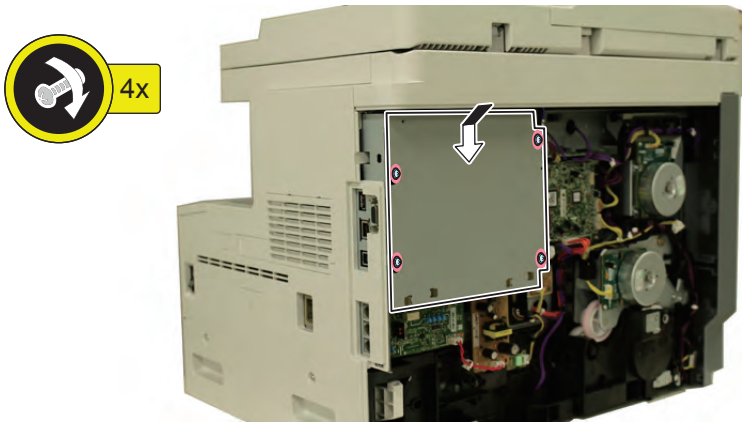3)

4x

F-9-81

4)

F-9-82
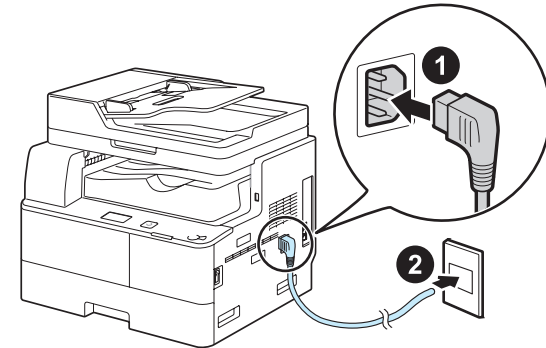
5)

NOTE :
Be sure to tighten the Hexagonal Screw with needlenose pliers.

2x

1x

F-9-83

6)

4x

F-9-84

7)

3x

F-9-85

8)

F-9-86
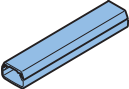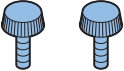
9)

ON

F-9-87

Handset-K1

Points to Note on Installation

Install this device to a model with the Fax function.

This equipment and the Copy Card Reader cannot be used at the same time.

Checking the Contents

[1] Handset X 1	[2] Handset Base X 1	[3] Handset Base Holder X 1
[4] Cord Guide X 1	[5] Knurled Screw X 2	[6] Screw (Binding; M3x35) X 2

F-9-88

Check Items when Turning OFF the Main Power

Check that the main power switch is OFF.

1) Turn OFF the main power switch of the host machine.

2) Be sure that display in the Control Panel and the lamp of the main power supply are turned off, then disconnect the power plug.

Installation Outline Drawing

F-9-89

Installation Procedure

1)

F-9-90

2)

Binding
M3x35

F-9-91

3)

Knurled
Screw

2x

F-9-92

4)

1x

HAND SET
EXT
LINE

F-9-93

5)

F-9-94

6)

Center

3.0 mm

1x

F-9-95

7) Connect the power plug to the outlet.

8) Turn ON the main power switch.

9) Check that the dial tone is heard from the Handset.

Appendix

- Service Tools
- General Circuit Diagram
- General Timing Chart
- Backup Data
- Soft Counter Specifications

Service Tools

■ Special Tools

In addition to the standard tools set, the following special tools are required when servicing the machine.

Tool name	Tool No.	Rank (*)	Appearance	Remarks
Digital multi meter	FY9-2002	A		Electrical checks
Tester extension pin	FY9-3038	A		Additional electrical check
Tester extension in (L-shipped)	FY9-3039	A		Additional electrical check
NA-3 Test Chart	FY9-9196	A		Check and adjusting images

T-10-1

A: each service engineer is expected to carry one.

B: each group of 5 service engineers is expected to carry one.

C: each workshop is expected to carry one.

■ Oils and Solvents

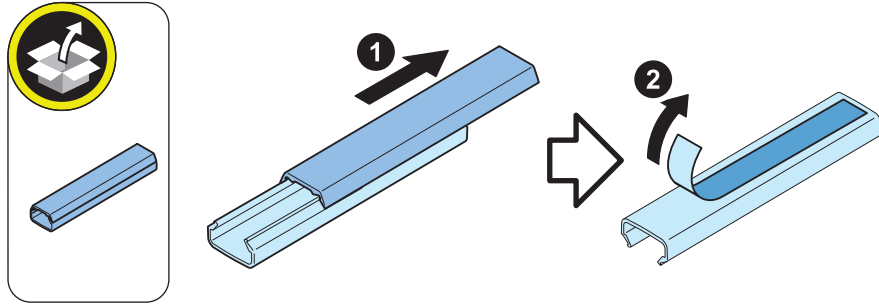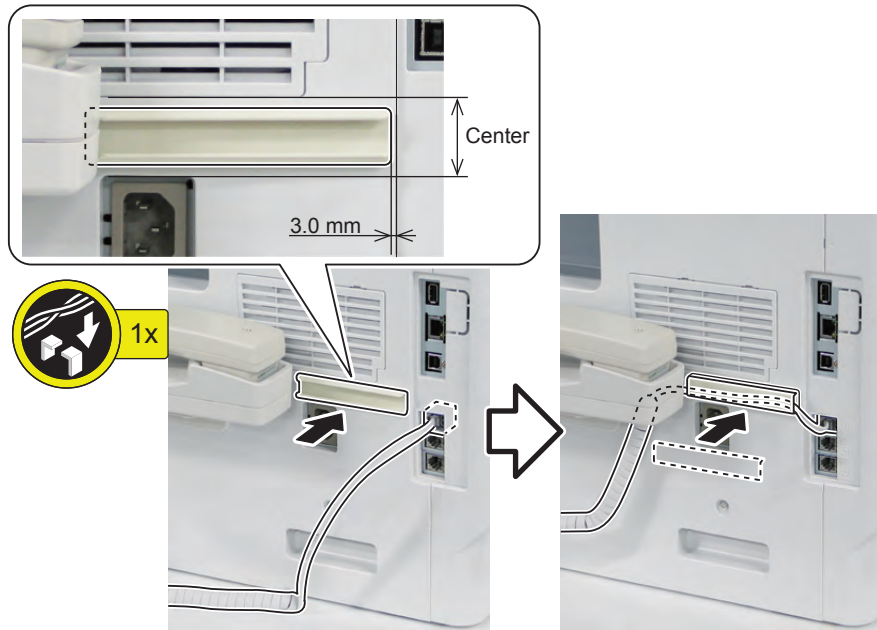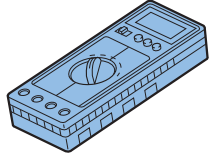| Name	Usage	Composition	Remarks
Alcohol	Cleaning (e.g.) glass, plastic, rubber, external covers.	• Fluoride-family hydrocarbon • Alcohol Surface activating agent • Water	• Do not put near fire. • Procure locally • Substitute: IPA (isopropyl alcohol)
Alcohol	Cleaning (e.g.) metal, oil stain, toner stain	• Fluoride-family hydrocarbon • Chlorine-family hydrocarbon • Alcohol	• Do not bring near fire. • Procure locally • Substitute: MEK
Lubricating oil (EM-50L)	Application (e.g.) gear, shaft of the CIS unit	• Special oil • Special solid lubricating agent • Lithium soap	• Dow Corning Corp. • Tool No. : HY9-0007 (20g)
Lubricating oil (HP-300)	Application (e.g.) bushing (L/R) of the pressure roller	• Composition oil	• Dow Corning Corp. • Tool No. : CK-8012 (100g)
Conducting grease	Application (e.g.) contact plate spring, developing sleeve electrode	• Mineral oil	• FLOIL GE-676 • Tool No. : FY9-6023 (20g)
Oil glass cleaner	Application (e.g.) stream reading glass	-	• TAIHO KOHZAI • Tool No. : FY9-6020 (10ml) • Tool No. : FY9-6035 (80ml)

T-10-2

General Circuit Diagram

F-10-1

⬤ Basic sequence at printing from cassette 1 (A4, 2-sided, 1 sheet)

Main Power Switch ON ▽

	Sequence	Warm-up rotation	STBY	INTR	PRINT	LSTR
1	Main Motor(M1)	▬		▬▬	▬▬▬▬▬▬	
2	Fixing Motor(M3)				▬▬▬▬▬▬▬	
3	Polygon Motor(M2)			▬	▬▬▬▬▬▬▬	
4	Laser			▬	▬▬▬▬▬	
5	Pre-registration Sensor(SR11)				▬ ▬	
6	Fixing Delivery Sensor(SR5)				▬	▬
7	Charging AC Bias	▬		▬	▬▬▬▬	
8	Charging DC Bias			▬	▬▬▬▬	
9	Developing AC Bias				▬ ▬	
10	Developing DC Bias	▬		▬	▬ ▬	
11	Transfer Bias	▬		▬	▬▬▬	
12	Separation Static Bias				▬ ▬	
13	Fixing Bias			▬	▬▬▬▬▬	
14	Cassette 1 Pickup Solenoid(SL2)			▬		
15	Registration Clutch(SL1)	▬			▬ ▬	
16	Fixing Delivery Sensor(SR5)				▬	
17	Duplex Solenoid(SL1)				▬	

F-10-2

Backup Data

Data		Location	Replace		Delete							Backup by User			Backup by Service		
					Menu > System Management Settings			COPIER > FUNCTION > CLEAR									
			Engine Controller PCB	Main Controller PCB *1	Initializing Address Book	Initializing Key and Certificate	System Management Settings	R-CON *2	SRVC-DAT *3	HIST *4	ALL *5	Yes/No	Method	Location to be stored	Yes/No	Method	Location to be stored
Address Book		Main Controller	-	Clear	Clear	-	-	-	-	-	Clear	Yes	Remote UI *11 LUI *12	PC, USB memory	No	-	-
Settings Manu	Preferences	Main Controller	-	Clear	-	-	-	-	-	-	Clear	Yes	Remote UI *11 LUI *12	PC, USB memory	No	-	-
	Timer Settings	Main Controller	-	Clear	-	-	-	-	-	-	Clear	Yes	Remote UI *11 LUI *12	PC, USB memory	No	-	-
	Common Settings	Main Controller	-	Clear	-	-	-	-	-	-	Clear	Yes	Remote UI *11 LUI *12	PC, USB memory	No	-	-
	Copy Settings	Main Controller	-	Clear	-	-	-	-	-	-	Clear	Yes	Remote UI *11 LUI *12	PC, USB memory	No	-	-
	Fax Settings	Main Controller	-	Clear	-	-	-	-	-	-	Clear	Yes *6	Remote UI *11 LUI *12	PC, USB memory	No	-	-
	Scan Settings	Main Controller	-	Clear	-	-	-	-	-	-	Clear	Yes	Remote UI *11 LUI *12	PC, USB memory	No	-	-
	Memory Media Print Settings	Main Controller	-	Clear	-	-	-	-	-	-	Clear	Yes	Remote UI *11 LUI *12	PC, USB memory	No	-	-
	Printer Settings	Main Controller	-	Clear	-	-	-	-	-	-	Clear	Yes	Remote UI *11 LUI *12	PC, USB memory	No	-	-
	System Management Settings	Main Controller	-	Clear	-	-	Clear	-	-	-	Clear *8	Yes	Remote UI *11 LUI *12	PC, USB memory	No	-	-
Key and Certificate		Main Controller	-	Clear	-	Clear *7	-	-	-	-	Clear	No	-	-	No	-	-
Serial Number		Main Controller	-	-	-	-	-	-	-	-	-	No	-	-	No	-	-
Job History		Main Controller	-	Clear	-	-	-	-	-	Clear	Clear	No	-	-	No	-	-
Service mode	Service mode setting values (Reader)	Main Controller	-	Clear	-	-	-	Clear	-	-	-	No	-	-	No	-	-
	Service mode setting values(Main Controller)	Main Controller	-	Clear	-	-	-	-	Clear	-	Clear	No	-	-	Yes	Service mode *9	USB memory
	Service mode setting values (Engine Controller)	Engine Controller	Clear	-	-	-	-	-	-	-	-	No	-	-	Yes	Service mode *10	Main Controller

T-10-3

*1. Log data such as Mac address, USB serial number, printer-related setting values, scanner-related setting values, user data, and logs are initialized.

*2. The factory adjustment values of the Reader and ADF are initialized.

*3. Service data is cleared. User data is not cleared. The factory adjustment values of the Reader and ADF are not initialized.

*4. The logs (communication management, print, jam, error, and alarm) are cleared.

*5. The user data, service data, logs, and system administrator are initialized. (The system manager ID and password are changed back to the default values.) The factory adjustment values of the Reader and ADF are not initialized.

*6. Excluding Fax Setup Guide

*7. When the key and certificate are initialized, TLS authentication of IEEE802.1X and the SSL setting are changed to "OFF".

*8. The system administrator ID and the password are changed back to the default values. <Counter meter-installed model> ID: 7654321 / PWD: 7654321.

*9. FUNCTION > SYSTEM > IMPORT / FUNCTION > SYSTEM > EXPORT

*10. FUNCTION > VIFFNC > STOR-DCN / FUNCTION > VIFFNC > STOR-DCN

*11. Settings/Regstration > System Management Settings > Import/Export > Export

*12. Menu > System Management Settings > Import/Export > Export

Soft Counter Specifications

Soft counter specifications

The numbers entered for software counters are classified as follows:

No.	Counter Details
000 to 199	Total
200 to 299	Copy
300 to 399	Print
400 to 499	Copy and print
500 to 599	Scan
600 to 699	Memory media print
700 to 799	Reception print
800 to 899	Report print
900 to 999	Transmission

T-10-4

Meanings of symbols in tables

- Copy: Local copy
- Copy A: Local copy
- Print: PDL print + report print
- Print A: PDL print + report print
- Scan: Black and white scan + color scan

*This product does not have the function of "Remote Copy" and "Box Print".

No.	Counter Details
071	Toner bottle (Black)
101	Total 1
102	Total 2
104	Total (Small)
108	Total (Black1)
109	Total (Black2)
113	Total (Black/ Small)
114	Total 1 (2-Sided)
115	Total 2 (2-Sided)
117	Small (2-Sided)
126	Total A1
127	Total A2
129	Total A(Small)
132	Total A(Black1)
133	Total A(Black2)
137	Total A (Black/ Small)
138	Total A1 (2-Sided)
139	Total A2 (2-Sided)
141	SmallA (2-Sided)
150	Total B1
151	Total B2
153	Total B(Small)
156	Total B(Black1)
157	Total B(Black2)
161	Total B (Black/ Small)
162	Total B1 (2-Sided)
163	Total B2 (2-Sided)
165	SmallB (2-Sided)
181	Black Toner
201	Copy (Total 1)
202	Copy (Total 2)
204	Copy (Small)
205	CopyA (Total 1)
206	CopyA (Total 2)
208	CopyA (Small)
209	Local Copy (Total 1)
210	Local Copy (Total 2)
212	Local Copy (Small)
221	Copy(Black1)
222	Copy(Black2)
228	Copy(Black/ Small)
238	Copy(Black/ Small/2-Sided)
249	CopyA(Black1)

No.	Counter Details
250	CopyA(Black2)
256	CopyA(Black/ Small)
266	CopyA(Black/ Small/2-Sided)
277	Local Copy(Black1)
278	Local Copy(Black2)
284	Local Copy(Black/ Small)
294	Local Copy(Black/ Small/2-Sided)
301	Print (Total 1)
302	Print (Total 2)
304	Print (Small)
305	Print A (Total 1)
306	Print A (Total 2)
308	Print A (Small)
313	Print (Black1)
314	Print (Black2)
320	Print (Black/ Small)
330	Print (Black/ Small/2-Sided)
331	PDLPrint (Total 1)
332	PDLPrint (Total 2)
334	PDLPrint (Small)
339	PDLPrint (Black1)
340	PDLPrint (Black2)
346	PDLPrint (Black/ Small)
356	PDLPrint (Black/ Small/2-Sided)
404	Copy+Print (Black/ Small)
405	Copy+Print (Black2)
406	Copy+Print (Black1)
412	Copy+Print (Small)
413	Copy+Print (2)
414	Copy+Print (1)
422	Copy+Print (Black/ Small/2-Sided)
501	Scan (Total 1)
505	BlackScan (Total 1)
506	BlackScan (Total 2)
508	BlackScan (Small)
509	Color Scan (Total 1)
510	Color Scan (Total 2)
512	Color Scan (Small)
631	Memory Media Print (Total 1)
632	Memory Media Print (Total 2)
634	Memory Media Print (Small)
639	Memory Media Print (Black1)
640	Memory Media Print (Black2)

No.	Counter Details
646	Memory Media Print (Black/ Small)
656	Memory Media Print (Black/ Small/2-Sided)
701	Receive Print (Total 1)
702	Receive Print (Total 2)
704	Receive Print (Small)
709	Receive Print (Black1)
710	Receive Print (Black2)
716	Receive Print (Black/ Small)
726	Receive Print (Black/ Small/2-Sided)
801	Report Print (Total 1)
802	Report Print (Total 2)
804	Report Print (Small)
809	Report Print (Black1)
810	Report Print (Black2)
816	Report Print (Black/ Small)
921	TX ScanTotal 5(Color)
922	TX ScanTotal 5(Black)
939	Remote Scan(Color)
940	Remote Scan(Black)
945	TX Scan/E-Mail(Color)
946	TX Scan/E-Mail(Black)
959	Memory Media Scan(Color)
960	Memory Media Scan(Black)

T-10-5