Service Manual

iR1018/1019/1022/1023 Series

Canon

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.

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

Symbols Used

This documentation uses the following symbols to indicate special information:

Symbol	Description
	Indicates an item of a non-specific nature, possibly classified as Note, Caution, or Warning.
	Indicates an item requiring care to avoid electric shocks.
	Indicates an item requiring care to avoid combustion (fire).
	Indicates an item prohibiting disassembly to avoid electric shocks or problems.
	Indicates an item requiring disconnection of the power plug from the electric outlet.
Memo	Indicates an item intended to provide notes assisting the understanding of the topic in question.
REF.	Indicates an item of reference assisting the understanding of the topic in question.
	Provides a description of a service mode.
Error	Provides a description of the nature of an error indication.

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

Chapter 4 Original Exposure System

Chapter 5 Laser Exposure

Chapter 6 Image Formation

Chapter 7 Pickup/Feeding System

Chapter 17 Upgrading

Chapter 18 Service Tools

Chapter 1 Introduction

Contents

1.1 System Construction

1.1.1 System Configuration

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

- Pickup/ Other Accessories

[1]

[2]

[3]

[4]

[5]

F-1-1
T-1-1

[1]	Main body (ADF type)
[2]	Main body (copyboard type)
[3]	Cassette Feeding Module-N1
[4]	Hand Set CT-25
[5]	Card Reader-E1 + Card Reader Attachment-D2

- **Boards**
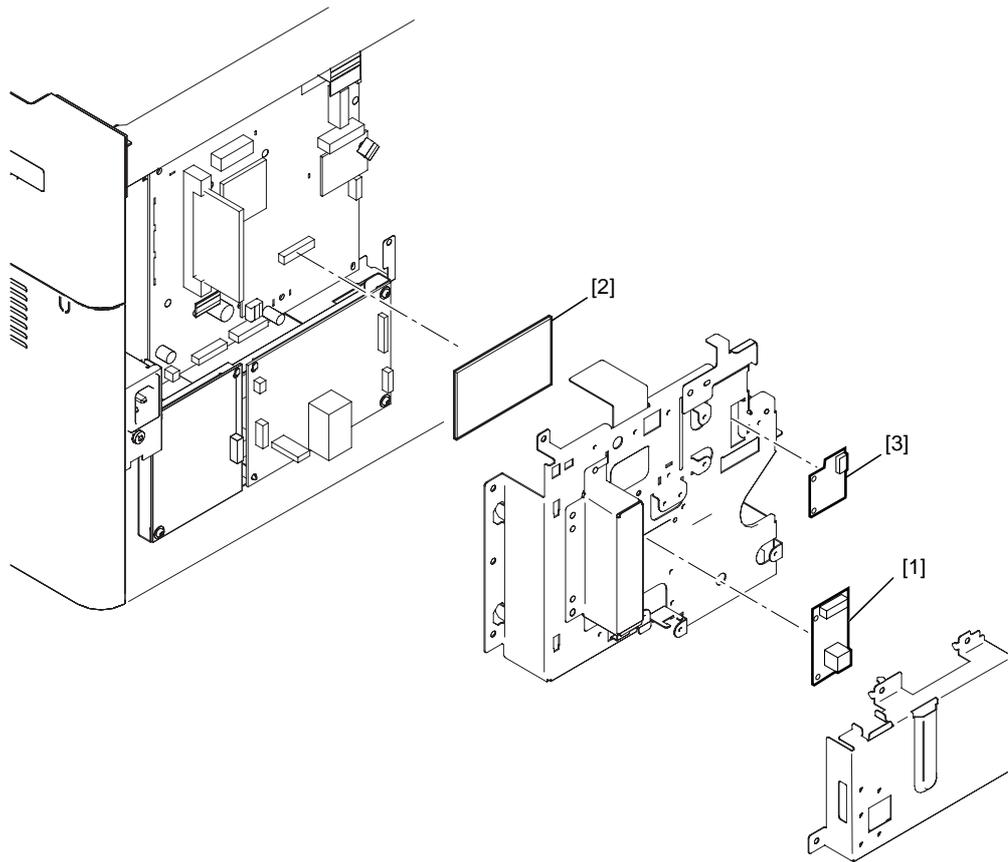
F-1-2
T-1-2

[1]	NW IF Adapter iN-E11
[2]	PCL Printer Kit-M1
[3]	Serial Interface Board-A1

1.2 Product Specifications

1.2.1 Names of Parts

1.2.1.1 External View (Front)

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF
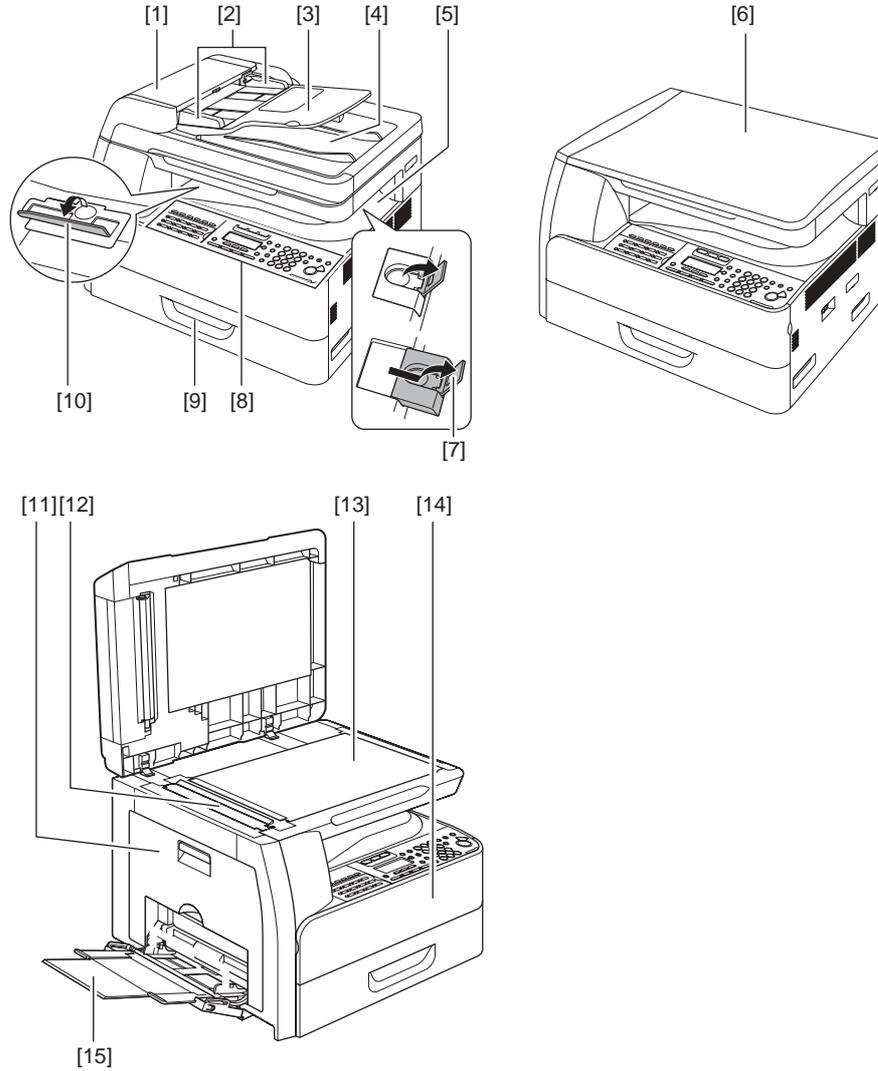
F-1-3
T-1-3

[1]	Open/close cover	[9]	Cassette
[2]	Slide guide	[10]	Stacking support
[3]	Document feeder tray	[11]	Left cover
[4]	Document delivery tray	[12]	Scanning glass
[5]	Delivery tray	[13]	Orginal glass
[6]	Copyboard cover	[14]	Front cover
[7]	Paper stopper	[15]	Multi-purpose tray
[8]	Operation panel		

1.2.1.2 External View (Rear)

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

F-1-4

T-1-4
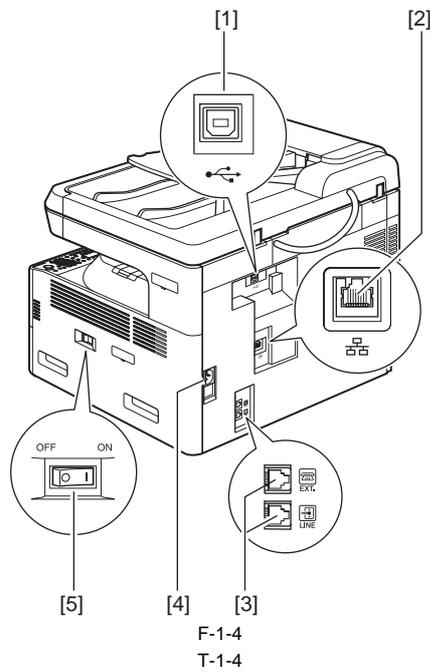
[1]   USB port
[2]   Ethernet port*1
[3]   Modular jack*2
[4]   Power socket
[5]   Main power switch

*1: If equipped with printer functions.

*2: If equipped with fax functions.

1.2.1.3 Cross-Section (Main body)

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

F-1-5
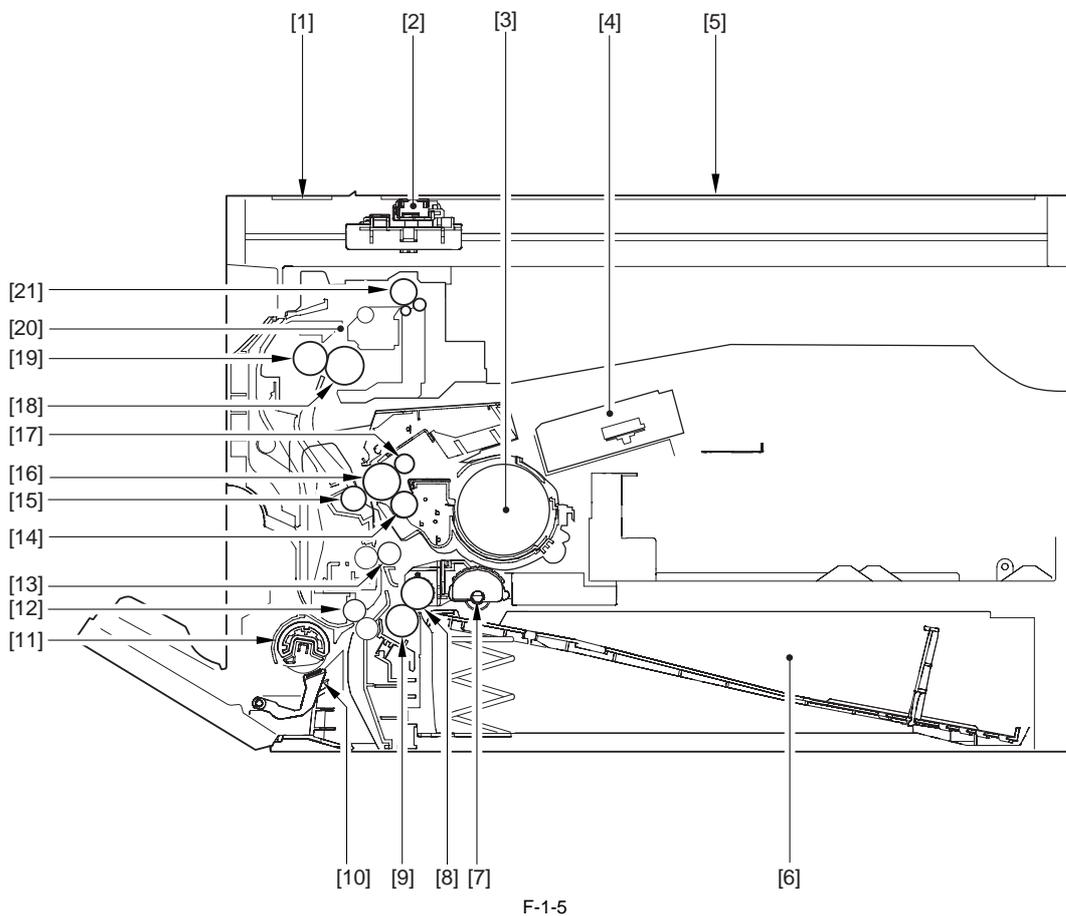
T-1-5

[1]	Reading glass	[12]	Vertical path roller
[2]	CS unit	[13]	Registration roller
[3]	Toner bottle	[14]	Developing cylinder
[4]	Laser scanner unit	[15]	Transfer charging roller
[5]	Copyboard glass	[16]	Photopositive drum
[6]	Cassette	[17]	Primary charging roller
[7]	Pickup roller	[18]	Fixing film unit
[8]	Feed roller	[19]	Fixing pressure roller
[9]	Separation roller	[20]	Fixing unit
[10]	Manual feed separation pad	[21]	Delivery roller
[11]	Manual feed pickup roller		

1.2.1.4 Cross Section (ADF)

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF
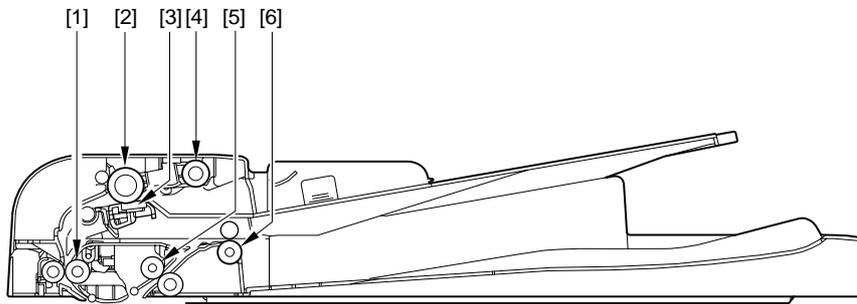
F-1-6
T-1-6

[1]	Registration roller	[4]	Pickup roller
[2]	Feed roller	[5]	Feed roller 1
[3]	Separation pad	[6]	Delivery roller

1.2.2 Using the Machine

1.2.2.1 Turning On the Power Switch

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

The machine possesses 2 power switches: main power switch and control power switch. Normally (i.e., unless the machine is in a sleep state), the machine will be supplied with power when you turn on its main power switch.
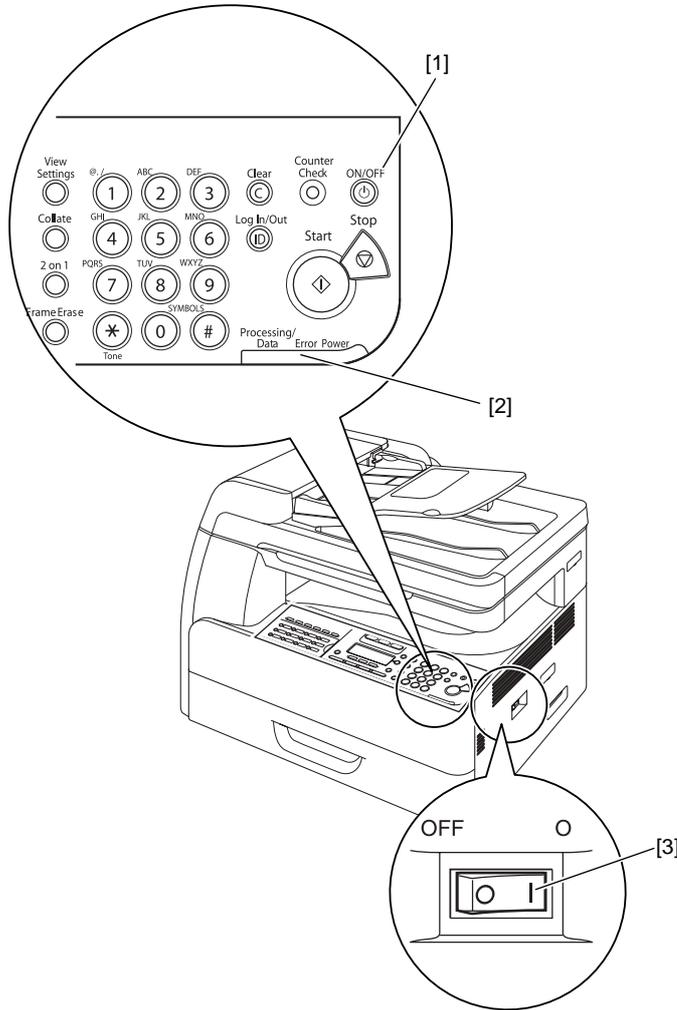
F-1-7
T-1-7

[1] Control panel power switch

[2] Main power lamp

[3] Main power switch

1.2.2.2 When Turning Off the Main Power Switch

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

<During printing or fax data transmission/reception>

⚠

Be sure to operate the main power switch while the Processing/Data lamp on the control panel is not lit.
(Turning off the main switch during printing or fax data transmission/reception can erase the data being processed.)
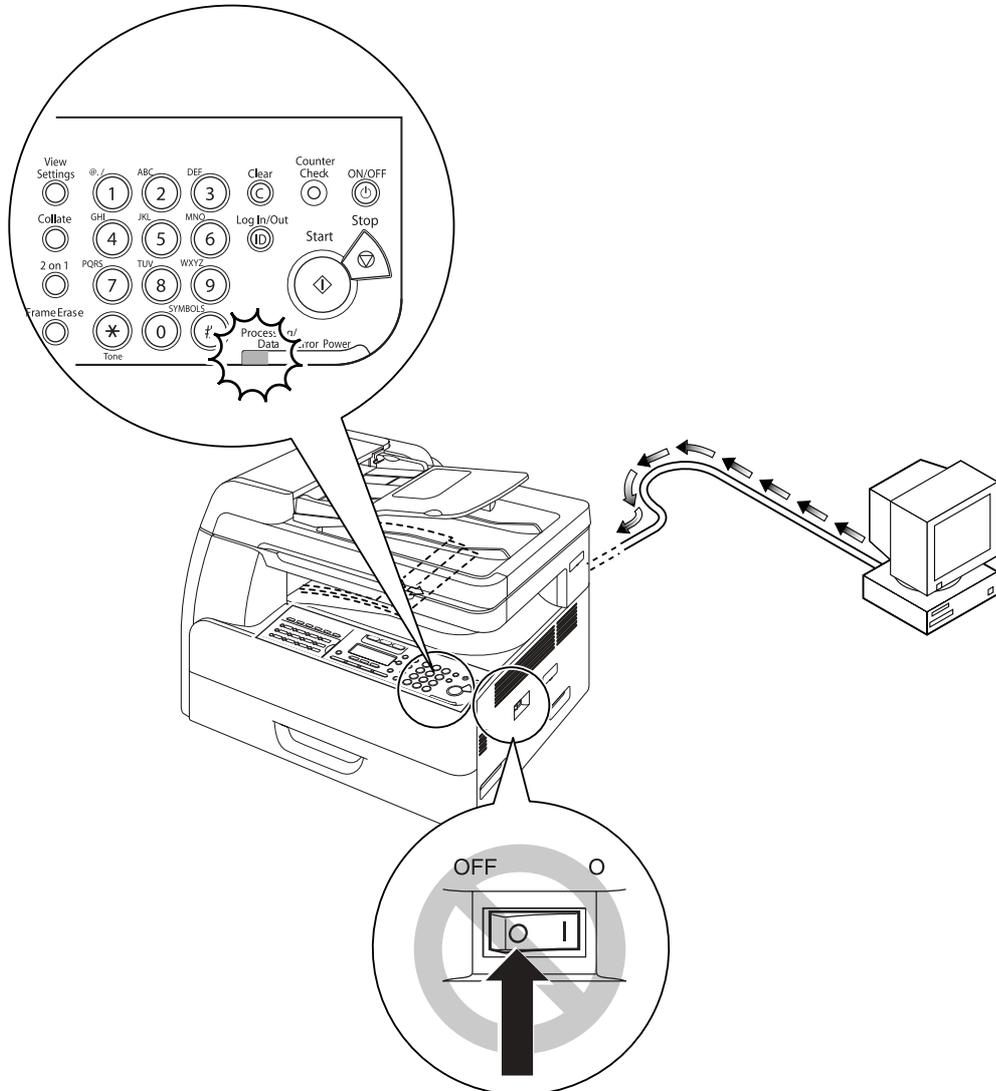
F-1-8

<During downloading>

⚠️

Do not turn off the power switch or ON/OFF switch on the control panel.
(Turning off the main power switch during downloading can make this machine inoperative.)
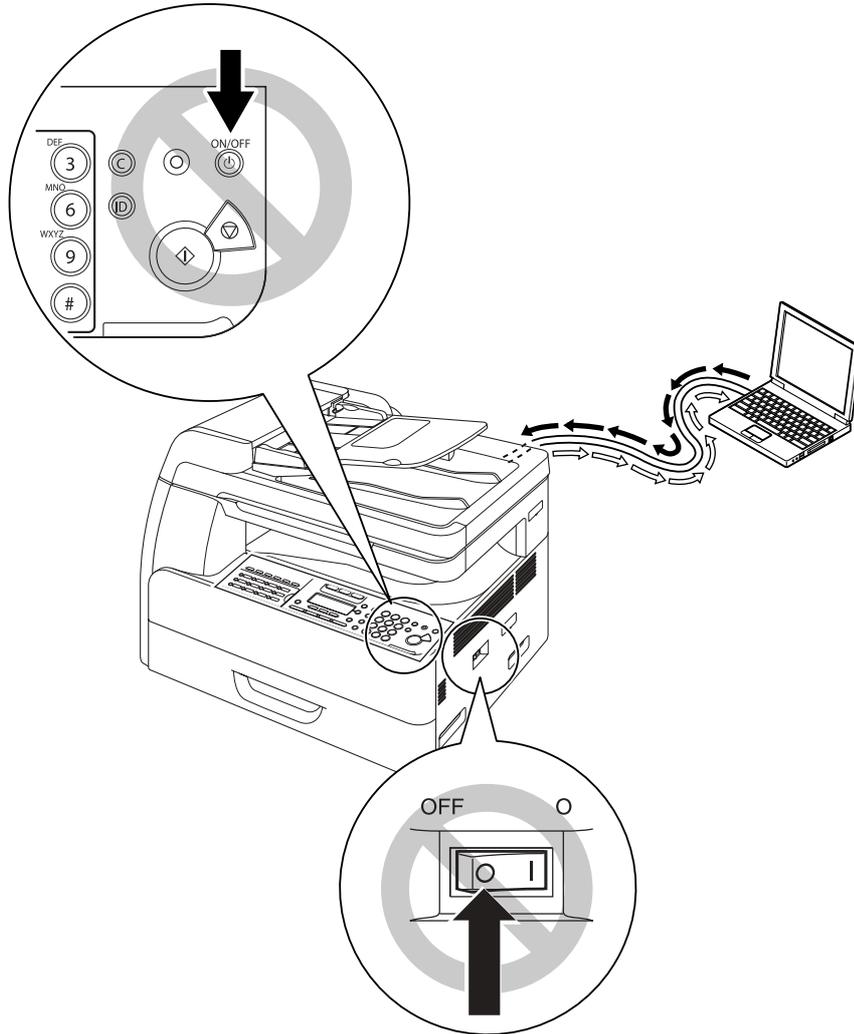
F-1-9

1.2.2.3 Control Panel

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

F-1-10
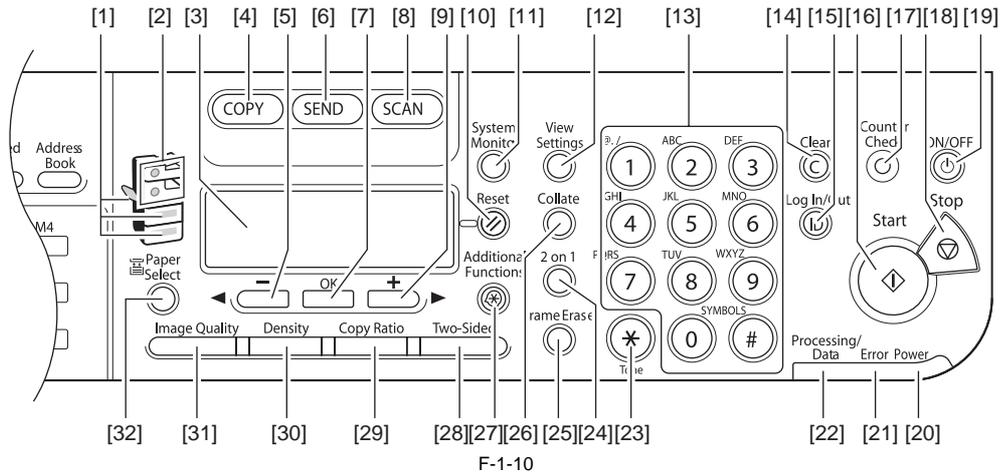
[1]	Paper Select indicator	[17]	[Counter Check] button
[2]	Jam Location indicator	[18]	[Stop] button
[3]	LCD display	[19]	[ON/OFF] button (operation panel power switch)
[4]	[COPY] button	[20]	[Power] indicator
[5]	[</-] button	[21]	[Error] indicator
[6]	[SEND] button	[22]	[Processing/Data] indicator
[7]	[OK] button	[23]	[Tone] button
[8]	[SCAN] button	[24]	[2 on 1] button
[9]	[>/+] button	[25]	[Frame Erase] button
[10]	[Reset] button	[26]	[Collate] button
[11]	[System Monitor] button	[27]	[Additional Functions] button
[12]	[View Settings] button	[28]	[Two-Sided] button
[13]	Numeric buttons	[29]	[Copy Ratio] button
[14]	[Clear] button	[30]	[Density] button
[15]	[log In/Out key] button	[31]	[Image Quality] button
[16]	[Start] button	[32]	[Paper Select] button

<FAX model>

F-1-11
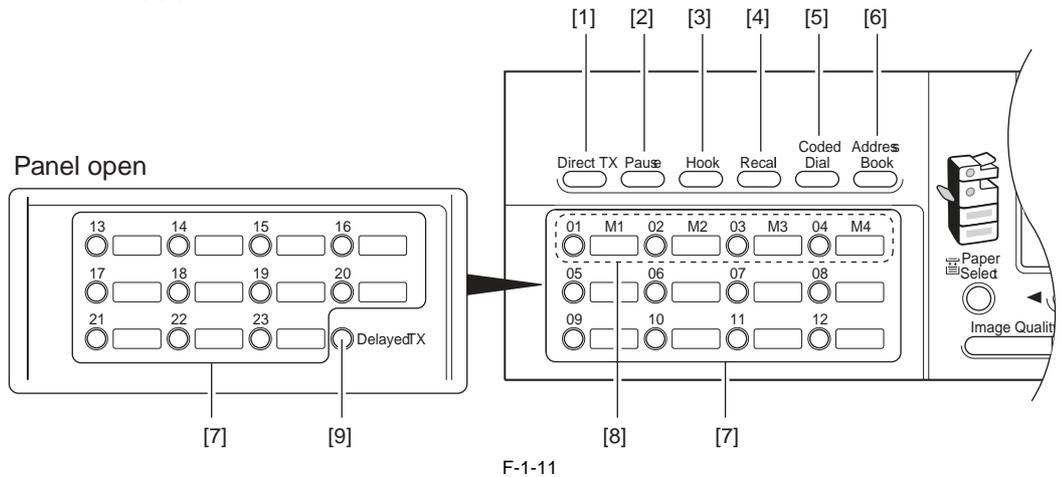
[1]	Direct TX key	[6]	Address Book key
[2]	Pause key	[7]	Favorites buttons
[3]	Hook key	[8]	Delayed TX key
[4]	Recall key	[9]	Delayed TX key
[5]	Coded Dial key		

1.2.3 User Mode Items

1.2.3.1 COMMON SETTINGS

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

MEMO:
User modes of the USA model (Copy + Print + Scan + Fax + ADF + Network + PCL) are described. Menus and defaults may vary depending on the destination. For details, refer to the User's Guide.

Additional Functions	Available Settings
1. DEFAULT SETTINGS	COPY, FAX(*), SCAN
2. AUTO CLEAR SET.	INITIAL FUNCTION(*), SELECTED FUNCTION
3. AUDIBLE TONES	ENTRY TONE: ON (volume 1(*) to 3), OFF
	ERROR TONE: ON (volume 1(*) to 3), OFF
	TX JOB DONE TONE: ERROR ONLY (volume 1(*) to 3), OFF, ON (volume 1(*) to 3)
	RX JOB DONE TONE: ERROR ONLY (volume 1(*) to 3), OFF, ON (volume 1(*) to 3)
	SCAN DONE TONE: ERROR ONLY (volume 1(*) to 3), OFF, ON (volume 1(*) to 3)
	PRINT DONE TONE: ERROR ONLY (volume 1(*) to 3), OFF, ON (volume 1(*) to 3)
4. TONER SAVER MODE	OFF(*), ON
5. PRINTER DENSITY	1 to 9 (5(*))
6. AUTO DRAWER SELCT	COPY: DRAWER 1 (ON(*), OFF), DRAWER 2 (ON(*), OFF), STACK BYPASS (OFF(*), ON)
	PRINTER: DRAWER 1 (ON(*), OFF), DRAWER 2 (ON(*), OFF)
	RECEIVE: DRAWER 1 (ON(*), OFF), DRAWER 2 (ON(*), OFF), STACK BYPASS (OFF(*), ON)
	OTHER: DRAWER 1 (ON(*), OFF), DRAWER 2 (ON(*), OFF), STACK BYPASS (OFF(*), ON)
7. SELECT PAPER TYPE	DRAWER 1, DRAWER 2
8. REG. PAPER TYPE	DRAWER 1: PLAIN PAPER(*), COLOR, RECYCLED, HEAVY PAPER 1, BOND, 3HOLE PUNCH PAPER
	DRAWER 2: PLAIN PAPER(*), COLOR, RECYCLED, HEAVY PAPER 1, BOND, 3HOLE PUNCH PAPER
9. ENERGY IN SLEEP	LOW(*), HIGH
10. BYPASS STD SET	OFF(*), ON: PAPER SIZE (LTR, SMTR, EXECUTIV, OFICIO, BRAZIL-OFICIO, MEXICO-OFICIO, FOLIO, G-LTR, FLSP, COM10, MONARCH, DL, ISO-C5, ISO-B5, FREESIZE, A4, B5, A5R, LGL), SELECT PAPER TYPE (PLAIN PAPER, COLOR, RECYCLED, HEAVY PAPER 1, HEAVY PAPER 2, HEAVY PAPER 3, BOND, 3HOLE PUNCH PAPER, TRANSPARENCY, LABELS, ENVELOPE)
11. PAPER FEED SWITCH	STACK BYPASS (SPEED PRIORITY(*), PRINT SIDE), DRAWER 1 (SPEED PRIORITY(*), PRINT SIDE), DRAWER 2 (SPEED PRIORITY(*), PRINT SIDE)
12. DISPLAY LANGUAGE	ENGLISH(*), FRENCH, SPANISH, PORTUGUESE
13. ADF DIRTY ERROR	DISPLAY(*), DO NOT DISPLAY
14. INIT. COMMON SET.	OFF(*), ON

*: indicates factory settings.

1.2.3.2 COPY SETTINGS

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Additional Functions	Available Settings
1. IMAGE DIR PRIORTY	OFF(*), ON

Additional Functions	Available Settings
2. STANDARD SETTINGS	IMAGE QUALITY: TEXT/PHOTO, TEXT(*), PHOTO
	DENSITY: AUTO(*), MANUAL (-LT - DK+: 9 steps, 5)
	ZOOM RATIO: PRESET RATIO (DIRECT 100%(*), 115% B5->A4, 121% LGL->11x17, 122% A5->B5,129% STMT->LTR,141% A5->A4, 200% MAX., 50% MIN., 64%, 70% A4->A5, 73% 11X17->LGL, 78% LGL->LTR, 81% B5->A5, 86% A4->B5), MANUAL
	COPIES: 1(*) to 99
	AUTO COLLATE: OFF(*), COLLATE
	TWO-SIDED: OFF(*), 1 > 2-SIDED, 2 > 2-SIDED, 2 > 1-SIDED
	FRAME ERASE: OFF(*), ORG. FRAME ERASE, BOOK FRAME ERASE, BINDING HOLE
	PAPER SELECT: AUTO(*), DRAWER 1, DRAWER 2
3. SHARPNESS	1 to 9 (5(*))
4. PAPER SIZE GROUP	A, AB, INCHES(*)
5. MM/INCH ENTRY	mm, INCHES(*)
6. INIT. COPY SET.	OFF(*), ON

*: indicates factory settings.

1.2.3.3 TX/RX SETTINGS

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Additional Functions		Available Settings
1.COMMON SETTINGS	1.TX SETTING	UNIT NAME
		DATA COMPRESSION: NORMAL(*), HIGH RATIO, LOW LATIO
		RETRY TIMES (0-5(3*))
		SCANNIING DENSITY (1-9(5*))
		STANDARD SETTINGS: DENSITY (STANDARD(*), DK, LT), IMAGE QUALITY (200X200DPI(*), 200X400DPI, 300X300DPI, 400X400DPI, 600X600DPI, 100X100DPI, 150X150DPI, 200X100DPI), IMAGE FORMAT (PDF(*), TIFF(B&W), PDF(COMPACT), JPEG), ORIGINAL TYPE (TEXT/PHOTO(*), TEXT, PHOTO), DIVIDE INTO PAGES (OFF(*), ON), DIRECT TX (OFF(*), ON)
		SEND SETTINGS: TX FILE NAME (max.24 characters), SUBJECT (max.40 characters), MESSAGE TEXT (max.140 characters) , REPLY TO (max.120 characters), E-MAIL PRIORITY (NORMAL(*), LOW, HIGH)
		TX TERMINAL ID: PRINTING POSITION (OUTSIDE IMAGE(*), INSIDE IMAGE), TELEPHONE # MARK (FAX(*), TEL)
		COLOR TX GAMMA: :GAMMA 1.8(*), GAMMA2.2, GAMMA1.0, GAMMA1.4
		SHARPNESS (1-7(4*))
		COLOR TX SCAN SET: SPEED PRIORITY(*), IMAGE PRIORITY
		INIT STADARD SET: OFF, ON
	2.RX SETTINGS	TWO-SIDED PRINT: OFF, ON, RECEIVE REDUCTION: ON (RX REDUCTION: AUTO, FIXED REDUCTION(90%, 95%, 97%, 75%), REDUCE DIRECTION: VERTICAL ONLY, HORIZ & VERTICAL), OFF
	3.CONT.PRINTING	RX TO MEMORY(*), KEEP PRINTING

Additional Functions		Available Settings
2.FAX SETTING	1.USER SETTINGS	UNIT TELEPHONE #
		TEL LINE TYPE: TOUCH TONE(*), ROTARY PULSE
		OFFHOOK ALARM: ON(*), OFF
		VOLUME CONTROL: MONITOR VOL. CTRL (0 - 3 (1(*))), CALLING VOLUME (0 - 3 (1(*)))
	2.TX SETTINGS	ECM TX: ON(*), OFF
		PAUSE TIME: 1 to 15 (2(*)) SEC.
		AUTO REDIAL: ON (REDIAL TIMES, REDIAL INTERVAL, TX ERROR REDIAL)(*), OFF
		TIME OUT: ON, OFF(*)
		DIALING LINE CHCK: ON, OFF(*)
	3.RX SETTINGS	ECM RX: ON(*), OFF
		RX MODE: FAXONLY(*), FAXTEL, ANSMODE, DRPD, Manual
		FAX/TEL OPT. SET: RING START TIME (0-30 (6*)), F/T RING TIME: (15-300 (15*)), F/T SWITCH ACTION: RECEIVE(*), DISCONNECT
		DRPD:SELECT FAX: DOUBLE RING(*), SHORT-SHORT-LONG, OTHER RING TYPR, NORMAL RING
		INCOMING RING: OFF(*), ON (RING COUNT (1-99TIMES)
		REMOTE RX: ON(*) (REMOTE RX ID (0-99(25*))), OFF
		MANUAL/AUTO: OFF(*), ON (F/T RING TIME (1-99SEC)

*: indicates factory settings.

1.2.3.4 ADDRESS BOOK SET.

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

T-1-8

Additional Functions			Available Settings
1.FAVORITES BUTTONS	FAX	NAME	max. 16 characters
		TEL NUMBER ENTRY	max. 120 digits
		IMAGEQUALITY	FINE, PHOTO, SUPER FINE, ULTRA FINE, STANDARD
		OPTIONAL SETTING	OFF(*), ON (ECM (ON(*), OFF), TX SPEED (33600bps(*), 14400bps, 9600bps, 4800bps), INTERNATIONAL (DOMESTIC(*), LONG DISTANCE 1, LONG DISTANCE 2, LONG DISTANCE 3)
	E-MAIL	NAME	max. 16 characters
		E-MAIL ADDRESS	max. 120 digits
		IMAGE FORMAT	PDF(*), TIFF (B&W), PDF (COMPACT), JPEG
		DIVIDE INTO PAGES	OFF(*), ON
		IMAGEQUALITY	200x200dpi(*), 200x400dpi, 300x 300dpi, 400x400 dpi, 600x600 dpi, 100x100 dpi, 150x150 dpi, 200x100dpi
		ORIGINAL TYPE	TEXT/PHOTO(*), TEXT, PHOTO
	IFAX	NAME	max. 16 characters
		I-FAX ADDRESS	max. 120 digits
		DIVIDE INTO PAGES	OFF(*), ON
		IMAGEQUALITY	200x200dpi(*), 200x400dpi, 300x 300dpi, 400x400 dpi, 600x600 dpi, 100x100 dpi, 150x150 dpi, 200x100dpi
		ORIGINAL TYPE	TEXT/PHOTO(*), TEXT, PHOTO
	FTP	NAME	max. 16 characters
		HOST NAME	max. 120 digits
		FILE PATH	max. 120 digits
		LOGIN NAME	max. 24 characters
		PASSWORD	max. 24 characters
		IMAGE FORMAT	PDF(*), TIFF (B&W), PDF (COMPACT), JPEG
		DIVIDE INTO PAGES	OFF(*), ON
		IMAGEQUALITY	200x200dpi(*), 200x400dpi, 300x 300dpi, 400x400 dpi, 600x600 dpi, 100x100 dpi, 150x150 dpi, 200x100dpi
		ORIGINAL TYPE	TEXT/PHOTO(*), TEXT, PHOTO
	SMB	NAME	max. 16 characters
		HOST NAME	max. 120 digits
		FILE PATH	max. 120 digits
		LOGIN NAME	max. 24 characters
		PASSWORD	max. 24 characters
		IMAGE FORMAT	PDF(*), TIFF (B&W), PDF (COMPACT), JPEG
		DIVIDE INTO PAGES	OFF(*), ON
		IMAGEQUALITY	200x200dpi(*), 200x400dpi, 300x 300dpi, 400x400 dpi, 600x600 dpi, 100x100 dpi, 150x150 dpi, 200x100dpi
		ORIGINAL TYPE	TEXT/PHOTO(*), TEXT, PHOTO

Additional Functions			Available Settings
2. 1-TOUCH SPD DIAL	FAX	NAME	max. 16 characters
		TEL NUMBER ENTRY	max. 120 digits
		OPTIONAL SETTING	OFF(*), ON (ECM (ON(*), OFF), TX SPEED (33600bps(*), 14400bps, 9600bps, 4800bps), INTERNATIONAL (DOMESTIC(*), LONG DISTANCE 1, LONG DISTANCE 2, LONG DISTANCE 3)
	E-MAIL	NAME	max. 16 characters
		E-MAIL ADDRESS	max. 120 digits
	IFAX	NAME	max. 16 characters
		I-FAX ADDRESS	max. 120 digits
	FTP	NAME	max. 16 characters
		HOST NAME	max. 120 digits
		FILE PATH	max. 120 digits
		LOGIN NAME	max. 24 characters
		PASSWORD	max. 24 characters
	SMB	NAME	max. 16 characters
		HOST NAME	max. 120 digits
		FILE PATH	max. 120 digits
		LOGIN NAME	max. 24 characters
		PASSWORD	max. 24 characters
3.CODED SPD DIAL	FAX	NAME	max. 16 characters
		TEL NUMBER ENTRY	max. 120 digits
		IMAGEQUALITY	FINE(*), PHOTO, SUPER FINE, ULTRA FINE, STANDARD
		OPTIONAL SETTING	OFF, ON (ECM (ON(*), OFF), TX SPEED (33600bps(*), 14400bps, 9600bps, 4800bps), INTERNATIONAL (DOMESTIC(*), LONG DISTANCE 1, LONG DISTANCE 2, LONG DISTANCE 3)
	E-MAIL	NAME	max. 16 characters
		E-MAIL ADDRESS	max. 120 digits
	IFAX	NAME	max. 16 characters
		I-FAX ADDRESS	max. 120 digits
	FTP	NAME	max. 16 characters
		HOST NAME	max. 120 digits
		FILE PATH	max. 120 digits
		LOGIN NAME	max. 24 characters
		PASSWORD	max. 24 characters
	SMB	NAME	max. 16 characters
		HOST NAME	max. 120 digits
		FILE PATH	max. 120 digits
		LOGIN NAME	max. 24 characters
		PASSWORD	max. 24 characters
4. GROUP DIAL	SELECT ADD/TEL NO		
	NAME		max. 16 characters

*: indicates factory settings.

1.2.3.5 PRINTER SETTINGS

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Additional Functions	Available Settings
1. DEFAULT PAPERSIZE	LTR(*), STMT, EXECUTIV, ISO-B5, COM10, MONARCH, DL, A4, B5, A5, LGL
2. DEFAULT PAPERTYPE	PLAIN PAPER(*), COLOR, RECYCLED, HEAVY PAPER 1, HEAVY PAPER 2, HEAVY PAPER 3, 3 HOLE PUNCH PAPER, BOND, TRANSPARENCY, LABELS, ENVELOPE
3. COPIES	1(*) to 999
4. 2-SIDED PRINTING	OFF(*), ON
5. PRINT QUALITY	IMAGE REFINEMENT: ON(*), OFF
	DENSITY: 1 to 9 (5(*))
	TONER SAVER: OFF(*), ON
6. PAGE LAYOUT	BINDING: LONG EDGE(*), SHORT EDGE
	MARGIN: mm (-50.0 mm to +50.0 mm; 0.0 mm(*)), INCHES (-01.90 INCHES to 01.90 INCHES; 00.00 INCHES(*))
7. ERROR TIME OUT	ON (1 to 300(15*)SEC), OFF
8. COLLATE	OFF(*), COLLATE

Additional Functions	Available Settings
9. INIT. PRINTER SET	OFF(*), ON
10. PCL SETTINGS**	ORIENTATION: PORTRAIT(*), LANDSCAPE
	FONT NUMBER: 0(*) to 120
	POINT SIZE: 4.00 to 999.75 point (12.00 point(*))
	PITCH: 0.44 to 99.99 cpi (10.00 cpi(*))
	FORM LINES: 5 to 128 lines (60 lines(*))
	SYMBOL SET: PC8(*), PC850, PC852, PC8DN, PC8TK, PC1004, PIFONT, PSMATH, PSTEXT, ROMAN8, VNINTL, VNMATH, VNUS, WIN30, WINBALT, WINL1, WINL2, WINL5, DESKTOP, ISO4, ISO6, ISO11, ISO15, ISO17, ISO21, ISO60, ISO69, ISOL1, ISOL2, ISOL5, ISOL6, LEGAL, MATH8, MCTEXT, MSPUBL, PC775
	CUSTOM PAPER: OFF(*), ON (UNIT OF MEASURE, X DIMENSION, Y DIMENSION)
	APPEND CR TO LF: NO(*), YES
	ENLARGE A4: OFF(*), ON
11. RESET PRINTER	OFF(*), ON

*: indicates factory settings.

1.2.3.6 TIMER SETTINGS

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Additional Functions	Available Settings
1. DATE&TIME SETTING	
2. TIME ZONE SETTING	Time Zone Settings: GMT -12:00 to GMT +12:00
3. DATE TYPE SELECT	DD/MM YYYY, YYYY MM/DD, MM/DD/ YYYY(*)
4. AUTO SLEEP TIME	ON (3 - 30 (3(*)) MIN. in one-minute increments), OFF
5. AUTO CLEAR TIME	ON (1 - 9 (2(*)) MIN. in one-minute increments), OFF
6. DAYLIGHT SV. TIME	ON: START DATE/TIME (MONTH, WEEK, DAY), END DATE/TIME (MONTH, WEEK, DAY), OFF(*)

*: indicates factory settings.

1.2.3.7 ADJUST./CLEANING

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Additional Functions	Available Settings
1. TRANS. ROLR CLEAN	Press [OK] to start cleaning.
2. FIX. UNIT CLEANING	START CLEANING, CLEAN PAPER PRT
3. FEEDER CLEANING	Set 5 sheets in the optional feeder and press [OK].
4. SPECIAL MODE M	MID(*), LOW, HIGH
5. SPECIAL MODE N	Not functional in this model
6. SPECIAL MODE P	OFF(*), ON
7. SPECIAL MODE Q	OFF(*), ON
8. SPECIAL MODE R	OFF(*), ON
9.SPECIAL MODE S	OFF(*), SPEED PRIORITY
10. CONT PRINT MODE	OFF(*), ON
11. BACK EDGE MODE	OFF(*), ON
12.LARGE PAPER MODE	OFF(*), ON
13. AUTO ADF DRTY ADJ	OFF, ON(*)
14. MAINTENANCE CODE	Not functional in this model

*: indicates factory settings.

1.2.3.8 REPORT SETTINGS

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Additional Functions	Available Settings
1. SETTINGS	TX REPORT: PRINT ERROR ONLY(*), OUTPUT YES, OUTPUT NO
	RX REPORT: OUTPUT NO(*), PRINT ERROR ONLY, OUTPUT YES
	ACTIVITY REPORT: AUTO PRINT, OFF(ON(*)), TX/RX SEPARATE (OFF(*), ON)
2. LIST PRINT	ACTIVITY REPORT
	SPEED DIAL LIST: 1-TOUCH LIST, CODED DIAL LIST, GROUP DIAL LIST
	ADD BOOK DETAILS: 1-TOUCH LIST, CODED DIAL LIST
	USER DATA LIST

*: indicates factory settings.

1.2.3.9 SYSTEM SETTINGS

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Additional Functions	Available Settings
1. DEVICE INFO	DEVICE NAME, LOCATION
2. NETWORK SETTINGS	TCP/IP SETTINGS: IP ADDRESS AUTO. (OFF(*), ON(*); DHCP, BOOTP, RARP), IP ADDRESS, SUBNET MASK, GATEWAY ADDRESS, USE LPD (ON(*); PORT NO., OFF), RAW SETTINGS (ON(*); PORT NO., USE BIDIRECTIONAL, OFF), USE HTTP (ON(*); PORT NO., OFF), SET IP ADD RANGE (OFF(*), ON), RX MAC ADD SET. (OFF(*), ON)
	SNMP SETTINGS: USE SNMP (ON(*): PORT NO., OFF), COMMUNITY NAME 1, COMMUNITY NAME 2, SNMP WRITABLE 1 (ON(*), OFF), SNMP WRITABLE 2 (ON, OFF(*))
	DEDICATED PORT: ON(*), OFF
	ETHERNET DRIVER: AUTO DETECT (AUTO(*), MANUAL), DUPLEX (HALF DUPLEX(*), FULL DUPLEX), ETHERNET TYPE (10 BASE-T(*), 100 BASE-TX)
	VIEW IP ADDRESS: IP ADDRESS, SUBNET MASK, GATEWAY ADDRESS
	STARTUP TIME SET.: 0(*) to 300 SEC.
3. COMMUNICATIONS	TX START SPEED: 2400 to 33600(*) bps
	RX START SPEED: 2400 to 33600(*) bps
	MEMORY LOCK SETTI: OFF(*), ON (PASSWORD, REPORT PRINT, MEMORY RX TIME)
4. REMOTE UI	ON(*), OFF
5. ACCESS TO DEST.	RESTRICT NEW ADD. : OFF(*), ON
	FAX DRIVER TX: OFF, ON(*)
6. CHECKING THE LOG	ON, OFF(*)
7. USE DEVICE USB	OFF, ON(*)

Additional Functions	Available Settings
1. SYS. MANAGER INFO	SYS. MANAGER ID, SYSTEM PASSWORD, SYSTEM MANAGER
2. DEVICE INFO	DEVICE NAME, LOCATION
3. MANAGE DEPT. ID	OFF(*), ON; REGISTER DEPT. ID (PASSWORD, PAGE LIMIT SET., ERASE), PAGE TOTALS (VIEW PAGE TOTALS, CLEAR ALL TOTAL, PRINT LIST), PDL JOBS W/OUT ID (ON(*), OFF)
4. MANAGE USER ID	OFF(*), ON

Additional Functions	Available Settings
5. NETWORK SETTINGS	TCP/IP SETTINGS: IP ADDRESS AUTO. (OFF(*), ON; DHCP, BOOTP, RARP), IP ADDRESS, SUBNET MASK, GATEWAY ADDRESS, DNS SETTINGS (PRIMARY SERVER, SECONDARY SERVER, HOST NAME, DOMAIN NAME, DNS DYNA. UPDATE), CINFIGURE WINS (WINS RESOKUTION, WINS SERVER), USE LPD (ON(*), OFF), RAW SETTINGS (ON(*); USE BIDIRECTIONAL, OFF),USE PASV MODE (OFF, ON), FTP EXTENSION (OFF, ON), USE HTTP (ON(*), OFF), PORT NO., SET IP ADD RANGE (OFF(*), ON), RX MAC ADD SET. (OFF(*), ON)
	SMB SETTINGS: USE SMB CLIENT (OFF, ON; SERVER, WORKGROUP, COMMENT, LM ANNOUNCE)
	SNMP SETTINGS: USE SNMP (ON(*), OFF), COMMUNITY NAME 1, COMMUNITY NAME 2, SNMP WRITABLE 1 (ON(*), OFF), SNMP WRITABLE 2 (ON, OFF(*))
	DEDICATED PORT: ON(*), OFF
	ETHERNET DRIVER: AUTO DETECT (AUTO(*), MANUAL; DUPLEX (HALF DUPLEX(*), FULL DUPLEX), ETHERNET TYPE (10 BASE-T(*), 100 BASE-TX)
	VIEW IP ADDRESS: IP ADDRESS, SUBNET MASK, GATEWAY ADDRESS
	E-MAIL/I-FAX: SMTP RX (OFF, ON), SMTP SERVER, POP (OFF, ON), POP BEFORE SEND (OFF,ON), E-MAIL ADDRESS, POP SREVER, POP ADDRESS, POP PASSWORD, POP INTERVAl
	STARTUP TIME SET.: 0(*) to 300 SEC.
6. COMMUNICATIONS	E-MAIL/I-FAX: MAX TX DATA SIZE, DIVIDED OVER MAX
	FAX SETTINGS: TX START SPEED (2400 to 33600(*) bps), RX START SPEED (2400 to 33600(*) bps)
	MEMORY LOCK: OFF(*), ON (PASSWORD, REPORT PRINT, MEMORY RX TIME)
7. REMOTE UI	ON(*), OFF
8. ACCESS TO DEST.	RESTRICT NEW ADD. : OFF(*), ON
	FAX DRIVER TX: OFF(*), ON
9. CHECKING THE LOG	ON(*), OFF
10. USE DEVICE USB	OFF(*), ON

*: indicates factory settings.

1.2.4 Maintenance by the User

1.2.4.1 User Maintenance Items

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

T-1-9

No.	Item	Maintenance cycle
[1]	Pressure plate/platen guide cleaning	As required
[2]	Copyboard glass/reading glass cleaning/copyboard holder (jump board) cleaning	As required
[3]	Fixing pressure roller cleaning	As required
[4]	Transfer roller cleaning	As required
[5]	ADF roller cleaning	As required
[6]	Exterior cleaning	As required
[7]	Toner cartridge replacement	When the message appears
[8]	Toner bottle replacement	When the message appears

1.2.4.2 Cleaning

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

The parts that should be cleaned by the customer to maintain the design performance and the cleaning method are described below.
The service engineer should instruct the customer to clean the machine at regular intervals (once a month).
1. Cleaning the Pressure plate/Platen guide
Clean the pressure plates [1] and platen guide [2] with a cloth dampened with water or neutral detergent and squeezed hard, and then wipe it with a dry soft cloth.
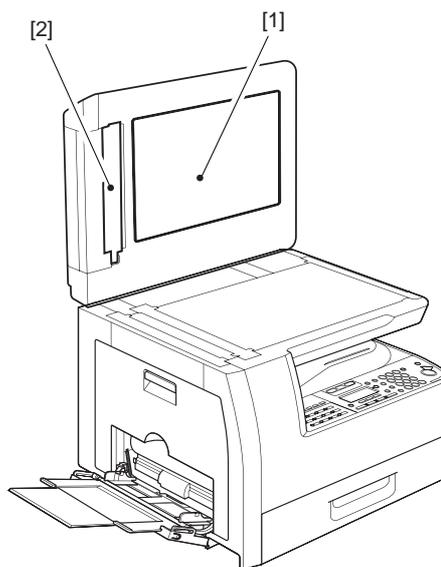
F-1-12

2. Cleaning the Copyboarg glass/Reading glass/Copyboard holder (jump board)
Clean the copyboard glass [1], reading glass [2] and copyboard holder (jump board) [3] with a cloth dampened with water or neutral detergent and squeezed hard, and then wipe them with a dry soft cloth.
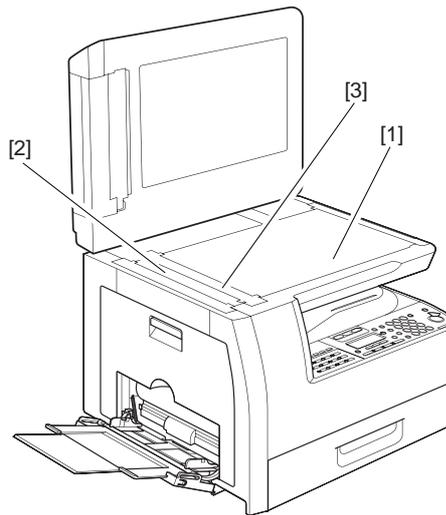
F-1-13

3. Cleaning the Fixing pressure roller

If black streaks are seen on the printed paper, the fixing pressure roller can be dirty. If black streaks are seen on the printed paper, clean the fixing pressure roller in the user mode. Be sure to clean the fixing pressure roller after replacing the toner bottle.

⚠

When cleaning the fixing pressure roller, manually feed A4 or LTR paper.

MEMO:
The time required for cleaning is about 100 seconds.

1) Press the additonal functions key key to enter the user mode.
    2) Using the left an right arrow keys, display the "ADJUST./CLEANING" menu.
    3) Press the OK key.
    4) Using the left and right arrow keys, select "FIX. UNIT CLEANING".
    5) Open the manual feed tray.
    6) Place an A4 or LTR sheet of plain paper in the manual feed tray.
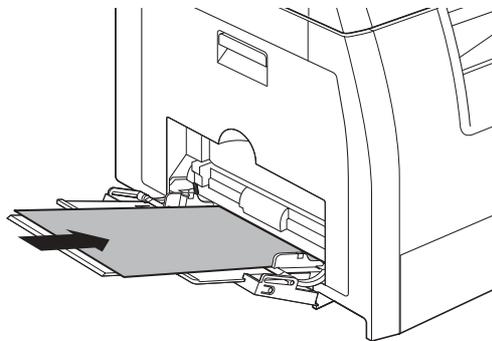
F-1-14

7) Press the OK key. The machine will start cleaning the fixing pressure roller.

4.Cleaning the Transfer roller

If the reverse side of the printed paper is stained, the transfer roller can be dirty. If the reverse side of the printed paper is stained, clean the transfer roller in the user mode.

1) Press the additonal functions key to enter the user mode.
    2) Using the left and right arrow keys, display the "ADJUST./CLEANING".
    3) Press the OK key.
    4) Using the left and right arrow keys, select "TRANS. ROLR CLEAN". Next, press the OK key. Cleaning will start.

5. Cleaning the ADF roller

If black streaks are seen on the printed paper from the ADF, the internal roller in the ADF can be dirty. If this symptom occurs, clean the internal roller in the user mode.

1) Press the additonal functions key to enter the user mode.
2) Using the left and right arrow keys, display the "ADJUST./CLEANING" menu.
3) Press the OK key.
4) Using the left and right arrow keys, select "FEEDER CLEANING".
5) Load five sheets of paper in the ADF and press the OK key. Cleaning will start.

1.2.5 Safety

1.2.5.1 Safety of Toner

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

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

⚠

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

Toner on Clothing or Skin
1. If your clothing or skin has come into contact with toner, wipe it off with tissue; then, wash it off with water.
2. Do not use warm water, which will cause the toner to jell and fuse permanently with the fibers of the cloth.
3. Do not bring toner into contact with plastic material. It tends to react easily.

1.2.5.2 Safety of the Laser Light

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Laser beam radiation may pose a danger to the human body. A laser scanner mounted on the machine is sealed with the protection housing and external cover to prevent the laser beam from leaking to the outside. The laser beam never leaks out of the scanner as far as users operate the machine normally

The following warnings are given to comply with Safety Principles (EN60950).
Laserstrahlen können für den menschlichen Körper gefährlich sein. Aus diesem Grund ist das optische Lasersystem mit einem Schutzgehäuse und einer Außenabdeckung dicht verschlossen und hat eine Struktur, die keine Laserstrahlen nach außen dringen lässt. Unter der Voraussetzung, dass der Benutzer dieses Gerät normal bedient, ist ein Austritt von Laserstrahlen daher ausgeschlossen.

1.2.5.3 CDRH Regulations

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

The Center for Devices and Radiological Health of the US Food and Drum Administration put into force regulations concerning laser products on August 2, 1976. These regulations apply to laser products manufactured on and after August 1, 1976, and the sale of laser products not certified under the regulations is banned within the Untied States. The label shown here indicates compliance with the CDRH regulations, and its attachment is required on all laser products that are sold in the United States.

CANON

30-2, SHIMOMARUKO, 3-CHOME, OHTAKU, TOKYO, 146, JAPAN.

MANUFACTURED:

THIS PRODUCT CONFORMS WITH DHHS RADIATION PERFORMANCE STANDARD 21CFR CHAPTER 1 SUBCHAPTER J.
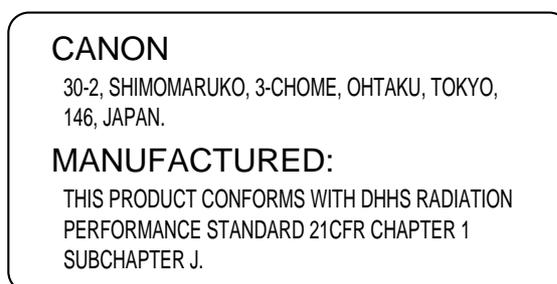
F-1-15

1.2.5.4 Handling the Laser Unit

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

When servicing the area around the laser assembly, be sure to turn off the main power.
If you must servicr 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 the eye.)
The machine's covers that can reflect laser light are identified by means of a warning label (Figure). If you must detach a cover showing the label, be sure to take extra caution during the work.

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

Handhabung des Laserteils

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. (Reflektierte Laserstrahlen könnten sonst in die Augen geraten.)

Abdeckungen, die möglicherweise Laserstrahlen reflektieren, haben in der auf dem Bild gezeigten Position einen Aufkleber. Bei Servicearbeiten auf der Innenseite von Abdeckungen mit Aufkleber ist besondere Vorsicht erforderlich.

F-1-16

F-1-17

1.2.5.5 Point to Note about Fire

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

It is dangerous to throw lithium batteries and parts and components containing flammable substances, such as toner supply bottole and drum unit, etc., into fire. Such parts and components must be disposed of in accordance with local laws and regulations.

1.2.5.6 Cautions as to the replacement and disposal of lithium battery

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

⚠ 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).

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

1.2.6 Product Specifications

1.2.6.1 Product Specifications

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Copyboard	stream reading, fixed reading
Body	desktop
Light source type	LED
Lens type	CCD (Contact sensor)
Photosensitive medium	OPC drum (24-mm dia.)
Reproduction method	indirect electrostatic
Exposure method	by laser light
Charging method	by roller contact
Development method	1-component toner projection
Transfer method	by transfer roller
Separation method	by curvature + static eliminator
Pickup method	Cassette: 1 cassette Multifeeder: 1 feeder
Cassette pickup method	claw + retard
Multifeeder pickup method	dual processing
Drum cleaning method	by cleaning blade
Fixing method	SURF (on-demand)
Toner type	magnetic negative toner
Auto Clear	yes
Original type	Sheet, book, 3-D object (2 kg max.)
Maximum original size	LGL (356 X 216mm)
Reproduction ratio	A series: 2R2E (1:1.000, 1:0.500, 1:0.70, 1:0.41, 1:2.000) INCH series: 3R2E (1:1.000, 1:0.500, 1:0.64, 1:0.78, 1:1.29, 1:2.000) AB series: 4R4E (1:1.000, 1:0.500, 1:0.70, 1:0.81, 1:0.86, 1:1.15, 1:1.41, 1:2.000) 50% to 200% (1% increments)*1 *1 except for MF6531
Warm-up time	13.5 sec or less (ROM: 12MB, 16MB model) 16.0 sec or less (ROM: 32MB model)
First print time	Book: 8 sec or less ADF: 12 sec or less
Cassette paper size	For JP/KOR/EU/ASIA/OCE: A4 (Fix) For USA/CA/LA: LGL/LTR/OFICIO/BOFI/M-OFI/FOOLSCAP (by user chage) For CHN: 16K/A4 (by user chage)
Multifeeder paper size	Width: 76 to 216 mm Length: 127 to 356 mm Weight: 56 to 128 g/m2
Cassette paper type	Plain paper (64 to 80 g/m2), recycled paper (64 to 80 g/m2), colored paper (64 to 80 g/m2), Heavy paper 1 (81 to 90 g/m2)
Multifeeder tray paper type	Plain paper (64 to 80 g/m2), recycled paper (64 to 80 g/m2), colored paper (64 to 80 g/m2), Heavy paper 1 (81 to 90 g/m2) , Heavy paper 2 (91 to 105 g/m2), Heavy paper 3 (106 to 128 g/m2), Bond (75g/m2), 3hole punch paper, transparency, labels, envelopes (COM10, Monarch, DL, ISOB5, ISO-C5)
Duplex paper type	Plain paper, colored paper, recycled paper, Heavy paper 1
Cassette capacity	500 sheets (80 g/m2)
Multifeeder tray capacity	100 sheets (plain paper: 80g/m2) 80 sheets (heavy paper: 91 to 105g/m2) 50 sheets (heavy paper: 106 to 128g/m2) 40 sheets (label) 10 sheets (envelope, OHP) 50 sheets (post card)

Delivery tray stack	100 sheets (plain paper: 80g/m2) 80 sheets (heavy paper: 91 to 105g/m2) 50 sheets (heavy paper: 106 to 128g/m2) 40 sheets (label) 10 sheets (envelope, OHP) 50 sheets (post card)
Continuous reproduction	1 to 99 sheets
Image margin (leading edge)	5.0 -/+2.0 mm
Image margin (trailing edge)	5.0 -/+2.0 mm
Image margin (left/right)	left: 2.5 -/+2.0 mm right: 0.5mm or more
Image mode	Yes (text, text/photo, photo)
Auto power off	yes
Energy save mode	yes (manually ON/OFF; auto OFF after specific time, auto ON after fax reception/print data reception)
Operating environment (temperature range)	15 to 30 deg C
Operating environment (humidity range)	10 to 80%
Operating environment (atmospheric pressure)	0.6 to 1.0 atm
Noise	Copying (A4/22cpm):66.7 dB or less (reference) (LTR/23cpm):67.05 dB or less (reference) (A4/18cpm):65.3dB dB or less (reference) (LTR/19cpm):65.65 dB or less (reference)
Power supply rating	120V (50/60Hz), 230V (50/60Hz)
Power consumption (maximum)	120V: Approx. 748 kW (max.) 230V: Approx. 954 kW (max.)
Power consumption	Continuous printing: 120V/ approx.432 Wh, 230V/ approx.417 Wh Standby: 120V/ approx.18.2 Wh, 230V/ approx.19.7 Wh Energy save stanby: 120V/ approx.4.59 Wh, 230V/ approx.4.65 Wh (reference only, if equipped with full option)
Ozone	0.01ppm or less (initial) 0.035ppm or less (after endurance test)
Dimensions	Copyboard model: 520 mm (W) X 457mm (D) X 380mm (H) ADF standard model: 520 mm (W) X 457mm (D) X 453mm (H) With optional cassette unit: 520 mm (W) X 457mm (D) X 581mm (H)
Weight	ADF model: Approx. 24.1kg Copy board model: Approx. 22.0kg

1.2.6.2 ADF Specifications

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Original orientation	Face-up
Original position	Center reference
Original processing mode	- Single-sided document processing - Double-sided document processing
Original reading	Stream reading
Stack	small size *1: 50 sheets or less large size*2: 25 sheets or less *1: small size (A4R, B5R, A5R, B6, LTRR, SMTR) *2: large size (LGL)
Mixed original sizes	Same types of paper can be mixed.
Original AE detection	no
Original size recognition	no
Stamp	no
Operating environment	Same as that of host machine.

1.2.6.3 Fax Specifications

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Applicable lines	Subscriber telephone line (PSTN)
Transmission method	G3 / ECM
Modulation method	<G3 image signal> ITU-T V.27 ter (2.4Kbps, 4.8Kbps) ITU-T V.29 (7.2Kbps, 9.6Kbps) ITU-T V.17 (TC7.2Kbps, TC9.6Kbps, 12Kbps, 14.4Kbps) ITU-T V.34 (2.4Kbps, 4.8Kbps, 7.2Kbps, 9.6Kbps, 12Kbps, 14.4Kbps, 16.8Kbps, 19.2Kbps, 21.6Kbps, 24Kbps, 26.4Kbps, 28.8Kbps, 31.2Kbps, 33.6Kbps) <G3 procedure signal> ITU-T V.21 No.2 (300bps) ITU-T V.8, V.34 (300bps)
Transmission speed	33.6Kbps, 31.2Kbps, 28.8Kbps, 26.4Kbps, 24Kbps, 21.6Kbps, 19.2Kbps, 16.8Kbps, 14.4Kbps, 12Kbps, TC9.6Kbps, TC7.2Kbps, 9.6Kbps, 7.2Kbps, 4.8Kbps, 2.4Kbps w/ auto fall-back mechanism
Coding	JBIG, MMR, MR, MH
Error correction	ITU-T ECM method
Modem IC	CONEXANT FM336 Plus
Scanning line density	Standard: 8 dots/mm x 3.85 lines/mm Fine: 8 dots/mm x 7.7 lines/mm Super Fine: 8 dots/mm x 15.4 lines/mm Ultra Fine: 16 dots/mm x 15.4 lines/mm
Scanning density adjustment	Possible (9 settings)
Half tone	256 gradations
Printing resolution	600 dpi x 600 dpi
Reduction for reception	Fixed reduction (75%, 90%, 95%, 97%) Auto reduction (70 to 100%)
FAX/TEL switching	Yes (no voice response, no pseudo CI transmission)
Answering machine connection	No
Remote reception	ID input method ID: 2 characters (default: 25)
Auto dialing	One-touch dialing: 200 (common with speed dial key) Speed dialing: 200 (common with one-touch dial key)
Delayed transmission	No
Broadcast transmission	Number of addresses: 199 max.
Dual access	Number of reservations: 64 max.
Image data backup	Image memory type: SDRAM Storage method: JBIG Backup battery: rechargeable capacitor Backup length: 1 hr (approx.)

1.2.7 Function List

1.2.7.1 Print Speed (iR1018/iR1018J/1019/iR1019J))

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

T-1-10

Type		Single-sided		Two-sided	
		Cassette feed	Manual feed	Cassette feed	Manual feed
Plain paper, colored paper, recycled paper, heavy paper 1	A4R	18	18	7	7
	B5R	-	13(8,3,2)	-	-
	A5R	-	13(8,3,2)	-	-
	LGL	18	18	5	5
	LTRR	19	19	7	7
	STMTR	-	13(8,3,2)	-	-
Heavy paper 2, labels	A4R	-	14(4,3,2)	-	-
	B5R	-	6(4,3,2)	-	-
	A5R	-	6(4,3,2)	-	-
	LGL	-	18	-	-
	LTRR	-	14(4,3,2)	-	-
	STMTR	-	6(8,3,2)	-	-
Heavy paper 3	A4R	-	6(4,3,2)	-	-
	B5R	-	6(4,3,2)	-	-
	A5R	-	6(4,3,2)	-	-
	LGL	-	10(4,3,2)	-	-
	LTRR	-	10(4,3,2)	-	-
	STMTR	-	6(4,3,2)	-	-
Transparency	A4R	-	6(4,3,2)	-	-
	LTRR	-	6(4,3,2)	-	-

Type		Single-sided		Two-sided	
		Cassette feed	Manual feed	Cassette feed	Manual feed
Envelopes, postcard	Monarch	-	6(4,3,2)	-	-
	COM10	-	6(4,3,2)	-	-
	ISO-B5	-	6(4,3,2)	-	-
	ISO-C5	-	6(4,3,2)	-	-
	DL	-	6(4,3,2)	-	-
	Post card	-	6(4,3,2)	-	-

Supplement:
- - (): The speed may change by the state of a fixing unit.
- - The above copy speed does not change if magnification is changed.
- - The above copy speed does not change irrespective of whether paper is supplied from the cassette, the manual feed tray, or from the cassette unit.
- - The copy speed may become down when the copies make continuously one minutes or more with the narrow width paper. The slowdown is reduced with the following user mode. User Mode: Additional Functions > Adjust/Cleaning > Spesial Mode S> ON

1.2.7.2 Print Speed (iR1022/1022A/1022F/1022i/1022iF/1022J/1022N/iR1023/1023N/1023iF)

iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

T-1-11

Type		Single-sided		Two-sided	
		Cassette feed	Manual feed	Cassette feed	Manual feed
Plain paper, colored paper, recycled paper, heavy paper 1	A4R	22	22	6	6
	B5R	-	13(8,3,2)	-	-
	A5R	-	13(8,3,2)	-	-
	LGL	18	18	5	5
	LTRR	23	23	6	6
	STMTR	-	13(8,3,2)	-	-
Heavy paper 2, labels	A4R	-	14(4,3,2)	-	-
	B5R	-	6(4,3,2)	-	-
	A5R	-	6(4,3,2)	-	-
	LGL	-	18	-	-
	LTRR	-	14(4,3,2)	-	-
	STMTR	-	6(8,3,2)	-	-
Heavy paper 3	A4R	-	6(4,3,2)	-	-
	B5R	-	6(4,3,2)	-	-
	A5R	-	6(4,3,2)	-	-
	LGL	-	10(4,3,2)	-	-
	LTRR	-	10(4,3,2)	-	-
	STMTR	-	6(4,3,2)	-	-
Transparency	A4R	-	6(4,3,2)	-	-
	LTRR	-	6(4,3,2)	-	-
Envelopes, postcard	Monarch	-	6(4,3,2)	-	-
	COM10	-	6(4,3,2)	-	-
	ISO-B5	-	6(4,3,2)	-	-
	ISO-C5	-	6(4,3,2)	-	-
	DL	-	6(4,3,2)	-	-
	Post card	-	6(4,3,2)	-	-

Supplement:
- - (): The speed may change by the state of a fixing unit.
- - The above copy speed does not change if magnification is changed.
- - The above copy speed does not change irrespective of whether paper is supplied from the cassette, the manual feed tray, or from the cassette unit.
- - The copy speed may become down when the copies make continuously one minutes or more with the narrow width paper. The slowdown is reduced with the following user mode. User Mode: Additional Functions > Adjust/Cleaning > Spesial Mode S> ON

1.2.7.3 Types of Paper

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

T-1-12

	Cassette	Manual feed tray	Duplex
Size (W X L)	A4 (For JP/KOR/EU/ASIA/OCE) LGL/LTR/OFICIO/BOFI/M-OFI/ FOOLSCAP (for USA/CA/LA) 16K/A4(for CHN)	76 x 127 to 216 x 356 mm	A4, LTR, LGL
Weight	64 to 90 g/m2	56 to 128 g/m2	64 to 90 g/m2

		Cassette	Manual feed tray	Duplex
Quantity		Max. 500 sheets	Max. 100 sheets	by pickup inlet
Paper type	Plain paper (80 g/m2)	Yes	Yes	Yes
	Recycled paper	Yes	Yes	Yes
	Colored paper	Yes	Yes	Yes
	Heavy paper 1	Yes	Yes	Yes
	Heavy paper 2	No	Yes	No
	Heavy paper 3	No	Yes	No
	Bond	Yes	Yes	No
	3hole punch paper	Yes	Yes	No
	Transparency	No	Yes	No
	Labels	No	Yes	No
	Envelopes	No	Yes	No

Chapter 2 Installation

Contents

2.1 Unpacking and Installation

2.1.1 Main Body Installation Procedure

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

The installation procedure of the main body refer to a Quick Start Guide.

2.2 Installing the Card Reader

2.2.1 Points to Note

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

⚠

When installing the card reader, the card reader attachment-D2 is required.

2.2.2 Checking the Contents

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

<Card reader-E1>

F-2-1
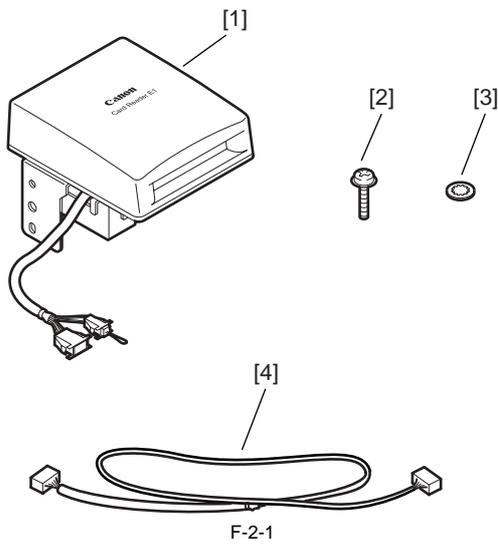
[1]	Card reader-E1	1 pc.
[2]	TP screw (M3x12)	1 pc.
[3]	Toothed washer	1 pc.
[4]	Repeating harness A	1 pc.

⚠

The TP screw (M3x12) and toothed washer are not used.

<Card reader attachment-D2>

F-2-2
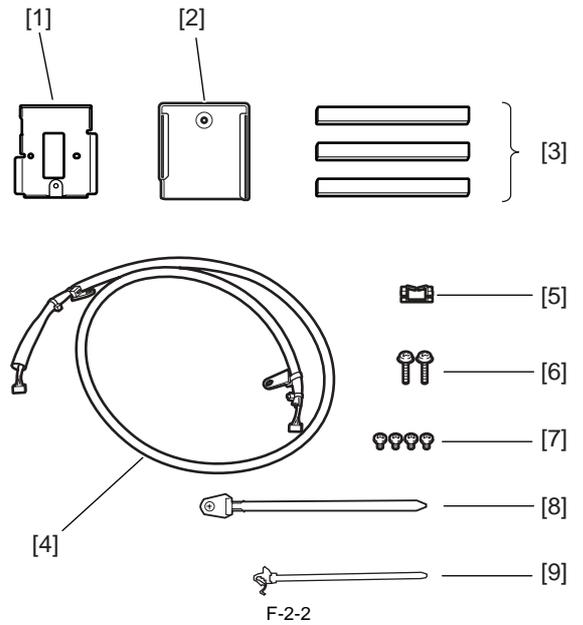
[1]	Card reader mount	1 pc.
[2]	Card reader cover	1 pc.
[3]	Harness cover (base + lid)	3 pcs.
[4]	Repeating harness B	1 pc.
[5]	Edge saddle	1 pc.
[6]	TP screw	2 pcs.
[7]	Binding screw (M4x6)	4 pcs.
[8]	Cord retainer	1 pc.
[9]	Reuse band	1 pc.

⚠

The haeness cover (base+lid) and repeating haerness , and binding screw (M4x6) are not used.

2.2.3 Installation Procedure

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

1. Preparations for main body
1) Turn off the main power switch of the host machine and disconnect the power plug from the outlet.
2) To release the hooks at the back of the machine, move the machine backward until the hooks are about 10 cm away from the edge of the desk and so on.
3) Remove the screw [1].
4) Release the three claws[2] at the right and the three claws [3] at the top.
5) Release the two claws [4] at the bottom, and then detach the rear cover [5].
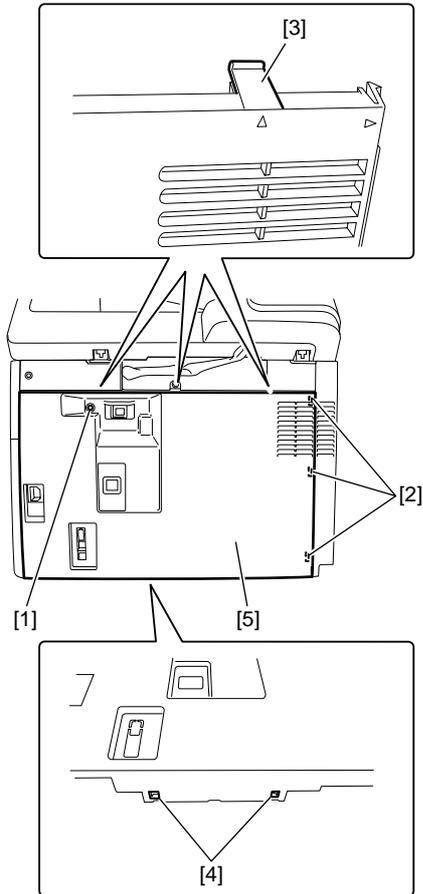
F-2-3

6) To release the hooks at the lower right of the machine, float the right side of the machine about 5 cm above the edge of the desk and so on.
7) Release the two claws [1] at the rear back of the right cover.
8) Using a flathead screwdriver, release the three claws [2] at the top of the right cover.
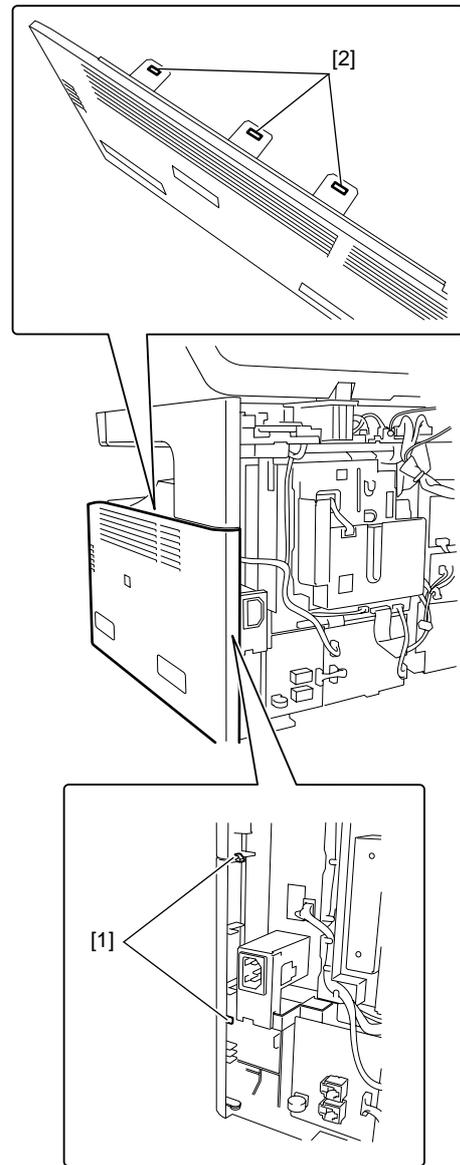
F-2-4

9) Remove the claw [1] at the front, and then release the two hooks [2] using a flathead screwdriver.
10) Remove right cover [4] in the direction of the arrow, and then detach the righy cover [4] by releasing the three hooks [3] at the bottom.
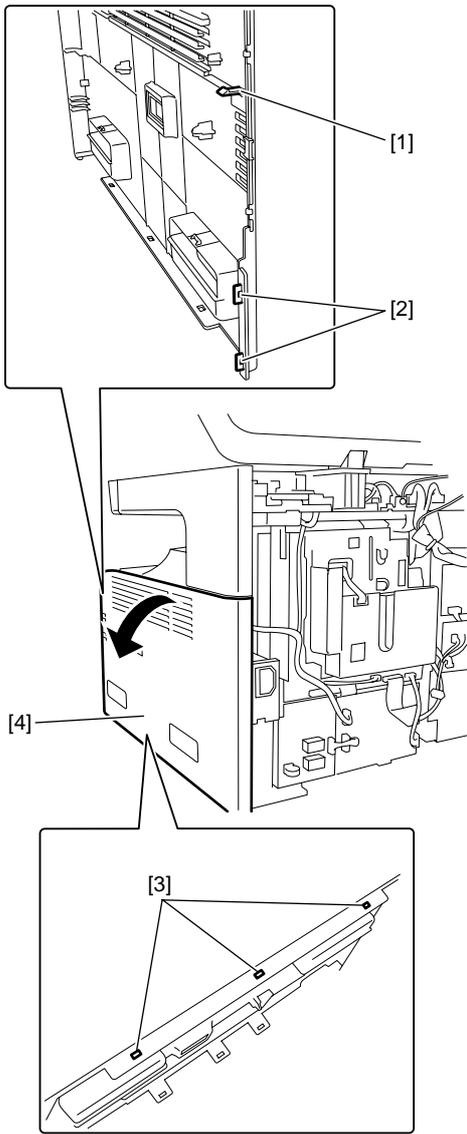
F-2-5

11) Using a nipper, remove the precut portion [1] of the right cover as shown below.
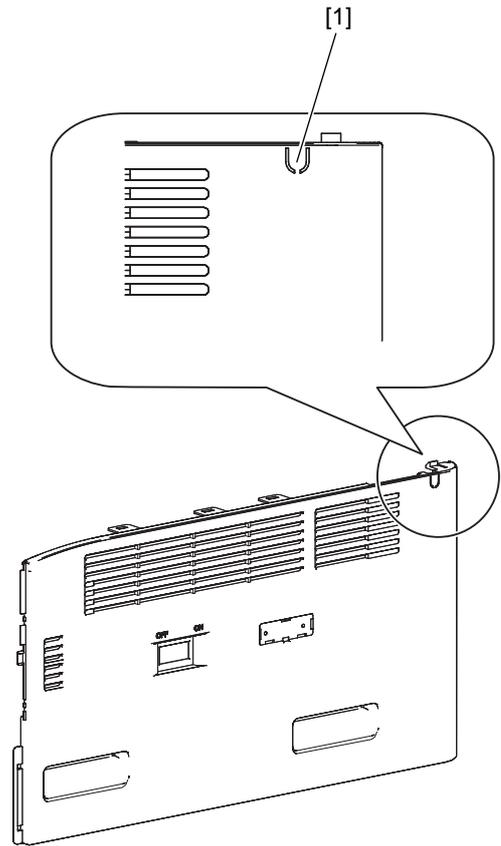
F-2-6

⚠️

Smooth the edges of the interface cable hole so that the canle is not damaged.

12) Attach the right cover.

2. Installation of a card reader
1) Remove the screw [1] from the card reader.
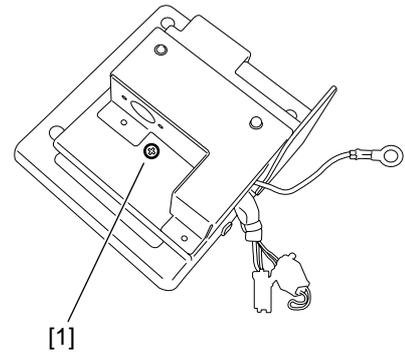
F-2-7

MEMO:
The removed screw will be used later.

2) Remove the screw [1] securing the ground cable, and then separate the card reader [3] from the card reader mount [2].
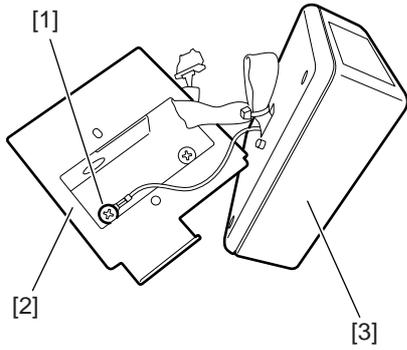
F-2-8

⚠

When removing the harness [1] through the opening in the card reader mount, take care not to cut or damage it.
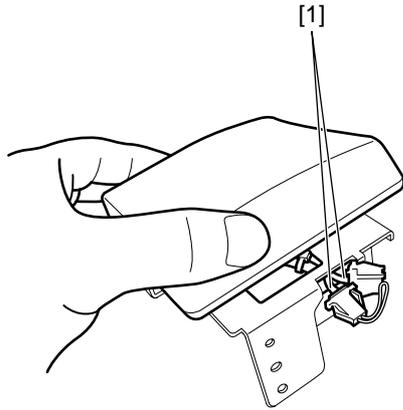
F-2-9

MEMO:
The removed card reader mount is no longer necessary.

3) Insert the card reader [2] harness and ground cable into the hole in the supplied card reader mount [1]. Using the screw [3] removed in step 1) of "2. Installation of the card reader", secure the card reader to the card reader mount.

⚠

When inserting the card reader [2] harness and ground cable into the hole in the supplied card reader mount [1], take care not to cut or damage them.
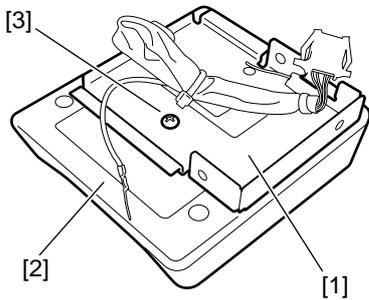
F-2-10

4) Using the supplied binding screw (M4x6) [1], connect the ground cable [2] to the reader mount. Attach the supplied edge saddle [3] to the card reader mount.
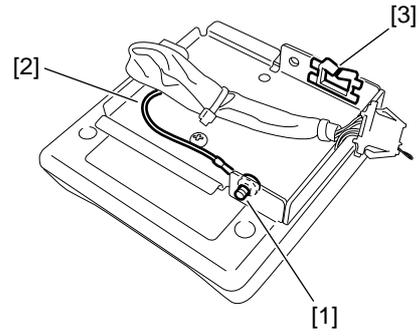
F-2-11

5) Attach the supplied cord retainer [1] at the position about 4 cm (A) away from the connector (with a protective cover) of the supplied repeating harness A. Cut out the excessive portion of the band.
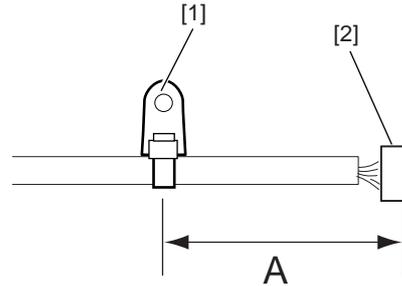
F-2-12

6) Connect the connector [1] of the supplied repeating harness A to the connector [2] on the card reader. Using the supplied binding screw (M4x6), secure the repeating harness A clamp [4]. Disconnect the shorting connector [5].

⚠

If the shorting connector [5] is not disconnected, a malfunction or error can result. Therefore, the shorting connector must be disconnected.

MEMO:
The removed shorting connector is no longer necessary.
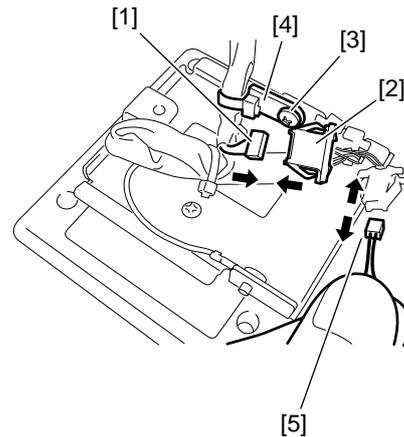
F-2-13

7) Secure the repeating harness A [1] with the wire saddle [2].
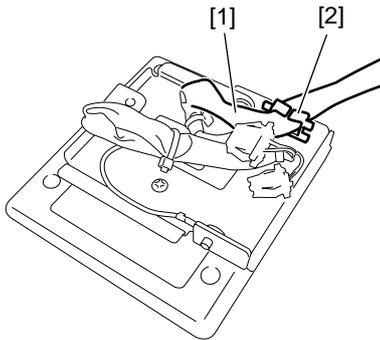
F-2-14

8) Remove the two blind cover [1] from the reader left cover.

F-2-15

9) Using the two supplied TP screws (M4x16) [1], attach the card reader to the reader.
  10) Route the repeating harness B [2] in the hole [3] of the right cover.

F-2-16

When tightening the screws, take care not to damage the repeating harness A.

11) Slide the card reader cover [1] to attach it to the card reader mount.

F-2-17

Route the repeating wire A [1] as shown below.
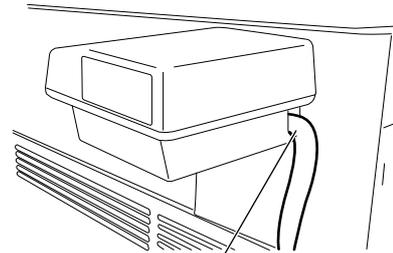
F-2-18

12) Using the supplied binding screw (M4x6)[1], secure the card reader cover [2].
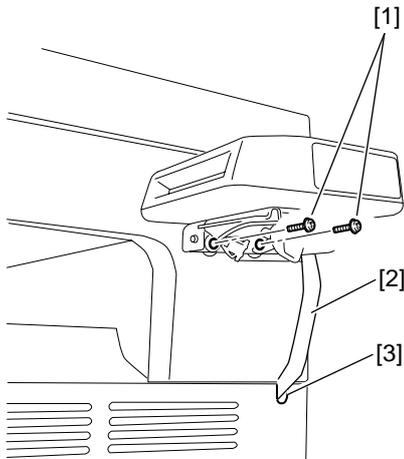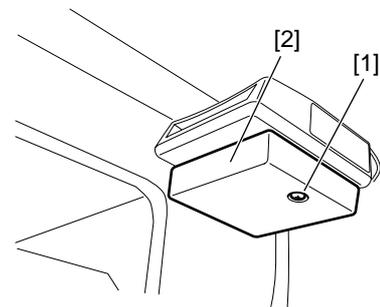
F-2-19

13) Connect the connector of the repeating harness A [1] to the connector J317 [2] on the image processor PCB.
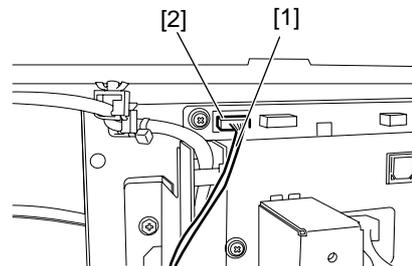
F-2-20

14) Form the repeating harness A [1] into four loops with a diameter of about 4 cm (B), and then bind them with the supplied reuse band [2]. Cut out the excessive portion of the band.
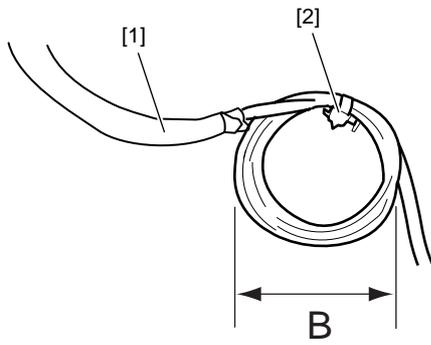
F-2-21

15) Route the bound repeating harness [1] as shown, and secure the reuse band [2] to the host machine.
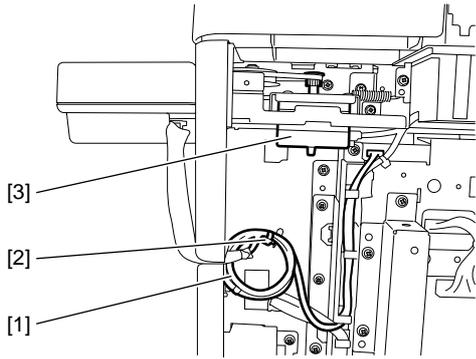
F-2-22

⚠

The shaft of the reader motor [3] is rotating above the repeating harness A. To prevent the relay harness from being damaged, be sure to bind it up.

16) Attach the rear cover.

2.2.4 Registering the Card IDs

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

⚠

After installing the card reader-E1, register the card numbers to be used in the service mode of the iR body. If they are not registered, cards will not be recognized when inserted.

1) Plug the power cord into the outlet, and then turn on the main power switch.
2) Press the following keys to display the service mode screen:
   Additional Functions Key > 2 Key > 8 Key > Additional Functions Key
3) Select "# ACC" using the + and - key, and then press the OK key.
4) Select "CARD" using the + and - key, and then press the OK key.
5) Specify the first ID number of the card ID numbers to be registered, and then press the OK key.
   Sequential Card ID numbers of 100 cards(*) are automatically registered in the department ID, starting with the specified card ID number.
   * Flash ROM 32MB model or When an optional ROM is added, card ID numbers of 1000 cards are registered.
6) Press the Additional Functions key to enter the user mode.
   7) Select "SYSTEM SETTINGS" using the + and - key, and then press the OK key.
8) Select "MANAGE DEPT. ID" using the + and - key, and then press the OK key.
9) Select "ON" using the + and - key, and then press the OK key.
10) Turn main power switch off and on again. Check that "INSERT CARD" appears.

Chapter 3 Basic Operation

Contents

3.1 Construction

3.1.1 Functional Construction

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

The machine may be divided into the following 7 functional blocks.
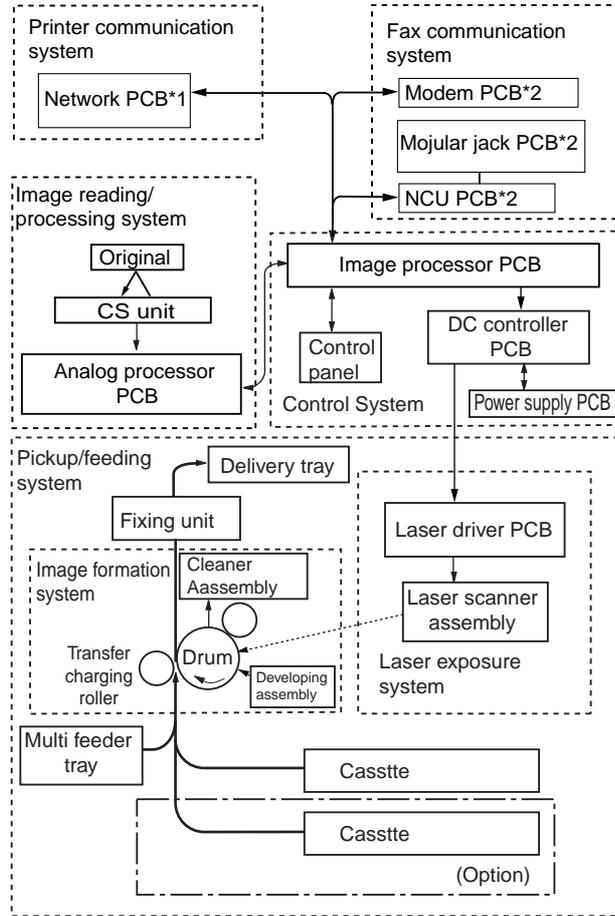
*1 : If equipped with printer functions.
*2 : If equipped with fax functions.

F-3-1

3.1.2 Functional Block Diagram

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

F-3-2

*1 : If equipped with fax functions.
*2 : If equipped with network functions.
*3 : If equipped with PCL functions.
*4 : If equipped with SEND functions.
*5 : Option
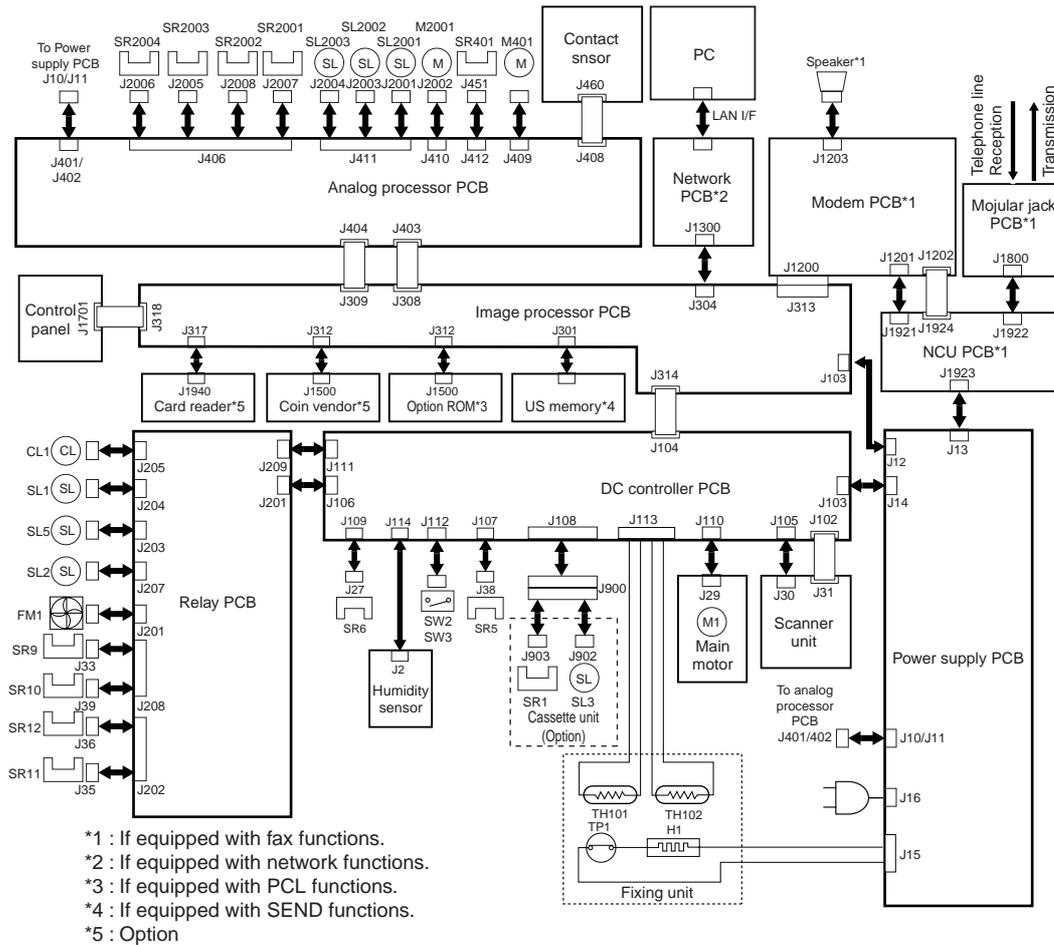
3.1.3 Image Processor PCB

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

1.function
The image processor PCB has the following functions.

Control Panel Control Block
The control panel control block receives the state of control keys while sending/receiving data in serial communication with the control IC of the control panel PCB. Also, it sends LED and LCD signals to the control panel PCB.

Image Processing Control Block
  - It subjects the digital image data from the analog processor PCB to enlargement/reduction processing, smoothing, and other image processing, thereby converting it to 600x600-dpi image signals (VD0, VD01*, VDO2, VDO2*).
  - It converts the analog image data from fax communication into 600x600-dpi image signals (VD0, VD01*, VDO2, VDO2*).
  - It uses a horizontal sync signal (BD0*) as a trigger to send image signals (VD0, VD01*, VDO2, VDO2*) to the laser unit.

Smoothing
The 600 x 600-dpi image data from the PC is converted into image data equivalent of 1200 x 600 dpi.

Sensor Detection
It detects the state of each sensor of the reader unit and the ADF.

ESS Control
It controls the ESS function used to reduce the power consumption while the machine isin standby state.

Memory Storage
Image data is stored in SDRAM, and is retained for about 1 hr even after the power is removed by the work of the super capacitor mounted on the modem PCB. The system software and various data (e.g., user data, service data) are held by flash ROM.

SEND Function (if equipped with SEND functions.)
The SEND function uses a network to send image scanned by the reader unit to an external device.

Speaker Control (if equipped with fax functions.)
It turns on/off or control the volume of the error sound, key sound, and line monitor sound generated by the speaker.

MEMO:
The volume of the line monitor or the sound of the key sound or the error sound is adjusted in user mode.

2. Construction
The image processor comes in different ROM types/sizes and RAM sizes according to models.
The firmware stored in the flash ROM may be either SYSTEM or BOOT.
Using the service support tool, the following 3 types of firmware may be upgraded: SYSTEM and BOOT stored in the flash ROM and the firmware stored ion PCL ROM.

<with SEND functions, with printer functions>

```
Image processor PCB

  DDR-SDRAM (256MB) ──── Flash ROM (16MB)

  USB MEMORY (128MB) ──── PCL ROM (16MB)

              CPU
```

<w/o SEND functions, with printer functions>

```
Image processor PCB

  DDR-SDRAM (128MB) ──── Flash ROM (16MB)

              CPU
```

<w/o SEND functions, w/o printer functions>

```
Image processor PCB

  DDR-SDRAM (64MB) ──── Flash ROM (12MB)

              CPU
```
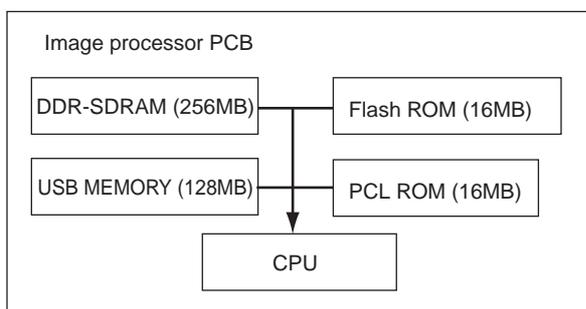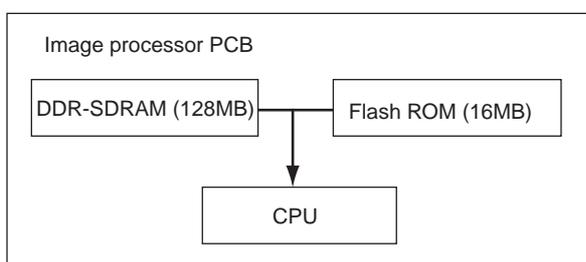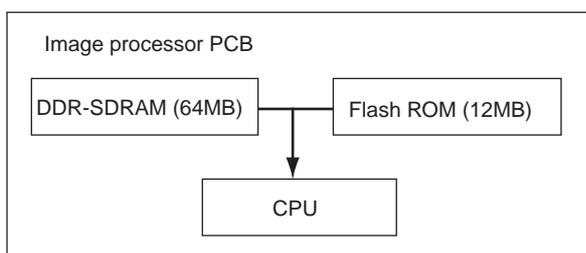
F-3-3

3.1.4 DC Controller PCB

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Fixing Heater Control Block
The fixing heater control block monitors the temperature reading of the thermistor to ensure that the temperature of the heater reaches a specific level. If an error is detected in the temperature of the heater, it stops the power to the heater.

High-Voltage Control Block
The high-voltage control block controls the high voltage for the primary charging roller, developing cylinder of the cartridge, transfer charging roller, and fixing film.

Drive Control Block
The drive control block controls the main motor, pickup solenoid, and fan.

Sensor Detection
It detects the state of the sensors in the pickup assemblies and the printer block, thereby monitoring the drive assembly.

Image Processor PCB Interface block
The image processor PCB interface block sends the horizontal sync signal (BD0*) to the image processor PCB. It also returns a state signal in response to a command signal (serial) from the image processor PCB, thereby communicating the state of the printer block to the image processor PCB.

Laser Control Block
The laser control block controls the drive of the laser diode of the laser scanner unit according to the image signals (VD01, VD01*, VD02, VD02*) from the image processor PCB. Also, it controls the intensity of the laser diode (auto power control) for each line of print data.

Horizontal Sync Signal Control
When the laser beam reaches the horizontal print start position, the laser beam detection signal (BDI*) from the laser scanner unit is detected, and the horizontal sync signal (BD0*) is sent to the image processor PCB. Also, the horizontal sync signal (BD*) is monitored for frequency of output.

Scanner Motor Control
The scanner motor is controlled so that the horizontal resolution of the print image is 600 dpi. Also, the laser beam detection signal (BDI*) from the laser scanner unit is detected to monitor the rotation of the scanner motor.

Drum Unit Detection Mechanism
In wait state, the CPU on the DC controller PCB measures the voltage level of the cartridge detection signal (CRGSNS) a specific number of times to check the presence/absence of the drum unit when an AC bias is applied to the primary charging roller.

Toner Level Detection Mechanism
While the machine is in wait state, the toner level detection signal (ADDTNR; based on the comparison of the developing bias output and the antenna output inside the cartridge) occurring when the developing AC bias is detected during normal rotation to monitor the toner level inside the cartridge.

3.1.5 Analog Processor PCB

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Image Processing Control Block
The analog image data read by the contact sensor is converted into digital image data and sent to the ASIC of the image processor PCB.

Drive Control Block
The drive control mechanism acts on the reader motor and the ADF motor by the motor drive IC of the analog processor PCB.

3.1.6 Power Supply PCB

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Switching Regulator
The following is generated using power from the power outlet for loads: +24DC, +5 VDC, +5VRDC, +3.3VDC, +3.3VRDC.

3.1.7 Relay PCB

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

The signals from the sensors/solenoids/clutches are sent to the DC controller PCB through the relay PCB.

3.1.8 Control Panel PCB

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Key Detection and LCD/LED Drive
The keys are monitored, and the LCD and LEDs are driven.

LCD Function
The LCD is controlled according to the display signals from the image processor PCB.

Serial Communication Control
The state of the control keys is monitored based on serial communications with the image processor PCB. LCD and LED drive data are received.

3.1.9 NCU PCB (if equipped with fax functions)

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

2-Line/4-Line Conversion Circuit
Signals from a 2-line telephone line are converted into 4-line signals (transmission signals and reception signals). Also, the transmission signals from the image processor PCB are prevented from entering the reception circuit.

Dial Pulse Generation Circuit
The dial pulse generation circuit generates dial pulses by turning on and off the relay inside it according to the control signals from the image processor PCB. It then sends the dial signals to the telephone line by way of the modular jack PCB.

Off-Hook Detection Circuit
An off-hook state is detected with reference to the direct current flowing into the circuit, occurring when the telephone connected to the telephone terminal of the modular jack PCB is off the hook.

Line Voltage Conversion Circuit
The primary side of the NCU PCB is controlled using a line voltage of +48 VDC. In light of this, the DC component is cut by the capacitor, and only the audio signals are converted into voltages suited to the modem level.

3.1.10 Network PCB (if equipped with network functions)

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

The communications with the PC are controlled. The image data from the PC is converted into print data for the machine, and is sent to the image processor PCB.

3.1.11 Modular Jack PCB (if equipped with fax functions)

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

The signals from the 2 modular jacks (for telephone line and telephone connection) are communicated to the line voltage conversion circuit of the NCU PCB, and the signals from the fax are communicated to the telephone line.

3.1.12 Modem PCB (if equipped with fax functions)

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF
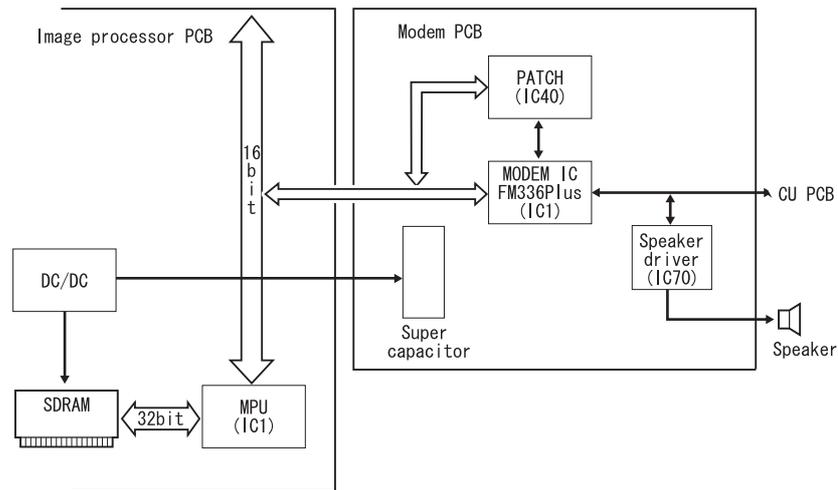
F-3-4

MPU (IC1)
Processes JBIG coding/decoding, controls combinations over lines, and controls SDRAM.

PATCH (IC40)
controls the various boards (NCU, speaker).

SDRAM
Controls coding/decoding of image data for transmission/reception, and stores data for the MPU work area and transmission/reception data.

MODEM IC (IC1)
For transmission, modulates data received from MPU according to ITU-T V.17, V21, V27ter, V29, or V.34; for reception, on the other hand, demodulates data received from the line according to ITU-T V.17, V.21, V.27ter, V.29, or V.34.

Super Capacitor
Backs up the transmission/reception image data stored in SDRAM.

DC/DC
When the main power is off (e.g., in the event of power failure), increases the voltage of the super capacitor to generate a backup voltage for SDRAM.

3.2 Basic Sequence

3.2.1 Basic Sequence

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

The machine's sequence of operation is controlled by the CPU on the image processor PCB and the CPU on the DC controller PCB.
The following figure shows the sequential flow, and table provides descriptions of the periods involved.
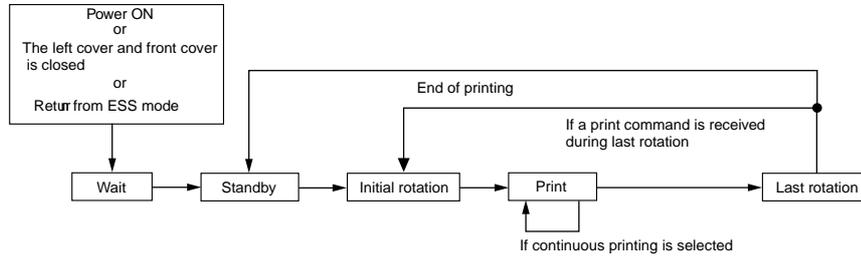
F-3-5

T-3-1

Period	Definition	Purpose	Remarks
WAIT (wait)	From when the power is turned on until the main motor is turned on and stopped.	The machine's mechanical and electrical states are checked.	A check is made on the presence/absence of a drum unit and for paper remaining inside the machine. The machine also shifts the WAIT state when the left door and front cover is closed while power is on, or after returning from ESS mode.
STBY (standby)	After the end of WAIT, unit the Start key is pressed.	The machine is ready for a print command.	
INTR (initial rotation)	After a press on the Start key, until the leading edge is detected by the registration sensor.	The machine starts up process conditions and picks up paper for printing.	The fixing heater is subjected to temperature contro (start-up temperature control, paper passage temperature control); scanner rotation speed adjustment and ATVC control are executed.
PRINT (print)	After the registration sensor detects the leading edge of paper, until the delivery sensor detects the trailing edge of paper.	The DC controller PCB generates the BD0* signal, and the image processor PCB sends VD0* signal and VD0 signal, thereby forming a latent image on the photosensitive drum and turning it into a toner image.	
LSTR (last rotation)	From when printing ends until the main motor stops.	The drum surface is made free of potential and the transfer charging roller is cleaned.	After last rotation, the machine shifts to standby to wait for a print command, in response to which it immediately shifts to initial rotation.

Chapter 4 Original Exposure System

Contents

4.1 Construction

4.1.1 Specifications, Control Methods, and Functions

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

T-4-1

Item	Function/Method
Exposure light source	LED
Original scan	In BOOK mode: Original scan is performed by moving the contact sensor (CS).
	When ADF is used: Original stream reading is performed with the contact sensor (CS) fixed.
Scan resolution	600 dpi (vertical scan) x 600 dpi (horizontal scan) (Color send: 300 dpi horizontal scan)
Gradation	256
Carriage position detection	Contact sensor HP sensor (SR401)
Magnification range	50% to 200%
	Vertical scan direction: Image processing is by image processor PCB
	Horizontal scan direction: Carriage movement speed change and image processing by image processor PCB
Lens	Rod lens array
CMOS sensor	Number of lines: 1
	Number of pixels: Total 5148 (incl. 5104 effective pixels)
	Maximum original scan width: 216 mm
CIS drive control	Drive control by reader motor (M401)
Original size detection	no

4.1.2 Major Components

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

The original exposure system consists of the following major components:
- contact sensor used to read originals
- reader motor, drive pulley, drive belt, carriage, and carriage rail used to move the contactsensor
- The analog processor PCB is used to convert the analog image data colleted by the econtact sensor into digital image data.
The image reading mechanism is controlled based on the drive signals from the image processor PCB, thereby moving the contact sensor to read the original placed on thecopyboard glass.
When the ADF is used, the contact sensor is moved to stream reading position, and the originals are read when they are moved by the ADF.

Drive belt

Reader motor

Drive pulley

Analog processor PCB

Contact sensor

forward

Reverse

Carriage rail

Drive belt

Contact sensor
home position
sensor (SR401)

Drive pulley

Raading glass

F-4-1
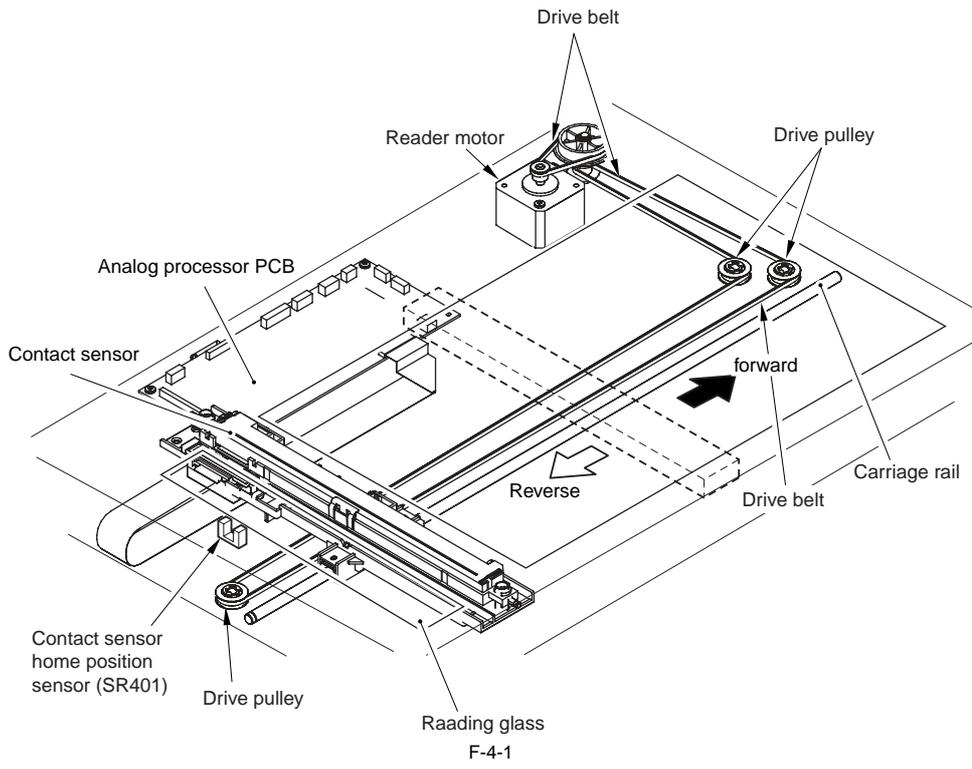
4.2 Basic Sequence

4.2.1 Basic Sequence at Power-on

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF
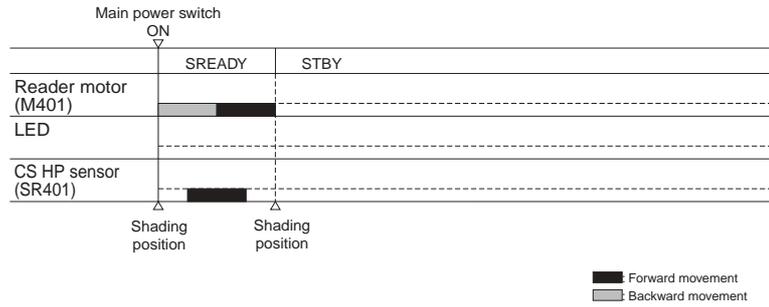
F-4-2
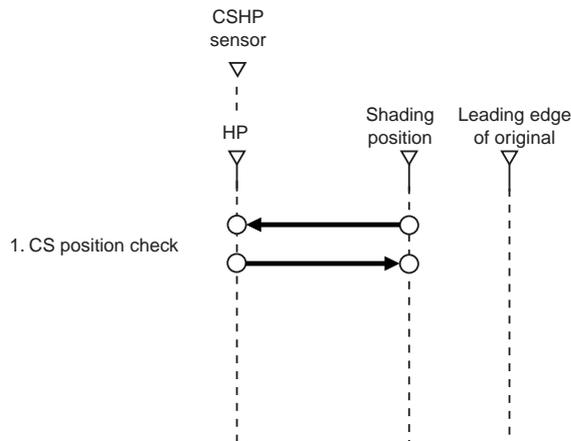
F-4-3

4.2.2 Basic Sequence after Depression of Start Key (Book mode, One Sheet of original)

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF
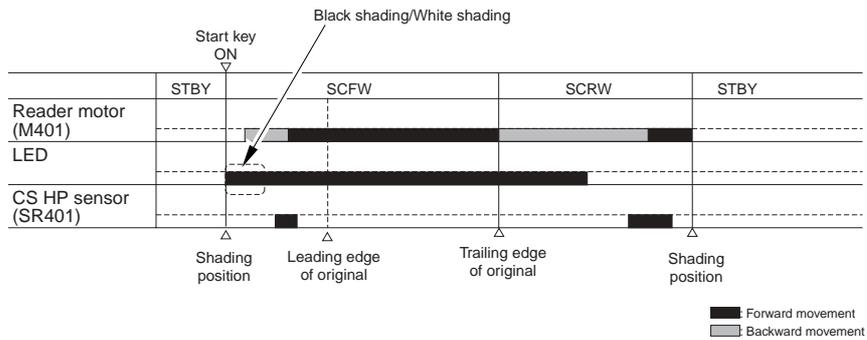
F-4-4
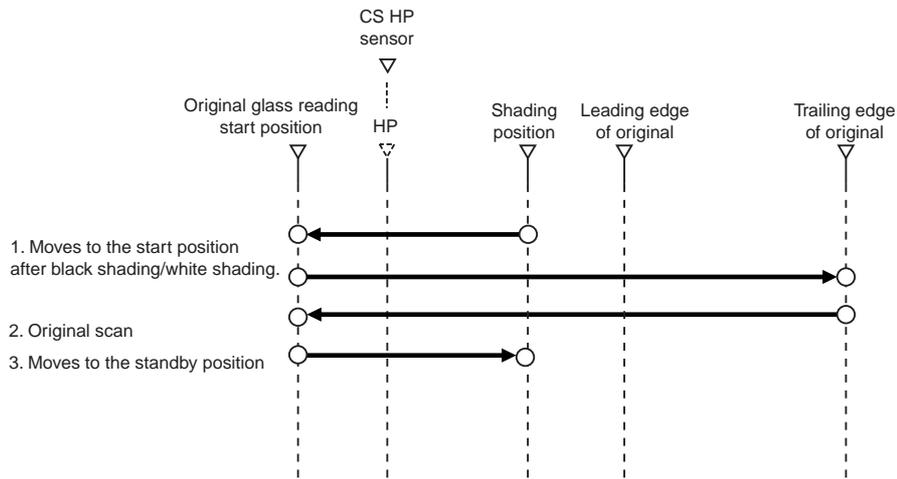
F-4-5

4.2.3 Basic Sequence after Depression of Start Key (ADF Mode, One Sheet of Original)

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF
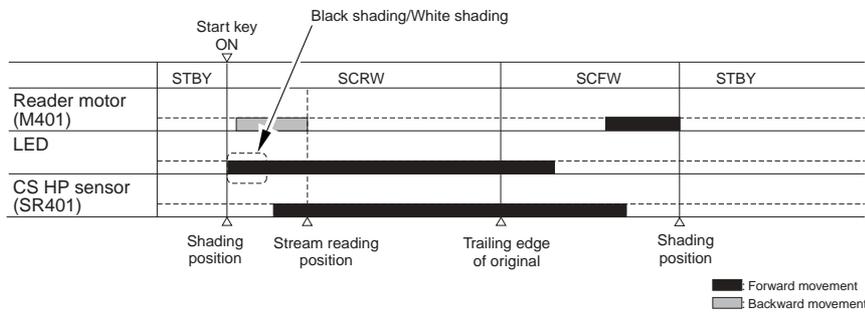
F-4-6
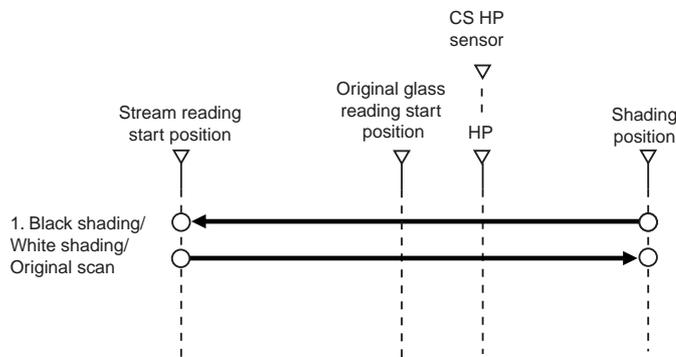
F-4-7

4.3 Various Control

4.3.1 Enlargement/Reduction

4.3.1.1 Magnification Change in Vertical Scan Direction

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

In the Book mode or when the ADF is used
In the vertical scan direction, the image is read at 100%. Magnification is changed by processing data on the image processor PCB.

4.3.1.2 Magnification Change in Horizontal Scan Direction

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

In the horizontal scan direction, magnification is changed as follows depending on the selected magnification rate:
1) When magnification is reduced to 50-99%
Data is processed on the image processor PCB with the original scan speed held at 118 mm/sec.

2) When magnification is increased to 100-200%
The original scan speed (in the Book mode)/original feed speed (when the ADF is used) is changed within the range of 118 mm/sec to 59 mm/sec depending on the selected magnification rate. Data is not processed on the image processor PCB.

4.3.2 Dirt Sensor Control

4.3.2.1 Outline

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

The machine changes the original read position or corrects the read image depending on the presence/absence of dust on the stream reading glass or ADF platen guide, thus preventing dust from showing up in the image. This control is performed only when the ADF is used and it is closed.

[Control Timing]
- At job end
- Immediately before scanning (one sheet at a time)
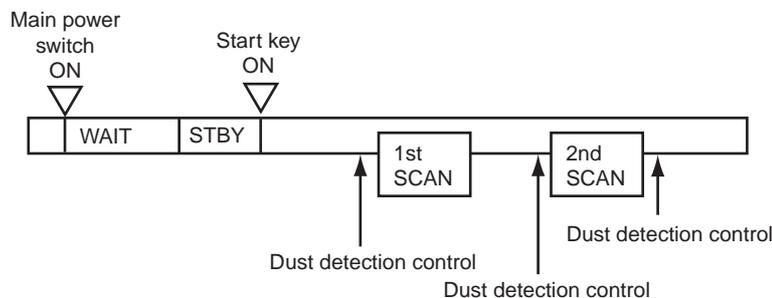
F-4-8

[Description of Control]
- At job end (Dust detection)
The contact sensor (CS) checks the light reflected by the ADF platen guide surface at the read position for presence/absence of dust. After completion of a job, dust detection is performed three times. First, dust detection is performed once at position A. If no dust is detected at position A, dust detection is performed twice there. If no dust is detected, the original is scanned at position A. If dust is detected at position A, move to position B and dust detection is performed twice at position B. If no dust is detected at position B, the original is scanned at position B. If dust is also detected at position B, move to position C and dust detection is performed once at position C. If dust is also detected at position C, a relevant message is displayed on the operation panel. In this case, move back to position A and the original is scanned at position A.

⚠

If presence of dust is detected at all points A, B, and C in this order at job end, the machine will indicate a reading glass cleaning message in the control panel.
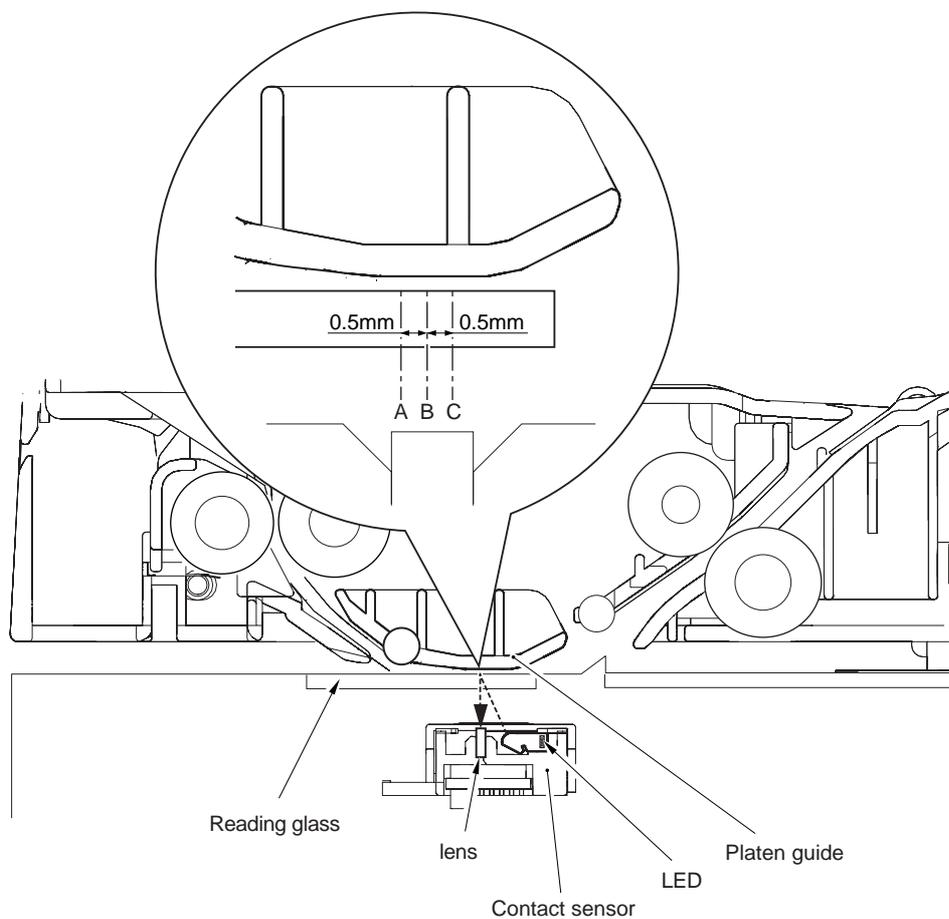
F-4-9

- Immediately before scanning (one sheet at a time)
The contact image sensor (CIS) does not move to detect dust.
The original is read at the position determined at job end or start. If presence of dust is detected there, the read image is corrected.

T-4-2

Point	Description
A	Read reference position
B	out 0.5 mm from the reference position to the inside of the guide
C	About 1.0 mm from the reference position to the inside of the guide

Point	Description
A	Read reference position
B	out 0.5 mm from the reference position to the inside of the guide
C	About 1.0 mm from the reference position to the inside of the guide

4.4 Parts Replacement Procedure

4.4.1 Copyboard glass

4.4.1.1 Removing the Copyboard Glass

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

1) Remove the two screws [1], and then remove the glass holder [2].
  2) Slide the copyboard glass [3] to remove it.
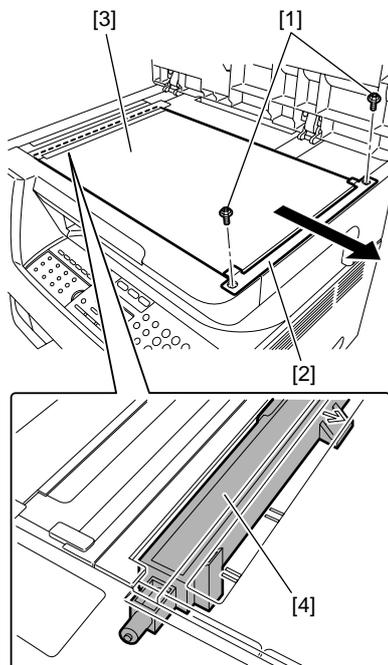
F-4-10

⚠️

Take care not to touch the contact sensor[4] when removing the copyboard glass [3].

4.4.1.2 Procedure after Replacing the Copyboard Glass (equipped with SEND functions)

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

After replacing the copyboard glass, enter the correction values (X, Y, Z) of the standard white plate which are indicated on the back of the new copyboard glass in the service mode.
Correction value (X): Service mode>#SCAN>#SCAN NUMERIC>No.213
Correction value (Y): Service mode>#SCAN>#SCAN NUMERIC>No.214
Correction value (Z): Service mode>#SCAN>#SCAN NUMERIC>No.215
Also, rewrite the values on the service label.
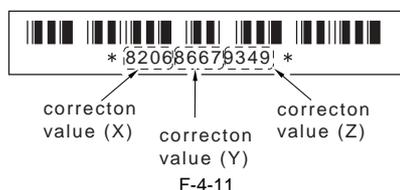
correcton value (X)
correcton value (Y)
correcton value (Z)
F-4-11

4.4.2 Reader Controller PCB

4.4.2.1 Removing the Analog Processor PCB

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

MEMO:
This machine stores adjustment values in the image processor PCB, not the analog processor PCB.
Accordingly, you need not input adjustment values after replacing the analog processor PCB.

1) Remove the ADF or copyboard.

2) Remove the copyboard glass, reader rear cover (small), and leader rear cover.
3) Disconnect all connectors and flexible cables from the analog processor PCB.
4) Remove the two screws [1], and then remove the analog processor PCB [2].
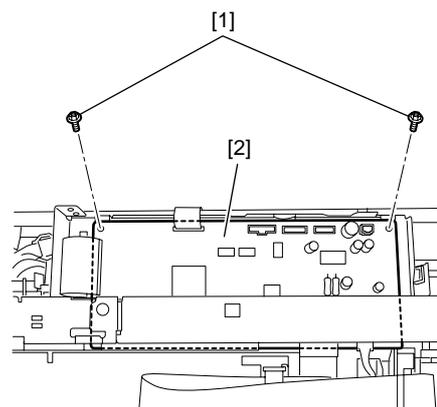
F-4-12

4.4.3 Scanner Motor

4.4.3.1 Removing the Reader Motor

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

1) Remove the ADF or copyboard.
  2) Remove the reader rear cover (small), reader cover, and rear cover.
  3) Remove the reader motor [4] by removing one spring [1], three screws [2], and one connector [3].
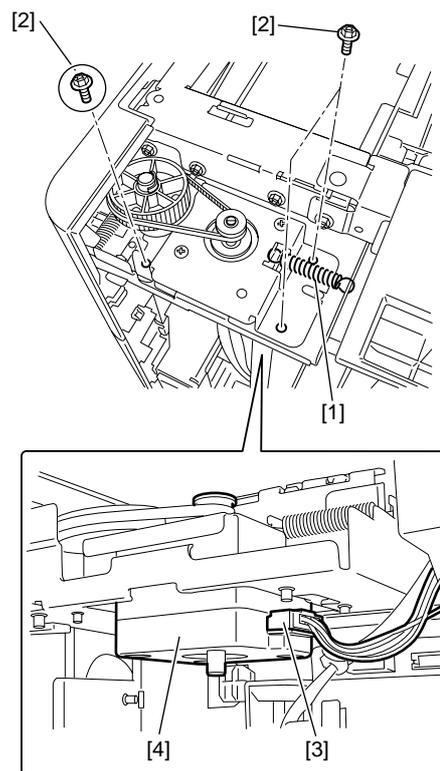
F-4-13

⚠️

When reinstalling the reader motor, attach the spring [1] with the three screws [2] fastened temporarily, tighten the circled screw [2] tightly, and finally tighten the remaining two screws [2] tightly.

4.4.4 Contact sensor

4.4.4.1 Removing the Contact Sensor

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

1) Remove the ADF or copyboard.
   2) Remove the copyboard glass and reader rear cover.
   3) Remove the four screws [1], and then remove the ADF base (left) [2].
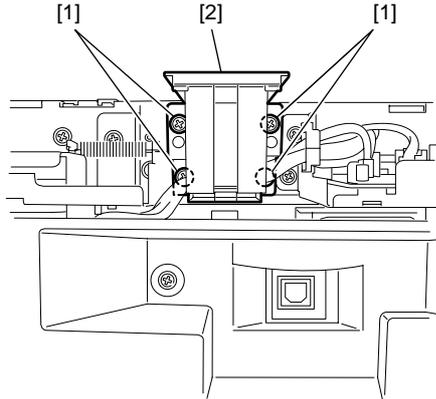
F-4-14
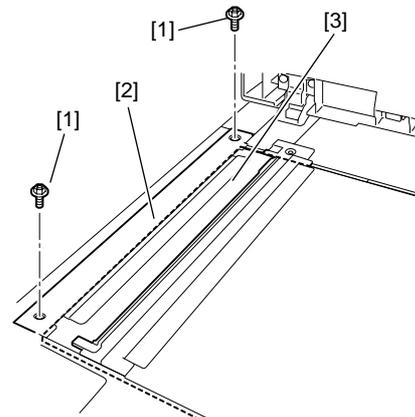
4) Holding the belt, move the contact sensor unit to the cutout [1] in the reader frame.
   5) Remove the cable holder [2] and flexible cable [3] to remove the contact sensor [4].

F-4-15

4.4.4.2 Procedure after Replacing the CS

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

After replacing the contact sensor (CS), go through the following steps to perform inter-channel output correction:
1) Enter the service mode.
Sequentially press the Additional functions key, 2 key, 8 key, and Additional functions key on the operation panel.
2) Press the arrow key on the touch panel to display "TEST MODE".
3) Press [OK].
4) Press the [2] key to display "SCAN TEST".
5) Press the [1] key to display "SHADING".
6) Press [OK].
After completion of the above procedure, the contact sensor output is compensated and parameters are set automatically.
After completion of automatic adjustment, "OK" is displayed.

4.4.5 Contact Sensor HP Sensor

4.4.5.1 Removing the Contact Sensor Home Position Sensor

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

1) Remove the copyboard glass.
   2) Remove the two screws [1] and remove the glass retainer [2].
   3) Remove the reading glass [3].

F-4-16

4) Taking care not to break the hook, remove the home position sensor [1] with a flathead screwdriver. Next, disconnect the connector [2]. If the contact sensor unit is over the reader home position sensor, move the contact sensor unit to an appropriate position by holding the belt [3].

F-4-17

Chapter 5 Laser Exposure

Contents

5.1 Construction

5.1.1 Specifications and Control Mechanism

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

T-5-1

Item	Description
Laser beam	
Number of laser beams	2 beams
Scanner Motor	
Type of motor	DC brushless motor
Rotation control	Constant speed rotaion control
Polygon Mirror	
Number of facets	4 facets (20-mm dia.)
Control Mechanism	
Synchronous control	Horizontal (main scan) synchronization control
Light intensity control	Automatic photocurrent control (APC)
Others	Laser emission ON/OFF control
	Laser scanner motor control
	Laser shutter control

5.1.2 Main Components

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

The laser scanner unit consists of the following major components:
- laser unit, which serves as the source of laser beam.
- laser scanner motor, equipped with a 4-face mirror for laser scanning.
- laser driver/BD PCB used to detect laser beam or to control emission of laser beam.
The laser beam generated by the laser unit based on the signals from the DC controller PCB moves through the collimator lens (inside the laser unit) and the cylindrical lens to reach a 4-face polygon mirror rotating at a constant speed.
When reflected by the 4-face polygon mirror, the laser beam moves through the imaging lens, and is bent by the reflecting mirror to reach the photosensitive drum.
At this time, the laser beam also is directed to the BD circuit of the laser driver/BD PCB.
As the 4-face polygon mirror rotates at a constant speed, the laser beam scans the surface of the photosensitive drum at a constant speed, thereby removing charges and forming static images.
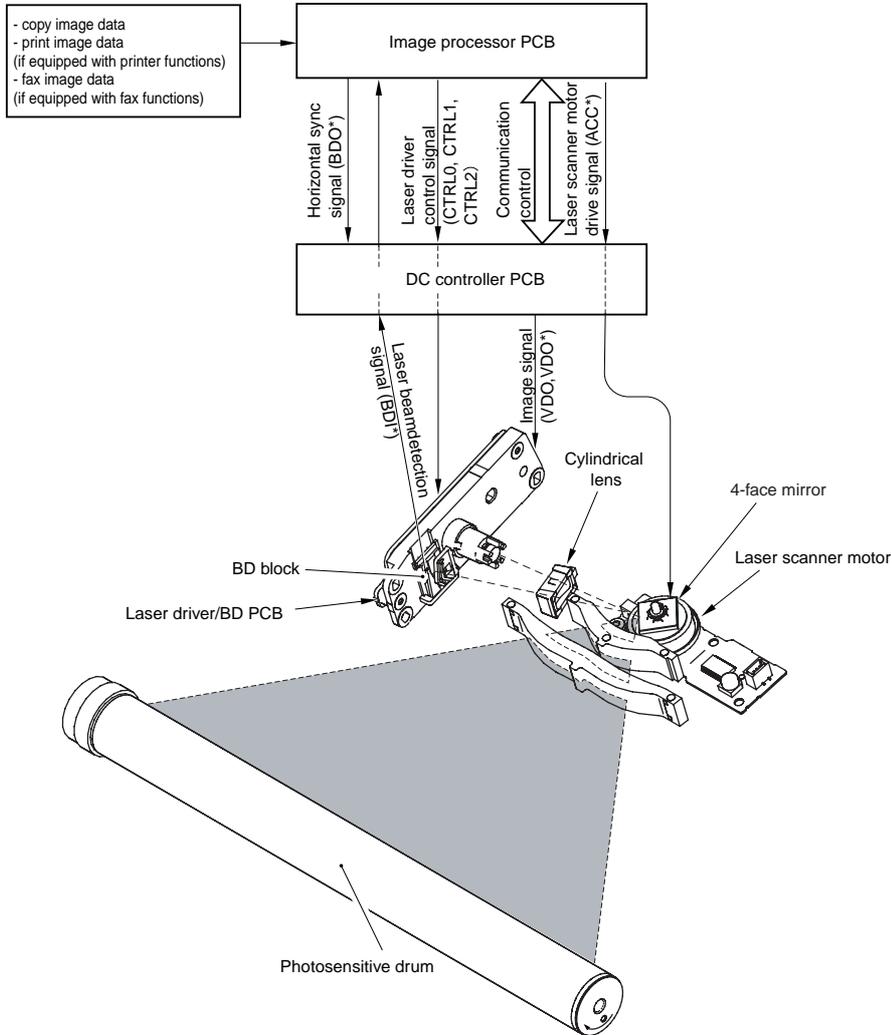
F-5-1

5.2 Parts Replacement Procedure

5.2.1 Laser Scanner Unit

5.2.1.1 Removing the Laser Scanner Unit

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

⚠

The laser scanner was-factory adjusted. Never disassemble it.

1) Detach the reader left cover, left front cover, internal cover, and delivery tray front cover.
2) Detach the right cover, control panel, and delivery tray.
3) Remove the laser shutter [1].
4) Disconnect the connector [2] and flexible cable [3].
5) Remove the four screws [4] using a stubby screwdriver, and then remove the laser scanner unit [5].
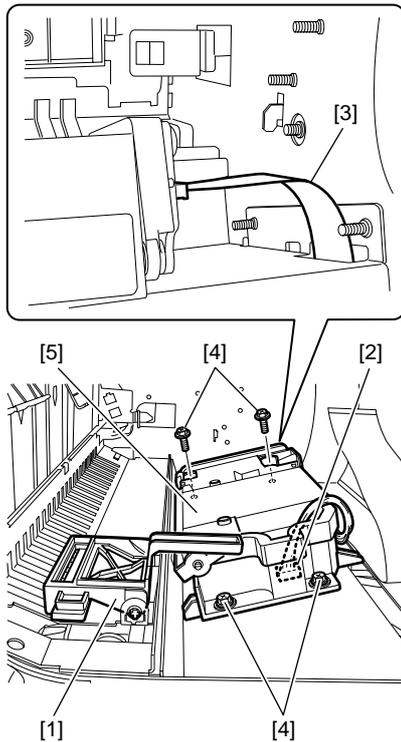
F-5-2

MEMO:
When reinstalling the laser scanner unit, it is difficult to install the encircled screw if your stubby screw driver is not magnetized. In this case, first install the screw in the screw hole on the laser scanner unit, place the laser scanner unit in place, and then tighten the screw tightly.
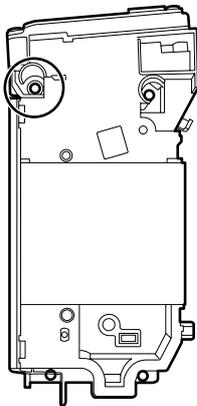
F-5-3

Chapter 6 Image Formation

Contents

6.1 Construction

6.1.1 Specifications and Control Mechanism

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

T-6-1

Items	Description
Photosensitive drum	
Drum type	OPC drum
Drum diameter	24mm
Cleaning mechanism	Cleaning blade
Processing speed	132.9mm/sec
Primary charging	
Charging method	Roller charging (AC + DC)
ng roller diameter	12mm
Transfer charging	
Charging method	Roller charging (DC)
Charging roller diameter	14.8mm
Developing assembly	
Developing cylinder diameter	12mm
Developing method	Dry, 1-component jumping (AC + DC)
Toner	1-component, negative toner
Remaining toner level detection	Remaining toner level sensor (in developing unit)
Others	
Separation method	Static Eliminator + Curvature separation
Waste toner	Collected in the drum unit.

6.1.2 Outline

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

The following is below the construction of the image formation system.
The main of image formation components consist of the drum unit (a photosensitive drum, a primary charging roller, a cleaner blade) and the developing unit (a developing cylinder).
The DC controller PCB has a built-in high-voltage output assembly, and generates high voltage for charging at such times as necessary.
This machine is provided with a humidity sensor to attain charging suitable for the environment.
The DC controller PCB monitors the humidity sensor status during standby to output the appropriate charging AC voltage.
Waste toner is collected by the cleaning blade inside the drum, and is kept in the waste toner assembly.
The waste toner inside the waste toner assembly is constantly stirred by the stirring rod.
If the waste toner box becomes full, the waste toner full detection sensor (SR6) goes ON.
The waste toner full detection sensor (SR6) notifies the DC controller PCB of the waste toner full.
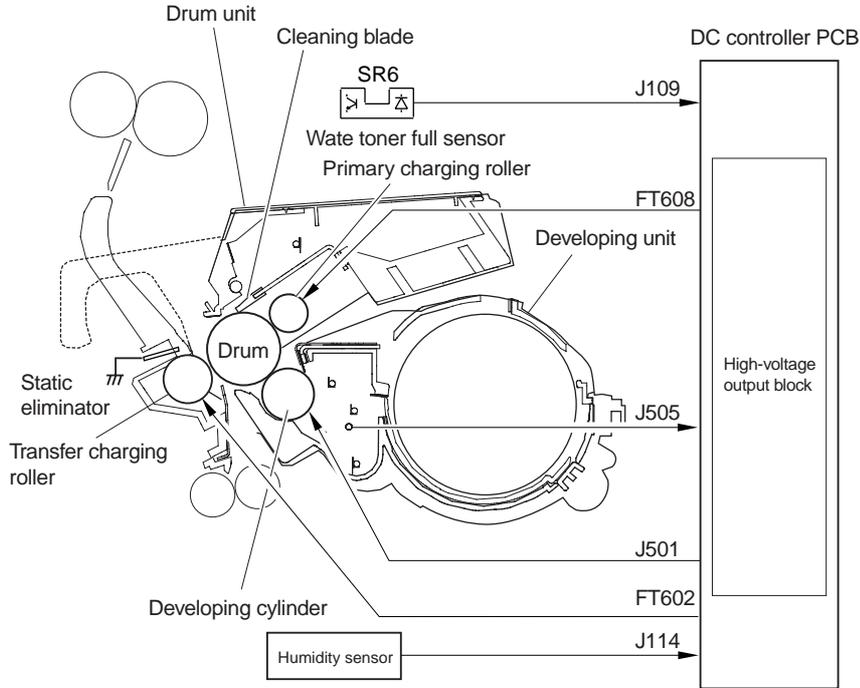
F-6-1

MEMO:
1.The toner bottle of this machine can be used to copy the A4 standard original (ISO/IEC 19752 conformity) on about 8,400 sheets.
2.The number of prints that may be made after the first indication of the message "TONER LOW PREPARE NEW TONER" is about 430 sheets (when copying an A4 standard original (ISO/IEC 19752 conformity)).
3.The capacity of a waste toner box is about 275g. The waste toner full detection operates with about 220g.

6.2 Image Formation Process

6.2.1 Reproduction Processes

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

The machine uses an indirect electrostatic method, and is constructed as shown below
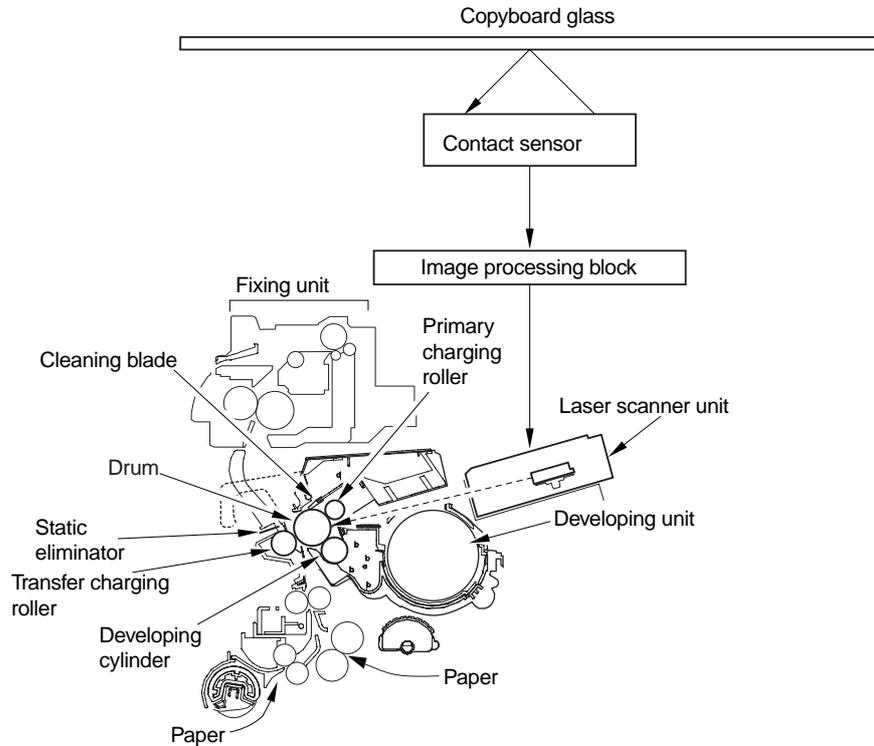
F-6-2

The machine's image formation processes can be divided into the following 5 blocks (7steps):
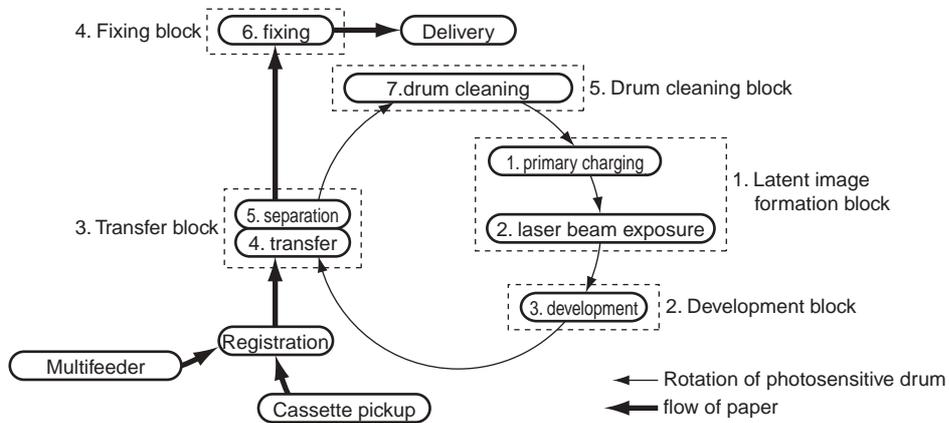
F-6-3

[1] **Latent Image Formation Block**
Step 1 primary charging (AC + negative DC)
Step 2 laser beam exposure
[2] **Developing Block**
Step 3 development (AC + negative DC bias)
[3] **Transfer Block**
Step 4 transfer (positive DC)
Step 5 separation (grounding)
[4] **Fixing Block**
Step 6 fixing
[5] **Drum Cleaning Block**
Step 7 drum cleaning

6.3 Parts Replacement Procedure

6.3.1 Developing Assembly

6.3.1.1 Removing the Developing Unit

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

1) Open the left cover, and remove the drum unit.
  2) Detach the reader left cover, front-left cover, internal cover, and delivery tray front cover.
  3) Remove the terminal [1], and detach the cable from the guide [2].
  4) Reamove the screw [3], and detach the guide [2].
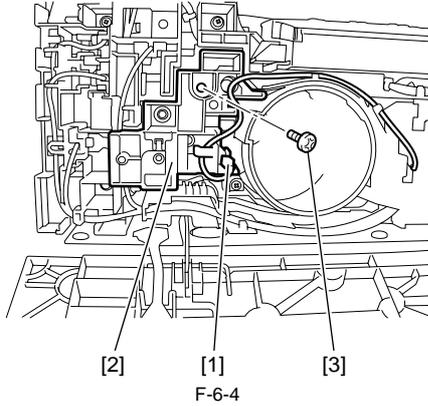
F-6-4

5) Pull out the developing unit [1] straightly to the front.
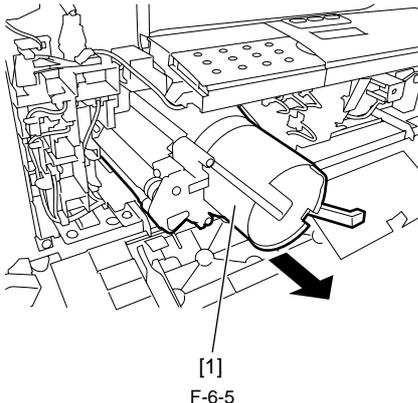
F-6-5

6.3.2 Transfer Charging Roller

6.3.2.1 Removing the Transfer Charging Roller

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

1) Open the left cover, and remove the drum unit.
  2) Release the two hooks [1], and then remove the transfer charging roller [2].
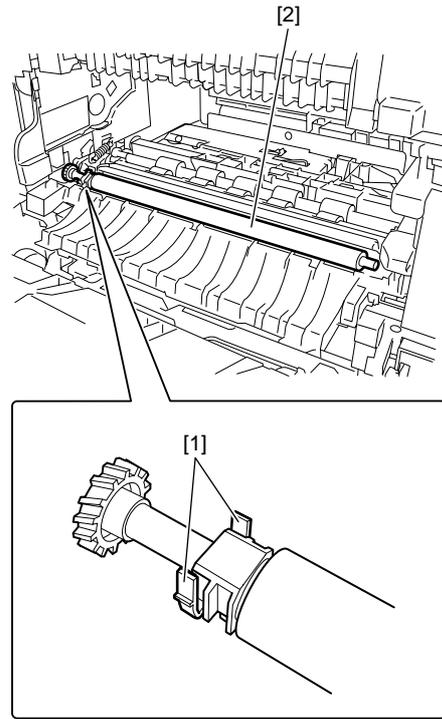
F-6-6

6.3.3 Waste Toner Full Sensor

6.3.3.1 Removing the Waste Toner Full Sensor

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

1) Detach the reader left cover, front-left cover, and internal cover.
  2) Detach the right cover, control panel, and delivery tray.
  3) Remove the cable from the clamp [1].
  4) Remove the waste toner full sensor [2], detach the connector [3].
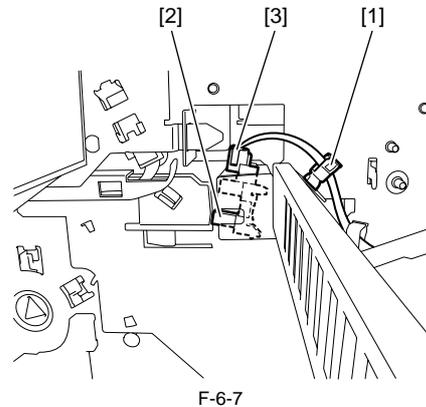
F-6-7

Chapter 7 Pickup/Feeding System

Contents

7.1 Construction

7.1.1 Outline

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

The machine is not equipped with a paper width detection mechanism. It uses center reference, in which paper moves centered through the pickup/feeding/delivery path. The source of paper may be from any of two: cassette and manual feed tray.
The paper is controlled so that its leading edge matches the leading edge of the image on the photosensitive drum by means of the registration sensor (SR11); it then is moved through the transfer, separation, feeding, and fixing assemblies to reach the delivery tray.
The machine is equipped with 5 sensors to monitor the movement of paper; the arrangement and of these sensors and rollers are as follows:

F-7-1
T-7-1
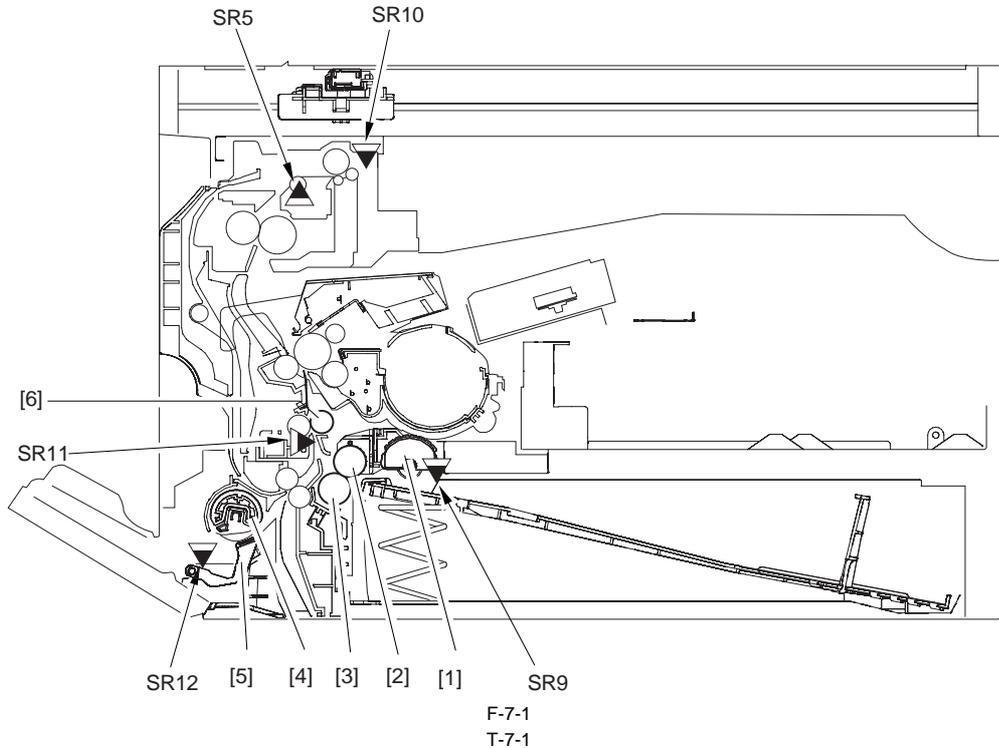
Symbol	Name
SR5	Delivery sensor
SR9	Cassette paper sensor
SR10	Delivery paper full sensor
SR11	Registration sensor
SR12	Multi feed paper sensor
[1]	Cassette pickup roller
[2]	Cassette feed roller
[3]	Cassette separation roller
[4]	Multi feed pickup roller
[5]	Multi feed separation pad
[6]	Registration roller

7.2 Detecting Jams

7.2.1 Jam Detection Outline

7.2.1.1 Outline

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

The machine is equipped with 3 jam sensors and 1 jam switch used to motor the movement of paper.
The presence/absence of paper or of a jam is checked at such times as programmed in advance in the CPU of the DC controller PCB and in relation to the presence/absence of paper over a specific sensor at a given time. If the machine detects a jam, it will turn off the main
motor (M1), and will indicate a jam message in the control panel.
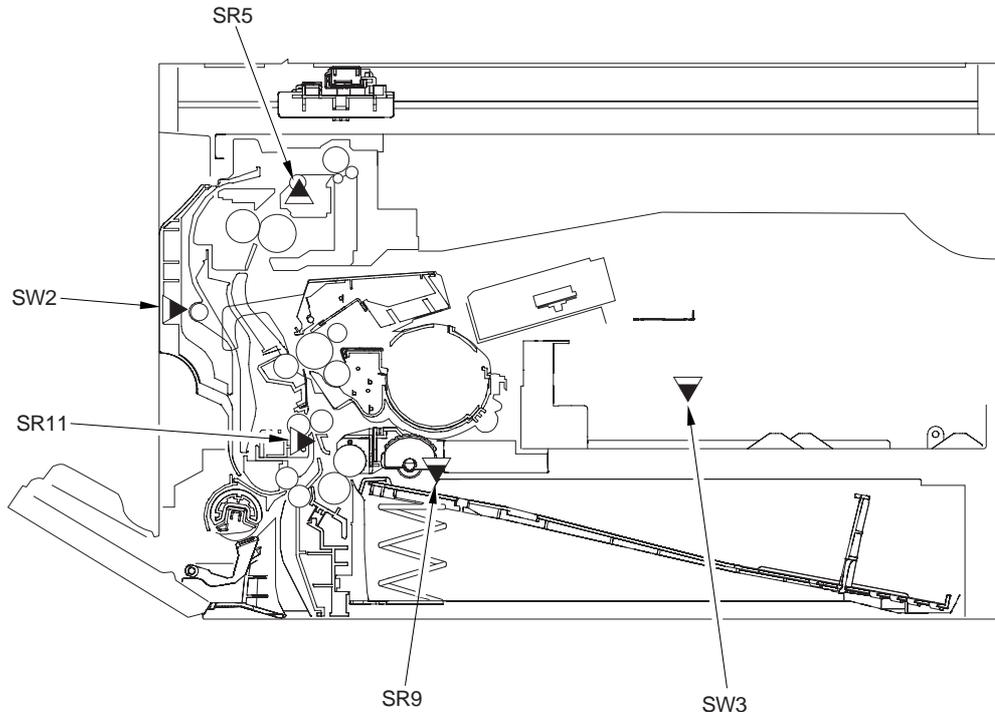
F-7-2
T-7-2

Symbol	Name
SR5	Delivey sensor
SR9	Cassette paper sensor
SR11	Registration sensor
SW2/SW3	Interlock switch

7.2.1.2 Types of Jams

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

The machine groups jams into 7 types. When a jam occurs, be sure to remove it, and start over the operation.

Pickup Delay Jam
After execution of a pickup retry, the registration sensor (SR11) does not detect the leading edge of paper within a specific period of time. Or after the duplex drive solenoid (SL1) is on, the registration sensor (SR11) does not detect the leading edge of paper within a specific period of time.

Delivery Sensor Delay Jam
After the registration sensor (SR11) has detected the leading edge of paper, the delivery sensor (SR5) does not detect the leading edge of paper within a specific period of time.

Pickup Stationary Jam
After the registration sensor (SR11) has detected the leading edge of paper, the registration sensor (SR11) does not detect the trailing edge of paper within a specific period of time.

Delivery Sensor Stationary Jam
After the registration sensor (SR11) has detected the trailing edge of paper, the delivery sensor (SR5) does not detect the trailing edge of paper within a specific period of time.

Wound Paper Jam at Fuser
The delivery sensor (SR5) has detected absence of paper within the prescribed time after it detected presence of paper.

Initial Jam
- When presence of paper is detected by the registration sensor (SR11) or delivery sensor (SR5) at the start of waiting.

- When presence of paper is detected by the delivery sensor (SR5) during waiting.

Left door/Front Cover Open Jam
During paper feeding, the interlock switch (SW2/SW3) has detected OFF.

7.3 Cassette Pick-Up Unit

7.3.1 Outline

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Paper is picked up from the cassette under the control of the CPU on the DC controller PCB and using the drive of the main motor (M1). When the cassette pickup solenoid (SL2) goes ON, the drive of the main motor (M1) is transmitted to the cassette pickup roller assembly
to rotate the cassette pickup roller.
When the cassette pickup roller rotates, a single sheet of paper is separated from the stack by the separation claws of the cassette, and is sent as far as the registration roller by way of the feed roller.
After the paper passes a registration sensor (SR11), the paper reaches the registration roller. At this time the registration roller is at rest, causing the leading edge of the paper to butt against it to form an arch.
The DC controller PCB turns on the registration clutch (CL1) at specific timing to transmit the drive of the main motor to the registration roller, thereby moving the paper ahead. The paper reaches the delivery tray after moving through the transfer, separation, and fixing/delivery assemblies.
The deliver tray has a delivery paper full sensor (SR10) to detect that the delivered sheets are stacked fully.
When the total height of the delivered sheets reaches the specified value and the delivery paper full sensor (SR10) turns on, this machine detects occurrence of an error and displays an error message on the LCD.
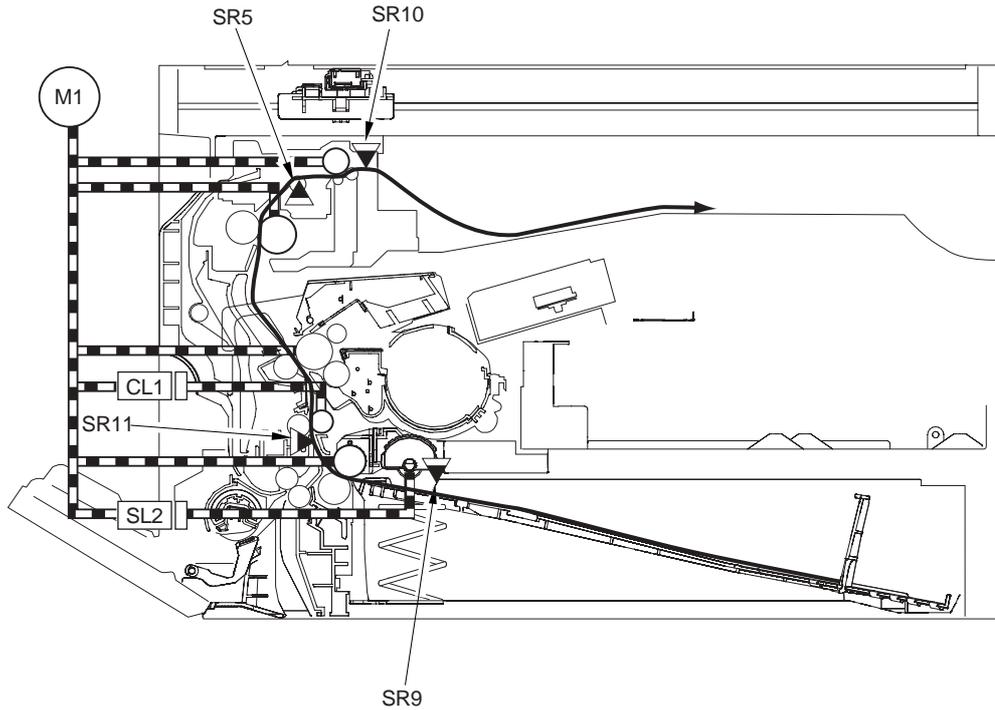
F-7-3

7.3.2 Retry Pickup

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

If the registration sensor (SR11) does not detect paper within a specific period of time after the cassette pickup roller has started to rotate, the machine will start to rotate the cassette pickup roller once again to execute a retry pickup operation.
If the registration sensor (SR11) still does not detect paper within a specific period of time after executing a retry pickup 3 times, the machine will identify the condition as a jam and will indicate a jam message on the LCD of its control panel.

7.3.3 Detecting the Size of Paper

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

The cassette paper size detection is performed using the registration sensor (SR11) based on the length of paper. In fax mode, if paper of a size different from the size selected from the control panel is placed, the DC controller will identify a paper size mismatch at the end of printing and indicate a message on the LCD.

7.4 Manual Feed Pickup Unit

7.4.1 Outline

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Paper is picked up from the manual feed tray under the control of the CPU on the DC controller PCB and using the drive of the main motor (M1). When the manual feed pickup solenoid (SL5) goes ON, the drive of the main motor (M1) is transmitted as far as the
manual feed pickup roller assembly to rotate the manual feed pickup roller.
The sheets of paper stacked in the manual feed tray are lifted by the work of a spring and forced against the manual feed pickup roller. Thereafter, a single sheet of paper is separated by the work of the manual feed pickup roller and the separation pad, and is moved as far as the registration roller.
After the paper passes a registration sensor (SR11), the paper reaches the registration roller. At this time the registration roller is at rest, causing the leading edge of the paper to butt against it to form an arch.
The DC controller PCB turns on the registration clutch (CL1) at specific timing to transmit the drive of the main motor to the registration roller, thereby moving the paper ahead. The paper reaches the delivery tray after moving through the transfer, separation, and fixing/delivery assemblies.
The deliver tray has a delivered paper full sensor (SR10) to detect that the delivered sheets are stacked fully.
When the total height of the delivered sheets reaches the specified value and the delivered paper full sensor (SR10) turns on, this machine detects occurrence of an error and displays an error message on the LCD.
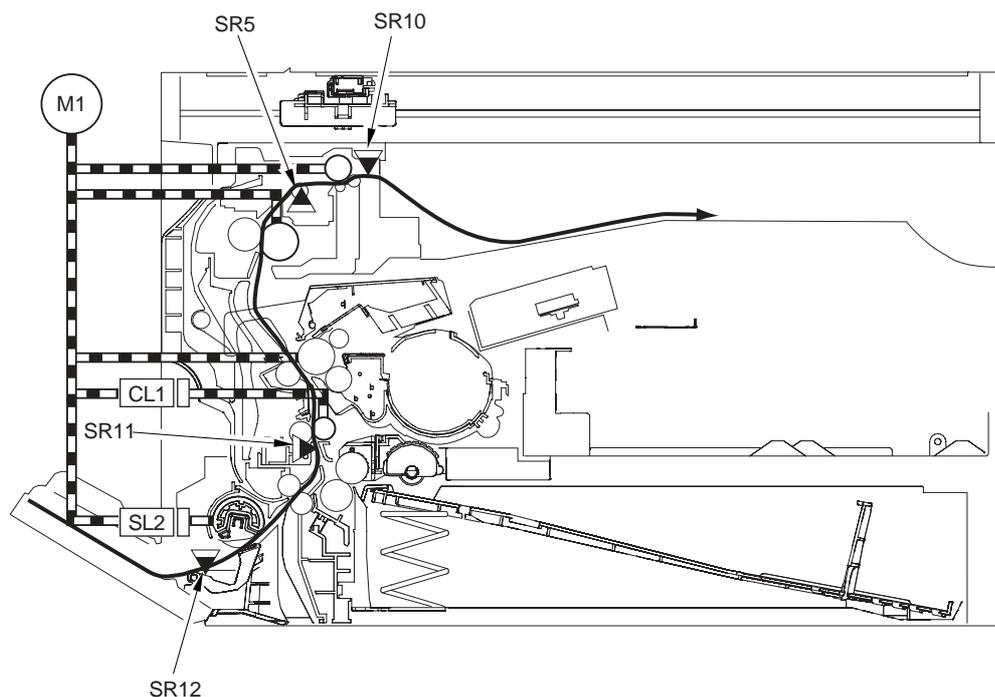
F-7-4

7.4.2 Retry Pickup

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

If the registration sensor (SR11) does not detect paper within a specific period of time after the manual feed pickup roller starts to rotate, the machine will rotate the manual feed pickup roller once again to execute a retry pickup operation. If the registration sensor (SR11) still does not detect the leading edge of paper after executing a retry pickup 3 times, the machine will identify the condition as a jam and will indicate a jam message on the LCD in its control panel.

7.4.3 Detecting the Size of Paper

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

The size of paper in the manual feed tray is detected using the registration sensor (SR11) with reference to the length of paper. In fax mode, if paper of a size different from the size selected from the control panel is placed, the DC controller will identify a paper size
mismatch at the end of printing and indicate a message on the LCD.

7.5 Duplex Feeding Unit

7.5.1 Outline

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

The duplex pickup operation of this machine is performed by driving the main motor (M1) under the control of the CPU installed on the DC controller PCB. When the trailing edge of the paper finished with printing on its top surface reaches the point 10 mm away from the delivery sensor (SR5), the duplex drive solenoid (SL1) turns on and the drive power of the main motor is transmitted to the delivery roller and duplex transport roller. Paper is led to the duplex unit through the reverse rotation of the delivery roller, and then fed to the registration roller via the duplex transport roller.
The paper transport for duplex printing is not provided with a sensor that detects arrival or passage of paper.
The duplex unit does not have a function of stopping and holding paper temporarily.
The sequence of duplex printing of the original (e.g., two sheets of original) is: reverse side of first sheet (the memory function is used.) -> top side of first sheet -> reverse side of second side -> top side of second sheet.

F-7-5
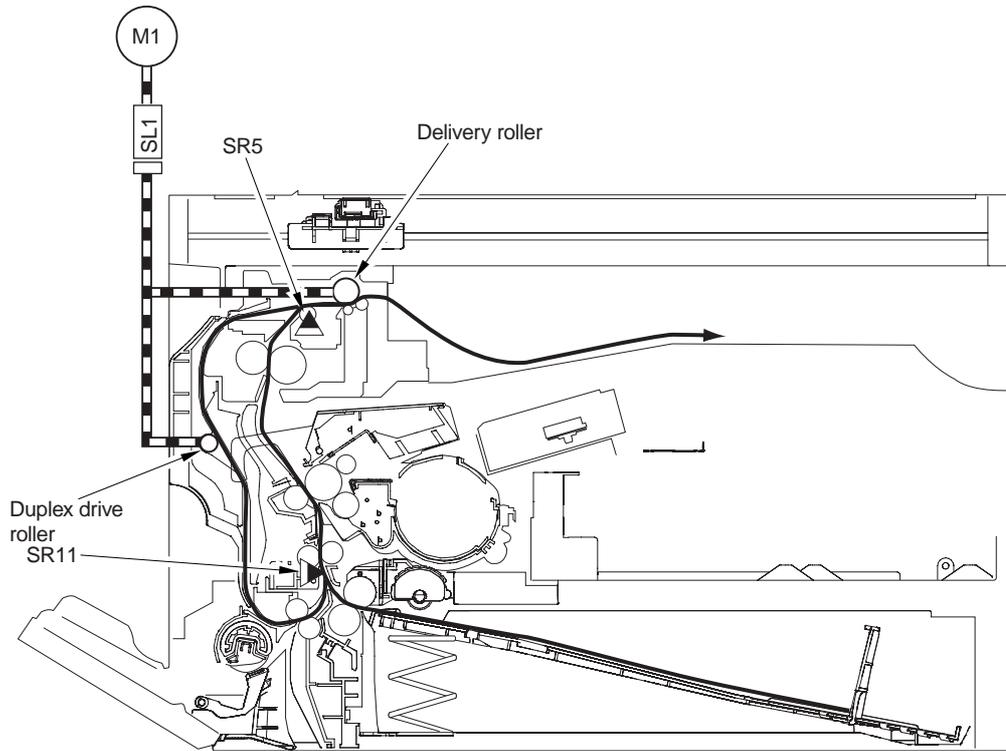
7.6 Parts Replacement Procedure

7.6.1 Pickup Roller

7.6.1.1 Removing the Cassette Pickup Roller

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

1) Remove the cassette.
 2) Place the machine with the rear panel down. However, since the exhaust duct projects about 16 mm from other area of the rear panel, insert stacks of paper or the like under the rear panel so that the machine stands stably.
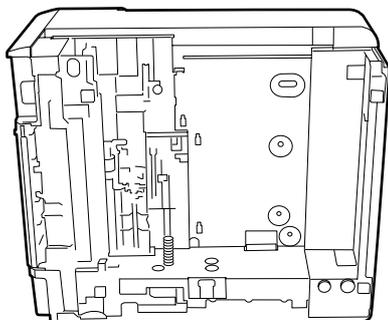
F-7-6

3) Turn the pickup roller a half-turn with one hand, release the hook [1] with the other hand, and remove the cassette pickup roller [2].
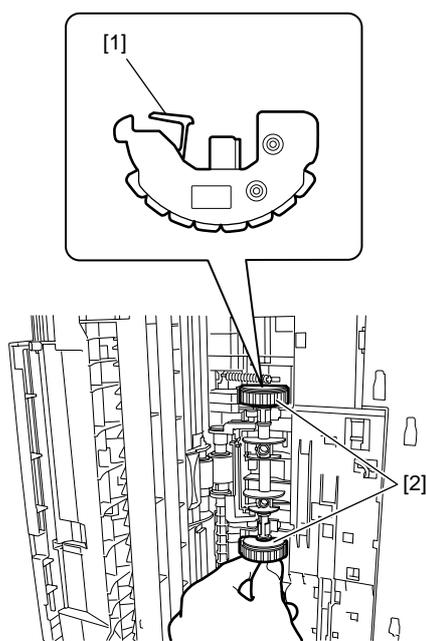
F-7-7

7.6.2 Cassette Paper Sensor

7.6.2.1 Removing the Cassette Paper Sensor

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

1) Remove the drum unit and developing unit.
 2) Remove the two shafts [1], and then remove the transfer guide [2].
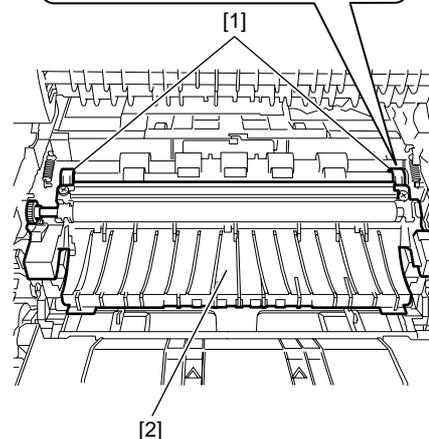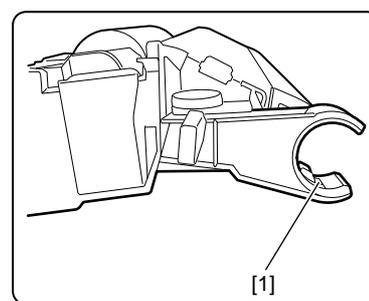
F-7-8

3) Release the claw [1], and then detach the sensor cover [2].
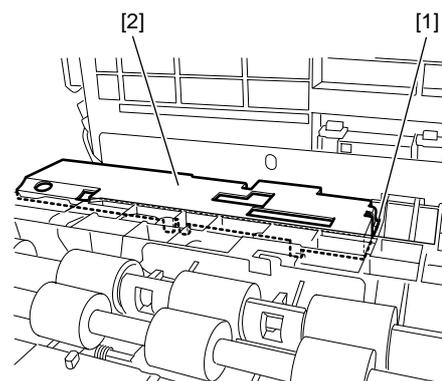
F-7-9

4) Disconnect the connector [1], release the claw, and then remove the cassette paper sensor [2].
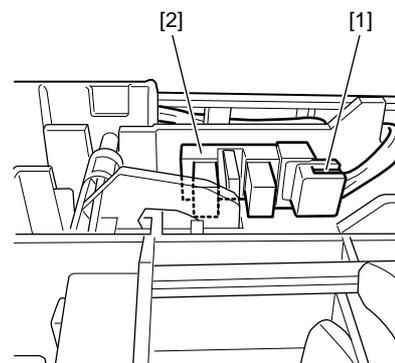
F-7-10

7.6.3 Cassette Pickup Solenoid

7.6.3.1 Removing the Cassette Pickup Solenoid

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

1) Detach the rear cover and rear-left cover.
 2) Remove the relay PCB, registration clutch, and pickup drive unit.
 3) Remove the gear [1] and screw [2], and then remove the pickup solenoid [3].
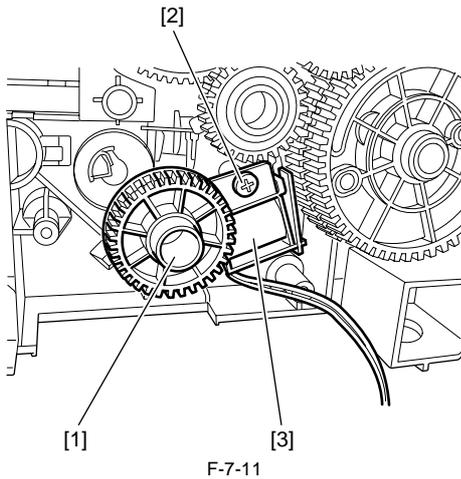
F-7-11

7.6.4 Manual Pickup Roller

7.6.4.1 Removing the Manual Pickup Roller

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

1) Detach the front cover and front-left cover.
   2) Remove the screw [1], and then detach the roller cover [2].
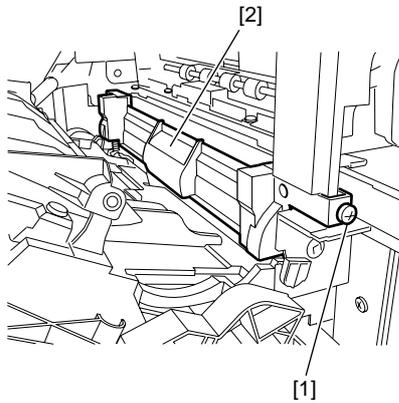
F-7-12

3) While holding the manual separation pad [1], release the right hook [2] and then slide the right bearing [3].
   4) Remove the manual pickup roller [4].
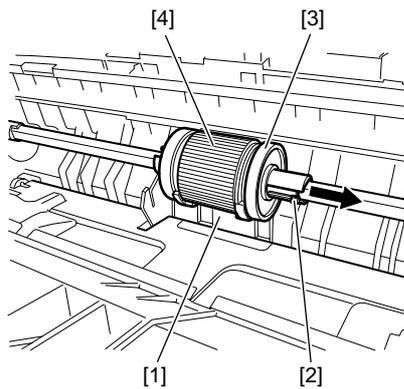
F-7-13

7.6.5 Manual Feed Tray paper sensor

7.6.5.1 Removing the Manual Tray Sensor

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

1) Detach the left cover and rear-left cover.
   2) Remove the relay PCB, registration clutch, and pickup drive unit.
   3) Disconnect the connector [1], release the claw, and then remove the manual tray sensor [2].
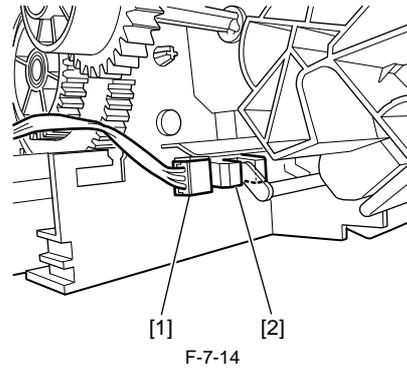
F-7-14

7.6.6 Manual Feed Pickup Solenoid

7.6.6.1 Removing the Manual Pickup Solenoid

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

1) Detach the left cover and rear-left cover.
   2) Disconnect the connector [1], remove the screw [2], and then remove the manual tray pickup solenoid [3].
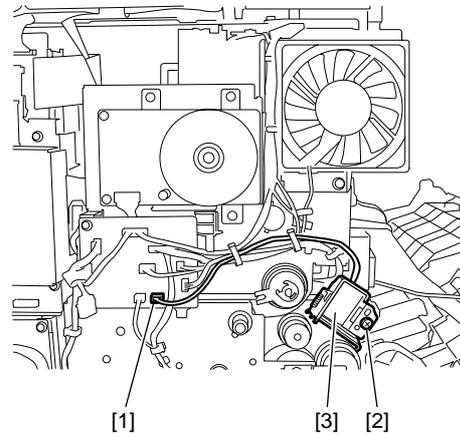
F-7-15

7.6.7 Manual Separation Pad

7.6.7.1 Removing the Manual Separation Pad

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

1) Remove the manual pickup roller.
   2) While holding the manual separation pad [1], release the claw [3] and slide the left bearing [4] with attention paid to the sensor flag [2].
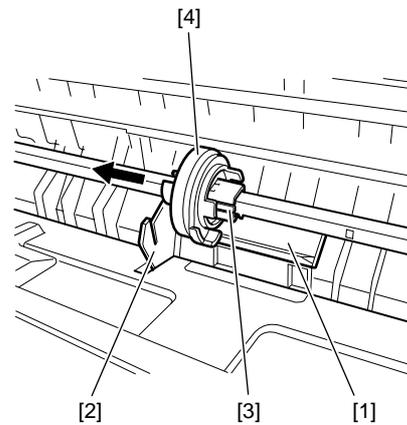
F-7-16

3) With the flathead screwdriver inserted as shown below, remove the manual pickup pad [1].
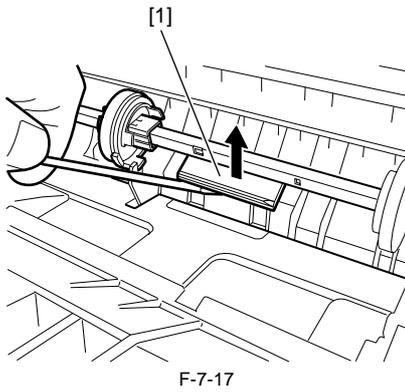
F-7-17

7.6.8 Registration Roller

7.6.8.1 Removing the Registration Roller

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

1) Remove the control panel.
   2) Remove the developing unit.
   3) Remove the registration clutch.
4) Remove the two shafts [1], and then remove the transfer guide [2].
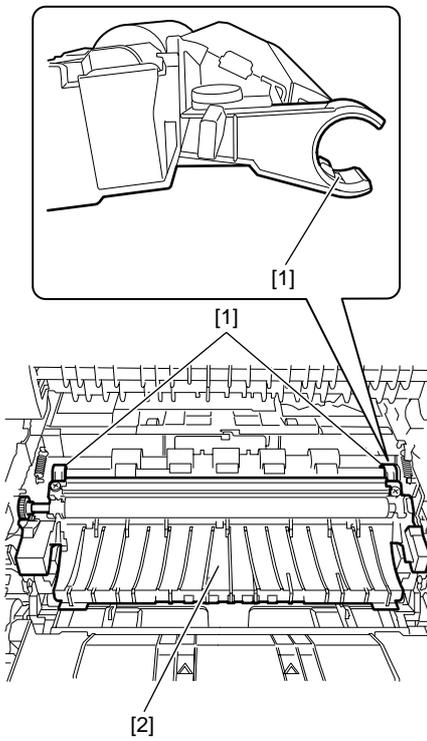
F-7-18

5) Release the two hooks [1], and then detach the registration sensor cover [2].
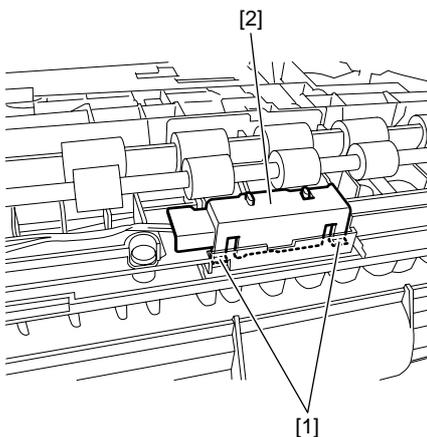
F-7-19

6) Remove the two bosses [1], disconnect the connector [2], and then slide the registration sensor unit [3] toward you to remove it.
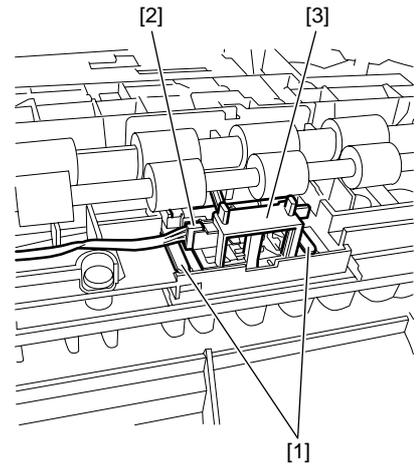
F-7-20

7) Make a note of the positions ([A] to [C]) of two springs [1]. Next, remove the two springs [1].
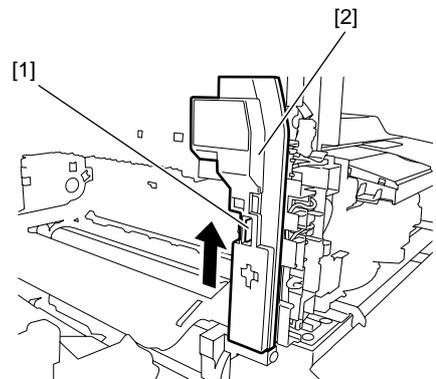
F-7-21

8) Remove the four high voltage contacts [1] and the interlock switch [2].
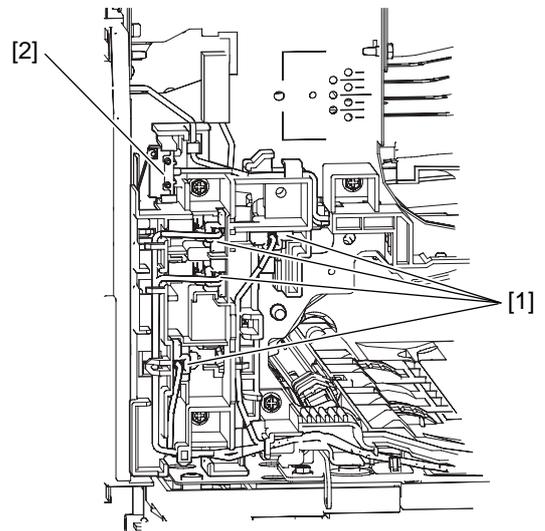
F-7-22

9) Remove the three screws [1], and slide the three voltage cable guide (right).
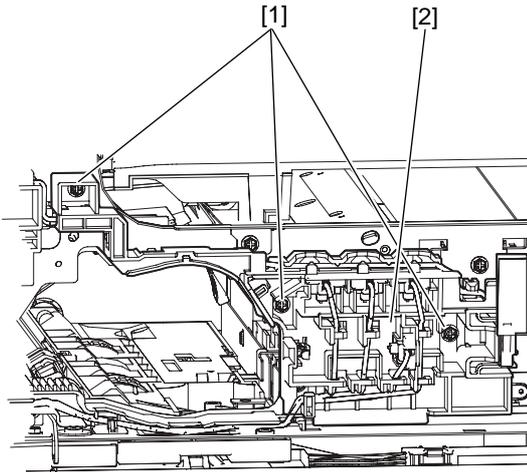
F-7-23

10) Remove the connector (J15) on the power supply, and release the cable [1] from the clamp.
11) Remove the bosswes [2] using a flathead screwdriver, and remove the high voltage cable guide (lower) [3].
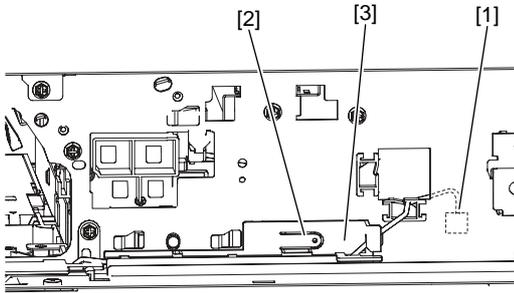
F-7-24

12) Remove the screw [1], and slide the high voltage cable guide (middle) [2] to the right.
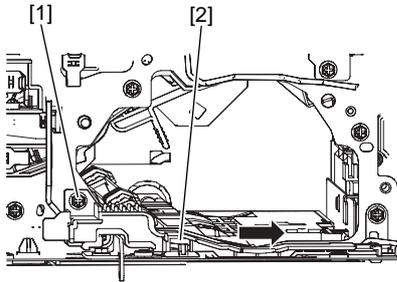
F-7-25

13) Release the claw [1], and remove the bushing [2]. Slide the developing unit lever [3].
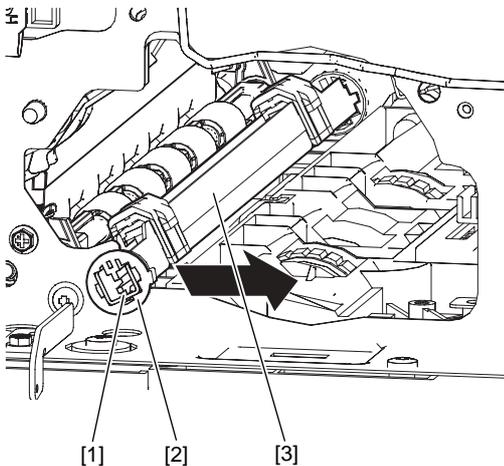
F-7-26

14) Make a note of the positions ([A] to [C]) of two springs [1]. Next, remove the two springs [1].

⚠ Each spring can be hooked at one of three positions. It is factory-hooked at the appropriate position for image adjustment.
Once you have removed a spring, be sure to hook it at the original position. Install the red spring in the rear side, and install the colorlessness in the front side.

15) Remove the two bearings [2], and then remove the right registration roller [3].
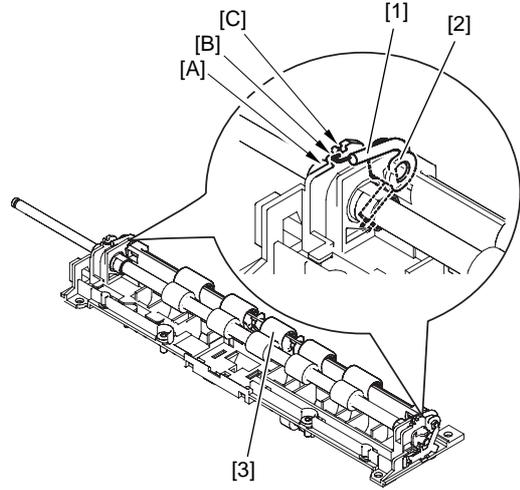
F-7-27

16) Remove one E-ring [1], two bearings [2], and left registration roller [3]. Then remove the left registration roller [3] from the shaft support. When reinstalling the shaft support [4], be sure to check installing the shaft support.
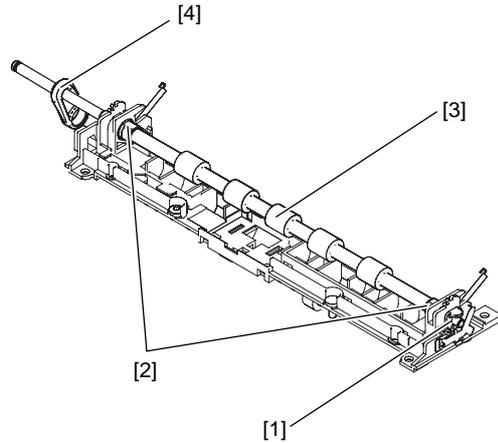
F-7-28

⚠ When reinstalling the right registration roller, the grounding spring [2] must be in touch with the end [1] of this roller. It is recommended to use tweezers when reinstalling the E-ring [3].
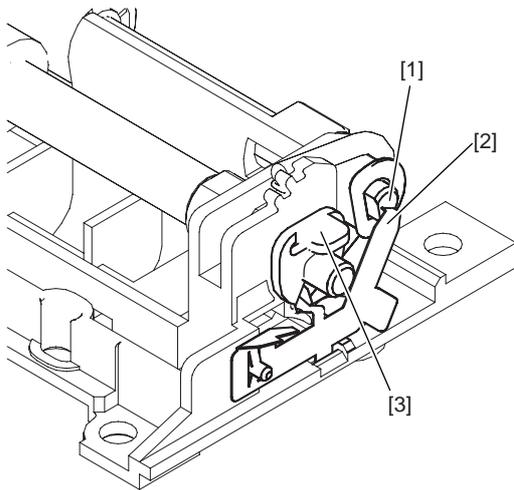
F-7-29
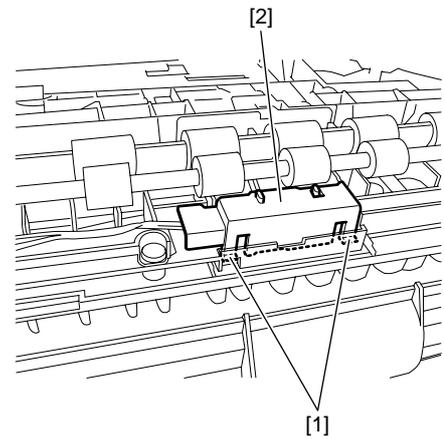
7.6.9 Registration Sensor

7.6.9.1 Removing the Registration Sensor

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

1) Remove the two shafts [1], and then remove the transfer guide [2].
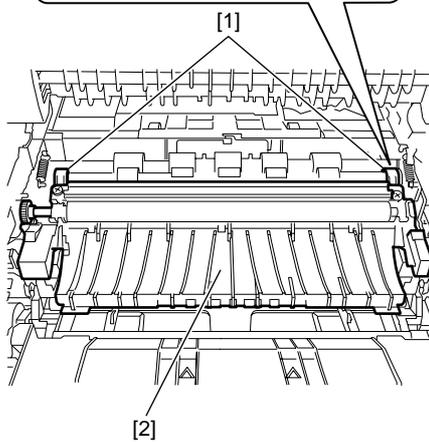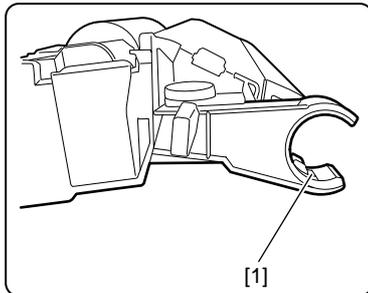
F-7-30

2) Release the two hooks [1], and then detach the registration sensor cover [2].

F-7-31

3) Remove the two bosses [1], disconnect the connector [2], and then slide the registration sensor unit [3] toward you to remove it.
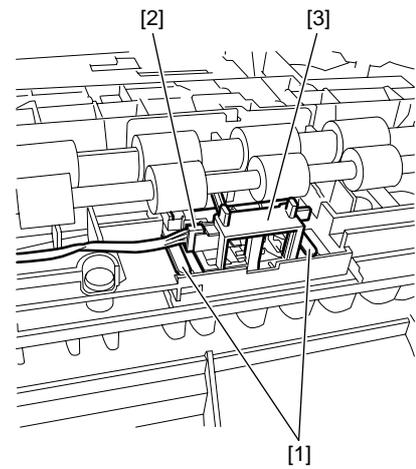
F-7-32

4) Remove the registration sensor [1] by releasing the hook.
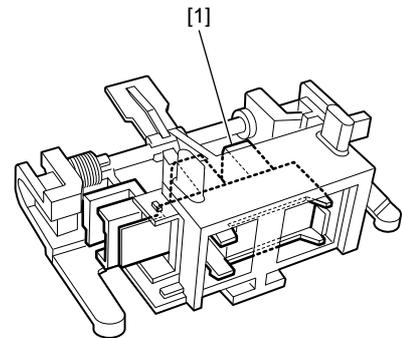
F-7-33

7.6.10 Registration Clutch

7.6.10.1 Removing the Registration Clutch

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

1) Detach the rear cover.
   2) Remove the connector [1] and E-ring [2], and then remove the registration clutch [3].

F-7-34

7.6.11 Feeding Roller

7.6.11.1 Removing the Cassete Feed Roller

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

1) Remove the cassette.
   2) Place the machine with the rear panel down. However, since the exhaust duct projects about 16 mm from other area of the rear panel, insert stacks of paper or the like under the rear panel so that the machine stands stably.
   3) While pressing the separation roller [1] to release the pressure, remove the boss [2] and slide the feed roller upward until the shafts [3] are separated.
   4) Pull out the feed roller [4] to remove it.
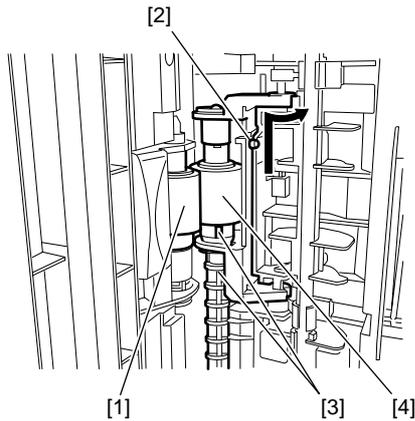
F-7-35

5) Remove the bushing [1] and shaft [2], and then remove the feed roller [3].
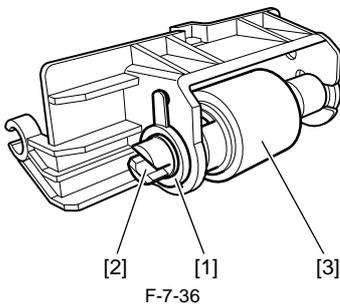
F-7-36

7.6.12 Duplex Pickup Solenoid

7.6.12.1 Removing the Duplex Pickup Solenoid

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

1) Remove the left cover and rear-right cover.
   2) Remove the fan duct, main motor, relay PCB, registration clutch, pickup drive unit, main drive unit, and fixing/drive unit.
   3) Remove the screw [1], and then remove the duplex pickup solenoid [2].

F-7-37

⚠️

When installing the duplex pickup solenoid, be sure to install the solenoid lever [1] on the arm [2].
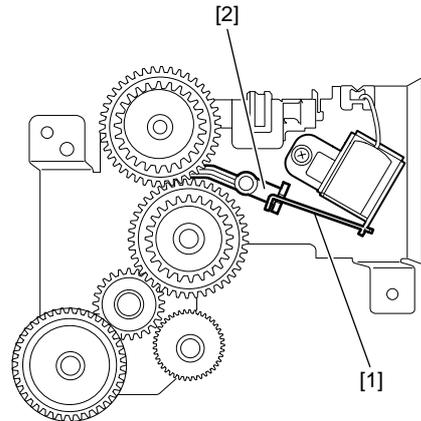
F-7-38

7.6.13 Separation Roller

7.6.13.1 Removing the Cassette Separation Roller

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

1) Remove the cassette.
   2) Place the machine with the rear panel down. However, since the exhaust duct projects about 16 mm from other area of the rear panel, insert stacks of paper or the like under the rear panel so that the machine stands stably.
3) While pressing the separation roller [1] to release the pressure, remove the boss [2] and slide the feed roller upward until the shafts [3] are separated.
   4) Pull out the feed roller [4] to remove it.
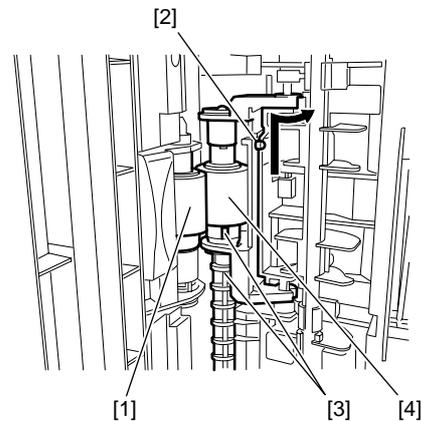
F-7-39

5) Remove the claw [1], and pull out the separation roller assembly [2].
   6) Remove the shaft [3] from the shaft hole to remove the separation roller assembly [4].
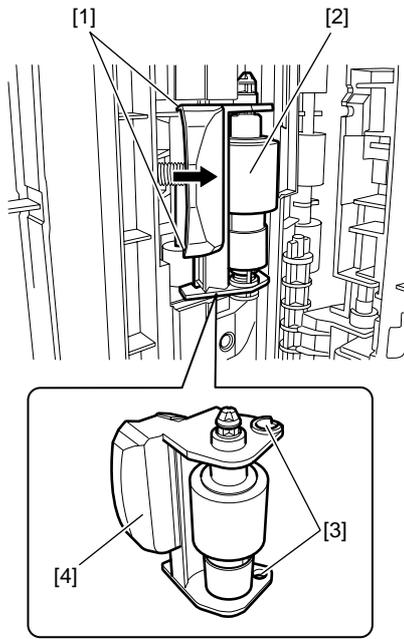
F-7-40

7) Remove the shaft [1], and remove the separation roller [2].
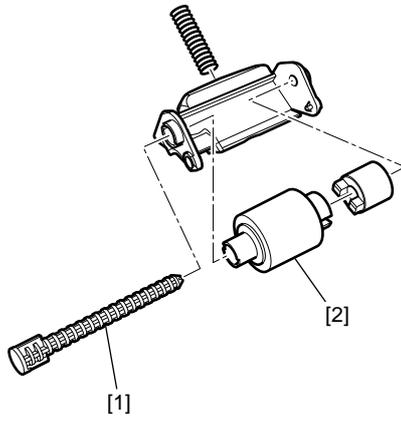
F-7-41

Chapter 8 Fixing System

Contents

8.1 Construction

8.1.1 Specifications, Control Mechanisms, and Functions

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

T-8-1

Item	Function/Method
Fixing method	by fixing film + pressure roller
Fixing heater	Unitary flat heater incorporating both main heater and sub heater
Fixing temperature detection	[1] Main thermistor (TH1): Temperature control and fault detection
	[2] Sub thermistor (TH2): Fault detection
	[3] Temperature-switch (TP): Fault detection
Fixing temperature control	[1] Warm-up temperature control
	[2] Normal temperature control
	[3] Sheet-to-sheet temperature control
Protection functions	[1] Detection of error in temperature control by thermistor
	[2] Detection of temperature rise by temperature huse

8.1.2 Outline

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

The fixing unit employing the on-demand fixing method consists of a fixing film unit (incorporating a fixing heater, thermistor, and temperature huse), a pressure roller, and a delivery roller.
The fixing pressure roller and the delivery roller are driven by the main motor (M1). The paper separated from the photosensitive drum is moved to the inside of the fixing assembly; the paper is then moved outside it after the toner is fused to the paper by the work
of the fixing film and the fixing pressure roller.
The delivery sensor (SR5) is used to detect paper coming out of the fixing assembly.

F-8-1

Fixing heater (H1)

Temperature fuse (TP)

Fixing pressure roller

Sub thermistor (TH2)

Main thermistor (TH1)
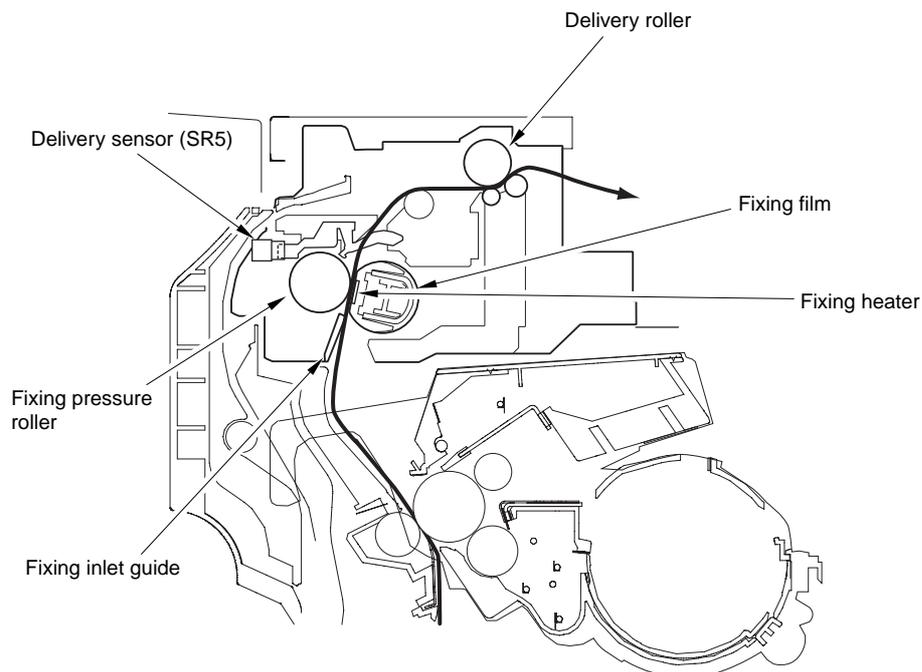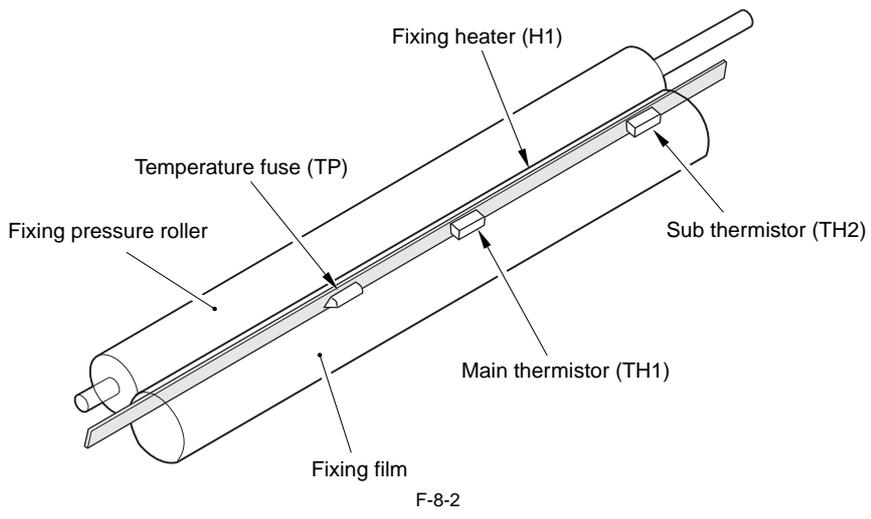
Fixing film

F-8-2

8.2 Various Control Mechanisms

8.2.1 Controlling the Fixing Film Temperature

8.2.1.1 Outline

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

The fixing film unit has a plate-shaped fixing heater built into it for heating the fixing film.
The fixing heater is equipped with 2 thermistor: a main thermistor in the middle and a sub thermistor at the end. The main thermistor is used to control the temperature of the fixing heater and to detect its overheating, while the sub thermistor is used to detect an error temperature on the end of the fixing heater.
The CPU on the DC controller PCB monitors the main thermistor signal (FSRTH) and the sub thermistor signal (SUBTH) from the thermistors for control of the fixing heater drive signal (FSRD0) and the relay drive signal (RLYD), thus varying the supply of power to the heater and, ultimately, controlling the temperature of the fixing heater.

8.2.1.2 Controlling the Fixing Film Temperature

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

The CPU on the DC controller PCB executes the following 6 types of fixing temperature control:

1. Startup Temperature Control
Upon input of a print command from the image processor PCB, the fixing heater is heated up to the temperature lower than the target temperature of paper pass temperature control according to the fixing temperature control mode and the number of prints made previously.

2.Paper-present section temperature control
The fixing heater temperature is adjusted to the target paper-present section temperature according to the combination of the paper size, number of sheets fed, fixing mode, and temperature detected by the fixing main thermistor.

3.Sheet-to-sheet temperature control
The fixing heater temperature is held relatively below the target paper-present section temperature to prevent the paper-absent section temperature from rising between sheets.

4.Target temperature for the distance between sheets during duplex printing
To prevent the temperature rise of the no-paper pass unit for the distance between sheets during duplex printing, the fixing heater temperature is controlled as follows.
For the first to third prints, the fixing heater temperature is lowered by 25 deg C from the target temperature of paper pass temperature control.
For the fourth and succeeding prints, the fixing heater temperature is lowered by 35 deg C from the target temperature of paper pass temperature control

5. Control at Time of Down Sequence
When prints are made in the continuous print mode, the sub-thermistor in the no-paper pass unit may rise extremely. To prevent this, the print head and paper clearance is widen when the sub-thermistor detects a temperature equal to or higher than 250/255/260 deg C. The down sequence is performed in three steps according to the detected temperature. If the sub-thermistor detects a temperature equal to or lower than 180 deg C in the down sequence, the normal temperature control resumes.

Reference:
A5/STMT throughputs in three down sequence steps are as follows:
Down sequence 1 (Detection of 250oC): A5/STMT plain paper 8 pppm
Down sequence 2 (Detection of 255oC): A5/STMT plain paper 3 pppm
Down sequence 3 (Detection of 260oC): A5/STMT plain paper 2 pppm

6. Cooling Mode
If prints are made on large-size (*1) paper after making prints on small-size (*1) paper in the continuous print mode, a fixing offset can occur due to the difference in temperature between the edge and center of paper. To prevent this, the main motor is driven for 40 seconds after continuous printing on small-size paper or down-sequence control, thus lowering the temperature detected by the sub-thermistor to a temperature below 160 deg C. When the following heater cooling time lapses after stop of the main motor, normal control resumes.
*1 Large-size paper: 270 mm or longer Small-size paper: 215.9 mm or longer

T-8-2

	After printing on small-size paper.			After the throughput of printing on large-size paper has reduced.
Print count (sheets)	1-10	11-20	21 and more	Any number of prints
Heater cooling time (s)	0	5	10	10

8.2.1.3 Target Temperatures by Mode

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

This machine controls the fixing temperature according to the "media type" selected in the user mode and the "target temperature" set in the "special mode."
The correspondence between each mode and target temperature is as follows:

T-8-3

Paper type	Cassette pickup	Manual feed tray pickup	Duplex	Fixing mode	Target initial fixing temperature (*1)	Initial number of sheets (*2)	Reamarks
Plain paper/colored paper/recycled paper/ heavy paper1(81-90g/ m2)	Yes	Yes	Yes	Plain paper	210 deg C	1-30 (A4/LTR)	Special Mode S: OFF
					185 deg C	1-30 (A4/LTR)	Special Mode S: ON
Heavy paper2(91 to 105g/m2)	-	Yes	-	Heavy paper	210 deg C	1-30 (A4/LTR)	
Heavy paper3(106 - 128g/m2)	-	Yes	-	Heavy paper H	215 deg C	1-30 (A4/LTR)	
Transparency	-	Yes	-	OHP	195 deg C	1-30 (A4/LTR)	
Envelopes	-	Yes	-	Envelope H /Envelope L	215 deg C	1-5	The controller changes fixing mode by size.
Labels	-	Yes	-	Heavy paper	210 deg C	1-5 (A4/LTR)	
3hole punch paper	Yes	Yes	Yes	Plain	210 deg C	1-30 (A4/LTR)	Special Mode S: OFF
					185 deg C	1-30 (A4/LTR)	Special Mode S: ON

*1: Target fixing temperature at startup. When the initial temperature of the fixing unit is high, the target temperature is lowered. In the continuous copy mode, the target temperature is lowered.
*2: Number of sheets controlled at the initial target temperature. If it is exceeded, the target temperature is lowered. The prescribed number of sheets varies with the paper size.

8.3 Protective Functions

8.3.1 Outline

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

This circuit is installed on the DC controller PCB. It is used to monitor abnormal rise of the fixing temperature at all times. If the main thermistor's output voltage is held below about 0.78 V (about 235 deg C or higher) for at least 1 second or the sub-thermistor's output voltage is held blow about 0.39 V for 0.15 seconds or longer due to the rise in the fixing heater temperature, the relay is turned off and the fixing heater is turned off irrespective of the relay drive signal (RLYD).
If the temperature of the fixing heater increases abnormally, on the other hand, to exceed about 228 deg c, the temperature fuse will melt to cut the power to the fixing heater.

F-8-3
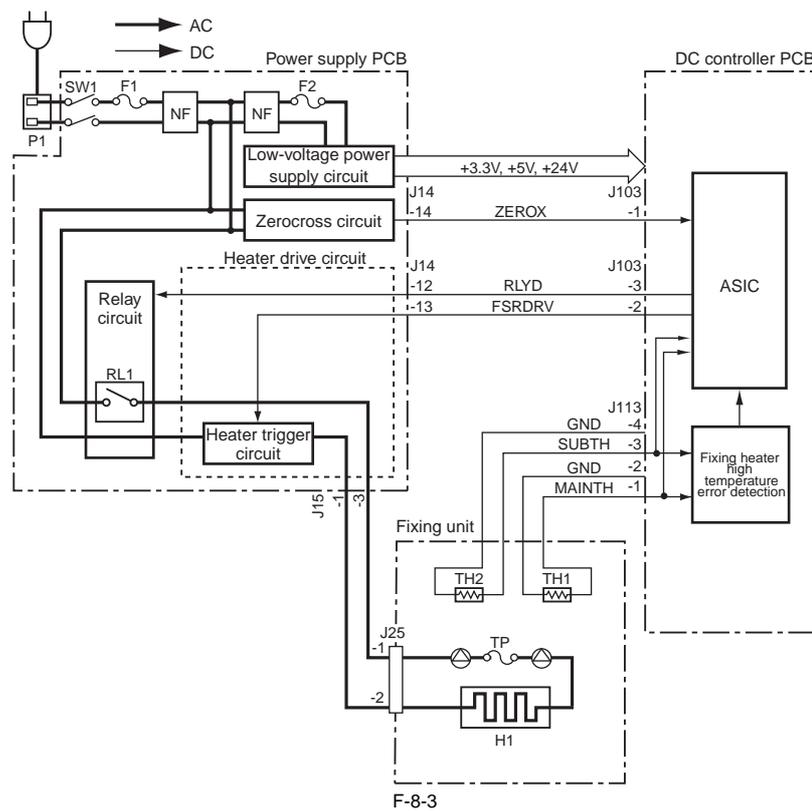
8.3.2 Failure Detection

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

The CPU on the DC controller PCB will identify a fault in the fixing assembly if any of the following conditions (a through d) occurs; as a result,
- it will cut the power to the fixing heater.
- it will cause the relay drive signal (RYLD) to go '1' to turn off the relay and, at the same time, will communicate the presence of a fault to the image processor PCB.

a. Detection of thtermistor short circuit (excessively high temperature)
This failure is detected when the main thermistor has continuously detected a temperature equal to or higher than 235 deg C for 1 second or longer during temperature control.
This failure is detected when the sub-thermistor has continuously detected a temperature equal to or higher than 300 deg C for 0.15 second or longer during temperature control.

b. Detection of open thermistor (excessively low temperature)
This failure is detected when the main thermistor has continuously detected a temperature lower than 20 deg C for 0.5 second or longer during temperature control.
This failure is detected when the sub thermistor has continuously detected a temperature lower than 35 deg C for 0.15 second or longer after the end of start up.
This failure is detected when the sub-thermistor cannot detect a temperature equal to or higher than 75deg C even if 2.29 to 20 seconds have lapsed since start of power supply to the fixing heater.

c. Detection of Drive circuit failure (zero-cross error)
This failure is detected when the number (cycle) of zero-cross inputs that have been counted every second has been outside the range (45-65 Hz) twice.

d. Detection of startup failure
This failure is detected when the main thermistor has detected a temperature lower than 45 deg C 2.29 seconds after start of power supply to the fixing heater.
This failure is also detected when the main thermistor temperature is lower than 150 deg C and the rise in the main temperature per second is less than 12 deg C or when the main thermistor temperature does not reach the target value 20 seconds later.

8.4 Parts Replacement Procedure

8.4.1 Fixing Unit

8.4.1.1 Removing the Fixing Unit

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

⚠

The height of the fixing unit is adjusted at 2 mounting points at the front (left door + front cover) prior to shipment. If you need to detach the fixing unit, apply 2 markings [1] before detaching the unit to enable you to return the unit to its previous position. When replacing the fixing unit with a new one, carry out height adjustment.
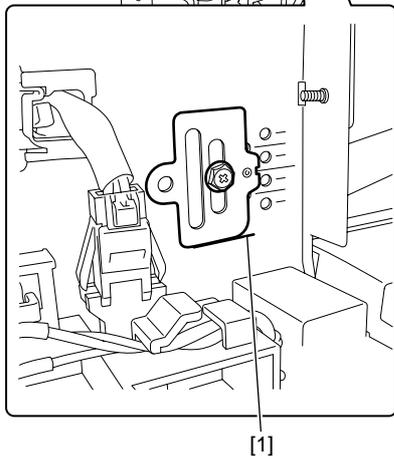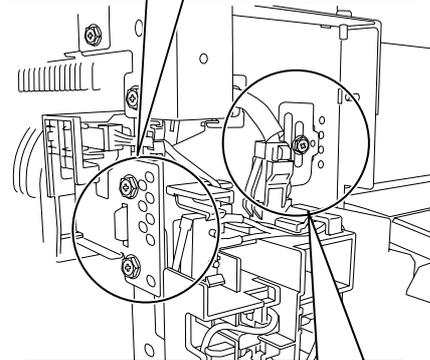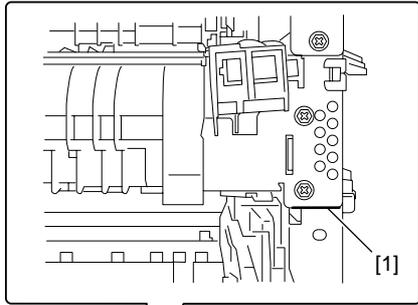
F-8-4

1) Detach the rear cover, front cover, front-left cover, rear-left cover, delivery tray fron cover and internal cover.
2) Remove the boss [1], and then slide the guide (front) [2] to remove it.
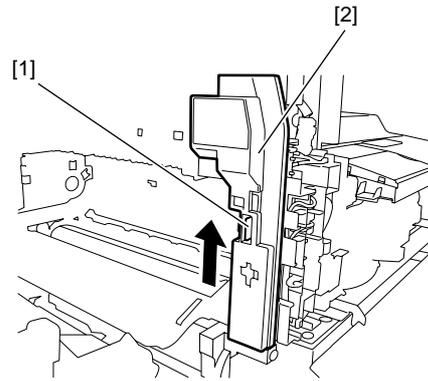
F-8-5

3) Disconnect the two connectors [1], and then release the cable from the clamp.
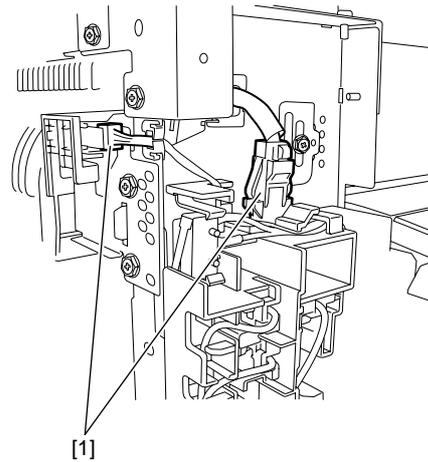
F-8-6

4) Remove the screw [1] and remove the fan duct [2].
5) Remove the three connectors [3] and one screw [4], and then slide the fan unit [5] upward to remove it.
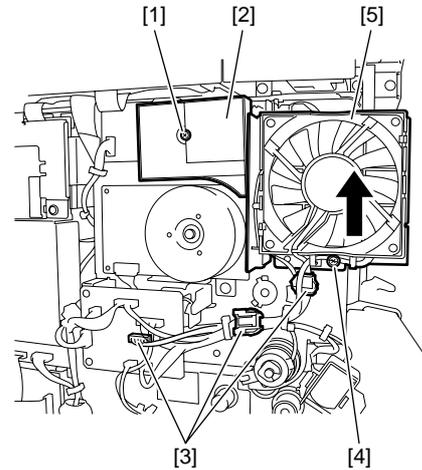
F-8-7

6) Remove the boss [1], and then slide the guide (rear) [2] backward to remove it.
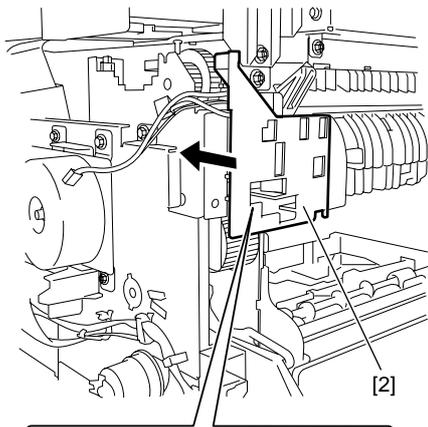
F-8-8

7) Release the hook, remove the fixing gear retainer [1], and then remove the fixing gear [2].
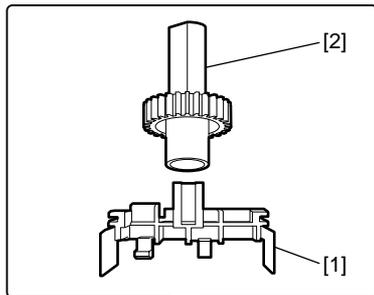
F-8-9

8) Apply marking [1], remove 1 screw [2], and detach the positioning pin [3].
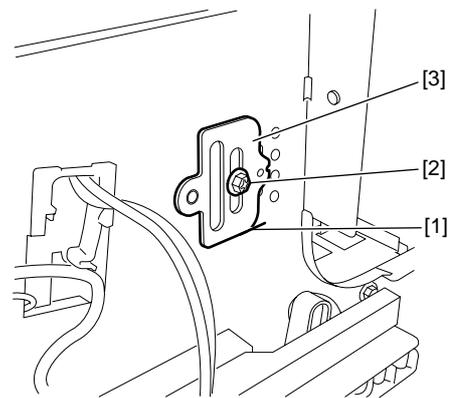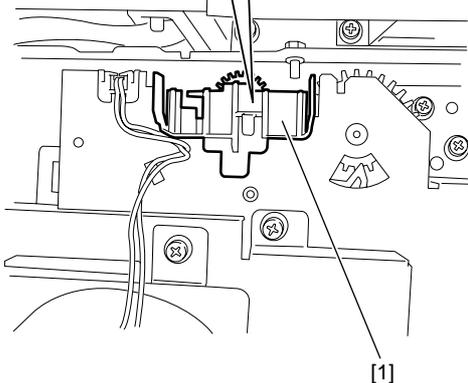
F-8-10

9) Apply marking [1], remove 4 screws [2], and detach the fixing unit [3].

[2]   [2]
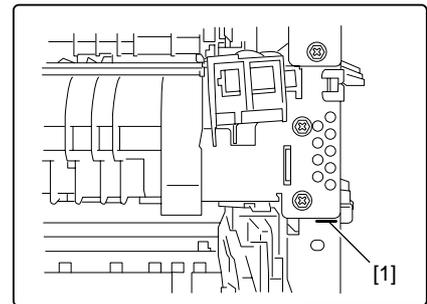
[3]
F-8-11

⚠ To install the fixing unit, follow "Installing the fixing unit".

8.4.1.2 Installing the Fixing unit

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Follow the procedure described below when installing the fixing unit.
  1) Install the fixing unit without tightening the screws.
  2) Install the positioning pin [2] to align with marking [1] at the left door, and then fix it with 4 screws at the front and back of the left door. When installing a new fixing unit, install the positioning pin to align with reference mark [3].
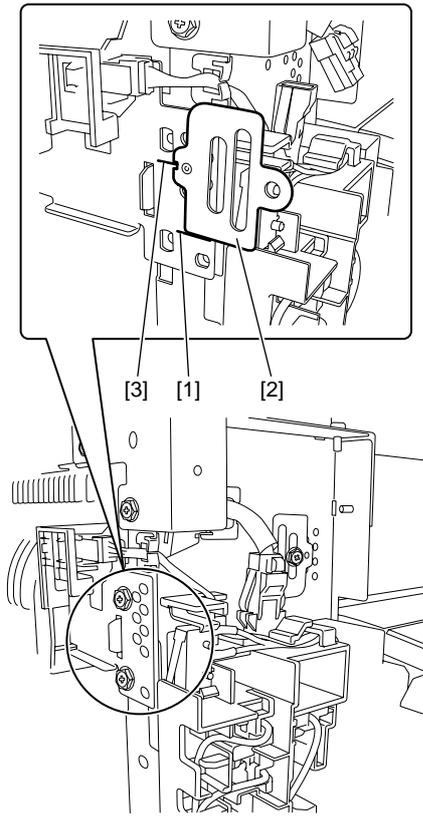
F-8-12

3) Remove the positioning pin.

4) Install positioning pin [2] to align with marking [1] at the front cover, and then fix it with one screw [3]. When installing a new fixing unit, install the positioning pin to align with reference mark [4].
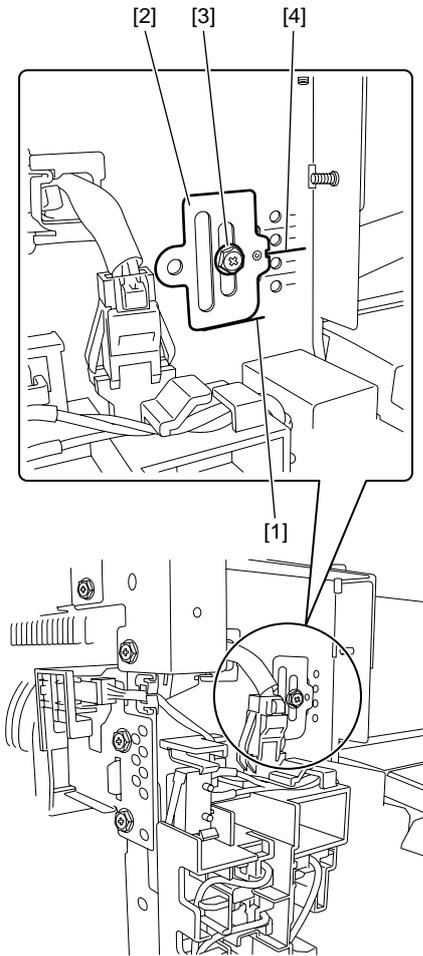
F-8-13

5) Perform the following procedure by reversing the installation procedure.

8.4.2 Pressure Roller

8.4.2.1 Removing the Pressure Roller

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

1) Remove the fixing film unit.

2) Remove the screw [1], and then slide the fixing unit inlet guide [2] sideways to release it. (The fixing unit inlet guide need not be removed.)

3) Remove the pressure roller [3].
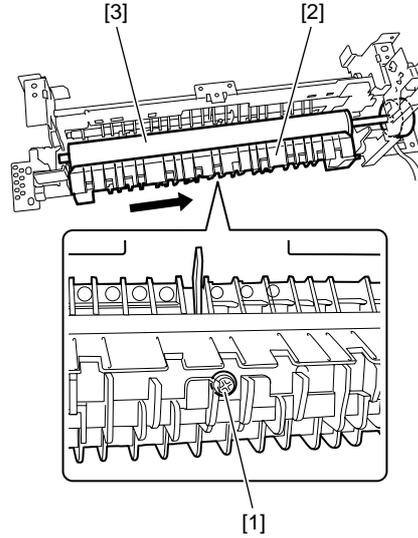
F-8-14

4) Release the hook and remove the gear [1]. The remaining part is the pressure roller [2].
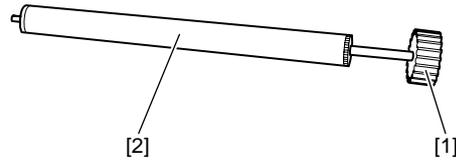
F-8-15

⚠ **Precautions for Installation of Pressure Roller**

When reinstalling the pressure roller, pay attention to the following:

1. The pressure roller bearing must be in touch with the leaf spring [1].
2. The left and right bearings [2] must be installed properly.
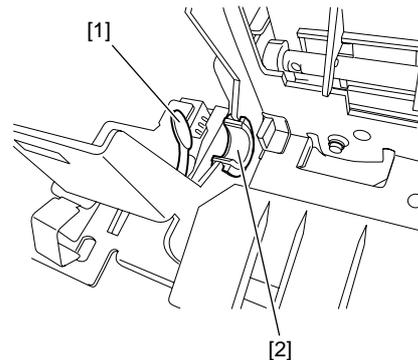
F-8-16

8.4.3 Fixing Film

8.4.3.1 Removing the Fixing Film Unit

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

1) Remove the fixing unit.

2) Remove the three screws [1], and then remove the reversing guide [2] and sensor lever unit [3].
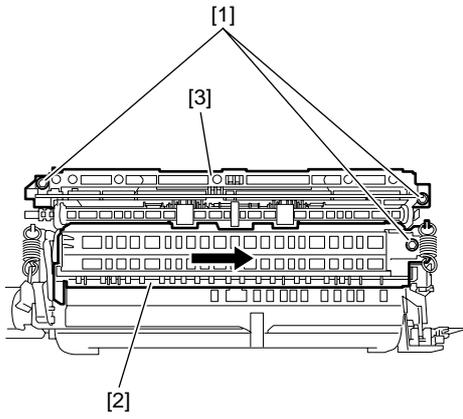
F-8-17

3) Remove the two pressure spring [1], and then remove the two pressure plate [2].
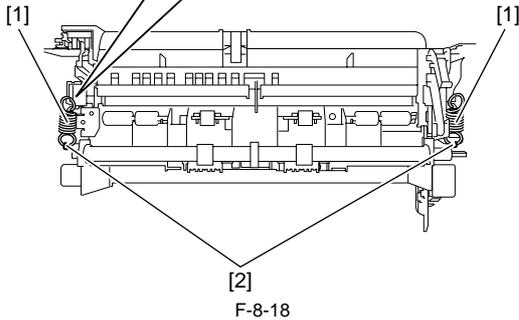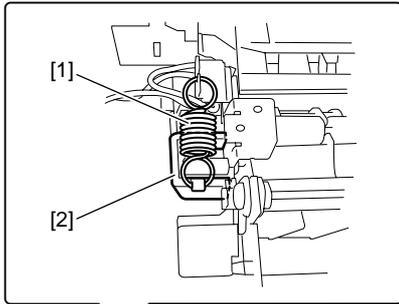
F-8-18

⚠

See the illustration below when reinstalling the pressure springs [1] and plates [2].
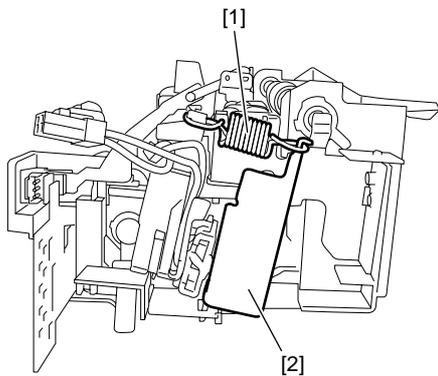
F-8-19

4) Remove the screw [1] and remove the delivery guide [2].
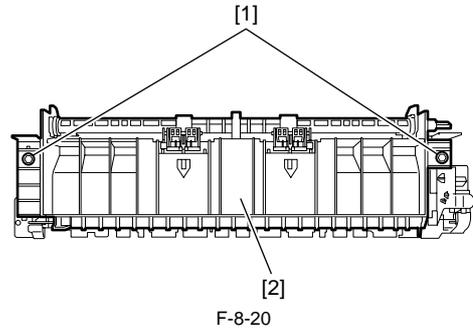
F-8-20

5) Remove the two screws [1], and then remove the grounding plate [2] and guide [3].
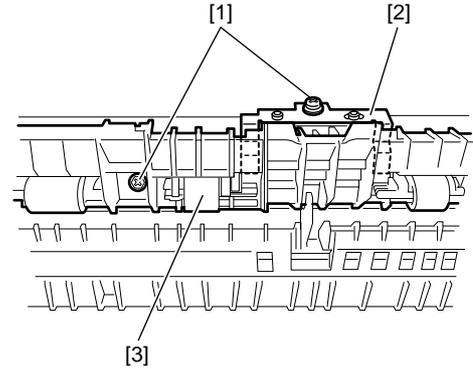
F-8-21

6) Remove the fixing film unit [1].
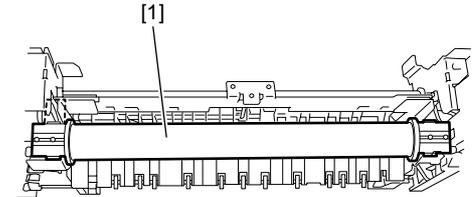
F-8-22

8.4.4 Fixing Delivery Sensor

8.4.4.1 Removing the Delivery Sensor

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

1) Remove the front cover and front-left cover.
2) Remove the boss [1], and then slide the guide (front) [2] upward to remove it.
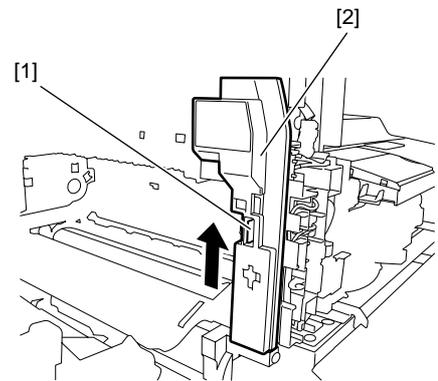
F-8-23

3) Disconnect the connector [1], and remove the delivery sensor [2] with the claw released.

F-8-24
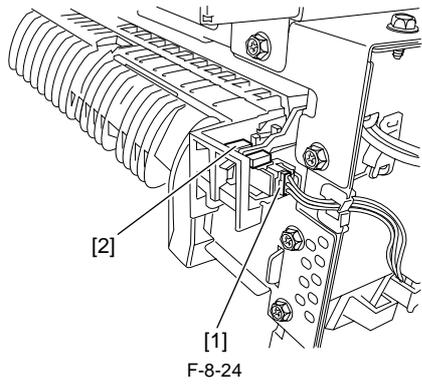
Chapter 9 External and Controls

Contents

9.1 Control Panel

9.1.1 Outline

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

The machine's control panel consists of the following PCBs, and is controlled by the ASIC of the image processor PCB.
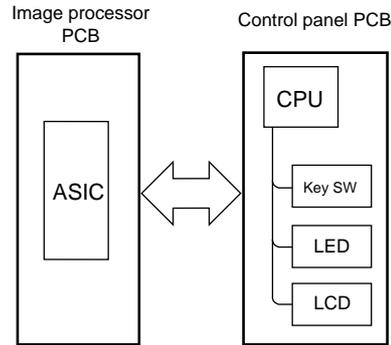
F-9-1

9.2 Fans

9.2.1 Outline

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

This machine has a fan on the rear side to discharge the hot air around the fixing unit and cool the laser scanner unit and electric elements on PCBs. The fan is controlled by the CPU on the DC controller PCB. Its operating conditions are as follows:

<Startup conditions>
    1. During normal rotation, in the fixing cleaning mode (user mode), or after paper has reached the registration clutch
    2. During transfer roller cleaning (user mode) or after operation of the main motor

<Stop conditions>
    1. After post-rotation, after completion of the cleaning mode, or 30 seconds after stop of the main motor
    2. After stop of the main motor due to opening of a door or occurrence of a jam or other failures

The CPU on the DC controller CPU outputs a Fan Drive signal (FANON = 'H') to turn the fan.
The CPU judges that a fan failure has occurred if it detects a Fan Lock Detection signal (FANLOCK = 'H') during fan rotation.
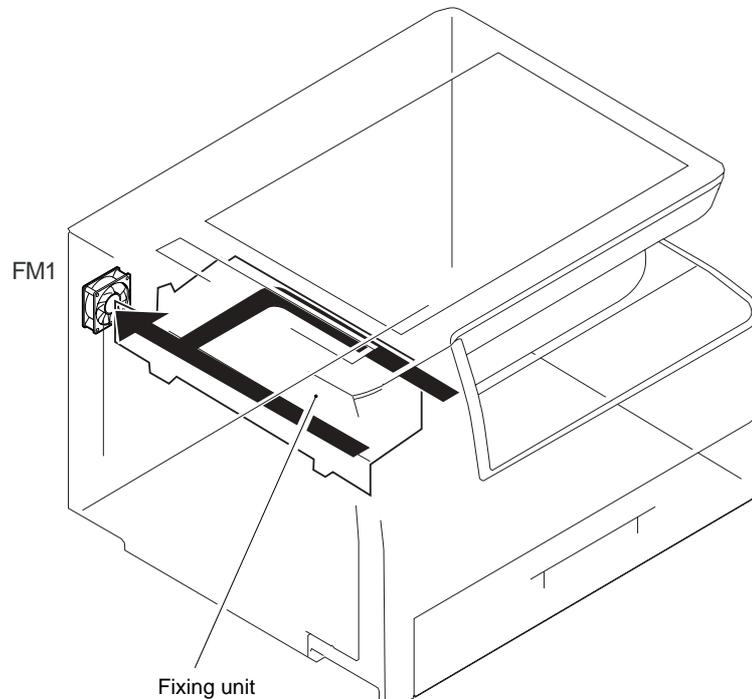
F-9-2

9.3 Power Supply System

9.3.1 Power Supply

9.3.1.1 Outline

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

When the main power switch (SW1) is turned on, AC power is supplied to the low-voltage power supply circuit in the power supply PCB.
The low-voltage power supply circuit supplies +3.3 V, +5 V, and +24 V to operate the machine.
+24 V is supplied to the motors, fan, electromagnetic clutch, solenoid, etc. +5 V and +3.3 V are supplied to the DC controller PCB, image processor PCB, anlog processor PCB.
There are two types of +24 V voltages: +24 VR which is normaly supplied from the low voltage power supply and +24 VU which is cut off when the left door is opened. The +24VU is supplied to the DC controller PCB and main motor. The +24 VU also plays the role of a door open detection signal (DOPEN). This signal allows the CPU to detect that the left door has opened.

T-9-1

Part Name	Function
Power supply PCB	Generates DC power from AC power.
Main power switch (SW1)	Supplies AC power to the power supply PCB.
Interlock switch (SW2/SW3)	Detects opening/closing of the left door and front cover, and cuts off +24 VR.
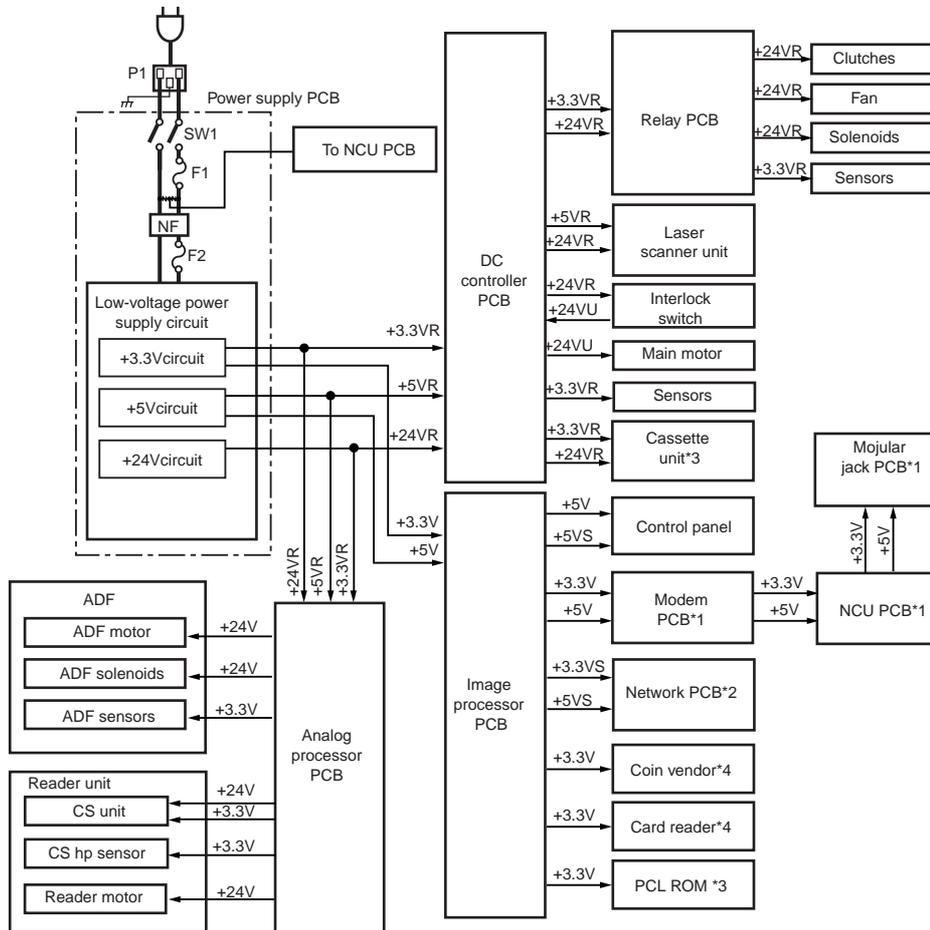
*1 : Only if equipped with Fax functions.
*2 : Only if equipped with Network functions.
*3 : Only if equipped with PCL functions.
*4 : Option

F-9-3

9.3.1.2 Rated Output of the Power Supply PCB

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

T-9-2

Output	24VR	5V	5VR	3.3V	3.3VR
Rated output voltage	24V	5.1V	5.1V	3.4V	3.4V

Output	24VR	5V	5VR	3.3V	3.3VR
Output voltage tolerance	+10%, -5%	+3%, -4%	+3%, -4%	+3%, -3%	+3%, -3%
Rated output current	4.5A	0.3A	0.7A	2.4A	0.8A
Overcurrent protection trigger current	7.0A	4.0A	2.0A	3.7A	2.0A
Overvoltage protection trigger voltage	32.5V	8.0V	8.0V	5.5V	5.5V

9.3.2 Protection Function

9.3.2.1 Protective Functions

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

The power supply PCB is equipped with an over-current/over-voltage protection mechanism to prevent damage to the power circuit in the event of an over-current or over-voltage, as caused by a short circuit or the like on the load side.
If the over-current/over-voltage protective mechanism has gone ON, disconnect the power cord, and correct the fault; then, connect the power cord once gain to reset the machine. If short circuiting and resetting are repeated, the internal fuse (F1, F2) can melt.

9.4 Parts Replacement Procedure

9.4.1 External Covers

9.4.1.1 External Covers

9.4.1.1.1 Detaching the Reader Rear Cover (Small)

0013-2399

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

1) Remove the screw [1], and then detach the reader rear cover (small).
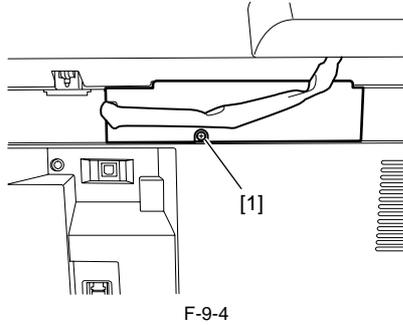
F-9-4

9.4.1.1.2 Detaching the Reader Rear Cover

0013-2400

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

1) Open the ADF or copyboard.
2) Detach the reader rear cover (small).
3) Remove the three screws [1], disconnect the three connectors [2], and then remove the ground wire [3].
4) While pushing the reader rear cover [5] upward with your finger to release the claw [4], slide the cover backward to remove it.
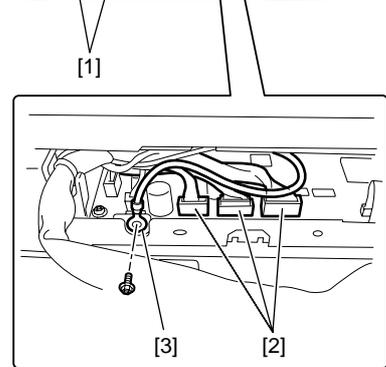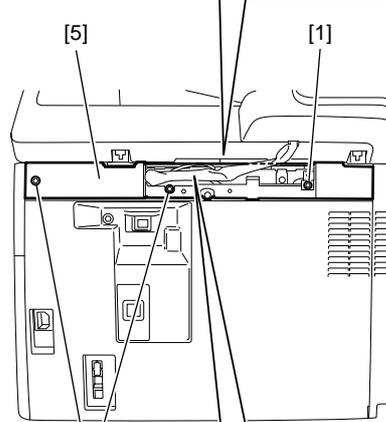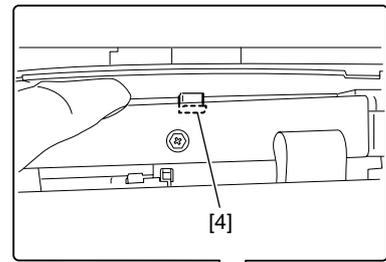
F-9-5

9.4.1.1.3 Detaching the Rear Cover

0013-2401

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

1) To release the hooks at the back of the machine, move the machine backward until the hooks are about 5 cm away from the edge of the desk and so on.
2) Remove the screw [1].
3) Release the three claws[2] at the right and the three claws [3] at the top.
4) Release the two claws [4] at the bottom, and then detach the rear cover [5].
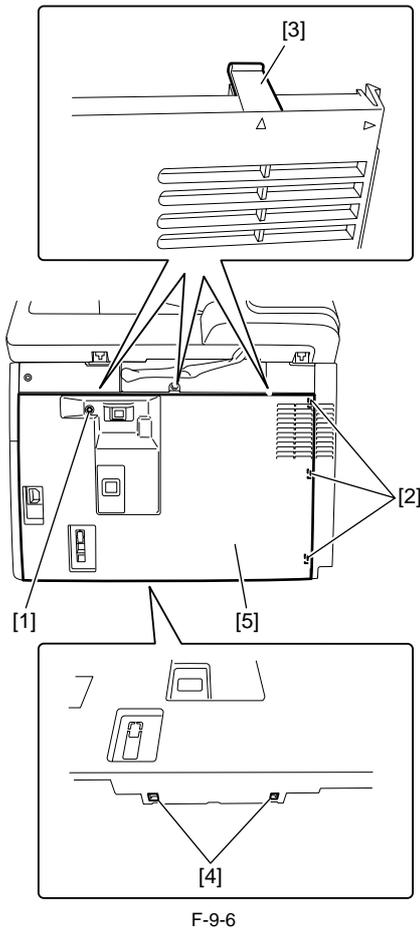
F-9-6

9.4.1.1.4 Detaching the Reader Left Cover

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

1) Open the left door.
   2) Remove the two screws [1], and then detach the reader left cover [2] as shown.
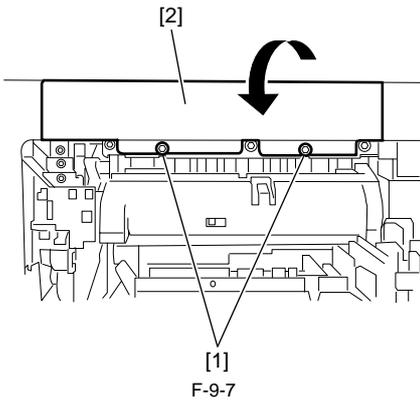
F-9-7

9.4.1.1.5 Detaching the Front-left Cover

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

1) Detach the reader left cover.
   2) Remove the two screws [1].
   3) Open the left door, and then remove the screw [2]
   4) Detach the front-left cover [3].
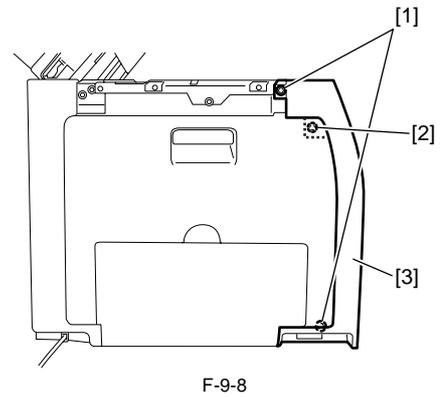
F-9-8

9.4.1.1.6 Detaching the Rear-left Cover

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

1) Detach the rear cover and reader left cover.
   2) Remove the two screws [1].
   3) Open the left door.
   4) Release the inner hook [2] by accessing it from the back of the machine, and then detach the rear-left cover [3].
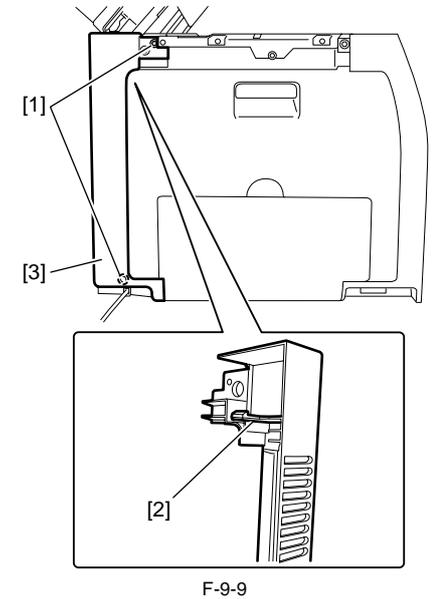
F-9-9

9.4.1.1.7 Detaching the Reader Right Cover

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

1) Remove the reader rear cover, and then detach the rear cover and right cover.
   2) Release the claw [1], and then slide the reader right cover [2] in the direction of the arrow to detach it.
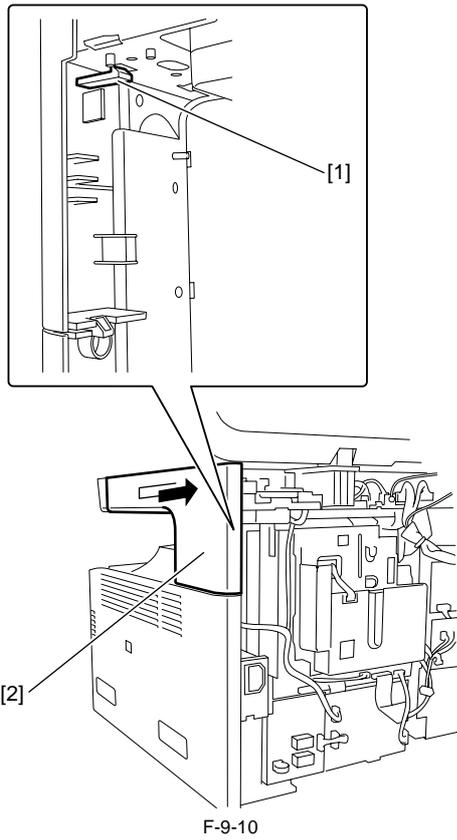
F-9-10

9.4.1.1.8 Detaching the Right Cover

<u>0013-2408</u>

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

1) Detach the rear cover.
  2) To release the hooks at the lower right of the machine, float the right side of the machine about 5 cm above the edge of the desk and so on.
  3) Release the two claws [1] at the rear back of the right cover.
  4) Using a flathead screwdriver, release the three claws [2] at the top of the right cover.
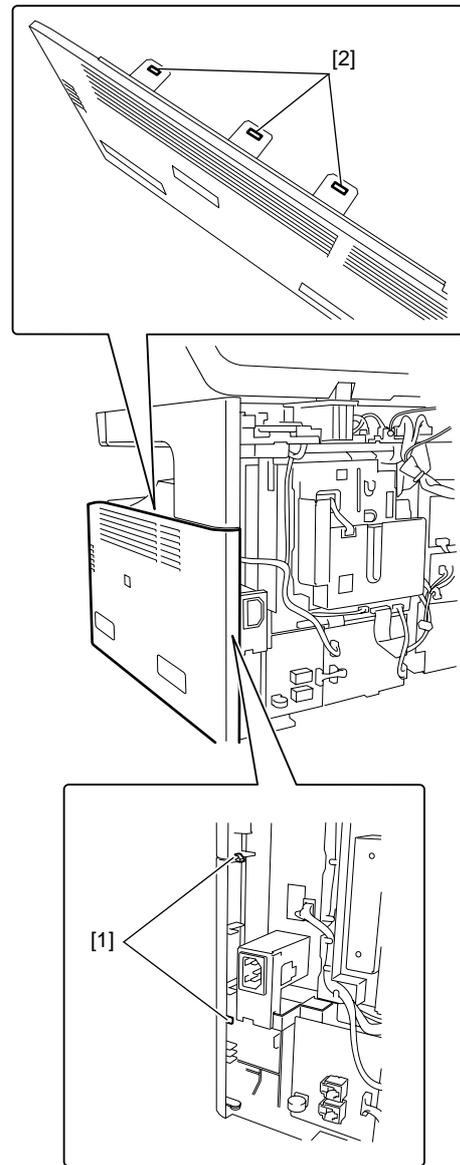
F-9-11

5) Remove the claw [1] at the front, and then release the two hooks [2] using a flathead screwdriver.
  6) Remove right cover [4] in the direction of the arrow, and then detach the right cover [4] by releasing the three hooks [3] at the bottom.
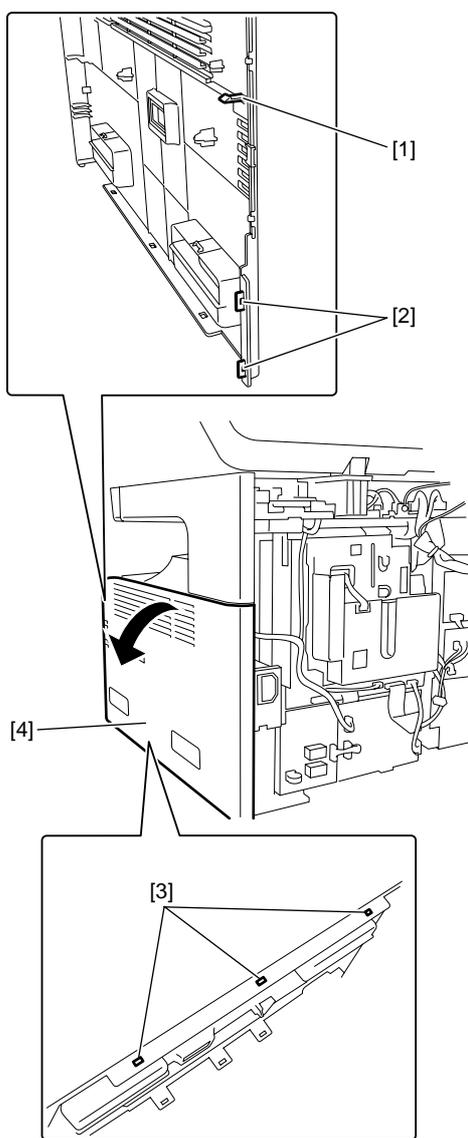
F-9-12

9.4.1.1.9 Detaching the Front Cover

0013-2409

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

1) Remove the cassette.
2) Using a flathead screwdriver, release the two claws [1] at the right and four hooks [2] at the top.
3) By releasing the two bosses [3] at the bottom, detach the inner cover [4].
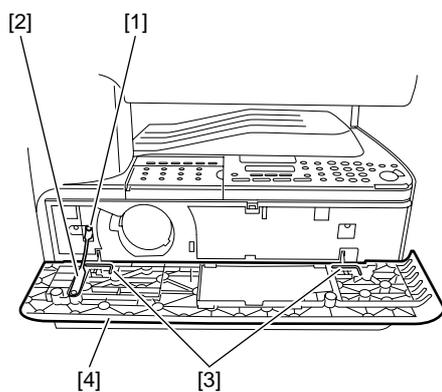
F-9-13

9.4.1.1.10 Detaching the Inner Cover

0013-7317

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

1) Detach the toner supply bottle.
2) Remove the two screws [1].
3) Release the two claws [2], and the remove the inner cover [3].
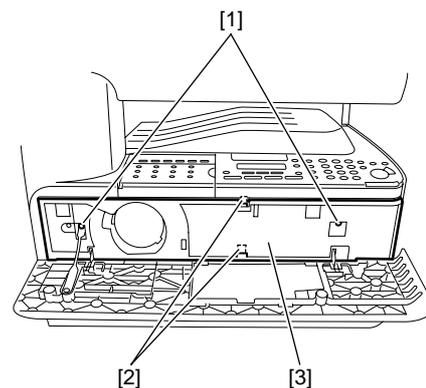
F-9-14

9.4.1.1.11 Detaching the Delivery Tray Front Cover

0013-7319

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

1) Detach the reader left cover, the front-left cover, and the inner cover.
2) Remove the screw [1], and then detach the delivery tray front cover [2].
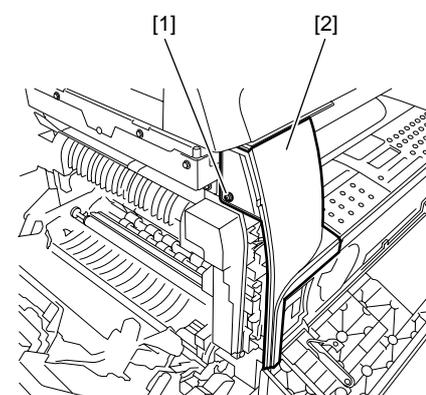
F-9-15

9.4.1.1.12 Detaching the Delivery Tray

0013-2411

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

1) Remove the reader left cover and the front-left cover.
2) Remove the rear cover, the reader rear cover, the right cover, the reader right cover, the inner cover and the delivery tray front cover.
3) Detach the operation panel.
4) Detach the delivery tray [1] from the front.
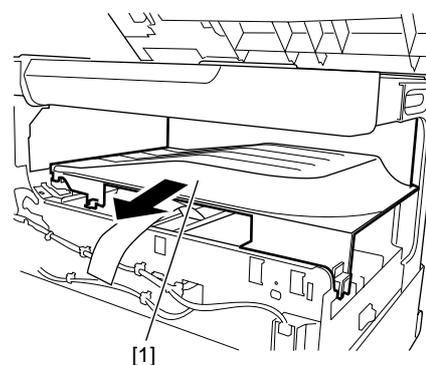
F-9-16

9.4.2 Drive Unit

9.4.2.1 Removing the Main Drive Unit

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

1) Remove the rear cover, the reader left cover and the rear-left cover.
2) Remove the fan duct, the main motor, the relay PCB, the registration

clutch, and the pickup drive unit.
3) Release the cable from all clamps on the main drive unit.
4) Remove the five screws [1], and then remove the main drive unit [2].

F-9-17
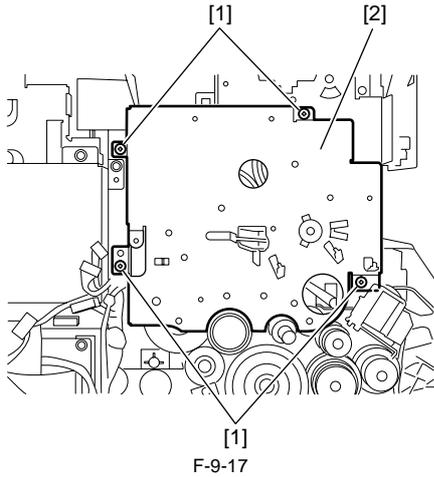
9.4.2.2 Removing the Pickup Drive Unit

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

1) Remove the rear cover, the reader left cover and the rear-left cover.
2) Remove the relay PCB and the registration clutch.
3) Release the cable from all clamps on the pickup drive unit.
4) Remove the three screws [1], and then remove the pickup drive unit [2].

F-9-18
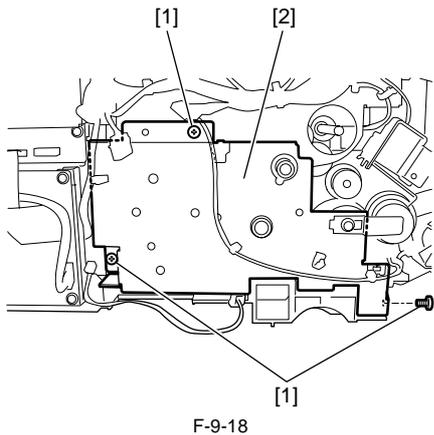
9.4.2.3 Removing the Fixing/Duplex Drive Unit

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

1) Remove the rear cover, the reader left cover and the rear-left cover.
2) Remove the fan duct, the main motor, the relay PCB, the registration clutch, the pickup drive unit, and the main drive unit.
3) Release the cable from all clamps on the fixing/duplex drive unit.
4) Remove the three screws [1], and then remove the fixing/duplex drive unit [2].

F-9-19
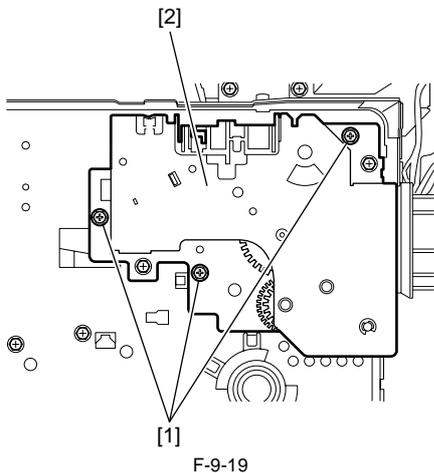
9.4.3 Power Supply Unit

9.4.3.1 Removing the Power Supply PCB

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

1) Detach the rear cover, the right cover, the inner cover, and the delivery tray front cover, and then remove the operation panel and delivery tray.
2) Remove the speaker.
3) Disconnect all connectors on the power supply PCB.
4) Remove the five screws [1], and then remove the power supply PCB [2].

F-9-20
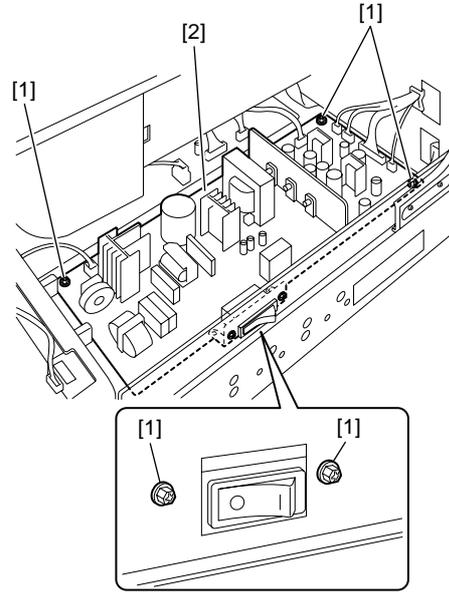
9.4.4 Control Panel

9.4.4.1 Removing the Operation Panel Unit

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

1) Detach the reader left cover, the front-left cover and the delivery tray front cover.
2) Detach the rear cover, the right cover and inner cover.
3) Remove the four screws [1].
4) Pull out the operation panel [2] slightly, and then remove the flexible cable [3].
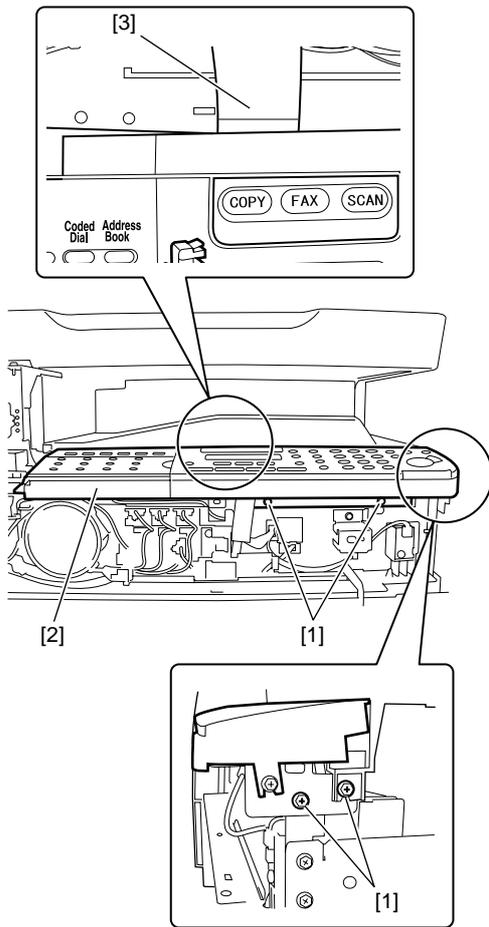
F-9-21

9.4.5 Image Processor PCB

9.4.5.1 Removing the Image Processor PCB

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

1) Detach the rear cover.
2) Remove the modular jack PCB.
3) Disconnect the connector [1], and then release the cable from the clamp.
4) Remove the three screws [2], and then remove the LAN cover [3].
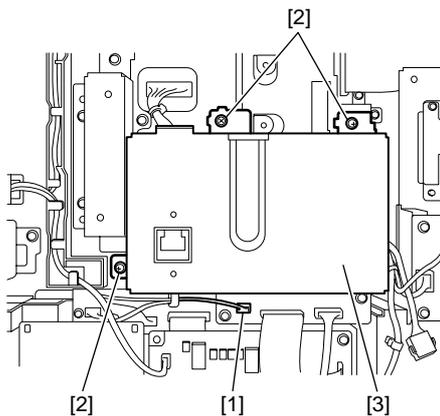
F-9-22

5) Disconnect all connectors from the modem PCB and the network PCB.
6) Remove the three screws [1], and then remove the modem PCB [2].
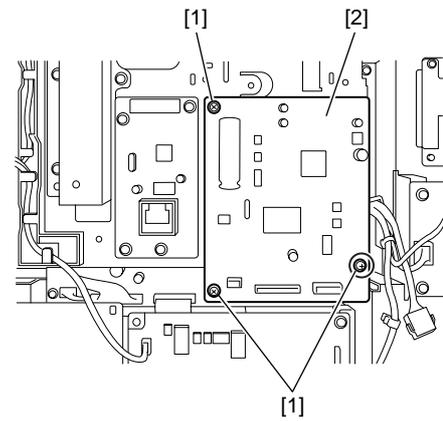
F-9-23

⚠ When mounting the screw surrounded with a circle, mount it with a grounded plate spring.

7) Disconnect the connector of the cable in the guide [1], remove the claw [2], and slide the guide [1] upward to remove it.
8) Remove the six screws [3], and then remove the IP cover [4].
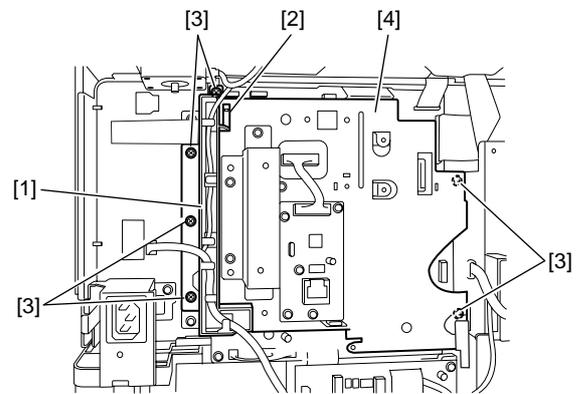
F-9-24

9) Remove the screw [1], and then remove the ROM PCB [2].
10) Remove the memory PCB [3].
11) Remove the USB memory [4].
12) Remove the screw [5], and then remove the counter PCB [6].
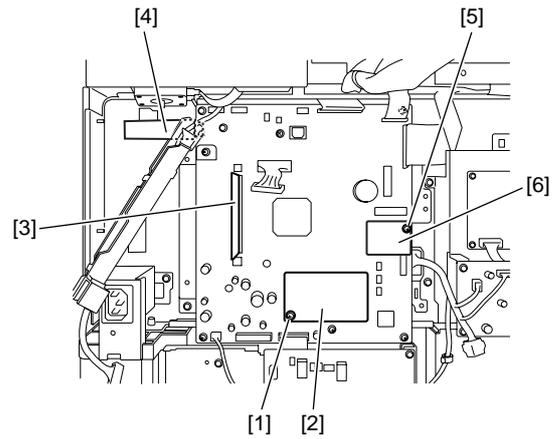
F-9-25

13) Disconnect all connectors and flexible cables from the image processor PCB.
14) Remove the six screws [1], and then remove the image processor PCB [2].
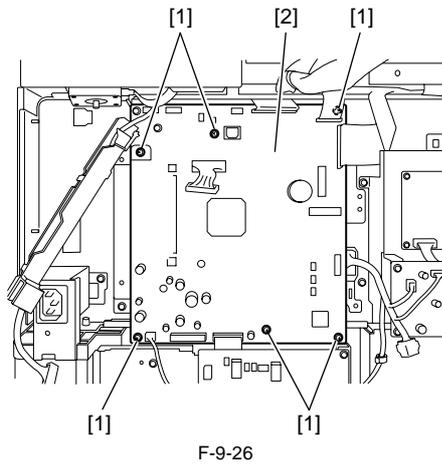
F-9-26

9.4.5.2 Procedure after Replacing the Image Processor PCB

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

If you have replaced the image processor PCB with a new one, perform the following operations:
- Attach altogether the PCB on the old image processor PCB in the new image processor PCB.
- Using the service support tool, download the latest firmware (System/Boot/PCL*1) and language files.
*1: if equipped with PCL functions
- Input the all value printed on the service label affixed to the rear cover.
Make the following adjustments:
- Correction of output between CS channels
1) Enter the service mode.
Sequentially press the Additional functions key, 2 key, 8 key, and Additional functions key on the operation panel.
2) Press the arrow key on the touch panel to display "TEST MODE".
3) Press [OK].
4) Press the [2] key to display "SCAN TEST".
5) Press the [1] key to display "SHADING".
6) Press [OK].
After completion of the above procedure, the contact sensor output is compensated and parameters are set automatically.
After completion of automatic adjustment, "OK" is displayed.
- Read position adjustment (Stream reading: Only when the ADF is installed)
1) Enter the service mode.
Sequentially press the Additional functions key, 2 key, 8 key, and Additional functions key on the operation panel.
2) Press the arrow key on the touch panel to display "TEST MODE".
3) Press [OK].
4) Press the [2] key to display "SCAN TEST".
5) Press the [3] key to display "SHEET POS ADJ".
6) Press [OK].
The optical system starts scanning. Several seconds later, automatic adjustment of the reading position finishes and "OK" appears.

⚠ If automatic adjustment fails, "NG" appears. Perform the following procedure:
Clean the platen guide of the ADF and the document glass of the host machine, and then retry auto adjustment.

9.4.6 NCU PCB

9.4.6.1 Removing the NCU PCB

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

1) Detach the rear cover.
2) Remove all connectors and flexible cables from the NCU PCB.
3) Remove the two screws [1], and then remove the NCU PCB [2].
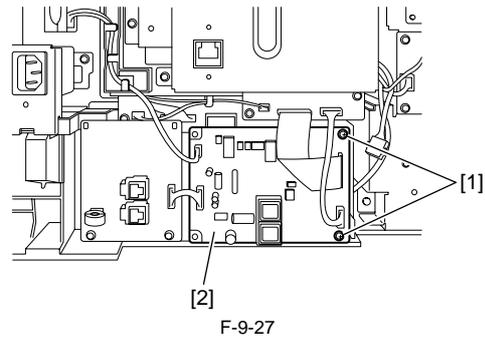
F-9-27

9.4.7 Modular Jack PCB

9.4.7.1 Removing the Modular Jack PCB

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

1) Detach the rear cover.
2) Disconnect all connectors from the modular jack PCB.
3) Remove the two screws [1], and then remove the modular jack PCB [2].
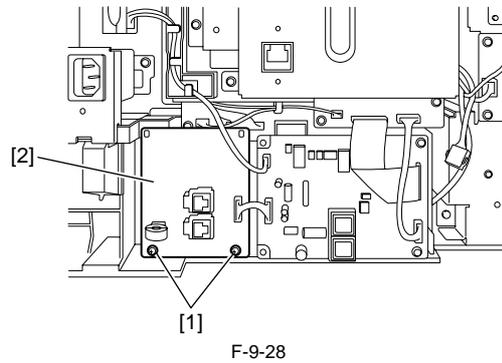
F-9-28

9.4.8 Modem PCB

9.4.8.1 Removing the Modem PCB

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

1) Detach the rear cover.
2) Disconnect the connector [1], and then release the cable from the clamp.
3) Remove the three screws [2], and then remove the LAN cover [3].
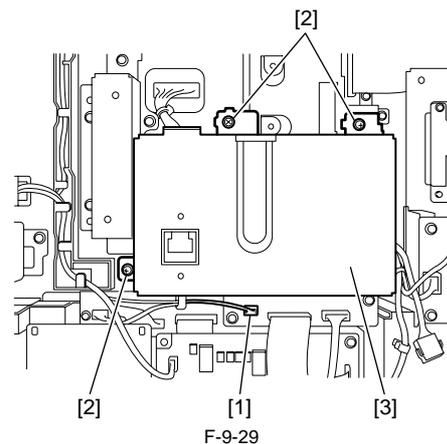
F-9-29

4) Disconnect all connectors from the modem PCB.
5) Remove the three screws [1], and then remove the modem PCB [2].
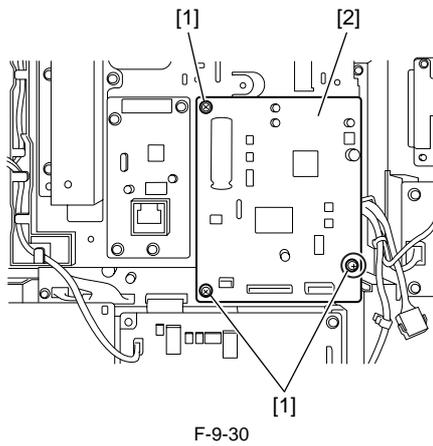
F-9-30

⚠ When mounting the screw surrounded with a circle, mount it with a grounded plate spring.

9.4.9 Network PCB

9.4.9.1 Removing the Network PCB

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

1) Detach the rear cover.
    2) Disconnect the connector [1], and then release the cable from the cable clamp.
    3) Remove the three screws [2], and then remove the LAN cover [3].
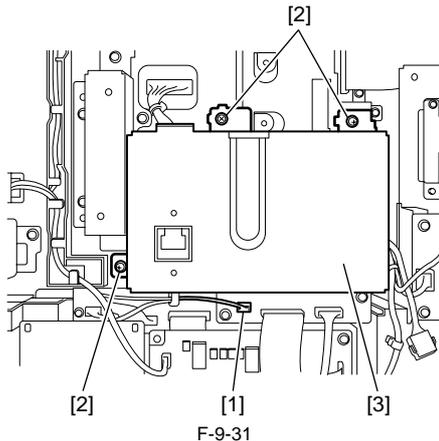
F-9-31

4) Disconnect all connectors from the network PCB.
    5) Remove the four screws [1], and then remove the network PCB [2].
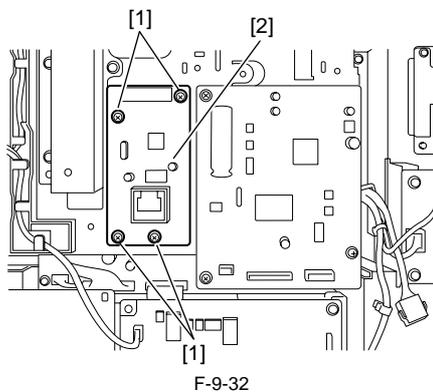
F-9-32

9.4.10 Relay PCB

9.4.10.1 Removing the Relay PCB

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

1) Detach the rear cover.
    2) Disconnect all connectors from the relay PCB.
    3) Remove the two screws [1] and relay PCB [2].
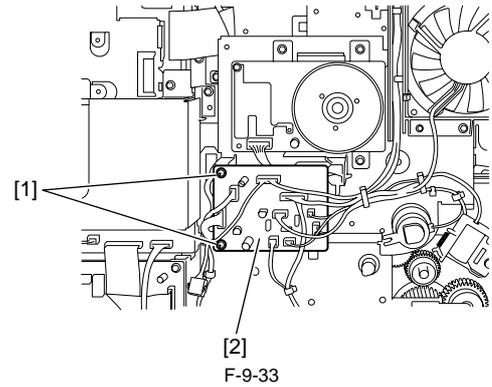
F-9-33

9.4.11 Interlock Switch

9.4.11.1 Removing the Interlock Switch

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

1) Detach the reader left and the front-left cover.
    2) Detach the rear cover, the right cover, the inner cover, the control panel and the delivery tray.
    3) Disconnect the connector (J112) from the DC controller PCB, and then remove the cable from the cable guide by cutting cable ties.
    4) Release the two claws [1], and then remove the interlock switch (for front cover) [2].
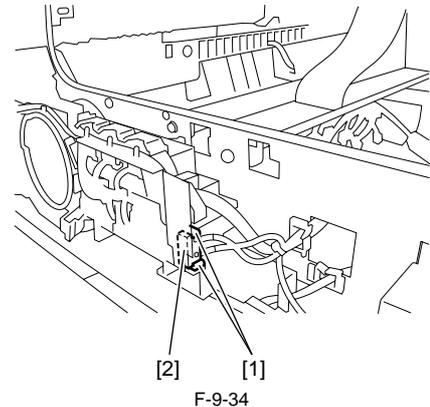
F-9-34

5) Remove the screw [1], and then detach the cable guide [2].
    6) Release the two claws [3], and then remove the interlock switch (for left door) [4].
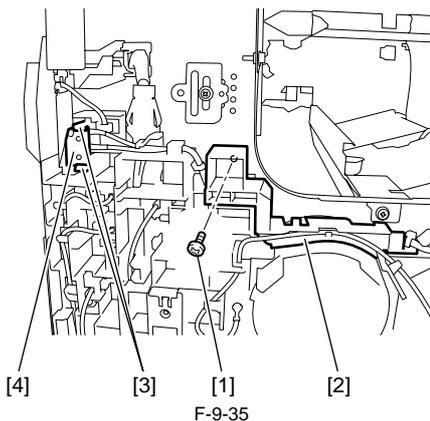
F-9-35

9.4.12 Fans

9.4.12.1 Removing the Heat Discharge Fan

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

1) Detach the rear cover and rear-left cover.
    2) Disconnect the connector [1], release the two hooks [2], and then remove the heat discharge fan [3].
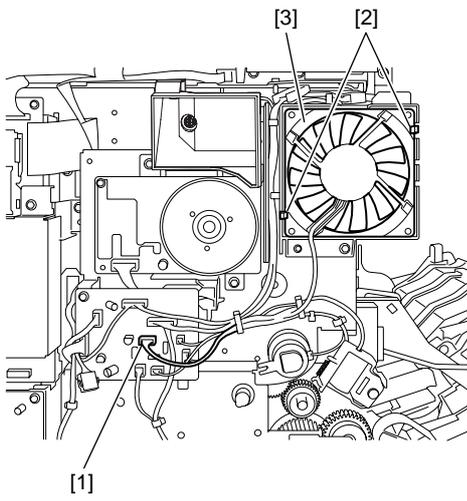
F-9-36

9.4.13 Other

9.4.13.1 Removing the Speaker

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

1) Detach the right cover and the rear cover.
   2) Disconnect the connector [1], and then remove the cable from the cable
   guide.
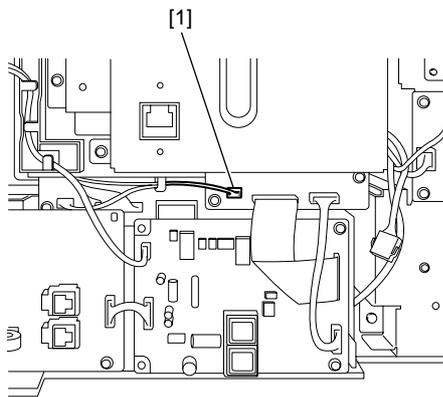
F-9-37

3) Remove the two screws [1], and then remove the speaker [2].
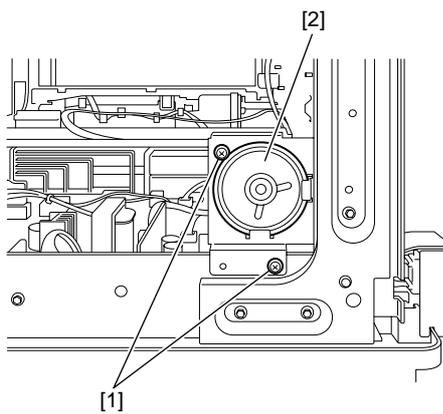
F-9-38

Chapter 10 Original Feeding System

Contents

10.1 Basic Construcion

10.1.1 Outline

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

The ADF is a feeding device used exclusively for stream reading, and its series of operations (original pickup, feeding, delivery) is performed using the drive of the ADF motor (M2001).
An original picked from the original placement assembly is controlled so that its movement will match the read start timing of the host machine's contact sensor.
Then, the original is moved as far as stream reading position, read by the contact sensor (for collection of analog image data), and sent to the delivery assembly.
The ADF has 4 sensors to monitor the state of the original. The names and the functions of the sensors are as follows:

T-10-1

Symbol	Sensor	Function
SR2001	Document set sensor	Detects the presence/absence of an original in the document set assembly.
SR2002	Document edge sensor	Detects the paper feed status and triggers scanning.
SR2003	Registration sensor	Detects the timing at which the leading edge of an original is made to arch at the ADF registration roller.
SR2004	Separation rear sensor	Detects the paper feed status and triggers pickup of the next original.
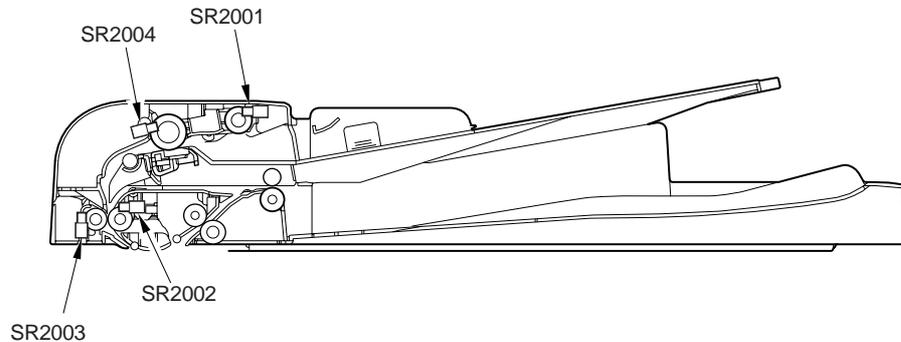
F-10-1

10.1.2 Drive Mechanism

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF
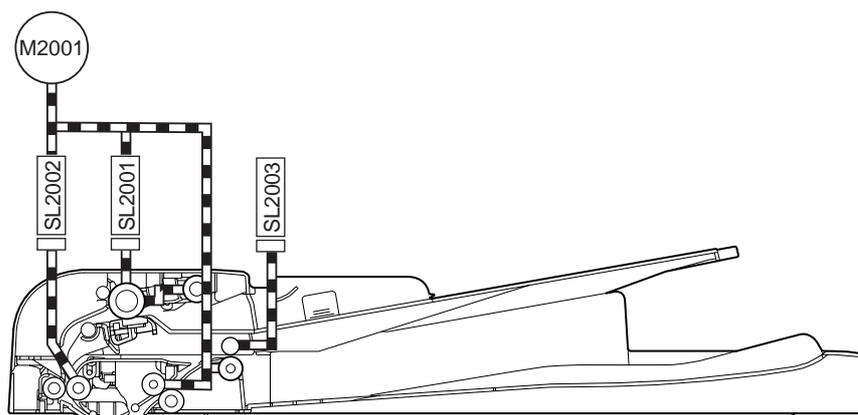
F-10-2

Symbol	Name
SL2001	Pickup solenoid
SL2002	Registration solenoid
SL2003	Roller release solenoid

Symbol	Name
M2001	ADF motor

Symbol	Name
M2001	ADF motor

10.2 Basic Operation

10.2.1 Outline of Operation Mode

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

This machine has 2 operation modes. This machine operates in the operation mode specified by the host machine to perform printing. Operation mode names, brief outline of operations, and associated print modes are given in the following table:

T-10-2

Operation mode name	Outline of operation	Associated print mode
[1] Forward pickup/delivery	Picks up, reads, and then delivers an document.	Single-sided document > Simplex printing Single-sided document > Duplex printing (This operation is performed for documents with the same width.)
[2] Forward feed/reversal delivery	Picks up, reads, reverses, and delivers an document.	Double-sided document > Duplex printing Double-sided document > Simplex printing (This operation is performed for documents with the same width.)

[1] Forward Pickup/Delivery Operation
The document flows as shown below.

MEMO:
This operation is performed for all single-sided documents irrespective of whether document widths are the same.
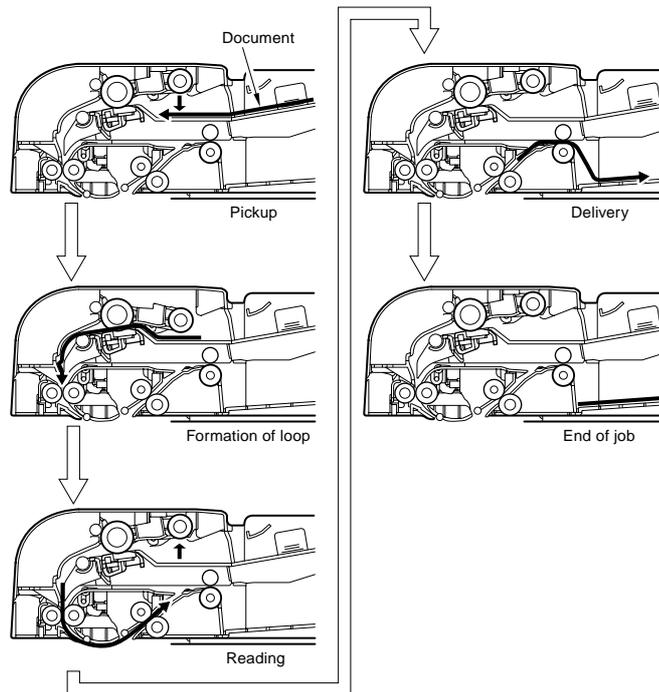
F-10-3

[2] Forward Pickup/Reversal Delivery Operation
The document flow is shown below.

MEMO:
This operation is performed for all double-sided documents irrespective of whether document widths are the same.

Document

Pickup

Reversal

Formation of loop

Formation of loop

Reading

Reverse side reading

Feed

Feed

Next

F-10-4

Reversal

Delivery

Feed

End of job
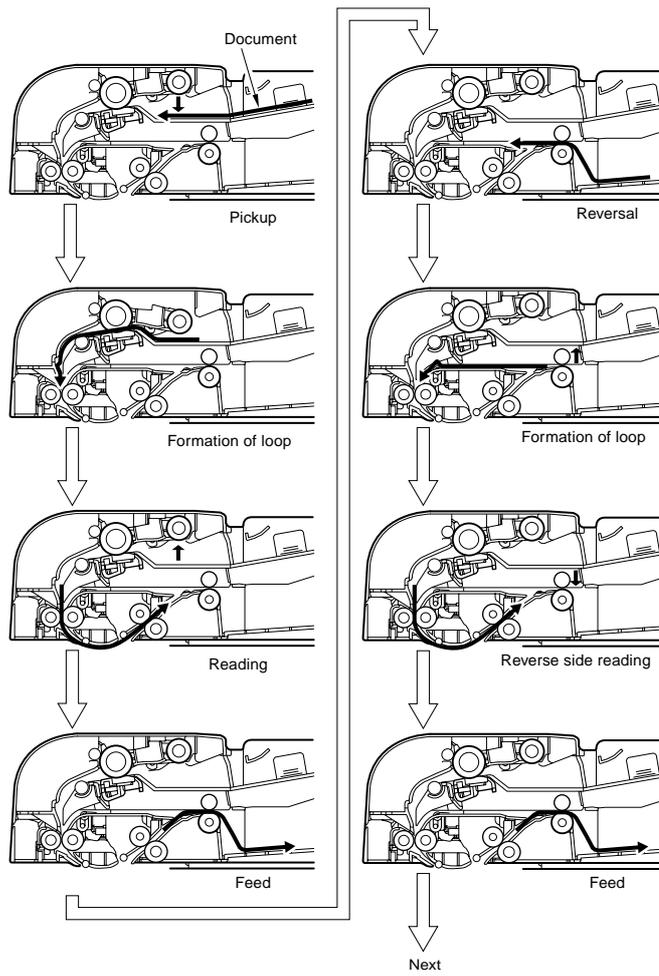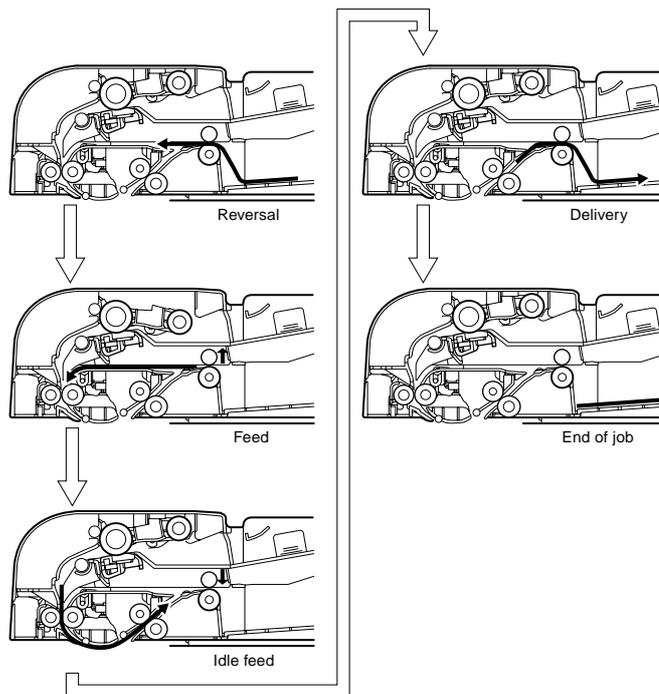
Idle feed

F-10-5

10.2.2 Document Size Detection

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

This machine detects the original size while feeding the original. (Same-type mixed printing and banner paper printing are included.)
The document feeder tray does not have a sensor for detecting the paper size.

T-10-3

Function	Description	Sensor used (symbol)
Document length detection	Detects the document length according to the distance from the position where the document edge sensor (SR2002) turns on to the position where the document edge sensor (SR2002) turns off.	Document edge sensor (SR2002)

10.2.3 Paper Pickup Operation

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

The pickup unit consists of pickup and transport rollers. When the Start Key signal or Original Feed signal is input, the ADF motor (M2001) turns in the normal direction and then the pickup solenoid (SL2001) turns on. The pickup unit lowers and the pickup and transport rollers rotate to feed the paper. The shutter moves up in conjunction with the pickup unit. A separation pad is used to prevent multiple sheets from being fed at the same time.
When the original reaches the registration roller where is it looped, the pickup solenoid (SL2001) turns off and the pickup unit roller rises. Next the registration solenoid (SL2002) turns on and the original is fed by the registration roller. At this time, the pickup roller drive shaft which is rotated via the spring one-way clutch is stationary at the highest position in the pickup unit. The pickup roller incorporating a one-way clutch is rotated by the friction against the paper.

F-10-6
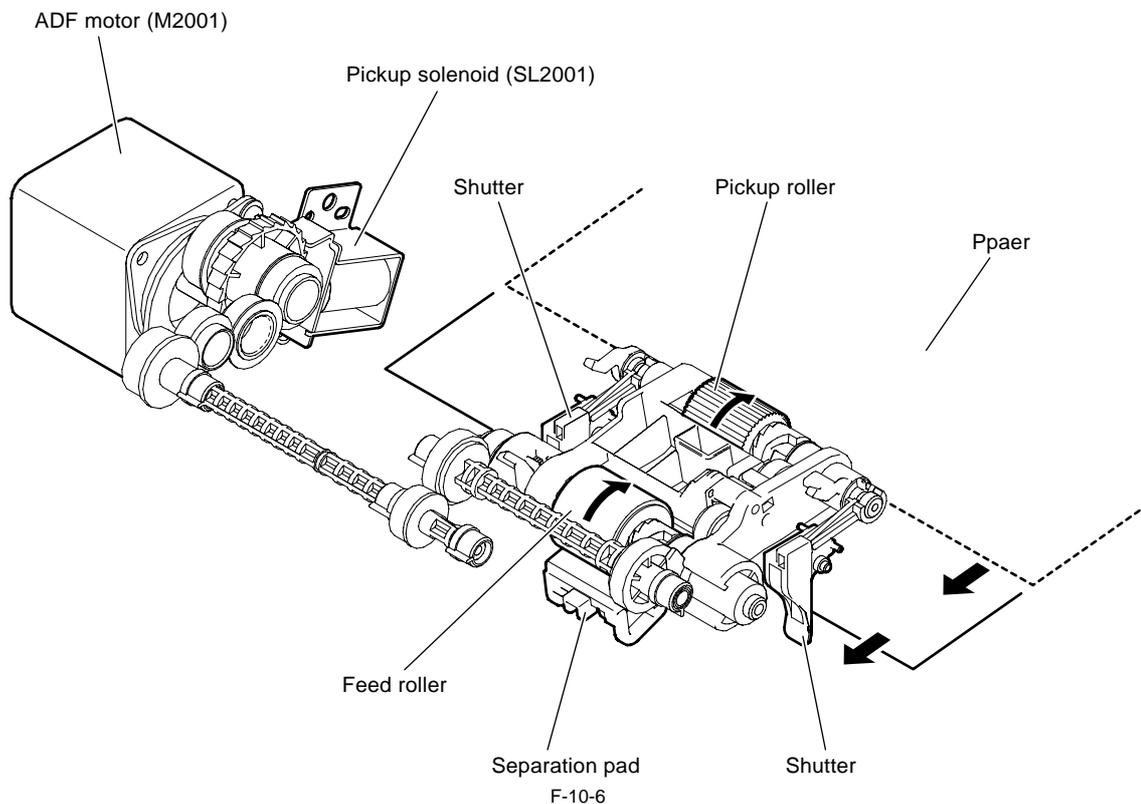
10.2.4 Reversal Operation

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

There are two types of reversal operations, reversal from the top side to the reverse side and reversal from the reverse side to the top side. However, since their operating principles are the same, only reversal from the top side to the reverse side is described below.

a. When the ADF motor (M2001) turns and the registration solenoid (SL2002) turns on, the registration roller turns to feed the paper along the platen guide for surface scanning. After completion of scanning, the paper is fed to the delivery unit by the transport roller 1 and delivery roller.

Platen guide
Registration roller
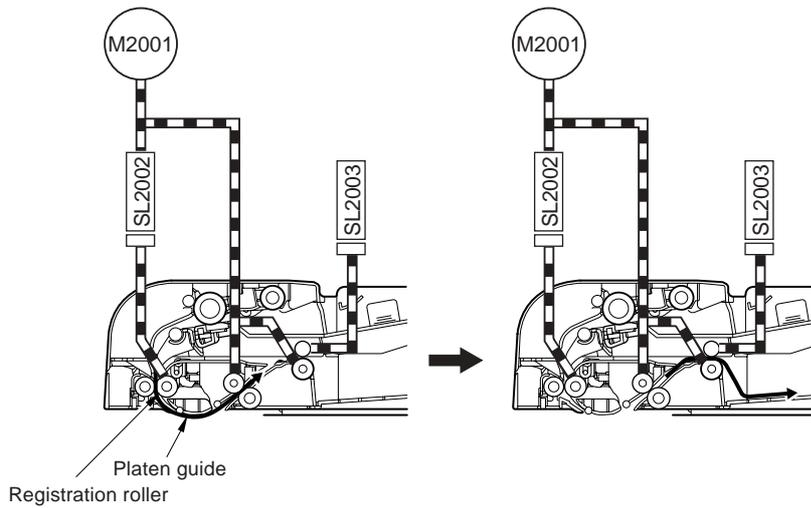
F-10-7

b. Reversal/Feed 1
When the predetermined time has lapsed since the trailing edge of the fed original passed through the document edge sensor (SR2002), the ADF motor (M2001) stops. Immediately after this, the ADF motor turns in the reverse direction to feed the original to the registration roller and the roller release solenoid (SL2003) turns on to release the delivery roller.

Delivery roller
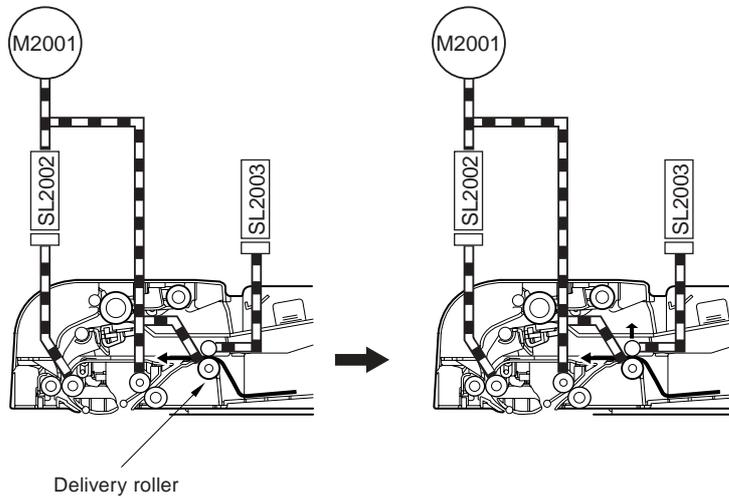
F-10-8

c. Reversal/Feed 2
The original is fed by the ADF motor (M2001), passing through the original scanning unit.
Thus, the original has been reversed. After completion of re-pickup, the roller release solenoid (M2003) turns off at completion of scanning of the reverse side of the original.
After this, re-reversal, feed, and delivery operations are performed.

Delivery roller
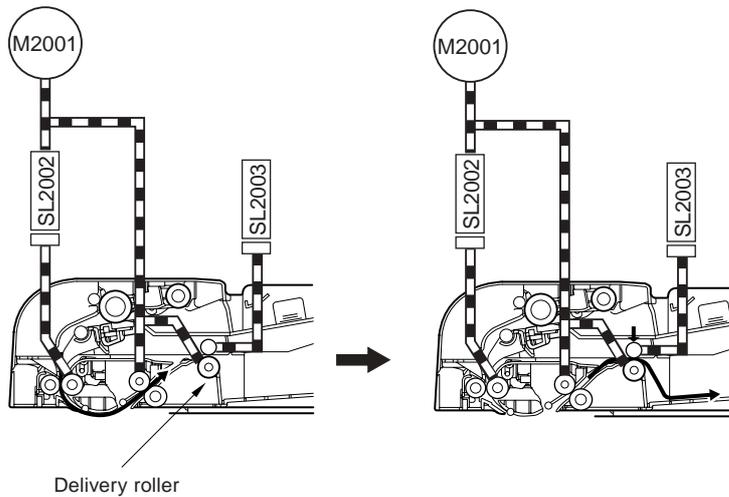
F-10-9

10.2.5 Delivery Operation

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

The original finished with stream reading on the original glass is delivered to the original delivery unit as described below.

a. The original that passed through the original feed/delivery position is fed by the delivery roller which is turned by the ADF motor (M2001). The delivery roller is normally held pressurized. It is released when the roller release solenoid (SL2003) turns on to reverse the original for duplex printing.

Delivery roller
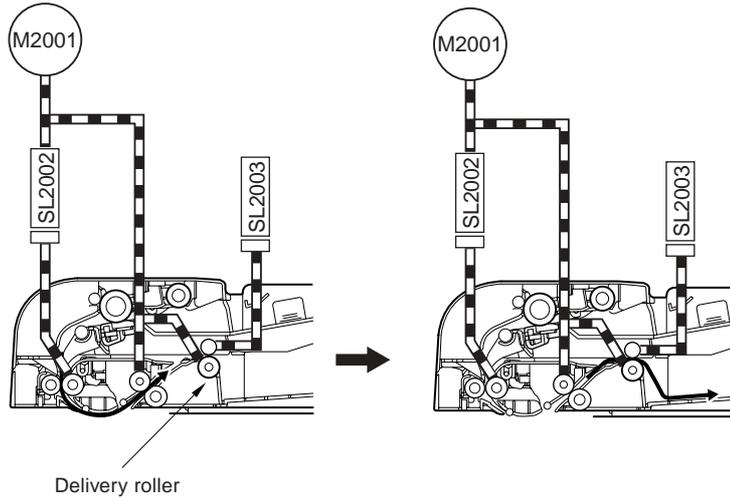
F-10-10

10.3 Detection Jams

10.3.1 Outline

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

This machine detects a jam using the sensors shown below. Document jam check timings are stored in the ROM on the image processor PCB to check whether a jam has occurred according to presence/absence of the document at the relevant sensor position.
When a jam occurs, the host machine stores its code.
Jam codes can be checked by outputting a jam error log report in the service mode of the host machine.
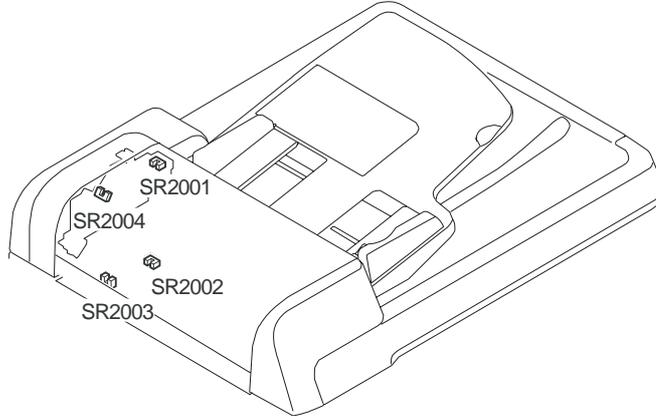
F-10-11
T-10-4

SR2001: Document set sensor

SR2002: Document edge sensor

SR2003: Registration sensor

SR2004: Separation rear sensor

T-10-5

Code	Name	Sensor No.	Description
0000	Unknown jam	-	Other errors
0007	Initial stationary	SR2002, R2003, SR2004	Paper is detected in the transport path before the ADF starts initial operation.
0008	Document edge sensor delay	SR2002	The document edge sensor does not detect paper when the paper has been fed by the predetermined distance since reception of a pickup request.
0009	Document edge sensor stationary	SR2002	The trailing edge of paper is not detected when the paper has been fed by the predetermined distance since detection of it by the docement edge sensor.
000a	Paper absence (Pull out the document.)	SR2001	The document set sensor has been held off since start of pickup.
000c	Delievery delay	SR2002	In case the internal software signal "Delivery Sensor ON" set in the system cannot be detected, when the paper feed request is received and the paper is fed the prescribed distance, and the leading edge of paper is detected and paper is fed the prescribed distance .

Code	Name	Sensor No.	Description
000d	Delievery stationary	SR2002	In case the internal software signal "Delivery Sensor OFF" set in the system cannot be detected, when the leading edge of paper is detected by the document edge sensor and fed the prescribed distance, and after the paper's trailing edge is detected.
0010	Pickup NG	SR2003	The registration sensor has been held off since paper pickup started.

10.4 Parts Replacement Procedure

10.4.1 ADF

10.4.1.1 Removing the ADF

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

1) Remove one screw [1], and then detach the reader rear cover (small).
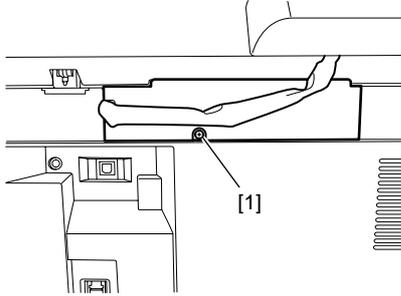
F-10-12

2) Remove the three connectors [1] and one screw [2] to disconnect the cable [3].
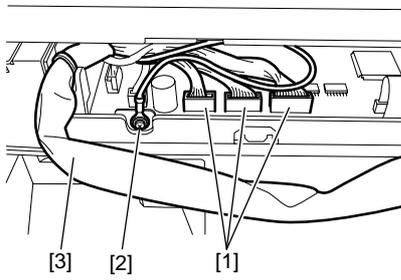
F-10-13

3) Open the ADF [1] vertically, and remove it by lifting upward.
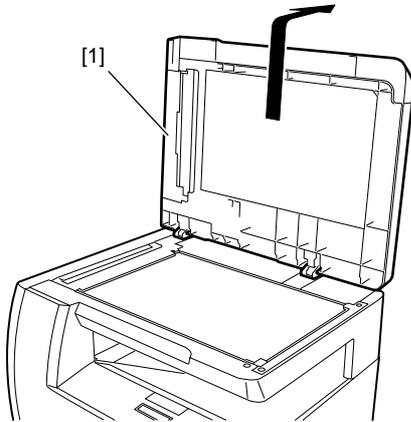
F-10-14

10.4.2 External Covers

10.4.2.1 Removing the Front Cover

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

1) Remove the two screws [1], release two hooks [2], and then detach the front cover [3].
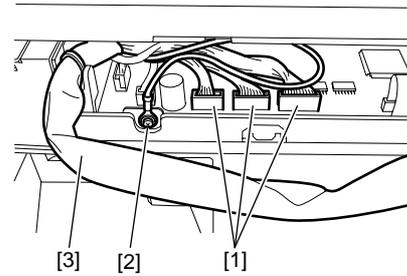
F-10-15

10.4.2.2 Removing the Rear Cover

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

1) Remove the stopper screw [1].
2) Open the pickup tray, remove the screw [2], and then detach the rear cover [3].
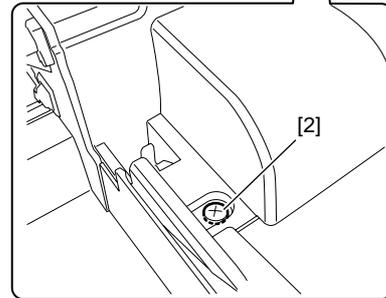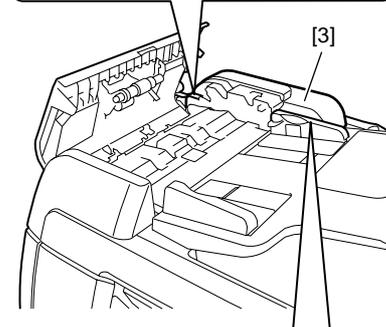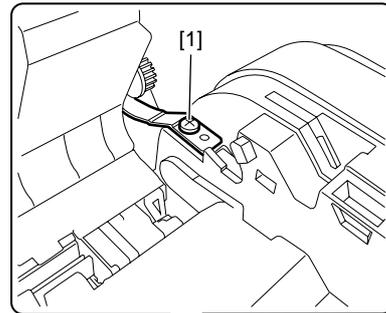
F-10-16

10.4.2.3 Detaching the Open/Close cover

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

1) Remove the screw [1], and then remove the stopper.
2) Remove the front and rear shafts [2] of the open/close cover, and then detach this cover [3].
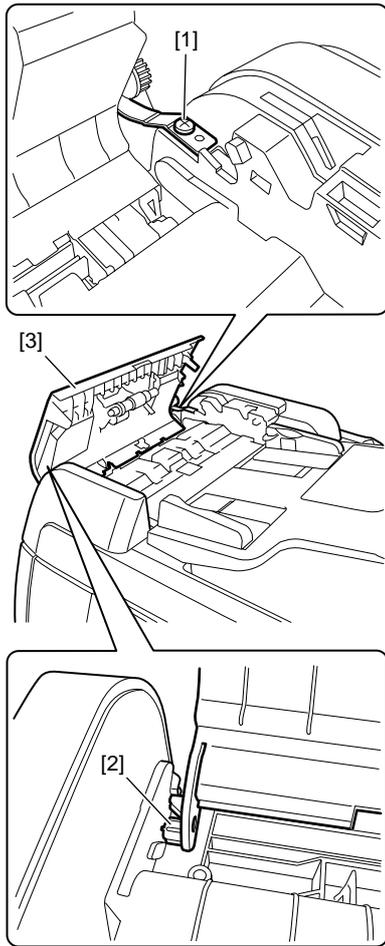
F-10-17

10.4.2.4 Removing the Pickup Tray

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

1) Detach the open/close cover, or open the open/close cover by removing the open/close cover stopper.
2) Remove the left and right shafts [1] of the pickup tray, and then remove the pickup tray [2].
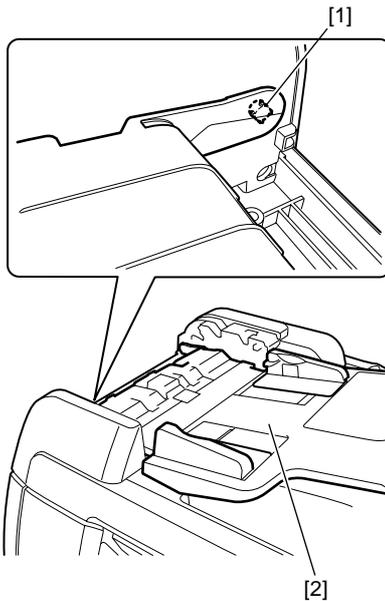
F-10-18

10.4.3 ADF Drive Unit

10.4.3.1 Removing the Drive Unit

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

1) Remove the feed frame unit.
   2) Remove the three screws [1], and then remove the drive unit [2].
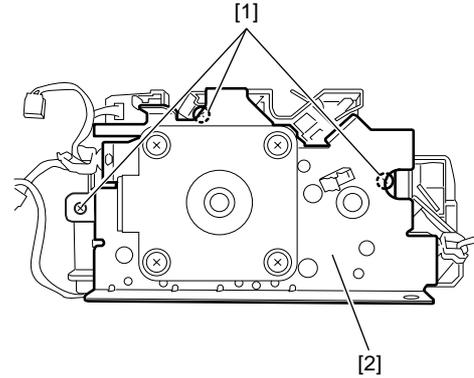
F-10-19

⚠️

When reinstalling the drive unit, make sure that the pickup solenoid lock plate [1] is engaged with the gear.
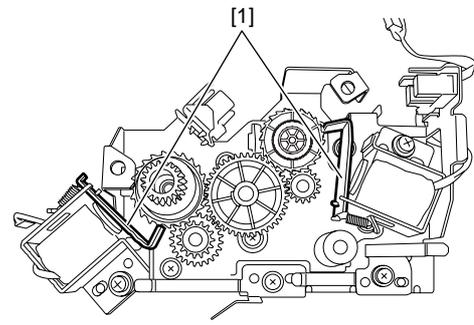
F-10-20

10.4.4 Feed Frame Unit

10.4.4.1 Removing the Feed Frame Unit

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

1) Detach the front cover, the rear cover, the open/close cover and the pickup tray.
   2) Disconnect the five connectors [1].
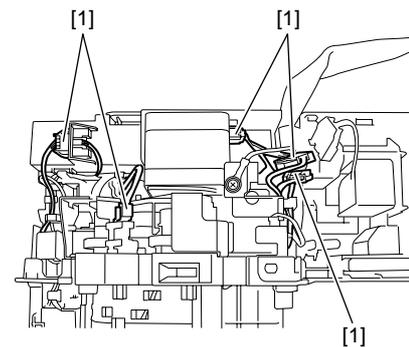
F-10-21

3) Remove the two front screws [1], two rear screws [2], and two grounding screws [3] to remove the feed frame unit [4].
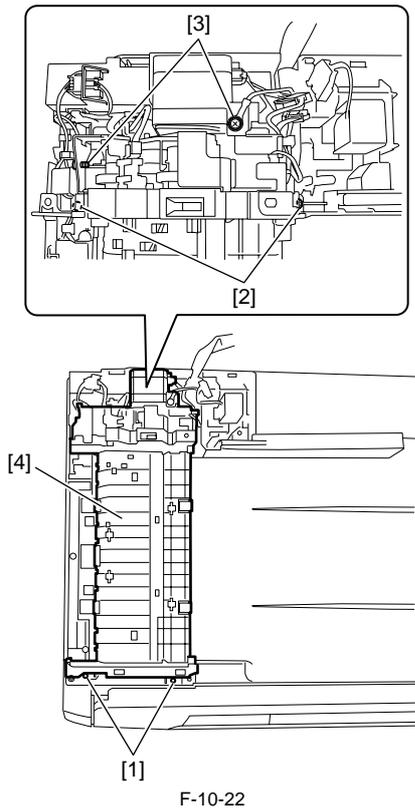
F-10-22

10.4.5 ADF Motor Unit

10.4.5.1 Removing the ADF Motor

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

1) Remove the feed frame unit.
   2) Remove the two screws [1], and then remove the drive unit [2].
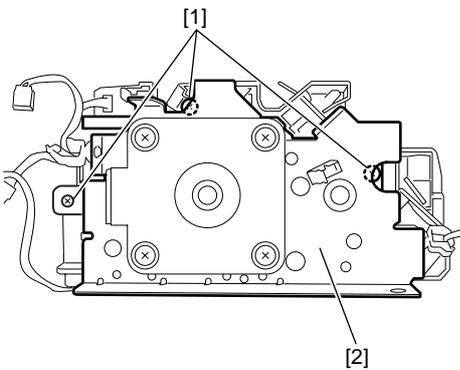
F-10-23

3) Remove the two sensors [1] (by releasing the claws), two leaf springs [2] (one screw each), two solenoids [3] (one screw each), one E-ring [4], three gears [5], and one belt [6].
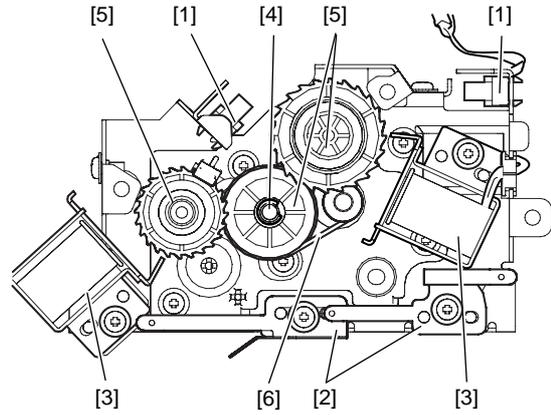
F-10-24

4) Remove the two gears [1] and three screws [2], and then remove the bracket [3].
   5) Remove the clamp and edge saddle from the motor frame. The remaining part is the ADF motor unit [4].
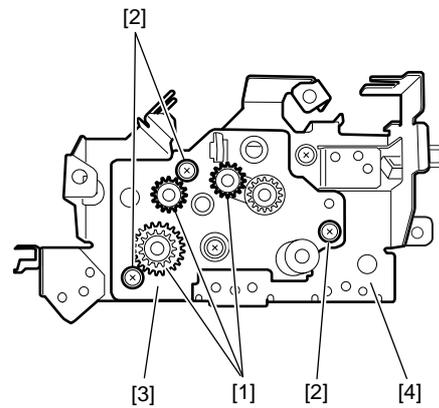
F-10-25

⚠

Since the ADF motor unit was factory-adjusted, do not disassemble it further.
After replacing the ADF motor unit, reinstall the parts removed in steps 3) and 4).

10.4.6 Pick-up/Feed Roller Unit

10.4.6.1 Removing the Pickup/Feed Roller Unit

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

1) Remove the open/close cover.
   2) Remove the shafts, and then remove the two shutters [1].
   3) Press the support plate with your fingers to remove the shaft [2], and then remove the pickup/feed roller unit [3].
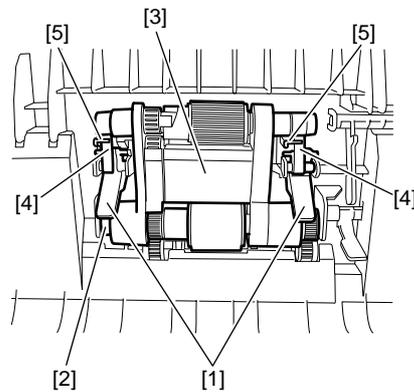
F-10-26

⚠

When reinstalling the pickup/feed roller unit, care should be taken to the following:
1. The arms [4] must be behind the shutters [1].
    2. The arms [4] must be behind the ribs [5].

10.4.7 Pickup Roller

10.4.7.1 Removing the Pickup Roller

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

1) Remove the pickup/feed roller unit.
    2) Remove the screw [1], and then remove the roller bracket [2].
    3) Remove the pickup roller [3].
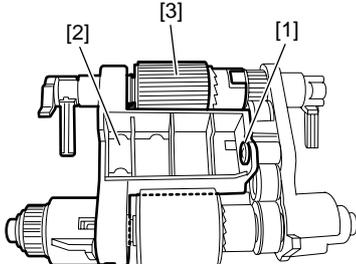
F-10-27

10.4.8 Original Separation Pad

10.4.8.1 Removing the Separation Pad

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

1) Open the open/close cover.
    2) Release the two claws [1], and then remove the separation pad [2].
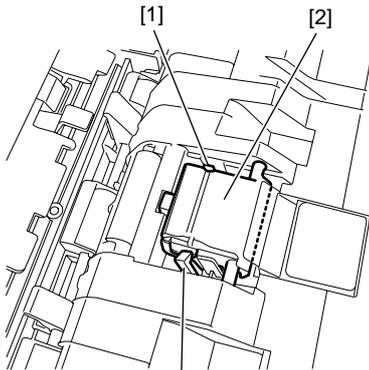
F-10-28

When reinstalling the separation pad, be sure to put the spring [2] in the groove [1].
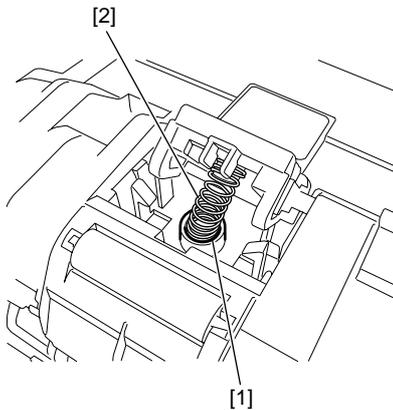
F-10-29

10.4.9 Feed Roller

10.4.9.1 Removing the Feed Roller

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

1) Remove the pickup/feed roller unit.
2) Remove the screw [1], and then remove the roller bracket [2].
3) Remove the feed roller [3].

F-10-30
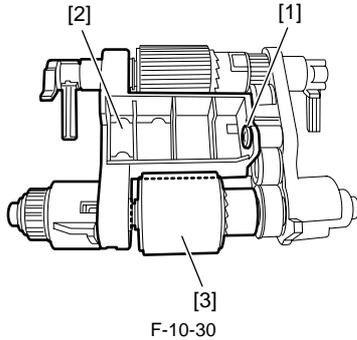
10.4.10 Original Sensor

10.4.10.1 Removing the Document Set Sensor

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

1) Remove the rear cover.
2) Remove the connector [1], release the hook, and then remove the document set sensor [2].

F-10-31
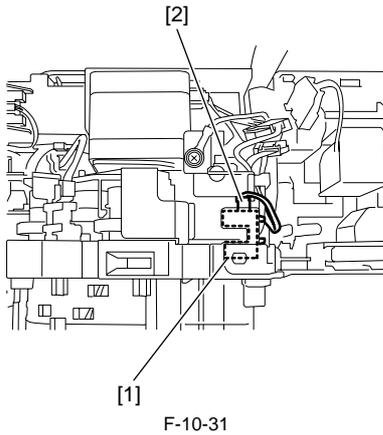
10.4.11 Separation Rear Sensor

10.4.11.1 Removing the Separation Rear Sensor

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

1) Detach the rear cover.
2) Release the hook, remove the separation rear sensor [1], and then disconnect the connector [2].

F-10-32
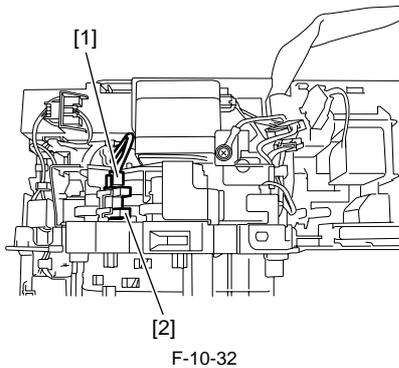
10.4.12 Registration Sensor

10.4.12.1 Removing the Registration Sensor

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

1) Remove the front cover and open/close cover.
2) Open the ADF, remove the three screws [1], and then detach the ADF left lower cover [2].

F-10-33

3) Release the two claws [1], and then remove the grounding plate [2].

F-10-34
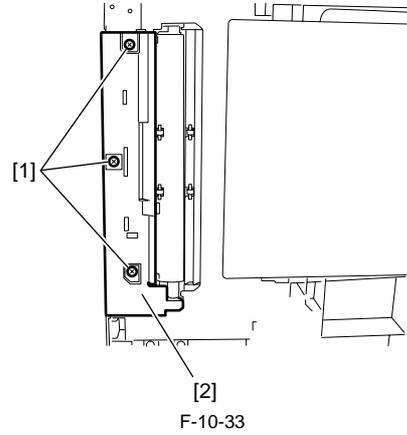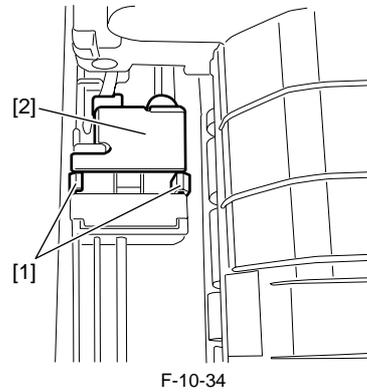
4) Disconnect the connector [1], release the hook, and then remove the registration sensor [2].

F-10-35
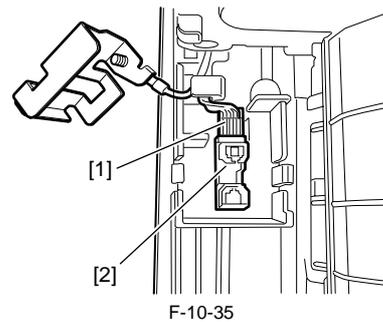
10.4.13 Document Edge Sensor

10.4.13.1 Removing the document Edge Sensor

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

1) Detach the front cover and open/close cover.
2) Open the ADF, remove the three screws [1], and then detach the ADF left lower cover [2].
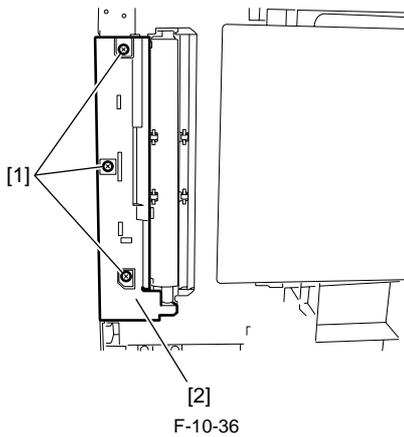
F-10-36

3) Release the claw to remove the document edge sensor [1], and then disconnect the connector [2].
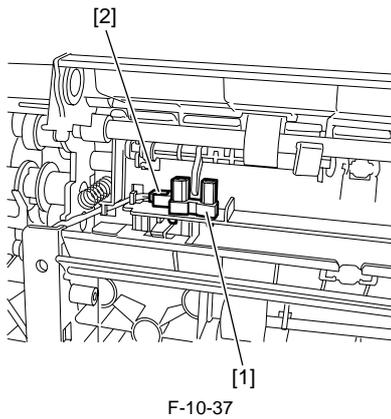
F-10-37

10.4.14 Pick-up Solenoid

10.4.14.1 Removing the Pickup Solenoid

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

1) Remove the feed frame unit.
   2) Remove the three screws [1], and then remove the drive unit [2].
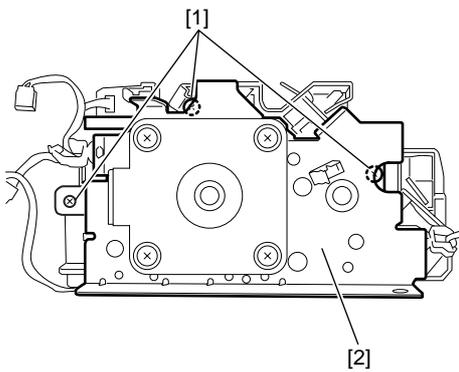
F-10-38

3) Remove the screw [1], and then remove the pickup solenoid [2].
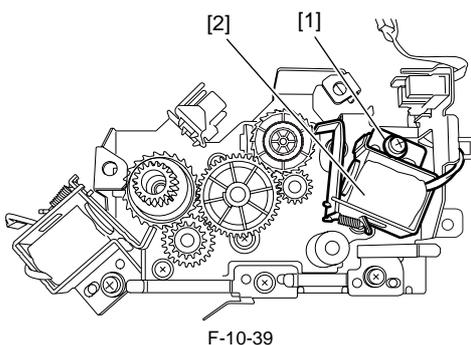
F-10-39

10.4.15 Registaration Solenoid

10.4.15.1 Removing the Registration Solenoid

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

1) Remove the feed frame unit.
   2) Remove the three screws [1], and then remove the drive unit [2].
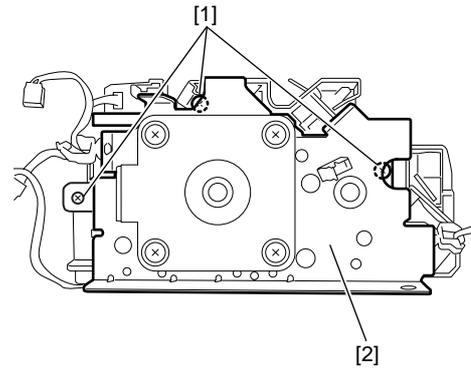
F-10-40

3) Remove the screw [1], and then remove the registration solenoid [2].
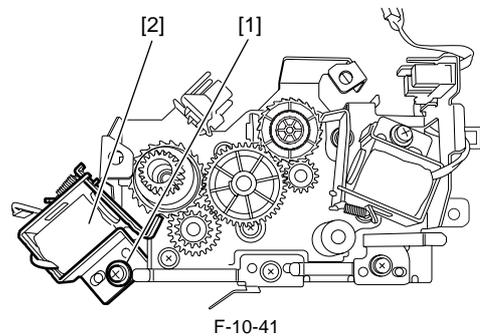
F-10-41

10.4.16 Roller Release Solenoid

10.4.16.1 Removing the Roller Release Solenoid

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

1) Detach the rear cover.
   2) Remove one connector [1] and one screw [2], and then remove the roller release solenoid [3].
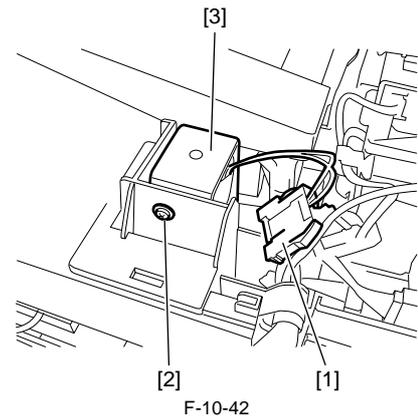
F-10-42

Chapter 11 RDS

Contents

11.1 RDS

11.1.1 Overview

iR1018 / iR1022A / iR1022F / iR1022i / iR1022iF

Product Overview
Embedded RDS (henceforth: e-RDS) is the front-end module of e-Maintenance embedded with a network module of a device controller.

Product Package Configuration
Embedded with a network module of a device.

Features
e-RDS is embedded with a network module of a device controller, which works as a front-end module of e-Maintenance without any hardware other than device.
With use of e-RDS, device information such as counter information, failure information, consumables information of device controllers are transmitted to a back-end server called Universal Gateway (centralized device information management host computer, henceforth: UGW) using SOAP protocol. (https(SSL) communication)

11.1.2 Application Operation Mode

iR1018 / iR1022A / iR1022F / iR1022i / iR1022iF

Whether to enable (ON) /disable (OFF) the Operation Mode is selectable by setting from e-RDS setting display from the service mode (E-RDS SWITCH).
    - OFF (default) : e-RDS is disabled.
    - ON : All e-RDS operations are enabled.
        By setting from UGW, operations including counter transmission, log transmission, and alert transmission can be controlled.

Note that the communication test (COM-TEST) is required prior to start of e-RDS operation.
(For detail, see 'Settings of e-RDS'.)

11.1.3 Communication Test

iR1018 / iR1022A / iR1022F / iR1022i / iR1022iF

By implementing a communication test (COM-TEST) from the service mode, service technicians can test the connection of the device with UGW.
In case of a communication error, you can find its cause by referring to the communication error log.

e-RDS obtains the schedule information from UGW by performing COM-TEST.
The obtainment of the schedule information from UGW enables e-RDS to start its operation.

11.1.4 Communication Log

iR1018 / iR1022A / iR1022F / iR1022i / iR1022iF

In case of a communication error (such as proxy server error), error log is recorded (for 5 cases).
Error code and error information can be displayed on the control panel as a list (service mode: COM-LOG), and printed out as a report.
(service mode: #REPORT > #REPORT OUTPUT > ERDS COM LOG LIST)

11.1.5 Detail of Communication Log

iR1018 / iR1022A / iR1022F / iR1022i / iR1022iF

Error code and detail of the communication error log can be displayed on the control panel and printed out as a report.

11.1.6 Initialization of e-RDS

iR1018 / iR1022A / iR1022F / iR1022i / iR1022iF

e-RDS setting can be returned to the factory default.

Step
Initialize the e-RDS setting values using the service mode items below:
#CLEAR > ERDS-DAT

Initialized setting values and data
Followings are the setting values and internally used data that are initialized:
#E-RDS > E-RDS SWITCH
#E-RDS > RGW-PORT
#E-RDS > RGW-ADDRESS
#E-RDS > COM-LOG

⚠️

Initialization of e-RDS resets all the port and address settings so that they are suitable for UGW, but does not reset the CA certificate data.
For this reason, in case a non-default CA certificate data is installed, you need to delete the certificate (installation of the default certificate) after initialization of e-RDS.

(As for deletion of certificate, see 'CA certificate'.)

11.1.7 SOAP Communication Function

iR1018 / iR1022A / iR1022F / iR1022i / iR1022iF

Following processings are enabled by use of SOAP communication (SSL client communication).
Server authentication is performed by use of CA*1 certificate issued by VeriSign.
In case the server certificate or CA certificate is expired, the device is not connected to UGW.

*1: CA stands for Certificate Authority, which are the institutions which issue electronic certificate used in e-commerce etc.

(1) Communication Test
    - Perform the communication test

(2) Transmit all or a part of the following data based on the schedule information obtained from UGW.
    - Counter details data
    - Service mode counter
    - Parts counter
    - Mode counter
    - ROM version
    - Schedule information
    - Application debug log

(3) In case of detecting jam, or alert/service call error from the device, transmit the following to UGW.
    - Transmission of alert code (transmit the counter information simultaneously)

      Transmit an alert code in case of a change in the status of the device.
      Main alert codes are toner LOW/OUT, jam, and door open.
      At error recovery, transmit again the data that indicates the recovery.
    - Transmission of jam log (transmit the counter information simultaneously)
    - Transmission of service call (Error code) log (transmit the counter information simultaneously)

(4) Change of device schedule information
    - Check whether there is a processing to execute.
    - Update the schedule information.
    - Return the result of the operation.

(5) Filtering reception from UGW
    - Alert filtering

T-11-1

Transmission Detail List:

Transmission Detail / Process Detail	Transmission Timing	Remarks
Communication test communicatonTest	Either at the time of execution of the service mode of the device or upon a request from UGW with 'getOperationList'	
Counter details data collection/transmission postGlobalClickCount	Once every 16 hours.	The detailed counter data for each paper size such as Total.
Service mode counter collection/transmission postSeviceModeCounter	Once every 16 hours.	The counter data tied to the service mode number. Mainly used for billing.
Mode counter collection/transmission postModeCounter	Once every 16 hours.	The counter data by operation mode.
Parts counter collection/transmission postPartsCounter	Once every 16 hours.	The counter data indicating the amount of usage by part.
ROM version postFirmwareInfo	Once every 7 days.	
Schedule information transmission postConfiguration	Once every 16 hours.	
Debug log postDebugLog	At the time that the log has been accumulated 5kbyte	The log data output by an application for analyzing a malfunction.
Alert code postAlert	At the time of change in the device condition	The data when a status change occurs.
Jam log postJamLog	At the time of jam occurrence	Includes the jam code, date of occurrence, total counter at occurrence, paper feeding slot, and paper size.
Service call log postServiceCallLog	At the time of service call occurrence	Includes the error code, error subcode, date of occurrence, total counter at occurrence, paper feeding slot, and paper size.
Operation list check getOperationList	Once every 16 hours. Upon a request from UGW	

Transmission Detail / Process Detail	Transmission Timing	Remarks
Schedule information update getConfiguration	At the time of communication test	
Alert filtering getAlertCodeNotificationList	Upon a request from UGW	When requested from UGW with 'getOperationList'

⚠

- The timing of transmission to UGW varies according to the device.
- The timing of transmission to UGW cannot be set on the side of the device.

11.1.8 Retransmission at the time of SOAP Transmission Error

iR1018 / iR1022A / iR1022F / iR1022i / iR1022iF

In case the SOAP transmission error occurs due to the fault at UGW side at the time of the alert code transmission, store the last 3 data failed to transmit in the RAMDISK, and retransmit it with the predefined intervals.

In addition, in case the SOAP transmission error occurs at the time of the jam log or service call log transmission, retransmit the data failed to transmit with the predefined intervals. (When transmitting these 2 types of data, RAMDISK is not used, and the number of retransmission is not restricted.)

11.1.9 e-RDS Setting Screen

iR1018 / iR1022A / iR1022F / iR1022i / iR1022iF

(1). Setting Items
The forms and default values of the setting items related to the e-RDS in the service mode are as follow:

T-11-2

Service Mode Setting Items (Meaning)	Description
E-RDS SWITCH	e-RDS OFF/ON 0: OFF/1: ON When the setting is ON, transmit the counter information and error information to UGW. Default value: 0 (OFF)
RGW-ADDRESS (RDS-Gateway ADDRESS)	URL of UGW Default value: the actual URL of UGW Number of characters: 129 bytes (Including NULL. 1-byte code only)
RGW-PORT (RDS-Gateway PORT)	Port number of UGW Default value: 443 Setting range: 1 to 65535
COM-TEST (Communication Test)	Execution of communication test Judge whether the connection with UGW is established, and display the result with either 'COM-TEST OK' or 'COM-TEST NG'.
COM-LOG (Communication Log)	Detail of the communication test result Display the error log for the communication with UGW. As the error information, occurred time, error code, and error detail information are displayed. Max. number of log: 5 Error information: max. 128 characters (Excluding NULL)

(2). Screen Menu

An example for the transition of the menu related to the e-RDS in the service mode.

arrow key

```
┌─────────────────┐     ┌─────────────────┐     ┌─────────────────┐
│ #E-RDS          │◄───►│ #E-RDS          │◄───►│ #E-RDS          │◄──┐
│ E-RDS SWITCH    │     │ RGW-ADDRESS     │     │ RGW-PORT        │   │
└─────────────────┘     └─────────────────┘     └─────────────────┘   │
         │ OK key                │                       │             │
         ▼                       ▼                       ▼             │
┌─────────────────┐     ┌─────────────────┐     ┌─────────────────┐   │
│ #E-RDS SWITCH   │     │ #RGW-ADDRESS  :A│     │ #RGW-PORT       │   │
│  001          1 │     │ https://xxxxxxxxxxxxx│ │  001        443 │   │
└─────────────────┘     └─────────────────┘     └─────────────────┘   │
                                                                       │
┌─────────────────┐     ┌─────────────────┐                          │
│ #E-RDS          │◄───►│ #E-RDS          │◄─────────────────────────┘
│ COM-TEST        │     │ COM-LOG         │
└─────────────────┘     └─────────────────┘
         │                       │
         ▼                       ▼
┌─────────────────┐     ┌─────────────────┐
│ #E-RDS          │     │ No:1 Ecode:870F2052│
│ COM-TEST OK     │     │ 2006 03/24 11:56 │
└─────────────────┘     └─────────────────┘
```
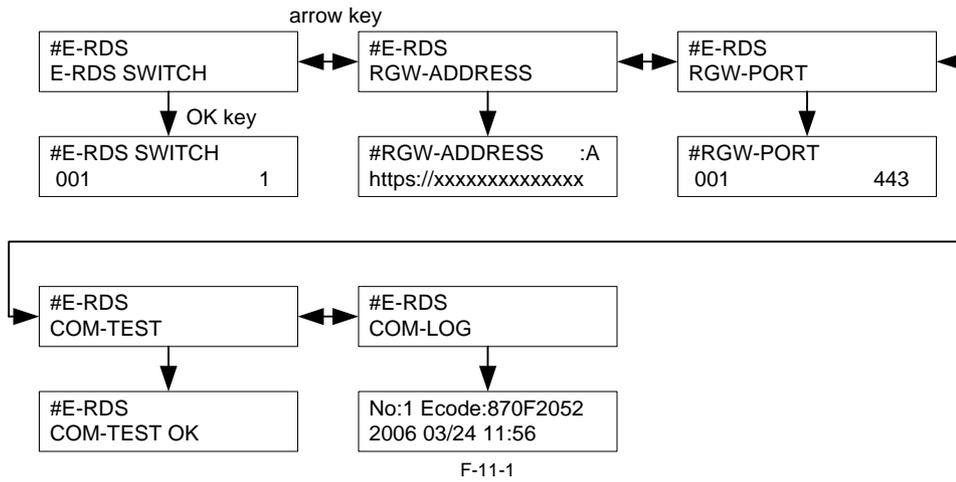
F-11-1

(3). Communication Error Log Selection Screen

The communication error log is displayed by selecting #E-RDS > COM-LOG in the service mode, and pressing the OK key.

The error log to be displayed is as follow:

Communication error log : transmission error of counter and various logs up to the present, as well as the error occurred date, error code, and error information at the communication test.

By pressing the arrow key (◄ key, ► key), the communication error log from No.1 to No. 5 can be checked.
(Only the No. in which an error is registered can be selected.)

Example of Operation

arrow key

```
┌─────────────────┐     ┌─────────────────┐
│ No:1 Ecode:870F2052│◄►│ No:2 Ecode:87053563│ ············
│ 2006 03/24 11:56 │     │ 2006 03/24 10:23 │
└─────────────────┘     └─────────────────┘
         │ OK key
         ▼
```

It transits to the Communication Error Log Detail Screen.
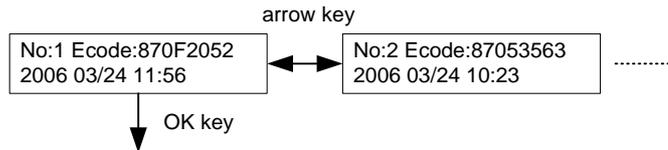
F-11-2

By pressing the OK key, it transits to the Communication Error Log Detail Screen.
Max. number of the communication error log: 5

(4). Communication Error Log Detail Screen

The detail information of the communication error log is displayed.
For the message to be displayed, see the 'Error Message List'.

By pressing the Menu key, it returns to the Communication Error Log Selection Screen.
Detail error information: max. 128 characters (excluding NULL)

For instance, in case of the detail error '*Server response error(0x800f0200): getConfiguration Not Found Agent(AgentID = E250SD01)', it is too long to fit in a screen; thus, display it with multiple screens as shown below. Switch each screen with the arrow key.

arrow key   arrow key

```
┌─────────────────┐     ┌─────────────────┐     ┌─────────────────┐
│ *Server response er│◄►│ etConfiguration Not│◄►│ D = E250SD01    )│
│ ror(0x800f0200) : g│   │ Found Agent(AgentI│   │                 │
└─────────────────┘     └─────────────────┘     └─────────────────┘
```

F-11-3

11.1.10 Report Output of Communication Error Log

iR1018 / iR1022A / iR1022F / iR1022i / iR1022iF

The communication error log can be output as report.

Operation:
#REPORT > #REPORT OUTPUT > ERDS COM LOG LIST

11.1.11 Sleep Operation

iR1018 / iR1022A / iR1022F / iR1022i / iR1022iF

Even in the sleep mode (power saving), the e-RDS executes the transmission if there is a message to be sent.

11.1.12 Alarm Filtering, Alert Filtering

iR1018 / iR1022A / iR1022F / iR1022i / iR1022iF

With the instruction from UGW (getOperationList), change the alarm level for the specified alarm code, and transmit only the specified alert code.

11.1.13 CA Certificate

iR1018 / iR1022A / iR1022F / iR1022i / iR1022iF

(1). Overview of functions
   CA certificate (CA-KEY) is included in the system software System (Default CA certificate. For UGW).

   The CA certificate other than the default is installable with SST.

   [Outline of the step]
   * See 'Downloading System Software' for details.
      1. Move it from SST to CA Certificate Install > Flash File System.
      2. Turn the power off/on.
         Read the CA Certificate file from Flash file system during initialization, and register CA Certificate through the key management module.
      3. Check the information in the service mode #NETWORK > #CERTIFICATE > #CA-CERTIFICATE to see if the same one as the installed CA Certificate has been registered.

(2). The number of CA Certificates stored in the device
   The upper limit of CA Certificates stored in the device : 1

(3). Saving the certificate
   When executing Service Mode > #CLEAR > CA-KEY and turning off/on the power, the default CA Certificate is loaded on the Flash memory.
   If necessary, install CA Certificate with SST.

(4). Update of the certificate
   The registered CA Certificate is renewed when overwriting with SST.

(5). Deleting the certificate
   The default CA Certificate is automatically installed when deleting CA Certificate in the service mode and turning off/on the power.
   Deleting CA Certificate therefore means installation of the default CA Certificate.

11.1.14 Settings of Network Connection (Installation/Maintenance)

iR1018 / iR1022A / iR1022F / iR1022i / iR1022iF

Prior to the setting of e-RDS, you need to make network settings of the device properly.
(1). Display Additional Functions screen
      - Press [Additional Functions] key.
      - Enter System Manager ID and a password if you are asked to do so.
(2). Display TCP/IP Settings screen
      - On the LCD panel, select: [SYSTEM SETTINGS] > [NETWORK SETTINGS] > [TCP/IP SETTINGS].
(3). Setting IP Address-Related Items
      Automatic IP address allocation
         - Select [IP ADDRESS AUTO] and press [OK].
         - Press the arrow key, select 'ON', and then press [OK].
         - Select each item such as DHCP and make settings.
      Fixed IP address allocation
         - Select [IP ADDRESS] and press [OK].
         - Enter the IP address to make settings, and press [OK].
         - Likewise, make settings for [SUBNET MASK] and [GATEWAY ADDRESS].
(4). DNS SERVER
      - Select [DNS SETTINGS] to display DNS setting screen.
      - Press the required items and make settings.
(5). Proxy Settings
      - Select [PROXY SETTINGS] to display Proxy setting screen.
      - Press the required items and make settings.
(6). Return to the Basic Features screen
      - Press [Stop] or press [Additional Functions] until each setting screen is closed.

⚠

When changing the above Network Settings, it is necessary to turn off/on the power of the device.

11.1.15 Settings of e-RDS (Installation/Maintenance)

iR1018 / iR1022A / iR1022F / iR1022i / iR1022iF

(1). Display the menu screen of e-RDS by the service mode of the device.
      (1)-1. Enter the service mode:
         [Additional Functions] key > 2 key > 8 key > [Additional Functions] key
      (1)-2. Initialization

#CLEAR > ERDS-DAT

    If necessary, install or delete CA Certificate and turn off/on the power.
(1)-3. Display the menu screen of e-RDS
    Press the arrow key to move to the menu (#E-RDS) of e-RDS.
(2). Set E-RDS SWITCH to 1 in order to enable e-RDS.
(3). If necessary, enter URL of UGW in RGW-ADDRESS (The setting has normally been done).
(4). Enter the port number of UGW in RGW-PORT (normally the setting done).
(5). Select COM-TEST and press OK key to execute the test of communication with UGW.
(6). If the result is 'COM-TEST NG', correct the settings of RGW-ADDRESS/RGW-PORT and repeat COM-TEST until it becomes 'COM-TEST OK'. If necessary, check the network settings of the device, the status of network connection and availability of the communication to UGW.

11.1.16 Troubleshooting

iR1018 / iR1022A / iR1022F / iR1022i / iR1022iF

No.1
Q. No e-RDS settings items (#E-RDS) are found in the Service Mode.
A. Check that the firmware version is WLaa-60-xx or later.
   Check if the network is up and running.

No.2
Q. Communication test fails.
A. Check the firmware version.
   Check the network settings.
   Check the results of communication test.

11.1.17 Error Message list

iR1018 / iR1022A / iR1022F / iR1022i / iR1022iF

The followings are error information displayed on the 'Communication Error Log Detail Screen'.
(The term "server" used in this section refers to UGW.)

⚠

- When OK is pressed on the 'Communication Error Log Selection Screen' where a communication error log is displayed, the screen changes to the 'Communication Error Log Detail Screen'.
- When an error character string on the 'Communication Error Log Detail Screen' is so long that the entire message cannot be displayed on a screen at one time, use the arrow keys to switch between screens. The amount of error information displayed on the 'Communication Error Log Detail Screen' is 128 characters at maximum.

Error character strings from No.3 onward listed on the table below will be displayed in the following order.
   [*][Error character string] : [Method name] [Server detail error]
   Character strings bracketed in [] are replaced by the following.

[*]:
An '*' (asterisk) is added to the beginning of the error character string for errors occurred during communication test.

[Error character string]:
For No.1 and 2 of the [Error character string] below, only the error character strings are displayed. The rest of the error character strings are displayed in the order described above.

T-11-3

	Error Character Strings	Error Description	Cause	Measures
1	SUSPEND: Communication test is not performed	e-RDS is ON but Communication test is not completed.	e-RDS is ON but e-RDS was activated without performing Communication test. (The device is rebooted.)	Perform and complete Communication test (COM-TEST).
2	Event Registration is Failed.	Event registration failure error	A processing (Event Registration) inside the device has been failed.	Turn OFF and then ON the device.Otherwise reinstall the device system software.
3	URL Scheme error(not https)	URL scheme specification error	The URL header of the server registered is not https.	Correct the header of the server URL to https. Service Mode > #E-RDS > RGW-ADDRESS

	Error Character Strings	Error Description	Cause	Measures
4	Server connection error	Server connection error	Displayed when a TCP / IP communication error occurs. This error also occurs as a result of the Proxy server dysfunction while the proxy server is in use.	- Check the network connection. - Check the port number for RGW-PORT. - Check the server status. - When the Proxy server is in use, check the Proxy server address. - When the Proxy server is in use, check the status of the Proxy server address.
5	URL server specified is illegal	Server-specified URL error	A different URL than the one specified by the server has been registered.	Check with the server helpdesk.
6	Proxy connection error	Proxy connection error	Cannot connect to the Proxy server.	Check the server IP address and port number and correct the settings accordingly. The device needs rebooting when network-related settings such as Proxy settings are modified.
7	Proxy authentication error	Proxy authentication error	Authentication for the Proxy server has failed.	Check the user name and password to log in to the Proxy server and re-set them.
8	Proxy address resolution error	Proxy address resolution error	Proxy server address resolution by DNS has failed.	- Check the network configurations of the device. (Check if PING by host name passes from computer to the device.) - Check the DNS settings. - Check if the host name set in RGW-ADDRESS is registered in the DNS server. - Check if the Proxy server address is correct.
9	Server certificate error	Server certificate error	During SSL negotiation, server certificate notified by the server cannot be authenticated by CA certificate of the device.	- Check that CA certificate has been installed. Service Mode > #NETWORK > #CERTIFICATE > #CA-CERTIFICATE - Install CA certificate corresponding the server.
10	Server certificate verify error	Server certificate verify (URL check) error	During SSL negotiation, host name written in server certificate notified by the server and URL host name set in RGW-ADDRESS have been different.	Check host name in the URL set in RGW-ADDRESS. Service More > #E-RDS > RGW-ADDRESS
11	Server certificate expired	Server certificate expired	- CA certificate registered in the device is expired. - Time and date on the device is invalid against the term specified in the certificate.	- Check expire date of CA certificate. Service Mode > #NETWORK > #CERTIFICATE > #CA-CERTIFICATE If the certificate is expired, register a valid CA certificate on the device. - Set the correct time and date on the device.
12	Unknown error	Unknown communication error	Unknown communication error has occurred.	Wait for a while and try again.
13	Server response error (NULL)	Server response error(When server error code processing has failed)	Server response error	This error can happen when Send function and e-RDS function are performed simultaneously. Wait for a while to try again and check that Send OK is displayed next time sending is performed.

	Error Character Strings	Error Description	Cause	Measures
14	Server response error ([Hexadecimal number]) [Server detail error]	Server response error	Displayed when server returns some kind of error although communication to the server was successful. [Hexadecimal number] Error code returned from the server. [Server detail error] Detailed character string of the error returned by the server.	Wait for a while and try again. Requires different actions according to the error returned from the server.
15	Device internal error	Device internal error	Internal error such as unable to acquire the memory has occurred.	Turn OFF and then ON the device.Or reinstall the device system software.
16	Server schedule is invalid	Invalid server-instructed schedule	Schedule setting value instructed by the server during Communication test is invalid.	Report detailed information on error occurred to the support division. After countermeasures are taken on the server side, perform Communication test again.
17	Server response time out	Server response time out	Due to network congestion etc., response from server does not return within a specified period of time.	In case this occurred when implementing the communication test, retry after a certain period of time. This error has been found to occur due to simultaneous operation of Send function and e-RDS function in some cases.
18	Service not found	Service is not found (invalid path)	Cannot access server due to wrong path for server URL.	Check the server URL including path, and set it again. Service mode > #E-RDS > RGW-ADDRESS
19	E-RDS switch is setted OFF	e-RDS is not enabled.	Executed communication test (COM-TEST) while e-RDS operation switch (E-RDS-SWITCH) is turned OFF.	Enable operation switch of e-RDS and execute communication test again. Service mode > #E-RDS > E-RDS SWITCH
20	Server schedule is not exist	Schedule of the target device does not exist within server.	Schedule of target device is not registered in server.	Check with Server Helpdesk
21	Network is not ready, try later	Network is not ready	Tried communication while connection to network is not established (at such timing as immediately after startup of device). (During the 60 seconds after startup of a device, connection to network may not be established.)	Check to see that connection to network is established. Furthermore, retry connection after long-enough period of time.
22	URL error	URL setting error	A host name of URL set as a server is invalid.	Check server URL including path, and set it again. Service mode > #E-RDS > RGW-ADDRESS
23	Server address resolution error	Server address resolution error	- Can access DNS server - Failed in address resolution of host name set as RGW-ADDRESS	- Check network status of device (Check to see that device responds to ping by host name from PC) - Check DNS setting - Check to see that host name set in RGW-ADDRESS is registered in DNS server - Check to see that URL set in RGW-ADDRESS is valid.
24	Server specified list is too big	Alarm/alert filtering information specified by server is too big	Ten or more alarm/alert filtering cases are registered.	Check with Server Helpdesk
25	Server specified list is wrong	Alarm/alert filtering information specified by server is invalid	Data values registered in alarm/alert filtering are invalid	Check with Server Helpdesk

[Method Name]:

T-11-4

	Method Name	Description
1	postServiceModeCount	Obtain software counters for copy/print charge
2	postModeCount	Obtain mode counter
3	postPartsCount	Obtain parts counter
4	postFirmwareInfo	Obtain ROM version
5	getOperationList	Check whether there is an operation execution command for you in UGW
6	postOperationOutcome	Transmit execution result of operation commanded in getOperationList
7	postConfiguration	Periodical environment information
8	postGlobalClickCount	Obtain counter details data
9	postJamLog	Obtain jam notification
10	postServiceCallLog	Obtain service call notification
11	postAlert	Obtain alert notification
12	postDebugLog	Obtain debug log
13	getConfiguration	Obtain schedule information
14	communicationTest	Communication test
15	getAlarmLevelConversionList	Alarm filtering
16	getAlertCodeNotificationList	Alert filtering

[Detail of server error]:
Display detailed error information from error in case there is an error response from UGW. However, in case the character number exceeds 128, character strings after 128th are omitted.
In case of the other error, nothing is displayed here.

Below is the example of the actual characters displayed:
Example) Unexpected error: postGlobalClickCount()

Chapter 12 Maintenance and Inspection

Contents

12.1 Periodically Replaced Parts

12.1.1 Periodically Replaced Parts

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

The machine does not have parts that require periodical replacement.

12.2 Durables and Consumables

12.2.1 Durables

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

The machine does not have durables.

12.3 Scheduled Servicing Basic Procedure

12.3.1 Periodeical Service Items

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

The machine does not have periodecal service items.

Chapter 13 Standards and Adjustments

Contents

13.1 Image Adjustments

13.1.1 Image parallelism adjustment

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

1) Create a test chart, load it in the ADF, and make a copy of it.

Test Sheet
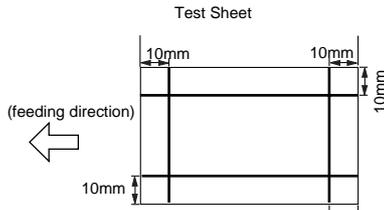
F-13-1

2) Compare the lines at the end of the test chart with those on the copy for parallelism. Measure dimensions A and B at the end of the copy and adjust the amount of skew (the range shown in the table) to within the spec.
Standard: A-B within ±1.7 mm

Test Sheet
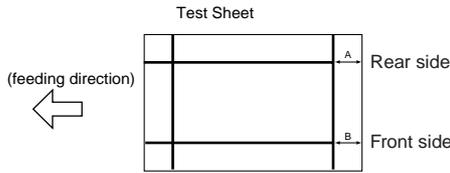
F-13-2

<Adjustment method>
This machine allows parallelism between the leading and trailing edges of the image to be adjusted by changing the positions where the front and rear springs of the registration unit are hooked.
There are five types of spring hooking positions. (One step = Approx. 0.6 mm)

T-13-1

Settings	Spring positions at the back of host machine	Spring positions at the front of host machine
1	+1	-1
2	+1	0
3	0	0
4	-1	0
5	-1	1

MEMO:
Parallelism varies depending on the difference in the spring pressure between the front and rear springs.
For example, the spring position "0"at the back of the host machine and the spring position "-1"at the front of the host machine are not shown in this document because they are the same as the spring position "+1"at the back of the host machine and the spring position "0t the front of the host machine respectively.
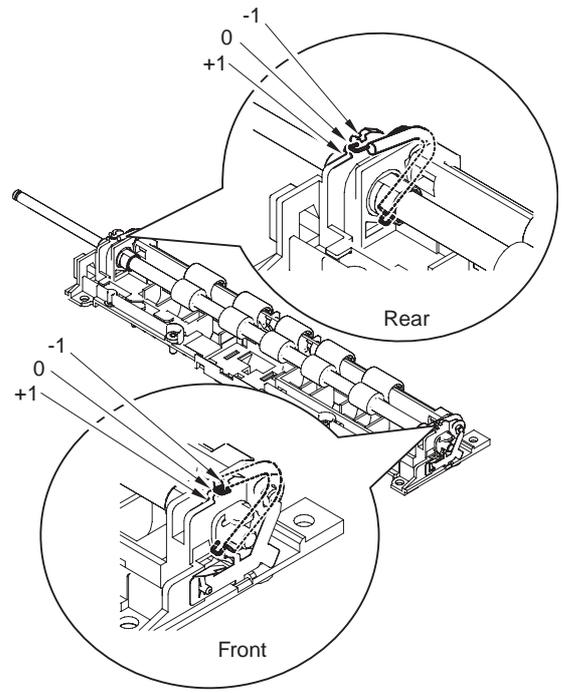
F-13-3

1) Check the current hooking positions of the left and right springs of the registration roller. Change the spring hooking positions in reference to the table below. (They are adjustable in five steps. One step = Approx. 0.6 mm)

T-13-2

	Settings	Spring positions at the back of host machine	Spring positions at the front of host machine
Correction of image A (The A-side extends.)	1	+1	-1
	2	+1	0
	3	0	0
	4	-1	0
Correction of image B (The B-side extends.)	5	-1	1

-If the A-side image (at the front of the host machine) is short (shrunken), reduce the setting value.
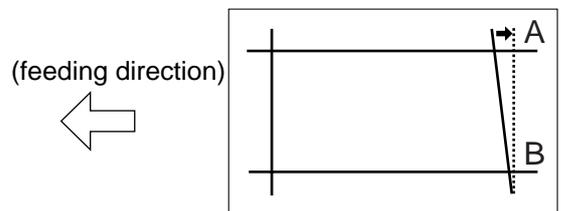
F-13-4

-If the B-side image (at the back of the host machine) is short (shrunken), increase the setting value.
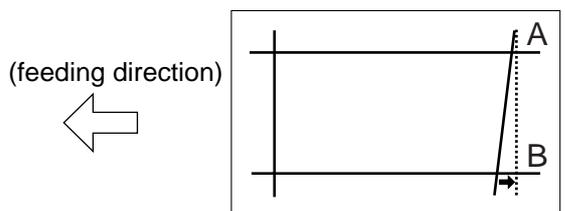
F-13-5

13.2 Scanning System

13.2.1 Procedure after Replacing the CS

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

After replacing the contact sensor (CS), go through the following steps to perform inter-channel output correction:
1) Enter the service mode.
Sequentially press the Additional functions key, 2 key, 8 key, and Additional functions key on the operation panel.
2) Press the arrow key on the touch panel to display "TEST MODE".
3) Press [OK].
4) Press the [2] key to display "SCAN TEST".
5) Press the [1] key to display "SHADING".
6) Press [OK].
After completion of the above procedure, the contact sensor output is compensated and parameters are set automatically.
After completion of automatic adjustment, "OK" is displayed.

13.2.2 Procedure after Replacing the Copyboard Glass (if equipped with SEND functions)

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

After replacing the copyboard glass, enter the correction values (X, Y, Z) of the standard white plate which are indicated on the back of the new copyboard glass in the service mode.
Correction value (X): Service mode>#SCAN>#SCAN NUMERIC>No.213
Correction value (Y): Service mode>#SCAN>#SCAN NUMERIC>No.214
Correction value (Z): Service mode>#SCAN>#SCAN NUMERIC>No.215
Also, rewrite the values on the service label.


```
* 820686679349 *
```

correcton value (X)   correcton value (Y)   correcton value (Z)

F-13-6
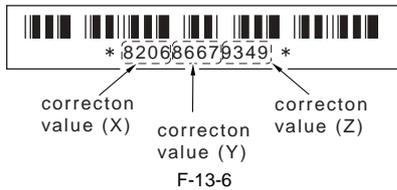
13.3 Electrical Components

13.3.1 Procedure after Replacing the Image Processor PCB

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

If you have replaced the image processor PCB with a new one, perform the following operations:
- Using the service support tool, download the latest firmware (System/Boot/PCL*1) and language files.
*1: if equiped with PCL functions.
- Input the all value printed on the service label affixed to the rear cover.
Make the following adjustments:
- Correction of output between CIS channels
1) Enter the service mode.
Sequentially press the Additional functions key, 2 key, 8 key, and Additional functions key on the operation panel.
2) Press the arrow key on the touch panel to display "TEST MODE".
3) Press [OK].
4) Press the [2] key to display "SCAN TEST".
5) Press the [1] key to display "SHADING".
6) Press [OK].
After completion of the above procedure, the contact sensor output is compensated and parameters are set automatically.
After completion of automatic adjustment, "OK" is displayed.
- Read position adjustment (Stream reading: Only when the ADF is installed)
1) Enter the service mode.
Sequentially press the Additional functions key, 2 key, 8 key, and Additional functions key on the operation panel.
2) Press the arrow key on the touch panel to display "TEST MODE".
3) Press [OK].
4) Press the [2] key to display "SCAN TEST".
5) Press the [3] key to display "SHEET POS ADJ".
6) Press [OK].
The optical system starts scanning. Several seconds later, automatic adjustment of the reading position finishes and "OK" appears.

 If automatic adjustment fails, "NG" appears. Perform the following procedure:
Clean the platen guide of the DADF and the document glass of the host machine, and then retry auto adjustment.

13.3.2 Actions to Take before All Clearing (Backing up the User Data)

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

- Performing the all-clear operation in the service mode (#CLEAR > ALL) erases/initializes the user data such as address data and user mode settings.
Be sure to back up the user data with the data export function before starting the all-clear operation, and then load the user data with tbe data import function.
- To export and import user data, a PC and a USB cable are required. Have them on hand.

a. Exporting user data
1) Output a user data list in the following user mode.
Additional functions key > Report Setting > Plint List > User Data List

2) Press the following keys to enter the service mode.

Additional functions key > 2 key > 8 key > Additional functions key
3) Select "#SYSTEM" using the arrow key, and then press the OK.
4) Select "#SYSTEM SW" using the arrow key, and then press the OK.
5) Press the following keys to display "SW003."
> 0 key > 3 key
Message: #SYSTEM SW003 00001000
6) Position the cursor at Bit-6 (second from left) using the arrow key, and then press the 1 key.
Message: #SYSTEM SW003 01001000
7) Press the OK key. Check that "SW003" changes to "SW004".
Message: #SYSTEM SW004 00000000
8) Press the Reset key to exit the service mode.
9) Turn off the main power switch, and then turn it on again.
10) Start the PC and connect it to this machine with a USB cable.
11) Open My Computer on the PC to check that the "Removable Disk" icon is displayed. If the "Removable Disk" icon is not displayed, repeat the above procedure starting with step 1.
12) Double-click the "Removable Disk" icon, and then copy the user data (address_book.abk and user_data.dat) onto the Desktop.
13) Close the window on the Desktop.
14) Turn off the main power switch of this machine.
15) Disconnect the USB cable from this machine.

b. Importing user data
1) Press the flowing keys to enter the service mode.
Additional functions key > 2 key > 8 key > Additional functions key
2) Select "#SYSTEM" using the arrow key, and then press the OK.
4) Select "#SYSTEM SW" using the arrow key, and then press the OK.
5) Press the following keys to display "SW003".
> 0 key > 3 key
Message: #SYSTEM SW003 00001000
5) Check that Bit-6 (second from left) is set to set to "1". If Bit-6 is not set to "1", position the cursor at this bit using the arrow key and then press the 1 key.
Message: #SYSTEM SW003 01001000

6) Press the OK key. Check that "SW003" changes to "SW004".
Message: #SYSTEM SW004 00000000
7) Press the Reset key to exit the service mode.
8) Turn off the main power switch, and then turn it on again.
9) Open My Computer on the PC to check that the "Removal Disk" icon is displayed.
11) Write the user data (address_book.abk and user_data.dat) copied onto the Desktop as described in "a. Exporting user data" over the removable disk.
12) Disconnect the USB cable from the machine.
13) Turn off the main power switch of the machine.
14) Perform steps 1) to 4) again to reset Bit-6 of "SW003" to "0".
15) Press the OK key. When "SW003" changes to "SW004", press the Reset key to exit the service mode.
16) Check the user data list output as described in "a. Exporting user data" to make sure that the user data has been loaded into the machine properly.

13.4 ADF

13.4.1 Outline

13.4.1.1 Outline

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

This machine has the following adjustment items. Make the necessary adjustments after replacing each part.

T-13-3

No.	Adjustment type	Replaced parts
[1]	Perpendicularity adjustment	Hinge
[2]	Magnification adjustment	Motor/roller
[3]	Side registration adjustment	-
[4]	Leading edge registration adjustment	-

13.4.1.2 Preparing a Test Sheet for Adjustment

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Preparing a Test Sheet: On a sheet of A4 or LTR paper, draw straight lines as indicated:

F-13-7

F-13-8
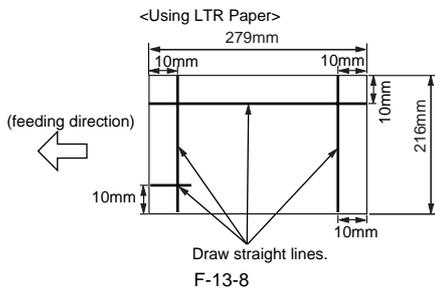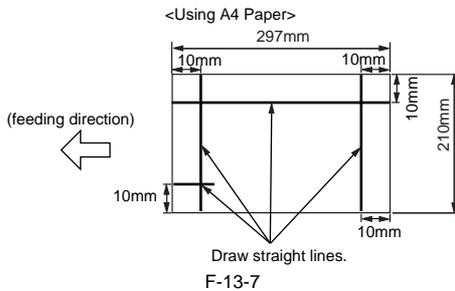
13.4.2 Adjusting the Mechanical System

13.4.2.1 Adjusting the Perpendicularity

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

1) reate a test chart, load it in the ADF, and make a copy of it.
2) Compare the lines at the end of the test chart with those on the copy for perpendicularity. Measure dimensions A and B at the end of the copy and adjust the amount of skew (the range shown in the table) to within the spec.

T-13-4

	Dimension (using A4)	Dimension (using LTR)
A-B	0 +/- 1.5 mm	0 +/- 1.5 mm

F-13-9
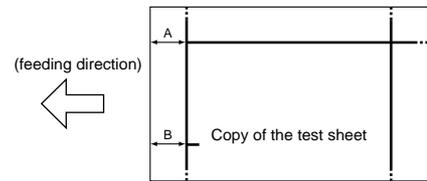
3) Loosen the two screws [1] securing the right hinge and slide the hinge according to the sale markings so that the perpendicularity is within spec.

F-13-10
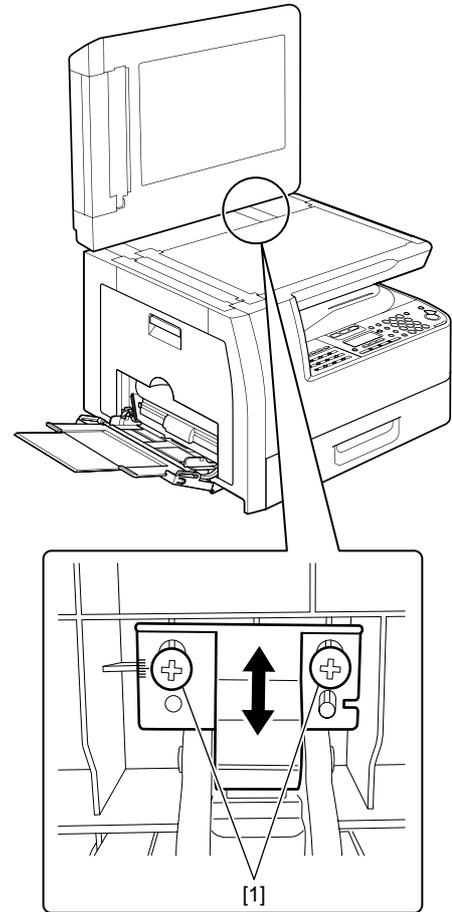
4) Tighten the screws you loosened in step 3.

13.4.3 Adjusting the Ellectrical System

13.4.3.1 Adjusting the Magnification

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

1) Create a test chart, load it in the ADF, and make a copy of it. This copy is called copy A.
 2) Compare the longitudinal image length on the test chart with that on copy A. If required, make an adjustment in the service mode.
 (A4-size paper: 277 +/-1mm LTR paper: 59 +/-1mm)
Image on copy A is shorter. -> Increase the value (or reduce the stream reading speed).
Image on copy A is longer. -> Decrease the value (or increase the stream reading speed).
3) Enter the service mode.
 Sequentially press the additional functions key, 2 key, 8 key, and additional functions key on the operation panel of the host machine.
 4) Using the arrow keys on the operation panel, display "#SCAN".
 5) Press the OK key.
 6) Using the arrow keys on the operation panel, display "#SCAN NUMERIC".
 7) Press the OK key.
 8) Using the arrow keys, select "48".
 9) Using the numeric keys, change the value to determine the optimum value. Next, press the OK key. (Default: 32)

⚠ Do not change the adjustment value excessively.

13.4.3.2 Adjusting the Horizontal Registration

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

1) Load the test chart in the ADF and make a copy of it.
2) Compare the horizontal registration of the chart with that of the copy. If required, make an adjustment.
The specified horizontal registration is 10mm +/-2mm.

```
        10±2mm

(feeding direction)

  ⟵

              Copy of the test sheet
```
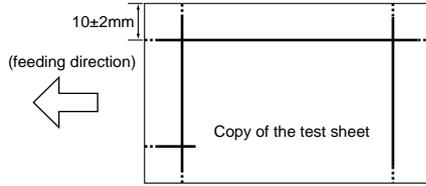
F-13-11

1) Load the test chart in the ADF and make a copy of it.
2) Compare the horizontal registration of the chart with that of the copy. If required, make an adjustment.
The specified horizontal registration is 10mm +/-2mm.
3) Enter the service mode.
Sequentially press the Additional functions key, 2 key, 8 key, and Additional functions key on the operation panel of the host machine.
4) Using the arrow keys on the operation panel, display "#SCAN".
5) Press the OK key.
6) Using the arrow keys on the operation panel, display "#SCAN NUMERIC".
7) Press the OK key.
8) Using the arrow keys, select "41".
9) Using the numeric keys, change the value to determine the optimum value. Next, press the OK key. (Default: 0)

If the registration cannot be set to the specified value using software, use the following procedure:
1) Open the ADF pickup tray.
2) Loosen the two screws [1] and move the slide guide forward or backward according to the scale calibrated in mm so that the registration is within spec.

[1]
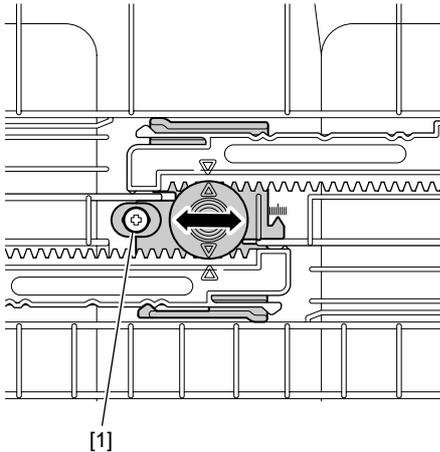
F-13-12

MEMO:
Making copies with the slide guide shifted 1 mm upward will increase the right registration (on the upper side of paper) by 1 mm.

13.4.3.3 Leading edge registration adjustment

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

1) Load the test chart in the ADF and make a copy of it.
2) Compare the end registration of the test chart with that on the copy. If required, make an adjustment.
The specified end registration is 10mm +/-2mm.

```
            Leading edge margin

(feeding direction)

  ⟵
                 Copy of the test sheet
```
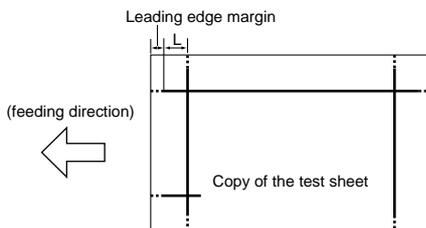
F-13-13

The image is shifted to the left. -> Decrease the value.
The image is shifted to the right. -> Increase the value.
Unit of adjustment   1 = 0.1 mm
3) Enter the service mode.
Sequentially press the Additional functions key, 2 key, 8 key, and Additional functions key on the operation panel of the host machine.
4) Using the arrow keys on the operation panel, display "#SCAN".
5) Press the OK key.
6) Using the arrow keys on the operation panel, display "#SCAN NUMERIC".
7) Press the OK key.
8) Using the arrow keys, select "42".
9) Using the numeric keys, change the value to determine the optimum value. Next, press the OK key. (Default: 219)

⚠ If the registration cannot be set to the specified value using software, make adjustments again starting with the perpendicular adjustment.

Chapter 14 Correcting Faulty Images

Contents

14.1 Making Initial Checks

14.1.1 Site Environment

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

a. There must be a source of power whose voltage is as specified (+/-10%). The power plug must never be disconnected day and night.
   b. The machine must not be in an area subject to high humidity (near a water faucet, water boiler, humidifier). The site must not be too cold or subject to dust. The machine must not be near a source of fire.
   c. The site must not be subject to ammonium gas.
   d. The machine must not be exposed to the rays of the sun. As necessary, curtains must be provided.
   e. The area must be well ventilated. The machine must be on a level floor.
   f. Be sure that there is a source of power that can be used by the machine.

14.1.2 Checking the Paper

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

a. Be sure the paper being used is of a type recommended by Canon.
   b. Be sure that the paper is not moist. Try using paper fresh out of package.

14.1.3 Checking the Placement of Paper

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

a. There must be paper in the cassette or the tray deposited within a specific limit.
   b. If transparencies are used, be sure that they are placed in the manual feed tray in the correct orientation.

14.1.4 Checking the Durables

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Refer to the table of durables, and replace those that have reached the end of their lives.

14.1.5 Checking the Units and Functional Systems

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

<Reader>
   - Check whether the optical system (contact sensor/white panel/copyboard glass) is free from scratches, stain, foreign objects.
   - Check whether the contact sensor unit moves smoothly. Check whether the rails are free from dirt.
   - Check whether the contact sensor is not flickering.
   - Check whether the optical system is free from dew condensation.

   <Process>
   - Check whether the toner cartridge is installed securely.
   - Check whether the photoconductor drum is free from scratches and stain.

   <Transfer>
   - Check whether the transfer roller is free from scratches, stain, and deformation.

   <Fixing>
   - Check whether the fixing film and pressure roller are free from wear, scratches, dirt, and deformation.
   - Check whether the fixing thermistor is broken.
   - Check whether the temperature huse is conductive.

   <Paper transport >
   - Check whether the paper transport path is free from foreign objects such as paper chips.
   - Check whether the paper pickup, feed, and separation rollers are free from paper dust. Also check whether these rollers are free from wear, scratches, dirt, and deformation.
   - Check whether the registration roller and paper path are free from wear, scratches, dirt, and deformation.
   - Check whether the transport guide is free from wear, scratches, dirt, and deformation.
   - Check whether the leading edge of paper is not folded, curled, wavy, or damp.
   - Check whether use of the Canon-recommended paper/transparency solves the problem.

   <Machine>
   - Check whether the drive system load is heavy.
   - Check whether gears are worn or cracked?

   <Cassette>
   - Check whether the cassette is installed properly. Check whether the paper size is set properly. Check whether the same symptom occurs when the cassette is replaced with the cassette verified to be normal.
   - Check whether the middle plate of the cassette moves smoothly. Check whether it is deformed.
   - Check whether the side and rear alignment plates are adjusted properly.
   - Check whether the cassette heater switch is turned on (when a cassette heater is installed).

   <Service Mode>
   - Check whether various adjustment values are the same as those printed on the service label.
   - Check whether the output between CIS channels has been corrected.
   (Service mode>TEST MODE>"2"(SCANTEST)>"1")
   - Check whether the read position has been adjusted properly. (Stream reading: Only when the ADF is installed)
   (Service mode>TEST MODE>"2"(SCANTEST)>"3"(SHEET POS ADJ))

   <General>
   - Check whether the power cord is plugged in the outlet securely.
   - Check whether the specified AC voltage is applied to the outlet.
   - Check whether sensors, clutches, motors, and solenoids are operating normally. Check whether connectors are connected properly.
   (Check the power supply and signal routes with reference to the general circuit diagram.)
   - Check whether all cables are routed properly and all screws are not loose.
   - Check whether all outer covers are attached.
   - Check whether the main power switch and the power switch on the operation pane are turned on.
   - Check the power cables and signal cables of options are connected properly.
   - Check whether no fuse on PCBs is blown.

- Check whether the user uses the machine properly.

14.1.6 Others

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

If a machine is brought from a cold to warm room, its inside can start to develop condensation, leading to various problems.
a. condensation on the BD sensor is likely to cause problems associated with E100
b. condensation on the dust-proof glass is likely to cause poor image density in sub scanning direction
c. condensation on the contact sensor of the reader unit or on the copyboard glass can cause light images
d. condensation on the pickup or feed guide can cause paper feed problems

If the problem given in d. above has occurred, dry wipe the units in the feed system. Do not open the package containing a drum unit right after it has been brought in from a cold to warm place to avoid condensation. Be sure to leave it alone for a while (1 to 2 hr), opening it after it has become fully used to the temperature of the site.

14.2 Outline of Electrical Components

14.2.1 Clutch/Solenoid

14.2.1.1 List of Clutches/Solenoids/Motors/Fans

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

<Main body>

T-14-1

Symbol	Name	Function	Part No.	Connection jack No.	Error
CL1	Registration clutch	Drives the registration roller.	FK2-1401	J205 (Relay PCB)	
SL1	Duplex pickup solenoid	Drives the duplex pickup roller.	FK2-1409	J204 (Relay PCB)	
SL2	Cassette pickup solenoid	Drives the cassette pickup roller.	FK2-1413	J207 (Relay PCB)	
SL5	Manual pickup solenoid	Drives the manual pickup roller.	FK2-1411	J203 (Relay PCB)	
M1	Main motor	Supplies a drive to each rollers.	FK2-1413	J110 (DC controller PCB)	E010
M2	Polygon motor	Drives the laser scanner.	FM2-5271	J105 (DC controller PCB)	
M401	Reader motor	Drives the contact sensor.	FK2-1383	J410 (Analog processor PCB)	
FM1	Heat discharge fan	Cools fixing unit.	FK2-1386	J206 (Relay PCB)	E805

F-14-1

<ADF>
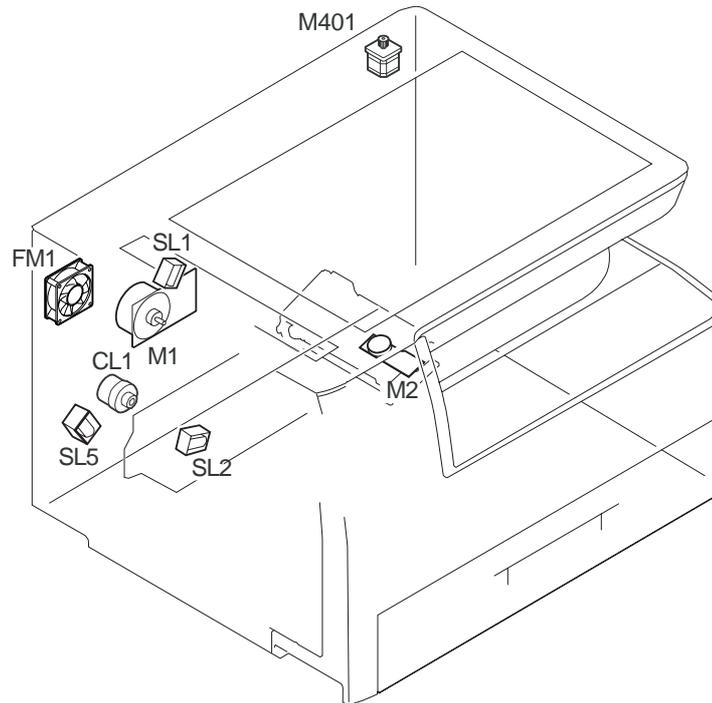
T-14-2

Symbol	Name	Function	Part No.	Connection jack No.	Error
SL2001	Pickup solenoid	Drives the pickup roller.	FK2-1393	J411 (Analog processor PCB)	
SL2002	Registaration solenoid	Drives the registration roller.	FK2-1393	J411 (Analog processor PCB)	

Symbol	Name	Function	Part No.	Connection jack No.	Error
SL2003	Roller release solenoid	Releases the delivery roller.	FK2-1392	J411 (Analog processor PCB)	
M2001	ADF motor	Supplies a drive to each rollers.	FM2-8208	J400 (Analog processor PCB)	
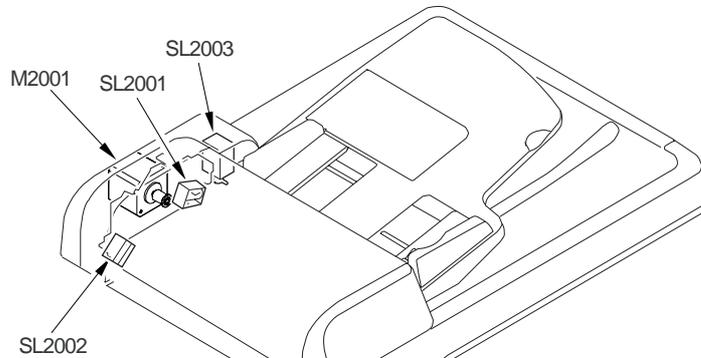
F-14-2

14.2.2 Sensor

14.2.2.1 List of Sensors

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

<Main body>

T-14-3

Symbol	Name	Function	Part No.	Connection jack No.	Jam code
SR401	CS HP sensor	Detects the CS home position.	WG8-5776	J412 (Analog processor PCB)	
SR5	Delivery sensor	Detects delivery.	WG8-5776	J107 (DC controller PCB)	010c, 0210, 0214, 021c
SR9	Cassette paper sensor	Detects presence/absence of cassette paper.	WG8-5776	J208 (Relay PCB)	
SR10	Delivery full sensor	Detects the delivery paper full status.	WG8-5776	J208 (Relay PCB)	
SR11	Registration sensor	Detects registration paper.	WG8-5776	J202 (Relay PCB)	0104, 0208, 010c, 0210, 0214
SR12	Manual feed paper sensor	Detects presence/absence of manually fed paper.	WG8-5776	J202 (Relay PCB)	
SW2	Interlock switch	Detects opening/closing of the left door.	WC4-5236	J112 (DC controller PCB)	1118
SW3	Interlock switch	Detects opening/closing of the front cover.	WC4-5236	J112 (DC controller PCB)	1118

F-14-3

<ADF>
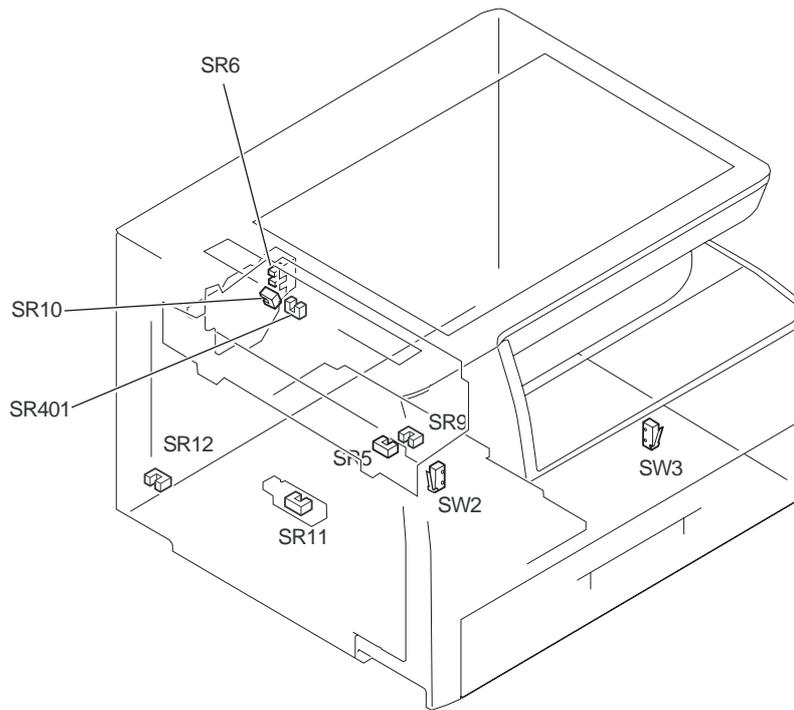
T-14-4

Symbol	Name	Function	Part No.	Connection jack No.	Error
SR2001	Document set sensor	Detects presence/absence of paper.	WG8-5696	J406 (Analog processor PCB)	000a
SR2002	Document edge sensor	Detects edge of paper.	WG8-5696	J406 (Analog processor PCB)	0007, 0008, 0009
SR2003	Registration sensor	Detects registration paper.	WG8-5696	J406 (Analog processor PCB)	0007, 0010
SR2004	Separation rear sensor	Detects paper after separation.	WG8-5696	J406 (Analog processor PCB)	0007
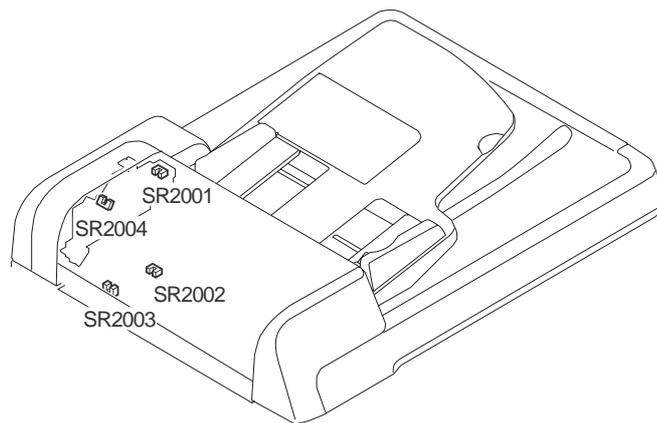
F-14-4

14.2.3 Lamps, Heaters, and Others

14.2.3.1 List of Lamps, Heaters, and Others

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

<Main body>

T-14-5

Symbol	Name	Function	Parts No.	Connection Jack No.	Error
H1	Fixing heater	Used as the heater for fixing.	Fixing unit (120V:FM2-9045, 230V:FM2-9046)	J15 (power supply PCB)	E000, E001, E002, E003

Symbol	Name	Function	Parts No.	Connection Jack No.	Error
TH1	Fixing main thermistor	Detects the fixing heater temperature.	Fixing unit (100V:FM2-5297, 120V:FM2-5278, 230V:FM2-5298)		
TH2	Fixing sub thermistor	Detects the fixing heater temperature.	Fixing unit (100V:FM2-5297, 120V:FM2-5278, 230V:FM2-5298)		
TP1	Temperature fuse	Cuts off the heater power supply line when an abnormal temperature is detected.	Fixing unit (100V:FM2-5297, 120V:FM2-5278, 230V:FM2-5298)	J15 (power supply PCB)	
SP1	Speaker	Speaker	FK2-1378	J1203 (modem PCB)	

F-14-5
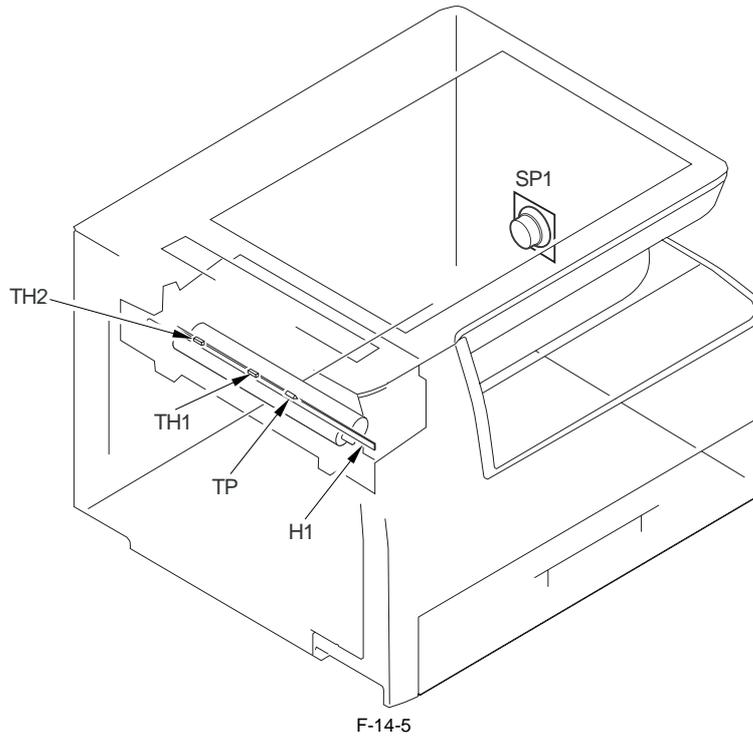
<ADF>
There are no parts applicable to ADF.

14.2.4 PCBs

14.2.4.1 List of PCBs

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

<Main body>

T-14-6

Symbol	Name	Function	Part No.
[1]	Image processor PCB	Processes output image data	12MB: FM2-5044(except USA), FM2-6080(for USA) 16MB: FM2-5045(except USA), FM2-6081(for USA)
[2]	DC controller PCB	Controls the printer unit/option	iR1018/1019 120V: FM2-8364 iR1018/1019 230V: FM2-8365 iR1022/1023 120V: FM2-8366 iR1022/1023 230V: FM2-8367
[3]	Analog processor PCB	CS drive, processes analog image data	FM2-8363
[4]	Power supply PCB	Printer power supply	120V: FK2-1372 230V: FK2-1373
[5]	Relay PCB	Relay of drive system DC load	FM2-4918
[6]	Laser driver PCB/BD detection PCB	Laser drive/laser beam detection	FM2-5271
[7]	NCU PCB	Controls the line switching operation	FM2-3947
[8]	Modular jack PCB	Fax line interface	Two lot type: FM2-5050 (iR1022F, iR1022iF except for EURO) Three lot type: FM2-5051 (iR1022F, iR1022iF for EURO)
[9]	Modem PCB	Control the fax	FM2-5047 (with SEND functions) FM2-4057 (w/o SEND functions)
[10]	LAN PCB	Network interface/printer function control	FM2-5048
[11]	Operation panel PCB	Controls the operation panel	FM2-9000 (iR1023iF for USA), FM2-9001 (iR1022iF for EURO), FM2-9002 (iR1022iF), FM2-9003 (iR1022iF for CHN), FM2-9005 (iR1022i for EURO), FM2-9006 (iR1022F for EURO), FM2-9007 (iR1022), FM2-9008 (iR1022F for KOR), FM2-9009 (iR1022F for TWN), FM2-9010 (iR1023 for USA), FM2-9011 (iR1018 for EURO), FM2-9012 (iR1018 for AUS), FM2-9013 (iR1022 for CHN), FM2-9014 (iR1022 for KOR), FM2-9015 (iR1022 for TWN), FM2-9016 (iR1023A for USA), FM2-9017 (iR1022A for EURO), FM2-9018 (iR1019J for USA/iR1018J), FM2-9019 (iR1018J for EURO), FM2-9020 (iR1022J for CHN)
[12]	Humidity sensor	Humidity detection	FH7-7611
[13]	RAM DIMM	temporarily retains image data	FM2-4055 (128MB) FM2-4056 (256MB)
[14]	(Option ROM PCB PCL)	PCL functiion control	FM2-5056(except USA), FM2-6083(for USA)
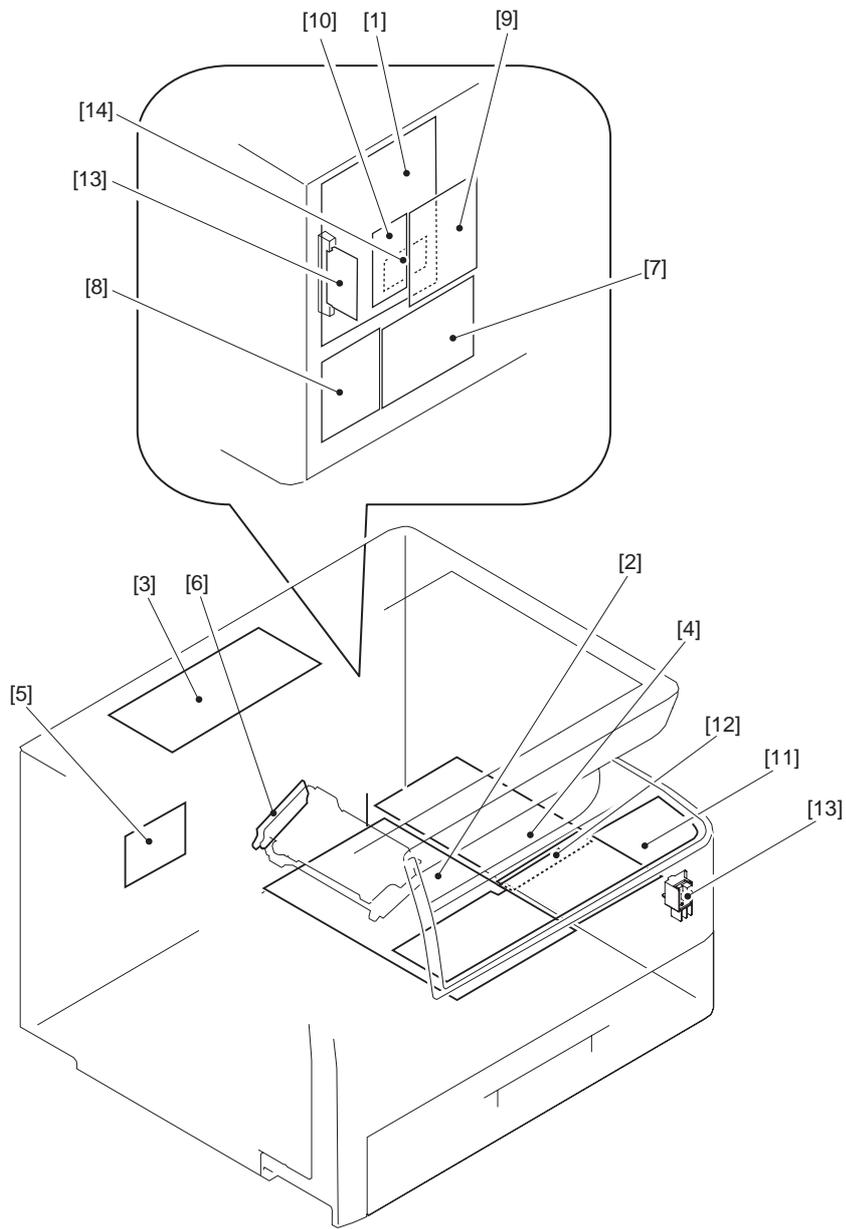
F-14-6

<ADF>
There is no circuit board in ADF.

Chapter 15 Self Diagnosis

Contents

15.1 Error Code Details

15.1.1 Error Code Details

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

T-15-1

Display Code	Detail Code	Main Cause/Symptom	Countermeasure
E000	0000	Startup error	
		The temperature detected by the main or sub thermistor does not rise to the specified value during startup control.	- Check the fixing film connector. - Replace the fixing film unit. - Replace the DC controller PCB.
E001	0000	Abnormally high temperature (detected by main thermistor)	
		The main thermistor detected an abnormally high temperature (235 deg C) during temperature control.	- Check the connector of the fixing film unit. - Replace the fixing film unit. - Replace the DC controller PCB.
	0001	Abnormally high temperature (detected by sub thermistor)	
		The sub thermistor detected an abnormally high temperature (300 deg C) during temperature control.	- Check the connector of the fixing film unit. - Replace the fixing film unit. - Replace the DC controller PCB.
E002	0000	Low temperature during temperature control.	
		The target temperature is not reached during temperature control.	- Check the connector of the fixing film unit. - Replace the fixing film unit. - Replace the DC controller PCB.
E003	0000	Abnormally low temperature (detected by main thermistor)	
		After the temperature detected by the main thermistor has reached the specified value, it does not reach the specified value during initial rotation.	- Check the connector of the fixing film unit. - Replace the fixing film unit. - Replace the DC controller PCB.
	0001	Abnormally low temperature (detected by sub thermistor)	
		After the temperature detected by the sub thermistor has reached the specified value, it does not reach the specified value during initial rotation.	- Check the connector of the fixing film unit. - Replace the fixing film unit. - Replace the DC controller PCB.
E010	0000	Main motor failure	
		The main motor is faulty.	- Check the connector of the main motor. - Replace the main motor. - Replace the DC controller PCB.
E019	0000	Waste toner full detection	
		The waste toner full state was detected.	Replace the drum unit
	0001	Waster toner full detection sensor is faulty.	
		The waste toner full state was detected continuously for five or more seconds while the main motor was turning.	- Check the connector of the waster toner full sensor. - Replace the waste toner full sensor. - Replace the DC controller PCB.
E100	0000	BD detection PCB failure	
		The BD detection PCB is faulty.	- Check the connector of the BD detection PCB. - Replace the laser scanner unit. - Replace the DC controller PCB.
E196	0001	Flash ROM write/read error	- Replace the image processor PCB.
		The write/read of Flash ROM in the image processor PCB is faulty.	
	0002	PCL ROM write/read error	- Replace the PCL PCB. - Replace the image processor PCB.
		The write/read of PCL ROM in the image processor PCB is faulty.	
E197	0000	Printer engine communication error	
		Erroneous communication between the DC controller PCB and image processor PCB was detected.	- Check the connectors of the DC controller PCB and image processor PCB. - Replace the DC controller PCB for normal connection. - Replace the image processor PCB.
E716	0000	Erroneous communication with optional cassette	
		Disconnection of the optional cassette was detected after power-on, detection of normal connection to the optional cassette, and start of communication.	- Check the connectors of the optional cassette PCB and DC controller PCB. - Replace the optional cassette PCB for normal connection. - Replace the DC controller PCB.

Display Code	Detail Code	Main Cause/Symptom	Countermeasure
E719	0000	Erroneous communication with card reader (serial communication)	
		- Disconnection from the card reader has been detected since communication started after confirmation of normal connection to the card reader (after power-on). - A serial communication error has occurred. (The serial communication error cannot be recovered.)	- Check the connectors of the card reader and image processor PCB. - Replace the card reader for normal connection. - Replace the image processor PCB.
	0001	Erroneous communication with coin vendor (serial communication)	
		- Disconnection from the coin vendor has been detected since communication started after confirmation of normal connection to the coin vendor (after power-on). - A serial communication error has occurred. (The serial communication error cannot be recovered.)	- Check the connection between the image processor PCB and serial PCB. - Check the connectors of the serial PCB and coin vendor for normal connection. - Replace the serial PCB. - Check the coin vendor. - Replace the image processor PCB.
E730	0000	inside error of the image processor PCB (PDL system error)	- Replace the image processor PCB.
		The inside of the image processor PCB is faulty.	
E733	0000	Erroneous communication between controller and printer	
		Cannot communicate with the printer at startup.	- Check the connectors of the DC controller PCB and image processor PCB for normal connection. - Check the power supply of the printer (Check whether initialization is performed at startup). - Replace the DC controller PCB or image processor PCB.
E736	0000	CCU communication error	
		The installed modem PCB is incompatible.	- Check the connectors of the image processor PCB and modem. - Replace the modem PCB. - Replace the image processor PCB.
E739	0000	Erroneous communication between controller and network board	
		The installed network board is incompatible.	- Check the connectors of the image processor PCB and LAN PCB for normal connection. - Replace the LAN PCB. - Replace the image processor PCB.
E805	0000	Fan failure	
		The fan is faulty.	- Check the fan connector. - Replace the fan. - Replace the DC controller PCB.
E808	0000	Fixing drive circuit failure	
		- The heater does not turn on. - A fixing drive motor failure was detected.	- Check the connector of the fixing film unit. - Replace the fixing film unit. - Replace the fixing drive motor. - Replace the DC controller PCB. - Replace the power supply PCB.

15.2 Jam Code

15.2.1 Jam Codes (Main body)

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

T-15-2

Code	Name	Sensor No.	Description
0104	Pickup Delay Jam	SR11	After execution of a pickup retry, the registration sensor (SR11) does not detect the leading edge of paper within a specific period of time. Or after the duplex drive solenoid (SL1) is on, the registration sensor (SR11) does not detect the leading edge of paper within a specific period of time.
0208	Pickup Stationary Jam	SR11	After the registration sensor (SR11) has detected the leading edge of paper, the registration sensor (SR11) does not detect the trailing edge of paper within a specific period of time.
010c	Delivery Sensor Delay Jam	SR5	After the registration sensor (SR11) has detected the leading edge of paper, the delivery sensor (SR5) does not detect the leading edge of paper within a specific period of time.

Code	Name	Sensor No.	Description
0210	Delivery Sensor Stationary Jam	SR5	- The delivery sensor cannot detect absence of paper within the specified time after turning off of the registration clutch. - The delivery sensor cannot detect absence of paper within the specified time after the sensor detected the leading edge of paper.
0214	Stationary jam in machine	SR5, SR9	After the registration sensor (SR11) has detected the trailing edge of paper, the delivery sensor (SR5) does not detect the trailing edge of paper within a specific period of time.
021c	Wound Paper Jam at Fuser	SR5, SR11	The delivery sensor (SR5) has detected absence of paper within the prescribed time after it detected presence of paper.
1118	Door open jam	SR5, SR9, SR11, SW2	The door was opened when there was printing paper in the transport path.

15.2.2 Jam Codes (ADF)

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

T-15-3

Code	Name	Sensor No.	Description
0000	Unknown jam	-	Other errors
0007	Initial stationary	SR2002, SR2003, SR2004	Paper is detected in the transport path before the ADF starts initial operation.
0008	Document edge sensor delay jam	SR2002	The document edge sensor does not detect paper when the paper has been fed by the predetermined distance since reception of a pickup request.
0009	Document edge sensor stationary jam	SR2002	The trailing edge of paper is not detected when the paper has been fed by the predetermined distance since detection of it by the document edge sensor.
000a	Paper absence (Pull out the document.)	SR2001	The Document set sensor has been held off since start of pickup.
000c	Delivery delay jam	SR2002	In case the internal software signal "Delivery Sensor OFF" set in the system cannot be detected, when the leading edge of paper is detected by the document edge sensor and fed the prescribed distance, and after the paper's trailing edge is detected.
000d	Delivery stationary jam	SR2002	In case the internal software signal "Delivery Sensor ON" set in the system cannot be detected, when the paper feed request is received and the paper is fed the prescribed distance, and the leading edge of paper is detected and paper is fed the prescribed distance .
0010	Pickup NG	SR2003	The registration sensor has been held off since paper pickup started.

15.3 FAX Error Codes

15.3.1 Outline

15.3.1.1 Error Code Outline

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

An error code is used to indicate a fault in a machine, and is indicated in the machine's LCD or reports, showing the nature (symptoms) of the fault. Using the error code, the user or the service man can readily find out how to correct the fault by simply referring to the User's Manual or service manual.
An error code may be either of the following two types:
User Error Codes
    A fault indicated as a user error code is one that can easily be corrected by the user, as by operating the machine. It takes the form of "#+number."
Service Error Codes
    If a fault calls for a service man for correction, it is indicated as a service man error code in the form of "##+number" or "SYSTEM ERROR E+number."

Memo
    A service error code expressed in the form of "##+number" will not appear on the LCD, Error Tx Report, or Activity Report while the machine remains in factory default state. To check a service error code, shift bit 0 of service soft switch #1 SSSW SW01 to '1'.

Memo
   Display only the error codes which are newly incorporated in this machine as well as which require remedies unique to the product. For the causes and countermeasures of other error codes, refer to the separate G3/G4 Facsimile Error Code List (Rev. 2).

15.3.2 User Error Code

15.3.2.1 User Error Code

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

T-15-4

No.	Tx/Rx	Description
#0001	[Tx]	an original has jammed.
#0003	[Tx/Rx]	tine-out for copying or sending/receiving a single page has occurred.
#0005	[Tx/Rx]	time-out for initial identification (T0/T1) has occurred.
#0009	[Rx]	recording paper has jammed or is absent.
#0012	[Tx]	recording paper is absent at the other party.
#0018	[Tx/Rx]	auto call initiation has failed.
#0037	[Rx]	image memory overflow at time of reception has occurred.
#0059	[Tx]	The number you dial and connected number (CSI) does not match.
#0995/0099	[Tx/Rx]	a memory communication reservation has been cancelled.

15.3.3 Service Error Code

15.3.3.1 Service Error Code

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

T-15-5

No.	Tx/Rx	Description
##0100	[Tx]	at time of transmission, the procedural signal has been transmitted more than specified.
##0101	[Tx/Rx]	the modem speed does not match that of the other party.
##0102	[Tx]	at time of transmission, fall-back cannot be used.
##0103	[Rx]	at time of reception, EOL cannot be detected for 5 sec (15 sec if CBT).
##0104	[Tx]	at time of transmission, RTN or PIN is received.
##0106	[Rx]	at time of reception, the procedural signal is received for 6 sec while in wait for the signal.
##0107	[Rx]	at time of reception, the transmitting party cannot use fall-back.
##0109	[Tx]	at time of transmission, a signal other than DIS, DTC, FTT, CFR, or CRP is received, and the procedural signal has been sent more than specified.
##0111	[Tx/Rx]	memory error has occurred.
##0114	[Rx]	at time of reception, RTN is transmitted.
##0200	[Rx]	at time of reception, no image carrier is detected for 5 sec.
##0201	[Tx/Rx]	DCN is received outside the normal parity procedure.
##0220	[Tx/Rx]	system error (main program out of control) has occurred.
##0232	[Tx]	encoding error has occurred.
##0237	[Rx]	decoding error has occurred.
##0261	[Tx/Rx]	system error has occurred.
##0280	[Tx]	at time of transmission, the procedural signal has been transmitted more than specified.
##0281	[Tx]	at time of transmission, the procedural signal has been transmitted more than specified.
##0282	[Tx]	at time of transmission, the procedural signal has been transmitted more than specified.
##0283	[Tx]	at time of transmission, the procedural signal has been transmitted more than specified.
##0284	[Tx]	at time of transmission, DCN is received after transmission of TCF.
##0285	[Tx]	at time of transmission, DCN is received after transmission of EOP.
##0286	[Tx]	at time of transmission, DCN is received after transmission of EOM.
##0287	[Tx]	at time of transmission DCN is received after transmission of MPS.
##0288	[Tx]	after transmission of EOP, a signal other than PIN, PIP, MCF, RTP, or RTN has been received.
##0289	[Tx]	after transmission of EOM, a signal other than PIN, PIP, MCF, RTP, or RTN has been received.
##0290	[Tx]	after transmission of MPS, a signal other than PIN, PIP, MCF, RTP, or RTN has been received.
##0670	[Tx]	at time of V.8 late start, the V.8 ability of DIS front the receiving party is expected to be detected, and the CI signal is expected to be transmitted in response; however, the procedure fails to advance, and the line is released because of T1 time-out.
##0671	[Rx]	at time of V.8 arrival, procedure fails to move to phase 2 after detection of CM signal from caller, causing T1 time-out and releasing line
##0672	[Tx]	at time of V.34 transmission, a shift in procedure from phase 2 to phase 3 and thereafter stops, causing the machine to release the line and suffer T1 timeout.
##0673	[Rx]	at time of V.34 reception, a shift in procedure from phase 2 to phase 3 and thereafter stops, causing the machine to release the line and suffer T1 timeout.
##0674	[Tx]	at time of V.34 transmission, a shift in procedure from phase 3 and phase 4 to the control channel and thereafter stops, causing the machine to release the line and suffer T1 timeout.

No.	Tx/Rx	Description
##0675	[Rx]	at time of V.34 reception, a shift in procedure from phase 3 and phase 4 to the control channel and thereafter stops, causing the machine to release the line and suffer T1 timeout.
##0750	[Tx]	at time of ECM transmission, no meaningful signal is received after transmission of PPS-NULL, causing the procedural signal to be transmitted more than specified.
##0752	[Tx]	at time of ECM transmission, DCN is received after transmission of PPS-NULL.
##0753	[Tx]	at time of ECM transmission, the procedural signal has been transmitted more than specified after transmission of PPS-NULL, or T5 time-out (60 sec) has occurred.
##0754	[Tx]	at time of ECM transmission, the procedural signal has been transmitted more than specified after transmission of PPS-NULL.
##0755	[Tx]	at time of ECM transmission, no meaningful signal is received after transmission of PPS-MPS, causing the procedural signal to be transmitted more than specified.
##0757	[Tx]	at time of ECM transmission, DCN is received after retransmission of PPS-MPS.
##0758	[Tx]	at time of ECM transmission, the procedural signal has been transmitted more than specified after transmission of PPS-MPS, or T5 time-out (60 sec) has occurred.
##0759	[Tx]	at time of ECM transmission, the procedural signal has been transmitted more than specified after transmission of PPS-MPS.
##0760	[Tx]	at time of ECM transmission, no meaningful signal is received after transmission of PPS-EOM, causing the procedural signal to be transmitted more than specified.
##0762	[Tx]	at time of ECM transmission, DCN is received after transmission of PPS-EOM.
##0763	[Tx]	at time of ECM transmission, the procedural signal has been transmitted more than specified after transmission of PPS-MPS, or T5 time-out (60 sec) has occurred.
##0764	[Tx]	at time of ECM transmission, the procedural signal has been transmitted more than specified after transmission of PPS-EOM.
##0765	[Tx]	at time of ECM transmission, no meaningful signal is received after transmission of PPS-EOP, causing the procedural signal to be transmitted more than specified.
##0767	[Tx]	at time of ECM transmission, DCN is received after transmission of PPS-EOP.
##0768	[Tx]	at time of ECM transmission, the procedural signal has been transmitted more than specified after transmission of PPS-EOP, or T5 time-out (60 sec) has occurred.
##0769	[Tx]	at time of ECM transmission, the procedural signal has been transmitted more than specified after transmission of PPS-EOP.
##0770	[Tx]	at time of ECM transmission, no meaningful signal is received after transmission of EOR-NULL, causing the procedural signal to be transmitted more than specified.
##0772	[Tx]	at time of ECM transmission, DCN is received after transmission of EOR-NULL.
##0773	[Tx]	at time of ECM transmission, the procedural signal has been transmitted more than specified after transmission of EOR-NULL, or T5 time-out (60 sec) has occurred.
##0774	[Tx]	at time of ECM transmission, ERR is received after transmission of EOR-NULL.
##0775	[Tx]	at time of ECM transmission, no meaningful signal is received after transmission of EOR-MPS, causing the procedural signal to be transmitted more than specified.
##0777	[Tx]	at time of ECM transmission, DCN is received after transmission of EOR-MPS.
##0778	[Tx]	at time of ECM transmission, the procedural signal has been transmitted more than specified after transmission EOR-MPS, or T5 time-out (60 sec) has occurred.
##0779	[Tx]	at time of ECM transmission, ERR is received after transmission of EOR-MPS.
##0780	[Tx]	at time of ECM transmission, no meaningful signal is received after transmission of EOR-EOM, causing the procedural signal to be transmitted more than specified.
##0782	[Tx]	at time of ECM transmission, DCN is received after transmission of EOR-EOM.
##0783	[Tx]	at time of ECM transmission, the procedural signal has been transmitted more than specified after transmission of EOR-EOM, or T5 time-out (60 sec) has occurred.
##0784	[Tx]	at time of ECM transmission, ERR is received after transmission of EOR-EOM.
##0785	[Tx]	at time of ECM transmission, no meaningful signal is received after transmission of EOR-EOP, causing the procedural signal to be transmitted more than specified.
##0787	[Tx]	at time of ECM transmission, DCN is received after transmission of EOR-EOP.
##0788	[Tx]	at time of ECM transmission, the procedural signal has been transmitted more than specified after transmission of EOR-EOP, or T5 time-out (60 sec) has occurred.
##0789	[Tx]	at time of ECM transmission, ERR is received after transmission of EOR-EOP.
##0790	[Rx]	at time of ECM reception, ERR is transmitted after transmission of EOR-Q.
##0791	[Tx/Rx]	while ECM mode procedure is under way, a signal other than a meaningful signal is received.
##0792	[Rx]	at time of ECM reception, PPS-NULL cannot be detected over partial page processing.
##0793	[Rx]	at time of ECM reception, no effective frame is received while high-speed signal reception is under way, thus causing time-out.
##0794	[Tx]	at time of ECM reception, PPR with all 0s is received.
##0795	[Tx/Rx]	a fault has occurred in code processing for communication.

Chapter 16 Service Mode

Contents# Contents

16.1 Outline

16.1.1 Outline of Service Mode

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

The items that follow may be checked/set using the machine's service mode, which is designed the way the service mode used in fax machines is designed in terms of contents and operation.

#SSSW
Use it to register/set basic fax functions (e.g., error control, echo remedy, communication error correction).
Use it to make settings related counter functions.

#MENU
Use it to register/set items related to functions needed at time of installation (e.g., NL equalizer, transmission level).

#NUMERIC
These setting items are for inputting numeric parameters such as the various conditions for the RTN signal transmission.

#SPECIAL
These setting items are for telephone network control functions.

#NCU
These setting items are for telephone network control functions such as the selection signal transmission conditions and the detection conditions, for the control signals sent from the exchange.

#FAX
Do not use.

#SCAN
These setting items are for image adjustment in scanning.

#PRINT
These setting items are for image adjustment in printer assembly and for special mode for the field-related measures.

#NETWORK
Use it to confirm the contents of the installed CA certificates.

#CODEC
Do not use.

#SYSTEM
These are used for the import/export of user information through USB.

#ACC
Register the accessories.

#COUNTER
Use it to check estimates for maintenance/parts replacement.

#LMS
Do not used.

#E-RDS
This is a setting items related to e-RDS (Embedded RDS).

#REPORT
Use it to generate reports on various service data.

#DOWNLOAD
Use it to download firmware to the ROM of a PCB in question.

#CLEAR
Use it to reset various data to initial settings.

#ERROR DISPLAY
The error and detailed code which have happened now are displayed.

#ROM
Displays ROM information, such as version numbers and checksums.

#TEST MODE
Makes various status checks, such as contact sensor, sensor and print status.

16.1.2 Using the Mode

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

<Operation at the time of Bit SW>

1) Selecting Service Mode
Press the Additionalfunctions key, 2key, 8key, Additional functions key sequentially.

```
#SSSW
```

2) Press [OK] on the touch panel.

```
#SSSW
 001          000000000
```

3) Selecting a Menu Item
Press [OK].

```
#SSSW
 033          000000000
```

4) Selecting a Bit Switch
Select the bit using the [left arrow]/[right arrow] on the touch panel.

```
#SSSW
 033          000000000
```

5) Registering/Setting Data
Enter data using the keypad, and press the [OK].

```
#SSSW
 033          000000001
```

6) Press the [Stop]/[Additional functions]/[Reset] key to end the service mode.

<Operation at the time of Parameter>

1) Selecting Service Mode
Press the Additionalfunctions key, 2key, 8key, Additional functions key sequentially.

```
#SSSW
```

2) Selecting a Menu Item
Select the Menu item using the [left arrow]/[right arrow] on the touch panel.

```
#NUMERIC Param.
```

3) Press [OK].

```
#NUMERIC Param.
 001                  0
```

4) Selecting a Prarameter
Select the Prarameter using the [left arrow]/[right arrow].

```
#NUMERIC Param.
 002                  0
```

5) Registering/Setting Data
Enter data using the keypad, and then press [OK].

```
#3    NUMERIC  Param.
 002                 10
```

6) Press the [Stop]/[Additional functions]/[Reset] key to end the service mode.

F-16-1

16.2 Default settings

16.2.1 Service Mode Menus

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

#SSSW		
No.	Initial setting	Function
SW01	00100000	error/copy control
SW02		not used
SW03	00000000	echo remedy setting
SW04	00000000	communication fault remedy setting
SW05	00000000	standard function (DIS signal) setting
SW06 - SW11		not used
SW12	00000010	page timer setting
SW13	00000000	meter/inch resolution setting
SW14	00000010	inch/meter resolution setting
SW15 - SW27		not used
SW28	00000000	V.8/V.34 protocol settings
SW29		not used
SW30	00010000	Assigning a New Dial Tone Detection Method

#SSSW		
No.	Initial setting	Function
SW31 - SW33		not used
SW34	00000000	waste toner full display setting
SW31 - SW50		not used

#MENU			
No.	Initial setting	Range of setting	Function
01: - 04:			not used
05:	0	ON/OFF	NL equalizer setting
06:	0	0: DIAL 1: SERVICEMAN [1] 2: SERVICEMAN [2] 3: OFF	line monitor setting
07:	10	0-15	transmission level setting
08:	0	0: 3429 1: 3200 2: 3000 3: 2800 4: 2743 5: 2400	V.34 baud rate
09:	0	0: 33.6kbs 1: 31.2kbs 2: 28.8kbs 3: 26.4kbs 4: 24.0kbs 5: 21.6kbs 6: 19.2kbs 7: 16.8kbs 8: 14.4kbs 9: 12.0kbs 10: 9.6kbs 11: 7.2kbs 12: 4.8kbs 13: 2.4kbs	V.34 transmission speed
10:	1	0: 50Hz 1: 25Hz 2: 17Hz	pseudo CI signal frequency setting
11: - 20:			not used

#NUMERIC Param.			
No.	Initial setting	Range of setting	Function
001:			not used
002:	10 (10%)	(1 - 99)	RTN signal transmission condition (1) setting
003:	15 (15lines)	(2 - 9)	RTN signal transmission condition (2) setting
004:	12 (12times)	(1 - 99)	RTN signal transmission condition (3) setting
005:	4 (4sec)	(1 - 60)	NCC pause time (pre-ID code) setting
006:	4 (4sec)	(1 - 60)	NCC pause time (post-ID code) setting
007: - 009:			not used
010:	5500 (55sec)	(0 - 9999)	line connection identification time length
011:	3500 (35sec)	(0 - 9999)	T.30 T1 timer (for reception)
012:			not used
013:	1300 (13sec)	(500 - 3000)	T30 EOL timer
014:			not used
015:	120 (1200ms)	(0 - 999)	hooking detection time setting
016:	2 (2sec)	(0 - 9)	fax/tel switch-over function: between line acquisition and pseudo RBTtransmission
017:	100 (1000ms)	(0 - 999)	pseudo RBT signal pattern: ON time setting
018:	0 (0ms)	(0 - 999)	pseudo RBT signal pattern: OFF time (short) setting
019:	400 (2000ms)	(0 - 999)	pseudo RBT signal pattern: OFF time (long) setting
020:	100 (1000ms)	(0 - 999)	pseudo CI signal pattern: ON time setting
021:	0 (0ms)	(0 - 999)	pseudo CI signal pattern: OFF time (short) setting
022:	400 (2000ms)	(0 - 999)	pseudo CI signal pattern: OFF time (long) setting
023:	0	(0 - 7)	fax/tel switch-over pseudo RBT transmission level
024:	10 (-20dBm)	(0 - 20)	fax/tel switch-over pseudo RBT transmission level
025:	60 (60sec)	(0 - 999)	pseudo RBT signal pattern: OFF time (long) setting
026:			not used
027:	0	(0 - 20)	V21 low-speed flag preamble detection time length
028: - 055:			not used
056:	101	(0 - 999)	count type select 1
057:	103	(0 - 999)	count type select 2
058:	201	(0 - 999)	count type select 3
059:	203	(0 - 999)	count type select 4
060:	0	(0 - 999)	count type select 5
061:	0	(0 - 999)	count type select 6
062: - 080:			not used

#SPECIAL	Do not change.
#NCU	Do not change.
#FAX	Not used.

#SCAN				
	No.	**Initial setting**	**Range setting**	**Explanation**
#SCAN SW	SW1 - SW50			Not used
#SCAN NUMERIC	001: - 023:			Not used
	024:	390	300 to 450, one unit=0.1mm	CS scan position during ADF scanning.
	025:			Not used
	026:	22	6 to 48, one unit=0.1mm	Distance from the standby position of CIS to the shading start point.
	027: - 030:			Not used
	031:	0	0 to 70, one unit=0.1mm	Vertical scan start position adjustment
	032:	115	50 to 150, one unit=0.1mm	Horizontal scan start position adjustment
	033:	32	0 to 32, one unit=0.1%	Vertical scan magnification correction
	034:	32	0 to 32, one unit=0.1%	Horizontal scan magnification correction
	035: - 036:	555		Reader motor speed adjustment
	037: - 040:			Not used
	041:	0	0 to 70, one unit=0.1mm	Vertical scan start position adjustment (scanning on ADF)
	042:	219	170 to 270, one unit=0.1mm	Horizontal scan start position adjustment (scanning on ADF)
	043:	75	0 to 200, one unit=0.1mm	Horizontal scan end position correction (copy)
	044:	75	0 to 200, one unit=0.1mm	Horizontal scan end position correction (superfine)
	045:	75	0 to 200, one unit=0.1mm	Horizontal scan end position correction (fine)
	046:	75	0 to 200, one unit=0.1mm	Horizontal scan end position correction (standard)
	047:	32	0 to 32, one unit=0.1%	Vertical scan magnification correction (scanning on ADF)
	048:	32	0 to 32, one unit=0.1%	Horizontal scan magnification correction (scanning on ADF)
	049: - 053:			Not used
	054:	32	0 to 32, one unit=0.1%	Pickup motor speed correction (when the ADF is used)
	055: - 192:			Not used
	193:	0	0: LEGAL 1: FOOLSCAP 2: M_OFFICIO 3: A_FOOLSCAP 4: FOLIO 5: G_LEGAL 6: A_OFFICIO 7: B_OFFICIO	ADF special paper, standardized size: LGL misidentification-ready
	194:	0	0: LTR 1: G_LTR 2: A_LTR	ADF special paper, standardized size: LTR misidentification-ready
	195:	0	0: LTR_R 1: FOOLSCAP 2: OFFICIO 3: E_OFFICIO 4: G_LTR_R 5: A_LTR_R	ADF special paper, standardized size: LTR_R misidentification-ready
	196 - 212:			Not used
	213:	8273	1 to 9999	XYZ correction value of (X) of standard white plate (equipped with SEND functions)
	214:	8737	1 to 9999	XYZ correction value of (Y) of standard white plate (equipped with SEND functions)
	215:	9427	1 to 9999	XYZ correction value of (Z) of standard white plate (equipped with SEND functions)
	216 - 350:			Not used

#PRINT

	No.	Initial setting	Range setting	Explanation
#PRINT SW	SW01 - SW04			Not used
	SW05	10000000		Horizontal scanning priority record
	SW06 - SW13			Not used
	SW14	00000000		Special mode setting
	SW15	00000000		IFAX Permission of split recording of text data
	SW16 - SW50			Not used
#PRINT NUMERIC	01: - 30:			Not used
	31:	50	0 to 100, one unit = 0.1 mm	Top registration adjustment (manual paper feed tray)
	32:	50	0 to 100, one unit = 0.1 mm	Top registration adjustment (cassette)
	33:	50	0 to 100, one unit = 0.1 mm	Top registration adjustment (duplex unit)
	34:	100	0 to 200, one unit = 0.1 mm	Left-end registration adjustment (manual paper feed tray)
	35:	100	0 to 200, one unit = 0.1 mm	Left-end registration adjustment (cassette)
	36:	100	0 to 200, one unit = 0.1 mm	Left-end registration adjustment (option cassette)
	37:-38:			not used
	39:	100	0 to 200, one unit = 0.1 mm	Left-end registration adjustment (duplex unit)
	40:	2	0 to 6, 1 unit = 5 deg C	Target fixing temperature adjustment (multi)
	41:	2	0 to 6, 1 unit = 5 deg C	Target fixing temperature adjustment (cassette)
	42:	2	0 to 6, 1 unit = 5 deg C	Target fixing temperature adjustment (option cassette)
	43:-50:			not used
	51:	3	0 to 6, 1 unit = 5 deg C	Target 2-sided temperature adjustment
	52:			not used
	53:	0	0 to 9999, one unit = 0.1 mm	Adjustment of margin at leading edge of copy
	54:	50	0 to 9999, one unit = 0.1 mm	Adjustment of margin at trailing edge of copy
	55:	0	0 to 9999, one unit = 0.1 mm	Adjustment of margin at right edge of copy
	56:	0	0 to 9999, one unit = 0.1 mm	Adjustment of margin at left edge of copy
#PRINT CST				not used

#NETWORK

	Item	Function
#NETWORK SW		not used
#NET NUMERIC		not used
#CERTIFICATE	#CA-CERTIFICATE	Used to confirm the contents of the installed CA certificates.

#CODEC	Not used.

#SYSTEM

	No.	Initial setting	Range of setting	Function
#SYSTEM SW	SW01- SW02			not used
	SW03	00001000		Import/export of the user information via USB
	SW04 - SW50			not used
#SYSTEM NUMERIC	001: -100:			not used

#ACC

Item	Initial setting	Range of setting	Function
CARD	0	0 - 99999	Card reader installation setting
CC-SPSW	0	0 or 1	Control card I/F support setting
COIN	0	0 or 1	Coin vendor change setting
CONTROL	0	0 or 1	Pinter output control setting at the time of support of control card I/F

#COUNTER

Item	Function
TOTAL	total counter
PICK_UP	pickup-related counter
FEEDER	feeder counter
JAM	jam-related counter
MISC	other counter
DRBL-1	durables counter

#LMS	Not used.

#E-RDS

Item	Default	Setting Range	Description
E-RDS SWITCH	0	0 / 1	Operation mode setting
			0 (OFF): Does not operate e-RDS.
			1 (ON): Operates e-RDS.
RGW-ADDRESS	URL of UGW	Character string length: 129 bytes(including NULL, one-byte codes only)	URL of UGW
RGW-PORT	443	1 to 65535	UGW port No.
COM-TEST			Execution of communication test
COM-LOG			Details of communication test result

#REPORT

	Setting	Function
#REPORT SW		Not used
#REPORT OUTPUT	SERVICE DATA LIST	Output of service data list
	SYSTEM DATA LIST	Output of system data list
	SYSTEM DUMP LIST	Output of system dump list
	COUNTER LIST	Output of counter list
	ERROR LOG LIST	Output of error log list
	SPEC LIST	Output of spec list
	SERVICE LABEL	Output of service label
	ERDS COM LOG LIST	Output of communication error log information related to e-RDS
#REPORT NUMERIC		Not used

#DOWNLOAD	Download mode

#CLEAR

Item	Level2	Function
TEL & USER DATA		Use it to clear all areas under user registration/setting.
SERVICE DATA		Use it to clear the counters (numerator), date, and start data form the system dump list.
COUNTER		Use it to clear the maintenance/parts counter data and each mode counter data.
SOFT-CNT		Not used.
TYPE		Use it to clear the user data and the service data by specified settings.

#CLEAR

Item	Level2	Function
HST	ACTIVITY	Use it to clear the contents of the communications control report.
	ACCOUNT	Use it to clear each print history.
	JAM	Use it to clear the contents of the jam history.
	ERR	Use it to clear the contents of the error (E code) history.
	ALARM	Use it to clear the contents of the alarm history.
CARD		Use it to clear the control cars error data.
ERR	E355	Not used.
	E719	Use it to clear the management information at the time of card reader removal.
PWD		Use it to clear the system administrator's password.
FILE SYSTEM		Not used.
FORMAT	USB MEMORY	Format the USB memory. (This mode is used when the USB memory error is damaged.
	LICENSE DRIVE	Not used.
	CA-KEY	Initializes the installed CA certificate.
ALL		Use it to clear all settings/registration data except the counter (denominator, numerator).

#ROM

Item	Function
MAIN	Use it to indicate the version of the ROM (SYSTEM) on the image processor PCB.
MAIN2	Use it to indicate the version of the ROM (BOOT) on the image processor PCB.
OPROM	Use it to indicate the version of option ROM.
ECONT	Use it to indicate the version of the ROM on the DC controller PCB.

#TEST MODE   [1] - [9]

Item	Function
(1) DRAM [1] - [2]	Data check in D-RAM
(2) SCAN TEST [1] - [8]	CS automatic correction and document scan position adjustment
(3) PRINT TEST [1] - [9]	Output of test prints
(4) MODEM TEST [1] - [9]	modem/NCU related tests
(5) AGING TEST	not used
(6) FACULTY TEST [1] - [9]	Various functional tests
(0) ROLLER CLEAN	Printer and ADF roller cleaning

16.3 Setting of Bit Switch (SSSW)

16.3.1 Outline

16.3.1.1 Bit Switch Composition

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

The items registered and set by each of these switches comprise 8-bit switches. The figure below shows which numbers are assigned to which bits. Each bit has a value of either 0 or 1.

F-16-2
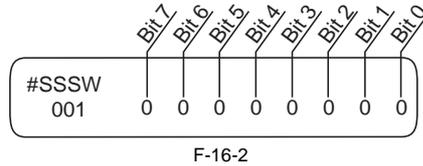
⚠ Do not change service data identified as "not used"; they are set as initial settings.

16.3.2 SSSW-SW01

16.3.2.1 List of Functions

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

T-16-1

Bit	Function	1	0
0	service error code	output	not output
1	not used	-	-
2	not used	-	-
3	not used	-	-
4	not used	-	-
5	not used	-	-
6	not used	-	-
7	not used	-	-

16.3.2.2 Detailed Discussions of Bit 0

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Selects whether or not service error codes are output.
When output is selected, service error codes is report.

16.3.3 SSSW-SW03

16.3.3.1 List of Functions

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

T-16-2

Bit	Function	1	0
0	not used	-	-
1	not used	-	-
2	not used	-	-
3	not used	-	-
4	not used	-	-
5	not used	-	-
6	not used	-	-

Bit	Function	1	0
7	tonal signal before CED signal transmission	transmit	do not transmit

16.3.3.2 Detailed Discussions of Bit 7

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Use it to enable/disable transmission of a 1080-Hz tonal signal before transmission of the CED signal.
Select 'transmit' if errors occur frequently because of an echo when reception is from overseas.

Memo:
Any of the following error code may be indicated because of an echo at time of reception
##0005, ##0101, ##0106, ##0107, ##0114, ##0200, ##0201, ##0790

16.3.4 SSSW-SW04

16.3.4.1 List of Functions

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

T-16-3

Bit	Function	1	0
0	not used	-	-
1	not used	-	-
2	the number of final flag sequences of protocol signals	2	1
3	Reception mode after CFR signal transmission	high speed	high speed/low speed
4	the length of the period of ignoring low speed signals after CFR output	1500 ms	700 ms
5	not used	-	-
6	CNG signal for manual transmission	Not transmitted	Transmitted
7	CED signal for manual reception	Not transmitted	Transmitted

16.3.4.2 Detailed Discussions of Bit 2

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Use it to select the number of last flag sequences for a protocol signal (transmission speed at 300 bps). Select '2' if the other party fails to receive the protocol signal properly.

Memo:
Any of the following error codes may be indicated at time of transmission
##0100, ##0280, ##0281, ##0750, ##0753, ##0754, ##0755, ##0758, ##0759, ##0760, ##0763 ##0764, ##0765, ##0768, ##0769,##0770, ##0773, ##0775, ##0778, ##0780, ##0783, ##0785, ##0788

16.3.4.3 Detailed Discussions of Bit 3

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Use it to select an appropriate reception mode after transmission of the CFR signal.
If errors occur frequently at time of reception because of the condition of the line, select 'high speed' for reception mode and, at the same time, selects 'do not receive' for 'ECM reception.'

Memo:
Any of the following error codes may be indicated at time of reception because of line condition
##0107, ##0114, ##0201
Be sure to change bit 4 before changing this bit; if errors still occur, change this bit.
When 'high speed' is selected, only high-speed signals (images) will be received after transmission of the CFR signal.

16.3.4.4 Detailed Discussions of Bit 4

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Use it to select the time length during which low-speed signals are ignored after transmission of the CFR signal.
If the condition of the line is not good and, therefore, the reception of image signals is difficult, select '1500 ms.'

16.3.4.5 Detailed Discussions of Bit 6

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Selects whether or not to transmit CNG signal during manual transmission.
In manual transmitting to a fax with the FAX/TEL switching mode, if there are frequent errors due to failure to switch to fax mode, select "Transmitted" for the CNG signal.

16.3.4.6 Detailed Discussions of Bit 7

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Selects whether or not to transmit CED signals during manual reception. If the other fax does not transmit even when you start manual reception, select "Transmitted" for the CED signal.

16.3.5 SSSW-SW05

16.3.5.1 List of Functions

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

T-16-4

Bit	Function	1	0
0	not used	-	-
1	Conversion from mm to inch (text mode)	convert	do not convert
2	Conversion from mm to inch (text/photo mode)	convert	do not convert
3	not used	-	-
4	not used	-	-
5	not used	-	-
6	not used	-	-
7	not used	-	-

16.3.5.2 Detailed Discussions of Bit 1

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Use it to enable/disable millimeter/inch conversion in sub scanning direction for images read in text mode.
Scanning direction in conversion follows the Bit 2 setting of SW14.

16.3.5.3 Detailed Discussions of Bit 2

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Use it to enable/disable millimeter/inch conversion in sub scanning direction for images read in text/photo mode while bit 1 is set to '1'.
Scanning direction in conversion follows the Bit 2 setting of SW14.

16.3.6 SSSW-SW12

16.3.6.1 List of Functions

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

T-16-5

Bit	Function	1	0
0	Time-out period for one page upon transmission	1	0
1	Time-out period for one page upon transmission	1	0
2	not used	-	-
3	not used	-	-
4	Time-out period for one page upon reception	1	0
5	Time-out period for one page upon reception	1	0
6	not used	-	-
7	Respective page timer settings for transmission and for reception	enable	do not enable

The machine will stop the ongoing communication if the transmission/reception of a single original page takes 32 min or more. To use the timer for a purpose other than this function, refer to the tables that follow, and select an appropriate time length.
When 'do not enable' is selected using bit 7, the time-out length for a single page for all modes will depend on the setting of bit 0 and bit 1.

T-16-6

Time-Out Length for Transmission/Reception	Bit7	Bit6	Bit5	Bit4	Bit3	Bit2	Bit1	Bit0
8 min	0	*	*	*	*	*	0	0
16 min	0	*	*	*	*	*	0	1
32 min	0	*	*	*	*	*	1	0
64 min	0	*	*	*	*	*	1	1

T-16-7

Time-Out Length for Transmission (in text mode)	Bit7	Bit6	Bit5	Bit4	Bit3	Bit2	Bit1	Bit0
8 min	1	*	*	*	*	*	0	0
16 min	1	*	*	*	*	*	0	1
32 min	1	*	*	*	*	*	1	0
64 min	1	*	*	*	*	*	1	1

T-16-8

Time-Out Length for Reception	Bit7	Bit6	Bit5	Bit4	Bit3	Bit2	Bit1	Bit0
8 min	1	*	0	0	*	*	*	*
16 min	1	*	0	1	*	*	*	*
32 min	1	*	1	0	*	*	*	*
64 min	1	*	1	1	*	*	*	*

16.3.7 SSSW-SW13

16.3.7.1 List of Functions

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

T-16-9

Bit	Function	1	0
0	not used	-	-
1	not used	-	-
2	Convert "inch" into "mm" when transmitting the received image data	convert	do not convert
3	not used	-	-
4	not used	-	-
5	not used	-	-
6	not used	-	-
7	not used	-	-

16.3.7.2 Detailed Discussions of Bit 2

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

It converts "inch" into "mm" when transmitting the received image data.
Scanning direction in conversion follows the Bit 2 setting of SW14.

16.3.8 SSSW-SW14

16.3.8.1 List of Functions

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

T-16-10

Bit	Function	1	0
0	not used	-	-
1	not used	-	-
2	direction of scanning for inch/mm conversion	both main and sub scanning directions	sub scanning direction only
3	not used	-	-
4	inch-configuration resolution declaration	declare	do not declare
5	not used	-	-
6	not used	-	-
7	not used	-	-

16.3.8.2 Detailed Discussions of Bit 2

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Use it to specify whether to convert or not convert an inch-configuration resolution into a millimeter-configuration resolution for image read in G3 transmission: either in sub scanning direction only or in both main and sub scanning directions. The setting is valid only when bit 1 of SW05 of #SSSW is set to '1'.

16.3.8.3 Detailed Discussions of Bit 4

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Use it to specify whether to declare or not declare an inch-configuration resolution to the other machine for G3 communication: if 'declare' is selected, the machine will indicate that it reads and records at an inch-configuration resolution using the DIS, DCS, or DTC signal.

16.3.9 SSSW-SW28

16.3.9.1 List of Functions

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

T-16-11

Bit	Function	1	0
0	Caller V.8 protocol	NO	YES
1	Called party V.8 protocol	NO	YES
2	Caller V.8 protocol late start	NO	YES
3	Called party V.8 protocol late start	NO	YES
4	V.34 reception fallback	Prohibited	Not prohibited
5	V.34 transmission fallback	Prohibited	Not prohibited
6	not used	-	-
7	not used	-	-

16.3.9.2 Detailed Discussions of Bit 0

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Select whether to use the V.8 protocol when calling. If NO is selected, the V.8 protocol is inhibited at calling and the V.21 protocol is used.

16.3.9.3 Detailed Discussions of Bit 1

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Select whether to use the V.8 protocol when called. If NO is selected, the V8 protocol is inhibited when called and the V.21 protocol is used.

16.3.9.4 Detailed Discussions of Bit 2

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

If ANSam signal is not received during transmission, select whether to use the V.8 protocol when the other fax machine declares the V.8 protocol in DIS signal. If

NO is selected, the CI signal is not transmitted and the V.8 protocol is not used even if the DIS that specifies the V.8 protocol is received.
The V.8 late start is not executed during manual transmission regardless of this setting.

16.3.9.5 Detailed Discussions of Bit 3

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Select whether to declare the V.8 protocol in DIS signal for reception. If NO is selected, the V.8 protocol cannot be used because it is not declared in DIS signal.
The V.8 late start is not executed during manual reception regardless of this setting.

16.3.9.6 Detailed Discussions of Bit 4

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Select whether the receiver falls back during V.34 reception. If 'Prohibit' is selected, the receiver does not fall back.

16.3.9.7 Detailed Discussions of Bit 5

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Select whether the transmitter falls beck during V.34 transmission. If 'Prohibit' is selected, teh transmitter does not fall back.

16.3.10 SSSW-SW30

16.3.10.1 List of Functions

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

T-16-12

Bit	Function	1	0
0	Not used	-	-
1	Not used	-	-
2	Not used	-	-
3	Not used	-	-
4	Not used	-	-
5	New dial tone detection method	Detect with the new method.	Detect with the existing method.
6	Not used	-	-
7	Not used	-	-

16.3.10.2 Detailed Discussions of Bit 5

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

When "Detect with the new method" is selected, tone is detected for 3.5 seconds before call origination in order to discriminate between dial tone and voice. If dial tone is detected and the time since line seizure is 3.5 seconds or longer, call origination takes place immediately. If the time since line seizure is less than 3.5 seconds, call origination takes place after waiting for 1 second. (If the time since line seizure reaches 3.5 seconds during the 1-second waiting period, call origination takes place immediately. By default, "Detect with a new method" is assigned for this SW.

16.3.11 SSSW-SW34

16.3.11.1 List of Functions

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

T-16-13

Bit	Function	1	0
0	Display the waste toner full warning	YES	NO
1	Switch the waste toner full warning	Drum replacement required message displayed on an operator call	E019 displayed on an service call
2	Not used	-	-
3	Not used	-	-
4	Not used	-	-
5	Not used	-	-
6	Not used	-	-

Bit	Function	1	0
7	Not used	-	-

16.3.11.2 Detailed Discussions of Bit 0

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

You can select whether a waste toner full warning is to be displayed.
When "1" is selected, a waste toner full warning is displayed.
When "0" is selected, a waste toner full warning is not displayed.

16.3.11.3 Detailed Discussions of Bit 1

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Select whether to display the waste toner full warning as a drum replacement required message or as E019 displayed on an operator call. Select 1 to display a rum replacement required message on an operator call. Select 0 to display E019 on an service call.

16.4 Setting of Menu Switch (Menu)

16.4.1 Menu Switch Composition

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

T-16-14

No.	Function	Range of settings
005	NL equalizer	1: ON, 0: OFF
006	telephone line monitor	0:DIAL, 1:SERVICEMAN1, 2:SERVICEMAN2, 3:OFF
007	transmission level (ATT)	from 0 to 15 (ex: 15= -15 dBm)
008	V.34 modulation speed upper limit	0:3429, 1:3200, 2:3000, 3:2800, 4:2743, 5:2400
009	V34 data speed upper limit	0:33.6 kbps, 1:31.2 kbps, 2:28.8 kbps, 3:26.4 kbps, 4:24.0 kbps, 5:21.6 kbps, 6:19.2 kbps, 7:16.8 kbps, 8:14.4 kbps, 9:12.0 kbps, 10:9.6 kbps, 11:7.2 kbps, 12:4.8 kbps, 13:2.4 kbps
010	Frequency of pseudoring signal	0:50 Hz, 1:25 Hz, 2:17 Hz

16.4.2 <No.005 NL equalizer>

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Use it to enable-disable the NL equalizer.
If errors occur often during communication because of the condition of the line, enable (ON) the NL equalizer.

Any of the following error codes may be indicated at time of transmission because of the line condition:
##100, ##101, ##102, ##104, ##201, ##281, ##282, ##283, ##750, ##755, ##765, ##774, ##779, ##784, ##789
Any of the following error codes may be indicated at time of transmission because of the line condition:
##103, ##107, ##114, ##201, ##790, ##793

16.4.3 <No.006 telephone line monitor>

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Use it to s the telephone line monitor function:
DIAL: generate the monitor sound of the telephone line using the speaker from the start of transmission to DIS.
SERVICEMAN [1]: generate the monitor sound of the telephone line using the speaker from the start of communication to the end of it.
SERVICEMAN [2]: generate the monitor sound of the telephone line2 (Option).
OFF: do not generate the monitor sound of the telephone line using the speaker.

16.4.4 <No.007 ATT transmission level>

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Use it to set the transmission level (ATT).
Raise the transmission level if errors occur frequently at time of communication because of the condition of the line. (It means close to 8)

Any of the following error codes may be indicated at time of transmission because of the line condition:
##100, ##101, ##102, ##104, ##201, ##280, ##281, ##282, ##283, ##284, ##750, ##752, ##754, ##755, ##757, ##759, ##760, ##762, ##764, ##765, ##767, ##769, ##770, ##772, ##774, ##775, ##777, ##779, ##780, ##782, ##784, ##785, ##787, ##789
Any of the following error codes may be indicated at time of reception because of the line condition:
##103, ##106, ##107, ##201, ##793

16.4.5 <No.008 V.34 modulation speed upper limit>

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Use it to set an upper limit to the modulation speed (baud rate) for the V.34 primary channel.

16.4.6 <No.009 V.34 data speed upper limit>

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Use it to set an upper limit to the data transmission speed for the V.34 primary channel between 2.4K and 33.6K bps in increments of 2400 bps. (0: 2.4K to 13: 33.6K bps).

16.4.7 <No.010 Frequency of the pseudo CI signal>

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

You may select a frequency for the pseudo CI signal.
Some types of external telephones do not ring when the fax/tel switch-over function is ON. To sound the ring, change the pseudo CI signal.

16.5 Setting of Numeric Parameter (NUMERIC Param.)

16.5.1 Numerical Parameter Composition

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

T-16-15

No.	Item	Range of settings
002	RTN transmission condition(1)	1% to 99%
003	RTN transmission condition (2)	2 to 99 item
004	RTN transmission condition (3)	1 to 99 lines
005	NCC pause time length (pre-ID code)	1 to 60 sec
006	NCC pause time length (post-ID code)	1 to 60 sec
010	line condition identification time length	0 to 9999 (10 msec)
011	T.30T1 timer (for reception)	0 to 9999 (10 msec)
013	T.30 EOL timer	500 to 3000 (10 msec)
015	hooking detection time length	0 to 999
016	time length to first response at time of fax/tel switchover	0 to 9
017	pseudo RBT signal pattern ON time length	0 to 999
018	pseudo RBT signal pattern OFF time length	0 to 999
	(short)	
019	pseudo RBT signal pattern OFF time length	0 to 999
	(long)	
020	pseudo CI signal pattern ON time length	0 to 999
021	pseudo CI signal pattern OFF time length	0 to 999
	(short)	
022	pseudo CI signal pattern OFF time length (long)	0 to 999
023	CNG detection level at time of fax/tel switchover	0 to 7
024	pseudo RBT transmission level at time of fax/tel switchover	10 to 20
		0 to 20 (120/230V)
025	Answering machine connection function signal detection time	0 to 999
027	preamble detection time length for V21 low-speed flag	20 (x 10ms)
056	display the type of soft counter 1	0 to 999
057	Display the type of soft counter 2	0 to 999
058	Display the type of soft counter 3	0 to 999
059	Display the type of soft counter 4	0 to 999
060	Display the type of soft counter 5	0 to 999
061	Display the type of soft counter 6	0 to 999

16.5.2 <002: RTN transmission condition (1)><003: RTN transmission condition (2)><004: RTN transmission condition (3)>

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Use it to set RTN signal transmission conditions. Raise these parameters for more lenient conditions if errors occur frequently at time of reception because of transmission of the RTN signal.

Memo:
Any of the following error codes may be indicated at time of reception because of RTN signal transmission
##0104, ##0107, ##0114, ##0201

RTN signal transmission condition (1) affects the ratio of error lines to the total number of lines per single page of received images.
RTN signal transmission condition (2) affects the standard value (*2) of burst errors (*1).
RTN signal condition (3) affects the number of errors not reaching the standard value of burst errors.

*1: transmission error occurring cover several lines.

*2: for instance, if '15' is set, a single burst error will represent an error occurring continuously cover 15 lines.

If any of these lines is detected while an image signal is being received, the RTN signal will be transmitted after receiving the protocol signal of the transmitting party. Higher parameters restrict the transmission of the RTN signal.

16.5.3 <005: NCC pause length (pre-ID code)>

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Use it to set the length of the pause automatically entered between access code and ID code when the NCC (New Common Carrier) line is used for dialing.

16.5.4 <006: NCC pause length (post-ID code)>

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Use it to set the length of the pause automatically entered between ID code and telephone number of the other party when the NCC (New Common Carrier) line is used for dialing.

16.5.5 <010: line connection identification length>

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Use it to set the time for identifying the line connection. Raise this parameter if errors occur frequently at time of communication because of the condition of the line.

Memo:
Any of the following error codes may be indicated because of the condition of the line
##0005, ##0018
The line condition identification time is between when the dial signal is transmitted and when the line condition is cut for the transmitting party, while it is between when the DIS signal is transmitted and when the line is cut for the receiving party.

16.5.6 <011: T.30 T1 timer (for reception)>

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Set the T1 timer for the receiver (wait time after DIS transmission starts until a significant signal is received).

16.5.7 <013: T.30 EOL timer>

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Set it so that the 1-line transmission time is longer for reception to prevent reception errors caused by a long data length per line (e.g., computer FAX).

16.5.8 <015: hooking detection time>

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Allows setting of the hooking detection time.

16.5.9 <016: time length to first response at time of fax/tel switchover>

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Allows setting of the time from seizing the line till pseudo RBT is sent, when the Fax/ Tel switching function is operating.

16.5.10 <017: pseudo RBT signal pattern ON time length><018: pseudo RBT signal pattern OFF time length (short)><019: pseudo RBT signal pattern OFF time length (long)>

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Use it to set the pattern of the pseudo RBT signal transmitted at time of a fax/tel switchover.

16.5.11 <020: pseudo CI signal pattern ON time length><021: pseudo CI signal pattern OFF time length (short)><022: pseudo CI signal pattern OFF time length (long)>

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Use it to set the pseudo CI signal pattern transmitted at time of a fax/tel switchover.

16.5.12 <023: CNG detention level for fax/tel switchover>

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Use it to set the CNG detention level for a fax/tel switchover.

16.5.13 <024: pseudo RBT transmission level at time of fax/tel switchover>

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Use it to set the pseudo transmission level for a fax/tel switchover.

16.5.14 <025: Answering machine connection function signal detection time>

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Sets the signal detection time for the answering machine connection function operation. When the answering machine connection function is operating, if the function does not operate normally because the fax does not detect CNG signal sent from the line, raise this parameter to increase the signal detection time.

16.5.15 <027: V.21 low-speed flag preamble identification length>

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Use it to detect the time of detection after which command analysis is started after detecting V.21 low-speed command preambles continuously for a specific period

of time.

16.5.16 <056 - 061: Count type select >

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Use it to confirm the count type indicated on the Counter Check screen, which appears in response to a press on the Counter key.
When '0' is selected, count type will not be indicated.
No.56: Use it to change the type of soft counter 1* of the control panel to suit the needs of the user.
No.57: Use it to change the type of soft counter 2* of the control panel to suit the needs of the user.
No.58: Use it to change the type of soft counter 3* of the control panel to suit the needs of the user.
No.59: Use it to change the type of soft counter 4* of the control panel to suit the needs of the user.
No.60: Use it to change the type of soft counter 5* of the control panel to suit the needs of the user.
No.61: Use it to change the type of soft counter 6* of the control panel to suit the needs of the user.
*:The default type settings of soft counter is different from models.
<Soft Counter Specifications>
The soft counters are classified a follows in terms of input numbers:
100s: total
200s: copy
300s: print
400s: copy + print
500s: scan
700s: received file print
800s: report pint
900s: transmitted scan

Guide to the Table
- 1:Count sheets of all sizes by one.
- 2:Count sheets of the large size by two.
- C:full color
- Bk:black mono
- L:large size (larger than A4/LTR)
- S:small size (A4/LTR or smaller)

MEMO:
To make a change so that B4 papers (for print) will be counted as large-size, use service mode: make the following selections, and change bit 0 to '1': #SSSW>SW33.
To make a change so that B4 papers (for scan) will be counted as large-size, use service mode: make the following selections, and change bit 2 to '1': #SSSW>SW33.

Serial No. on counter check screen	Counter type	Print system															
		Bk 1-sided L				Bk 1-sided S				Bk 2-sided L				Bk 2-sided S			
		Local copy	PDL print	FAX print	Report print	Local copy	PDL print	FAX print	Report print	Local copy	PDL print	FAX print	Report print	Local copy	PDL print	FAX print	Report print
101	Total1	1	1	1	1	1	1	1	1								
102	Total2	2	2	2	2	1	1	1	1								
103	Total (L)	1	1	1	1												
104	Total (S)					1	1	1	1								
108	Total (Bk1)	1	1	1	1	1	1	1	1								
109	Total (Bk2)	2	2	2	2	1	1	1	1								
112	Total (Bk/L)	1	1	1	1												
113	Total (Bk/S)					1	1	1	1								
114	Total1 (2-sided)									1	1	1	1	1	1	1	1
115	Total2 (2-sided)									2	2	2	2	1	1	1	1
116	L (2-sided)									1	1	1	1				
117	S (2-sided)													1	1	1	1
126	TotalA1		1	1	1		1	1	1								
127	TotalA2		2	2	2		1	1	1								
128	TotalA (L)		1	1	1												
129	TotalA (S)						1	1	1								
132	TotalA (Bk1)		1	1	1		1	1	1								
133	TotalA (Bk2)		2	2	2		1	1	1								
136	TotalA (Bk/L)		1	1	1												
137	TotalA (Bk/S)						1	1	1								
138	TotalA1 (2-sided)										1	1	1		1	1	1
139	TotalA2 (2-sided)										2	2	2		1	1	1
140	L A (2-sided)										1	1	1				
141	S A (2-sided)														1	1	1
150	TotalB1		1	1	1		1	1	1								
151	TotalB2		2	2	2		1	1	1								
152	TotalB (L)		1	1	1												
153	TotalB (S)						1	1	1								
156	TotalB (Bk1)		1	1	1		1	1	1								
157	TotalB (Bk2)		2	2	2		1	1	1								
160	TotalB (Bk/L)		1	1	1												

Serial No. on counter check screen	Counter type	Print system															
		Bk 1-sided L				Bk 1-sided S				Bk 2-sided L				Bk 2-sided S			
		Local copy	PDL print	FAX print	Report print	Local copy	PDL print	FAX print	Report print	Local copy	PDL print	FAX print	Report print	Local copy	PDL print	FAX print	Report print
161	TotalB (Bk/S)						1	1	1								
162	TotalB1 (2-sided)										1	1	1		1	1	1
163	TotalB2 (2-sided)										2	2	2		1	1	1
164	LB (2-sided)										1	1	1				
165	SB (2-sided)														1	1	1
201	Copy(Total1)	1				1											
202	Copy(Total2)	2				1											
203	Copy(L)	1															
204	Copy(S)					1											
205	CopyA (Total1)	1				1											
206	CopyA (Total2)	2				1											
207	CopyA (L)	1															
208	CopyA (S)					1											
209	Local copy(Total1)	1				1											
210	Local copy(Total2)	2				1											
211	Local copy(L)	1															
212	Local copy(S)					1											
221	Copy(Bk1)	1				1											
222	Copy(Bk2)	2				1											
227	Copy(Bk/L)	1															
228	Copy(Bk/S)					1											
237	Copy(Bk/L/2-sided)									1							
238	Copy(Bk/S/2-sided)													1			
249	CopyA (Bk1)	1				1											
250	CopyA (Bk2)	2				1											
255	CopyA (Bk/L)	1															
256	CopyA (Bk/S)					1											
265	CopyA (Bk/L/2-sided)									1							
266	CopyA (Bk/S/2-sided)													1			
277	Local copy(Bk1)	1				1											
278	Local copy(Bk2)	2				1											
283	Local copy(Bk/L)	1															
284	Local copy(Bk/S)					1											
293	Local copy(Bk/L/2-sided)									1							
294	Local copy(Bk/S/2-sided)													1			
301	Print (Total1)		1		1		1		1								
302	Print (Total2)		2		2		1		1								
303	Print (L)		1		1												
304	Print (S)						1		1								
305	PrintA (Total1)		1		1		1		1								
306	PrintA (Total2)		2		2		1		1								
307	PrintA (L)		1		1												
308	PrintA (S)						1		1								
313	Print (Bk1)		1		1		1		1								
314	Print (Bk2)		2		2		1		1								
319	Print (Bk/L)		1		1												
320	Print (Bk/S)						1		1								
329	Print (Bk/L										1		1				
330	Print (Bk/S/2-sided)														1		1
331	PDL print (Total1)		1				1										
332	PDL print (Total2)		2				1										
333	PDL print (L)		1														
334	PDL print (S)						1										
339	PDL print (Bk1)		1				1										
340	PDL print (Bk2)		2				1										
345	PDL print (Bk/L)		1														
346	PDL print (Bk/S)						1										
355	PDL print (Bk/L/2-sided)										1						
356	PDL print (Bk/S)														1		

Serial No. on counter check screen	Counter type	Bk 1-sided L				Bk 1-sided S				Bk 2-sided L				Bk 2-sided S			
		Local copy	PDL print	FAX print	Report print	Local copy	PDL print	FAX print	Report print	Local copy	PDL print	FAX print	Report print	Local copy	PDL print	FAX print	Report print
403	Copy+Print (Bk/L)	1	1		1												
404	Copy+Print (Bk/S)					1	1		1								
405	Copy+Print (Bk2)	2	2		2	1	1		1								
406	Copy+Print (Bk1)	1	1		1	1	1		1								
411	Copy+Print (L)	1	1		1												
412	Copy+Print (S)					1	1		1								
413	Copy+Print (2)	2	2		2	1	1		1								
414	Copy+Print (1)	1	1		1	1	1		1								
421	Copy+Print (Bk/L)									1	1		1				
422	Copy+Print (Bk/S)													1	1		1
701	Recieved print (Total1)																
702	Recieved print (Total2)																
703	Recieved print (L)																
704	Recieved print (S)																
709	Recieved print (Bk1)																
710	Recieved print (Bk2)																
715	Recieved print (Bk/L)																
716	Recieved print (Bk/S)																
725	Recieved print (Bk/L/2-sided)											1					
726	Recieved print (Bk/S/2-sided)															1	
801	Report print (Total1)																
802	Report print (Total2)																
803	Report print (L)																
804	Report print (S)																
809	Report print (Bk1)																
810	Report print (Bk2)																
815	Report print (Bk/L)																
816	Report print (Bk/S)																
825	Report print (Bk/L)												1				
826	Report print (Bk/S)																1

Serial No. on counter check screen	Counter type	Bk 1-sided L				Bk 1-sided S			Bk 2-sided L				Bk 2-sided S		
		Total scan	E-mail scan	FileShare DBscan	E-mail FileShare DB scan	FileShare DB BoxFscan	E-mail FileShare DB Box	Total scan	Total scan	E-mail scan	FileShare DB scan	E-mail FileShare DB scan	FileShare DB scan	E-mail FileShare DB BOX scan	Total scan
501	Scan (Total1)	1							1						
505	Bk scan (Total1)	1						1							
506	Bk scan (Total2)	2						1							
507	Bk scan (L)	1													
508	Bk scan (S)							1							
509	C scanTotal (1)								1						1
510	C scanTotal (2)								2						1
511	C scan (L)								1						
512	C scan (S)														1
915	Transmission scan total2 (C)													1	
916	Transmission scan total2 (Bk)						1								
917	Transmission scan total3 (C)											1			
918	Transmission scanTotal3 (Bk)				1										
921	Transmission scanTotal5 (C)										1				
922	Transmission scanTotal5 (Bk)			1											
929	Transmission scanTotal6 (C)												1		
930	Transmission scanTotal6 (Bk)					1									
945	Transmission scan/E-mail (C)									1					

Serial No. on counter check screen	Counter type	Scan system													
		Bk 1-sided L				Bk 1-sided S			Bk 2-sided L					Bk 2-sided S	
		Total scan	E-mail scan	FileShare DBscan	E-mail FileShare DB scan	FileShare DB BoxF scan	E-mail FileShare DB Box	Total scan	Total scan	E-mail scan	FileShare DB scan	E-mail FileShare DB scan	FileShare DB scan	E-mail FileShare DB BOX scan	Total scan
946	Transmission scan/E-mail (Bk)		1												

16.6 Setting of Scanner Functions (SCANNER)

16.6.1 Numeric Parameter Functional configuration

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

No.	Function	Default	Setting range	Unit
001: - 023:	Not used			
024:	CIS scan position during ADF scanning.	390	300-450	one unit=0.1mm
025:	Not used			
026:	Distance from the standby position of CIS to the shading start point.	22	6-48	one unit=0.1mm
027: - 030:	Not used			
031:	Vertical scan start position adjustment	0	0-70	one unit=0.1mm
032:	Horizontal scan start position adjustment	115	50-150	one unit=0.1mm
033:	Vertical scan magnification correction	32	0-32	one unit=0.1%
034:	Horizontal scan magnification correction	32	0-32	one unit=0.1%
035: - 036:	Reader motor speed adjustment	555		
037: - 040:	Not used			
041:	Vertical scan start position adjustment (scanning on ADF)	0	0-70	one unit=0.1mm
042:	Horizontal scan start position adjustment (scanning on ADF)	219	170-270	one unit=0.1mm
043:	Horizontal scan end position correction (copy:scanning on ADF)	75	0-200	one unit=0.1mm
044:	Horizontal scan end position correction (superfine:scanning on ADF)	75	0-200	one unit=0.1mm
045:	Horizontal scan end position correction (fine:scanning on ADF)	75	0-200	one unit=0.1mm
046:	Horizontal scan end position correction (standard:scanning on ADF)	75	0-200	one unit=0.1mm
047:	Vertical scan magnification correction (scanning on ADF)	32	0-32	one unit=0.1%
048:	Horizontal scan magnification correction (scanning on ADF)	32	0-32	one unit=0.1%
049: - 053:	Not used			
054:	Pickup motor speed correction (when the ADF is used)	32	0-32	one unit=0.1%
055: - 192:	Not used			
193:	ADF special paper, standardized size: LGL misidentification-ready	0	0 : LEGAL 1 : FOOLSCAP 2 : M_OFFICIO 3 : A_FOOLSCAP 4 : FOLIO 5 : G_LEGAL 6 : A_OFFICIO 7 : B_OFFICIO	
194:	ADF special paper, standardized size: LTR misidentification-ready	0	0 : LTR 1 : G_LTR 2 : A_LTR	
195:	ADF special paper, standardized size: LTR_R misidentification-ready	0	0 : LTR_R 1 : FOOLSCAP 2 : OFFICIO 3 : E_OFFICIO 4 : G_LTR_R 5 : A_LTR_R	

No.	Function	Default	Setting range	Unit
196: - 212:	Not used			
213:	XYZ correction value of (X) of standard white plate (equipped with SEND functions)	8273	1-9999	
214:	XYZ correction value of (Y) of standard white plate (equipped with SEND functions)	8737	1-9999	
215:	XYZ correction value of (Z) of standard white plate (equipped with SEND functions)	9427	1-9999	
216: - 350:	Not used			

⚠️ If any operation error occurs after changing the setting value, change the setting value to the original one.

16.6.2 <024:CIS scan position during ADF scanning>

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

This value is used when automatic scan position adjustment (TESTMODE>"2"SCAN TEST>"3"SHEET POS ADJ) fails.

16.6.3 <026:Distance from the standby position of CIS to the shading start point>

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

White shading can be adjusted finely.

⚠️ Normally, do not change the setting value. If any operation error occurs after changing the setting value, change the setting value to the original one.

16.6.4 <031: Vertical scan start position adjustment>

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Adjust the position at which vertical scanning of a book starts. The larger the adjustment value, the narrower the left-side margin of the image becomes.

16.6.5 <032: Horizontal scan start position adjustment>

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Adjust the position at which horizontal scanning of a book starts. The larger the adjustment value, the narrower the top margin in the image becomes.

16.6.6 <033: Vertical scan magnification correction>

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Correct the magnification of vertical scanning of a book. The larger the adjustment value, the more the image stretches in the vertical scanning direction.

16.6.7 <034: Horizontal scan magnification correction>

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Correct the magnification of horizontal scanning of a book. The larger the adjustment value, the more the image stretches in the horizontal scanning direction.

16.6.8 <035: - 036:Reader motor speed change>

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Though no market adjustment work needs to be carried out, enter factory defaults at image processor PCB replacement.

16.6.9 <041: Vertical scan start position adjustment (when scanning on a document fed from ADF)>

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Adjust the position at which vertical scanning of a document fed from the ADF starts. The larger the adjustment value, the narrower the left-side margin of the image becomes.

16.6.10 <042: Horizontal scan start position adjustment (when scanning on a document fed from ADF)>

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Adjust the position at which horizontal scanning of a document fed from the ADF starts. The larger the adjustment value, the narrower the top margin of the image becomes.

16.6.11 <043: Horizontal scan end position correction ((copy:scanning on ADF)>

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Adjust the position at which horizontal scanning of a document being copied ends (when scanning on a document fed from ADF). The larger the adjustment value, the narrower the bottom margin of the image becomes.

16.6.12 <044: Horizontal scan end position correction (superfine:scanning on ADF)>

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Adjust the position at which horizontal scanning of a FAX document scanned in superfine mode ends. The larger the adjustment value, the narrower the bottom margin of the image becomes.

16.6.13 <045: Horizontal scan end position correction (fine:scanning on ADF)>

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Adjust the position at which horizontal scanning of a FAX document scanned in fine mode ends. The larger the adjustment value, the narrower the bottom margin of the image becomes.

16.6.14 <046: Horizontal scan end position correction (standard:scanning on ADF)>

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Adjust the position at which horizontal scanning of a FAX document set to the standard scan resolution ends. The larger the adjustment value, the narrower the bottom margin of the image becomes.

16.6.15 <047: Vertical scan magnification correction (when scanning on a document fed from ADF)>

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Correct the magnification of vertical scanning of a document fed from the ADF. The larger the adjustment value, the more the image stretches in the vertical scanning direction.

16.6.16 <048: Horizontal scan magnification correction (when scanning on a document fed from ADF)>

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Correct the magnification of horizontal scanning of a document fed from the ADF. The smaller the adjustment value, the more the image ruduces in the horizontal scanning direction.
This menu is used to adjust the ADF feed motor speed. If you changed the adjustment value in this mode, the adjustment value selected for SCAN NUMERIC>54 must also be incremented/decremented by the same amount.

⚠ Do not change the adjustment value extremely.

16.6.17 <054: Pickup motor speed correction (when the ADF is used) >

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

This menu is used to adjust the ADF pickup motor speed. If you have adjusted the ADF feed motor speed by selecting SCAN NUMERIC>48, the ADF pickup motor speed must also be incremented/decremented by the same amount.

⚠ Do not change the adjustment value extremely.

16.6.18 <193: ADF special standard-sized paper: LGL misidentification-ready>

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Set to use special standard-sized paper that is not otherwise identifiable to the ADF (because it is misidentified as "LEGAL").
0: LEGAL
1: FOOLSCAP
2: M_OFFICIO
3: A_FOOLSCAP
4: FOLIO
5: G_LEGAL
6: A_OFFICIO
7: B_OFFICIO

16.6.19 <194: ADF special standard-sized paper: LTR misidentification-ready>

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Set to use special standard-sized paper that is not otherwise identifiable to the ADF (because it is misidentified as "LTR").
0: LTR
1: G_LTR
2: A_LTR

16.6.20 <195: ADF special standard-sized paper: LTR_R misidentification-ready>

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Set to use special standard-sized paper that is not otherwise identifiable to the ADF (because it is misidentified as "LTRR").
0: LTR_R
1: FOOLSCAP
2: OFFICIO
3: E_OFFICIO
4: G_LTR_R
5: A_LTR_R

16.6.21 <213: XYZ correction value (X) of standard white plate> (equipped with SEND functions)

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

If you replaced the image processor PCB, enter values indicated on the service label. If you have replaced the document glass, enter values indicated on the new document glass and write the values on the service label.

correcton value (X)

correcton value (Y)

correcton value (Z)

F-16-3
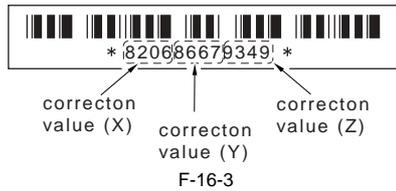
16.6.22 <214: XYZ correction value (Y) of standard white plate> (equipped with SEND functions)

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

If you replaced the image processor PCB, enter values indicated on the service label. If you have replaced the document glass, enter values indicated on the new document glass and write the values on the service label.

correcton value (X)

correcton value (Y)

correcton value (Z)

F-16-4
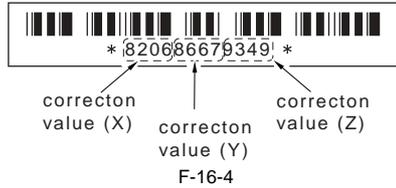
16.6.23 <215: XYZ correction value (Z) of standard white plate> (equipped with SEND functions)

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

If you replaced the image processor PCB, enter values indicated on the service label. If you have replaced the document glass, enter values indicated on the new document glass and write the values on the service label.

correcton value (X)

correcton value (Y)

correcton value (Z)

F-16-5
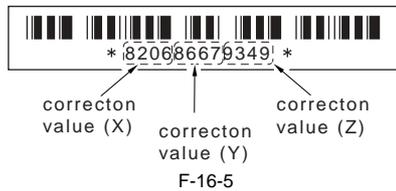
16.7 Setting of Printer Functions (PRINTER)

16.7.1 Service Soft Switch Settings (PRINTER)

16.7.1.1 SSSW-SW05

16.7.1.1.1 List of Functions

0013-1379

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

T-16-16

Bit	Function	1	0
0	not used	-	-
1	not used	-	-
2	not used	-	-
3	not used	-	-
4	not used	-	-
5	not used	-	-
6	not used	-	-
7	priority on recording in sub scanning direction	place	do not place

16.7.1.1.2 Detailed Discussions of Bit 7

0013-1380

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Use it to enable/disable placement of priority on recording in sub scanning direction.

T-16-17

place:	if B4 recording paper and A4 recording paper are set and an A4 extra-long image (*) is received, printing will be on the B4 recording paper.
do not place:	if B5 horizontal recording paper and A4 recording paper are set and a B4 image is received, printing will be by division and on B5 horizontal recording paper.

*: Image B4 or shorter and that cannot be printed by division and on A4 recording paper.

16.7.1.2 SSSW-SW14

16.7.1.2.1 List of Functions

0013-1381

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

T-16-18

Bit	Function	1	0
0	Transfer bias pressure reduction mode	Enable	Disable
1	Not used	-	-
2	Black belt addition mode	Enable	Disable
3	Not used	-	-
4	Flicker reduction mode	Enable	Disable
5	Silent mode	Enable	Disable
6	Not used	-	-
7	Pre-rotation extension mode	Enable	Disable

16.7.1.2.2 Detailed Discussions of Bit 0

0013-1382

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Select whether to enable or disable transfer bias pressure reduction mode.
Select "Enable" to avoid image defects (black spots) produced by transfer bias leaks occurring in a low-pressure region, such as one at a high altitude. This setting regulates the transfer bias to keep it from exceeding a predetermined level during printing.

16.7.1.2.3 Detailed Discussions of Bit 2

0013-1383

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Select whether to enable or disable black belt addition mode. If the user uses paper that causes fixed toner on paper to be fused and adhered to drum, selecting "Yes" will clean the drum by forming a black band on the drum surface during the reverse rotation which is performed after printing on 50 sheets.

16.7.1.2.4 Detailed Discussions of Bit 4

0013-1384

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Select whether to enable or disable flicker reduction mode. Select "Enable" and enter a count to modify fusing temperature control to cancel fluorescent flicking during printing.

⚠ Implementation of this mode would degrade the throughput.

16.7.1.2.5 Detailed Discussions of Bit 5

0013-1385

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Select whether to enable or disable silent mode. Select "Enable" to modify the registration loop amount and thus reduce noises or squeaks the registration rollers produce after picking paper from the individual paper inlets.

16.7.1.2.6 Detailed Discussions of Bit 7

0013-1386

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Select whether the pre-rotation is to be extended.
If white streaks appear in the image in the H/H environment, selecting "Set" extends the pre-rotation by five turns. During the extended period, the charge Vpp is increased to prevent white streaks from occurring.

16.7.1.3 SSSW-SW15

16.7.1.3.1 List of Function

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

T-16-19

Bit	Function	1	0
0	Not used	-	-
1	Not used	-	-
2	Not used	-	-
3	IFAX Permission of split recording of text data	Enable	Disable
4	Not used	-	-
5	Not used	-	-
6	Not used	-	-
7	Not used	-	-

16.7.1.3.2 Detailed Discussions of Bit 3

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Select whether split recording is to be enabled when text data such as a header and body text is recorded. Selecting "Set" may split text data when a small paper size such as A5 is selected. In this case, a page may be split in the middle of a character string.

16.7.2 Numerin Parameter Settings (Numeric Prama.)

16.7.2.1 Numeric Parameter Functional configuration

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

No.	Function	Default	Setting range
01: - 30:	Not used		
31:	Top registration adjustment (manual feed tray)	50	0 to 100, one unit = 0.1 mm
32:	Top registration adjustment (cassette)	50	0 to 100, one unit = 0.1 mm
33:	Top registration adjustment (duplex unit)	50	0 to 100, one unit = 0.1 mm
34:	Left-end registration adjustment (manual feed tray)	100	0 to 200, one unit = 0.1 mm
35:	Left-end registration adjustment (cassette)	100	0 to 200, one unit = 0.1 mm
36:	Left-end registration adjustment (option cassette)	100	0 to 200, one unit = 0.1 mm
37: - 38:	Not used		
39:	Left-end registration adjustment (duplex unit)	100	0 to 200, one unit = 0.1 mm
40:	Target fixing temperature adjustment (multi)	2	0 to 4, one unit = 5 deg C
41:	Target fixing temperature adjustment (cassette)	2	0 to 4, one unit = 5 deg C
42:	Target fixing temperature adjustment (option cassette)	2	0 to 4, one unit = 5 deg C
43: - 50:	Not used		
51:	Two-sided curl reform mode	3	0 to 6, one unit = 5 deg C
52:	Not used		
53:	Adjustment of margin at leading edge of copy	0	0 to 9999, one unit = 5 deg C
54:	Adjustment of margin at trailing edge of copy	50	0 to 9999, one unit = 5 deg C
55:	Adjustment of margin at right edge of copy	0	0 to 9999, one unit = 5 deg C
56:	Adjustment of margin at left edge of copy	0	0 to 9999, one unit = 5 deg C

16.7.2.2 <031: Top registration adjustment (manual feed tray)>

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Adjust the top registration margin of paper picked from a manual feed tray. The larger the adjustment value, the wider the top margin of the image becomes.

16.7.2.3 <032: Top registration adjustment (cassette)>

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Adjust the top registration margin of paper picked from cassettes. The larger the adjustment value, the wider the top margin of the image becomes.

16.7.2.4 <033: Top registration adjustment (duplex unit)>

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Adjust the top registration margin of paper picked from a duplex unit. The larger the adjustment value, the wider the top margin of the image becomes.

16.7.2.5 <034: Left-end registration adjustment (manual feed tray)>

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Adjust the left-end registration margin of paper picked from a manual feed tray. The larger the adjustment value, the wider the left-end margin of the image becomes.

16.7.2.6 <035: Left-end registration adjustment (cassette 1)>

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Adjust the left-end registration margin of paper picked from cassette 1. The larger the adjustment value, the wider the left-end margin of the image becomes.

16.7.2.7 <036: Left-end registration adjustment (cassette 2)>

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Adjust the left-end registration margin of paper picked from cassette 2. The larger the adjustment value, the wider the left-end margin of the image becomes.

16.7.2.8 <039: Left-end registration adjustment (duplex unit)>

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Adjust the left-end registration margin of paper picked from a duplex unit. The larger the adjustment value, the wider the left-end margin of the image becomes.

16.7.2.9 <040: Target fixing temperature adjustment (manual feed tray)>

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Lower the fixing temperature from the target temperature setting to reduce the chances of fixing offsets and curled or stuck delivered sheets occurring with paper picked from a manual feed tray.

16.7.2.10 <041: Target fixing temperature adjustment (cassette 1)>

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Lower the fixing temperature from the target temperature setting to reduce the chances of fixing offsets and curled or stuck delivered sheets occurring with paper picked from cassette 1.

16.7.2.11 <042: Target fixing temperature adjustment (cassette 2)>

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Lower the fixing temperature from the target temperature setting to reduce the chances of fixing offsets and curled or stuck delivered sheets occurring with paper picked from cassette 2.

16.7.2.12 <051: Target 2-sided temperature adjustment>

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

This mode is used to adjust the target temperature for printing the second-side in double-sided printing. The higher the value, the higher will be the second-side target temperature, thus increasing the fusing capacity. The lower the value, the lower will be the second side target temperature, thus reducing curling of the delivered paper.

16.7.2.13 <053: Margin adjustment at the leading edge of the copy>

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Adjust the margin at the leading edge of the copy. Increasing the value makes the margin at the leading edge larger.

16.7.2.14 <054: Margin adjustment at the trailing edge of the copy>

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Adjust the margin at the trailing edge of the copy. Increasing the value makes the margin at the trailing edge larger.

16.7.2.15 <055: Margin adjustment at the right edge of the copy>

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Adjust the margin at the right edge of the copy. Increasing the value makes the margin at the right edge larger.

16.7.2.16 <056: Margin adjustment at the left edge of the copy>

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Adjust the margin at the left edge of the copy. Increasing the value makes the margin at the left edge larger.

16.8 Network Parameter Settings (NETWORK)

16.8.1 Confirmation of contents of CA certificate

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Selecting the service mode "#NETWORK>#CERTIFICATE>#CA-CERTIFICATE" enables confirmation of the contents of the installed CA certificate.

16.9 Registration of Accessories (ACC)

16.9.1 Accessory Registration

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

The table below gives summary description of the accessories available.

Item		Explanation
#ACC	CARD	Card reader installation setting Enter a card number to use. (0 to 9999. One hundred cards are registered with the department ID beginning from the input card number in sequence.) *1:1,000 cards if option ROM is mounted. When a card number is entered, the following kinds of management information are initialized: - Card name (department ID), beginning from the input card number. - Password associated with the card
	CC-SPSW	Control card I/F support setting Set whether to support the control card I/F (CC-V) or not. 0: Do not support. 1: Support.
	COIN	Coin vendor change Set the control card set display appearing on the operator station for vendor use. 0: Control card use 1: Coin vendor use
	CONTROL	Set the PDL printer output control where the control card I/F (CC-V) is supported. 0: Enable printing without a card mounted. 1: Enable printing with a card mounted in position.

16.10 eRDS Parameter Settings (E-RDS)

16.10.1 Settings Related to e-RDS

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Settings related to e-RDS are described below.

T-16-20

Item	Description
E-RDS SWITCH	e-RDS OFF/ON setting (0:OFF / 1:ON)When used (ON), the counter information and error information are sent to UGW.Default: 0 (OFF)
RGW-ADDRESS	URL of UGWDefault: URL of actual UGWCharacter string length: 129 bytes (including NULL, one-byte codes only)
RGW-PORT	Port No. of UGW Default: 443Setting range: 1 to 65535
COM-TEST	Execution of communication test An attempt is made to connect to UGW, judges whether connection is successful, and displays "COM-TEST OK" or "COMTEST NG" as the judgment result.
COM-LOG	Details of communication test resultThe log of errors in communication with UGW is displayed. The error information includes the error occurrence time, error code, and details of the error.Maximum log count: 5Error information length: Max. 128 characters (excluding NULL)

16.11 Display of Counter Information (COUNTER)

16.11.1 Counters

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

This copier is furnished with a maintenance/supplies counter set (DRBL-1), which can be used to gain rough measures of when to replace supplies. The counter set increments by one on counting each sheet of small-sized paper (up to A4/LTR) and by two on counting each sheet of large-sized paper (larger than A4/LTR).

T-16-21

Maintenance counter list		
Item	Counter	Explanation
TOTAL (Total counter)	SERVICE1	Service total counter 1
	SERVICE2	Service total counter 2
	TTL	Total counter
	COPY	Total copy counter
	PDL-PRT	PDL print counter
	FAX-PRT	Fax print counter
	REP-PRT	Report print counter
	2-SIDE	Double-sided copy/print counter
	SCAN	Scan counter
PICK-UP (Paper pickup counter)	C1	Cassette 1 jam counter
	C2	Cassette 2 jam counter
	C3	Not used
	C4	Not used
	MF	Manual feed tray pickup total counter
	2-SIDE	Double-sided paper pickup total counter
FEEDER (Feeder related counters)	FEED	Feeder pickup total counter
	DFOP-CNT	ADF open/close hinge counter
JAM (Jam counters)	TTL	Unit total jam count
	FEEDER	Feeder total jam count
	SORTER	Not used
	2-SIDE	Duplex unit jam counter
	MF	Manual feed tray jam counter
	C1	Cassette 1 jam counter
	C2	Cassette 2 jam counter
	C3	Not used
	C4	Not used
MISC (Other required counter)	WST-TNR	Not used

T-16-22

Parts counter list			
Item	Counter	Explanation	Service life
DRBL-1 (Unit supplies)	PT-DRM	Drum unit rotation count	26,000

16.11.2 Clearing Counters

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

- Maintenance/parts counter all clear
Execute service mode > CLEAR > COUNTER to clear all maintenance/parts counters.

- Counter clear on parts replacement
Press the numeric keypad key 0 after displaying the counter for a part just replaced, and the counter will be cleared individually.

16.12 Service Report (REPORT)

16.12.1 Report Output

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

The table below lists the kinds of reports that are supported.

Item	Explanation
SERVICE DATA LIST	Service mode service soft switch output (SSSW, MENU, NUMERIC Param., SPECIAL, NCU, SCAN, PRINT, SYSTEM, ROM, start date)
SYSTEM DATA LIST	Service mode service soft switch output (SSSW, MENU, NUMERIC Param., SPECIAL, NCU, SCAN, PRINT, SYSTEM, ROM, start date) System dump list output
SYSTEM DUMP LIST	Transmission count, reception count, record chart count, error count and other outputs
COUNTER REPORT	Counter output
ERROR LOG LIST	Jam and error history output
SPEC LIST	Type setting, print speed, memory size, ROM indication, adjustment data and other outputs
SERVICE LABEL	Output of an entry format for the service label affixed to the rear cover as shipped
ERDS COM LOG LIST	Output of communication error log information related to e-RDS

16.12.2 System Data List

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Use it to check the settings associated with the service soft switch and service parameters.

F-16-6

16.12.3 System Dump List

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

- System Dump List
Use it to check the history of communications, both successful and error.

```
06/30 2005  19:18                                                              ☑ 001

    CLEAR DATE                        06/18 2005

[1]
   ┌TX    =    7
[3]─┤A4    =    0    B4    =    0    A3    =    0
[2]─┤RX    =    0
   └A4    =    7    B4    =    0    A3    =    0    LTR   =    0    LGL   =    0
[3]
   ┌33600  =    0    31200 =    0    28800 =    0    26400 =    0    24000 =    0
   │21600  =    0    19200 =    0    16800 =    0    14400 =    0    12000 =    0
[4]│9600   =    0    7200  =    0    4800  =    0    2400  =    0
   │14400  =    0    12000 =    0    TC9600 =    0    TC7200 =    0
   │14400  =    0    12000 =    0
   └9600   =    0    7200  =    0    4800  =    0    2400  =    0
[5]─┤STD    =    2    FINE  =    5    SUPER =    0    ULTRA =    0
[6]──MH     =    0    MR    =    0    MMR   =    7    JBIG  =    0    JPEG  =    0
[7]──G3     =    0    ECM   =    7

     PRINT   TTL    =    63  /  63
            C-S-TTL =    0   /  0
[8]         K-S-TTL =    51  /  51
     READ    SCAN   =    43  /  43

     #000          0    0    0    0    0    0    0    0
[9]                0    0    0    0    0    0    0    0
                   0    0    0    0    0    0    0    0
                        0    0    0    0    0    0    0
                             0    0    0    0    0    0
                             0    0    0    0    0    0
                                  0    0    0
```

F-16-7

*1: TX, number of total pages transmission.
*2: Total number of pages transmitted/received according to original size.
*3: RX, number of total pages reception.
*4: Total number of pages transmitted and received for each modem speed
*5: Total number of pages transmitted/received in connection with different modem speeds (Standard, Fine, Super Fine, Ultra Fine).
*6: Total number of pages transmitted and received for each coding method
*7: Total number of pages transmitted and received in each mode
*8: Total number of pages printed/scanned
*9: Total number of occurrences for error code

T-16-23

Indication sample					
##280	1	7	3	0	0

##280   ##281   ##282
number of errors   number of errors   number of errors

It provides error information on the 3 most recent communications.

```
                    2003 09/02 TUE 12:00  FAX                                      001
*1 ───────── #1 LATEST              #000
*2 ───────────── START TIME          09/02 10:00
*3 ───────────── OTHER PARTY         12345678
*4 ───────────── MAKER CODE          10001000
*5 ───────────── MACHINE CODE        0100001 00000000
                 RCV V.8 FRAME       E0 81 85 D4 90 7E 00 00
                 SYMBOL RATE         3429 baud
                 DATA RATE           28800 bps [V. 34]
                 TX LVL REDUCTION      0
                 ERR ABCODE          00
                 ERR SECTXB          00
                 ERR SECRXB          00
*6 ───────────── Rx :（bit 1）      00000100 01110111 01011111 00100011 00000001 10101001 00000001（bit 56）
                     （bit 57）      00000001 00000001 00000100 00000000 00000000                 （bit 96）
*7 ───────────── Tx :（bit 1）      00000000 01000010 00011111 00100001 00000001 00000001 00000001（bit 56）
                     （bit 57）      00000001 00000001 00000100 00000000 00000000                 （bit 96）

*8 ───────── Rx : NSF CSI DIS           CFR          MCF              MCF
*8 ───────── Tx :          NSS TSI DCS    PIX-288 PPS-NUL    PIX-288 PPS-NUL    PIX-288 PPS-NUL

             Rx : MCF           MCF            MCF
             Tx :      PIX-288 PPS-NUL    PIX-288 PPS-EOP    DCN

             #2                    #000
                 START TIME          09/02 09:30
                 OTHER PARTY         12345678
                 MAKER CODE          10001000
                 MACHINE CODE        0100001 00000000
                 RCV V.8 FRAME       E0 81 85 D4 90 7E 00 00
                 SYMBOL RATE         3429 baud
                 DATA RATE           28800 bps [V. 34]
                 TX LVL REDUCTION      0
                 ERR ABCODE          00
                 ERR SECTXB          00
                 ERR SECRXB          00
                 Rx :（bit 1）      00000100 01110111 01011111 00100011 00000001 10101001 00000001（bit 56）
                     （bit 57）      00000001 00000001 00000100 00000000 00000000                 （bit 96）
                 Tx :（bit 1）      00000000 01000010 00011111 00100001 00000001 00000001 00000001（bit 56）
                     （bit 57）      00000001 00000001 00000100 00000000 00000000                 （bit 96）

             Rx : NSF CSI DIS           CFR          MCF              MCF
             Tx :          NSS TSI DCS    PIX-288 PPS-NUL    PIX-288 PPS-NUL    PIX-288 PPS-NUL

             Rx : MCF           MCF            MCF
             Tx :      PIX-288 PPS-NUL    PIX-288 PPS-EOP    DCN

             #3 OLDEST              #000
                 START TIME          09/02 09:00
                 OTHER PARTY         12345678
                 MAKER CODE          10001000
                 MACHINE CODE        0100001 00000000
                 RCV V.8 FRAME       E0 81 85 D4 90 7E 00 00
                 SYMBOL RATE         3429 baud
                 DATA RATE           28800 bps [V. 34]
                 TX LVL REDUCTION      0
                 ERR ABCODE          00
                 ERR SECTXB          00
                 ERR SECRXB          00
```

F-16-8

*1: service error code.
*2: START TIME, date and time (in 24-hr notation).
*3: OTHER PARTY, telephone number sent by the other party.
*4: MAKER CODE, manufacturer code.
*5: MACHINE CODE, model code.
*6: bit 1 through bit 96 of DIS, DCS, or DTC that has been received.
*7: bit 1 through bit 96 of DIS, DCS, or DTC that has been transmitted.
*8: RX, procedural signal received; TX, procedural signal transmitted.

16.12.4 Counter List

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Explanation: Maintenance/supplies counter output.
(For more detailed information about the maintenance/supplies counter output, execute service mode > Display counter information > Counters.)

16.12.5 Error Log List

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

```
07/12/2005 13:07 FAX                                                    001

                         *****************************************
                         ***   JAM/ERR LOG REPORT   ***
                         *****************************************

                    [1]   [2]   [3]   [4] [5]   [6]   [7]    [8]  [9][10]
                     |     |     |     |   |     |     |      |    |  |
        JAM
                    01  04/12  12:17  20:03  4      1    0012  000026  1  A4




                    20  04/12  12:17  20:03  4      1    0012  000026  1  A4




                    [1]   [2]   [3]   [4] [5]    [6]   [7]    [8]
                     |     |     |     |   |      |     |      |
        ERR
                    01  04/12  12:17  15:36  3       0010  0000  000691




                    20  04/12  12:17  15:36  3       0010  0000  000691
```
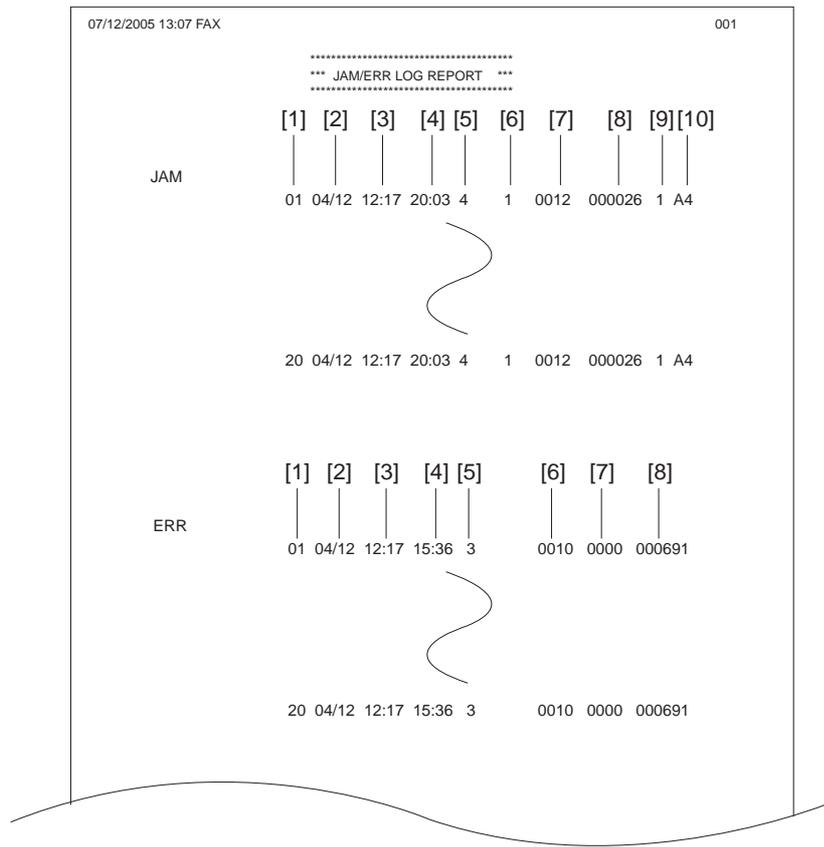
F-16-9

Jam history description (JAM)			
	Item	**Explanation**	
[1]	Number	The larger the number of a jam, the more recently it has occurred.	
[2]	Jam date	Date of jam occurrence	
[3]	Jam time		
[4]	Jam recovery time		
[5]	Location	3: Host machine, 4: ADF	
[6]	Occurrence category	0: Host machine, 1: ADF	
[7]	Jam code	Code	Jam cause
	Host machine	0104	Pickup delay jam
		0208	Pickup stationary jam
		010c	Delivery sensor delay jam
		0210	Delivery sensor stationary jam
		0214	Stationary jam in machine
		021c	Wound paper jam at fuser
		1118	Door open jam
	ADF	0000	Unknown jam
		0007	Initial stationary
		0008	Document edge sensor delay jam
		0009	Document edge sensor stationary jam
		000a	Paper absence (Pull out the document.)
		000c	Deliver delay jam
		000d	Delivery stationary jam
		0010	Pickup NG
[8]	Total counter display		
[9]	Pickup stage position	0: Manual feed tray, 1: Cassette 1, 2: Cassette 2	
[10]	Paper size		

Error history description (ERR)		
	Item	**Explanation**
[1]	Number	The larger the number of an error, the more recently it has occurred.
[2]	Error date	Date of error occurrence
[3]	Error time	
[4]	Error recovery time	

Error history description (ERR)

	Item	Explanation
[5]	Location	3: Main unit
[6]	Error code	Error code (4-digit code; for a definition of the code, see the "Error Code" Chapter.)
[7]	Detail code	Detail code of the error code (4-digit code; for a definition of the code, see the "Error Code" Chapter.)
[8]	Total counter display	

16.12.6 Spec List

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

```
07/12/2005 13:07 FAX                                                         001

[1]                      *****************************
[2]                      ***  SPEC REPORT   ***
[3]                      *****************************

                 TYPE                      _ _ _ _ _    U. S. A
                 LBP SPEED                  _ _ _ _ _    22cpm
                 TOTAL MEMORY               _ _ _ _ _    128MB
               ┌ MAIN                       _ _ _ _ _    WLaa-03-13
[4]            │ OPTION                     _ _ _ _ _    WLaa-03-13
               │ BOOT                       _ _ _ _ _    WLaa-03-13
               │ ECONT                      _ _ _ _ _    0509
               │ OPT-CAS 1                  _ _ _ _ _    0000
               │ OPT-CAS 2                  _ _ _ _ _    0000
               │ OPT-CAS 3                  _ _ _ _ _    0000
               │ OPT-DUP                    _ _ _ _ _    0000
               └ OPT-FIN                    _ _ _ _ _    0000
               ┌ ACTIBAT FUNCTION
[5]            │   BDL-IMAGE (1200)         _ _ _ _ _    OFF
               │   FAX                      _ _ _ _ _    ON
               │   NETWORK                  _ _ _ _ _    ON
               │   PCL                      _ _ _ _ _    ON
               │   PC-SCAN                  _ _ _ _ _    ON
               │   BW-SEND                  _ _ _ _ _    OFF
               │   CL-SEND                  _ _ _ _ _    OFF
               │   PAF                      _ _ _ _ _    OFF
               └   BDL-IMAGE (600)          _ _ _ _ _    ON
               ┌ SOFT-ID PRM
                 TYPE                       _ _ _ _ _    0 : NONE
                 OPTION/ENABLE SW
[6]                BIT 00: BDL-IMAGE (1200) _ _ _ _ _    ON   / OFF
                   BIT 01: FAX             _ _ _ _ _    ON   / OFF
                   BIT 02: NETWORK         _ _ _ _ _    ON   / OFF
                   BIT 03: PCL             _ _ _ _ _    ON   / OFF
                   BIT 04: PC-SCAN         _ _ _ _ _    OFF  / OFF
                   BIT 05: BW-SEND         _ _ _ _ _    OFF  / OFF
                   BIT 06: CL-SEND         _ _ _ _ _    OFF  / OFF
                   BIT 07: PAF             _ _ _ _ _    OFF  / OFF
                   BIT 08: BDSS            _ _ _ _ _    ON   / OFF
                   BIT 09: BDL-IMAGE (600) _ _ _ _ _    ON   / OFF
                   BIT 10: COUNTER         _ _ _ _ _    ON   / OFF
                 BODY No.                   _ _ _ _ _    BFDxxxxx
                 ENGINE CODE                _ _ _ _ _    20000016
               └ SIZE TYPE                  _ _ _ _ _    0 : NONE
               ┌ TOTAL
[7]            │ TTL                        _ _ _ _ _    000688
               │ COPY                       _ _ _ _ _    000685
               │ FAX-PRT                    _ _ _ _ _    000000
               │ PDL-PRT                    _ _ _ _ _    000000
               └ RPT-PRT                    _ _ _ _ _    000000
               ┌ READ ADJ PRM
                 026:                       _ _ _ _ _    0022
                 031:                       _ _ _ _ _    0000
                 032:                       _ _ _ _ _    0115
                 033:                       _ _ _ _ _    0032
                 034:                       _ _ _ _ _    0032
                 041:                       _ _ _ _ _    0000
                 042:                       _ _ _ _ _    0219
                 043:                       _ _ _ _ _    0075
[8]              044:                       _ _ _ _ _    0075
                 045:                       _ _ _ _ _    0075
                 046:                       _ _ _ _ _    0075
                 047:                       _ _ _ _ _    0032
                 048:                       _ _ _ _ _    0032
                 054:                       _ _ _ _ _    0032
                 213:                       _ _ _ _ _    0000
                 214:                       _ _ _ _ _    0000
                 215:                       _ _ _ _ _    0000
                 WRITE ADJ PRM
                 031:                       _ _ _ _ _    0050
                 032:                       _ _ _ _ _    0050
                 033:                       _ _ _ _ _    0050
                 034:                       _ _ _ _ _    0100
                 035:                       _ _ _ _ _    0100
                 036:                       _ _ _ _ _    0100
                 037:                       _ _ _ _ _    0100
[9]              038:[                       _ _ _ _ _    0100
[10]           └ 039:                        _ _ _ _ _    0100
[11]             OPTYION ROM                _ _ _ _ _    16MB
               ┌ USB MEMORY                 _ _ _ _ _    OFF
[12]           │ DELIVERY FULL SENSOR 1     _ _ _ _ _    ON
               └ DELIVERY FULL SENSOR 2     _ _ _ _ _    OFF
[13]             USB SERIAL No.             _ _ _ _ _    0051J9AE904
[14]             MAC ADDRESS                _ _ _ _ _    00 00 85 51 60 1C
                 BACKUP BATTERY             _ _ _ _ _    OFF
[15]             LUGIA                      _ _ _ _ _    2
```

F-16-10

[1] Type setting
[2] Print speed
[3] Memory size
[4] ROM version (MAIN/BOOT/ECONT/option cassette/duplex unit/finisher)
[5] Activation function ON/OFF
[6] Soft ID information

[7] Total counter (TOTAL/COPY/FAX/PDL/REPORT record counts)
[8] Adjustment data (factory scan/record adjustment values)
[9] Option ROM availability
[10] USB memory availability
[11] No. 1/No. 2 paper full sensor sensor availability
[12] USB serial number
[13] MAC address
[14] Backup battery availability
[15] Anlog purocessor PCB version

16.12.7 Service Label

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Enter the value given in the service label affixed to the rear cover when it has been replaced with a new one.

#PRINT>#PRINT NUMERIC					#SCAN>#SCAN NUMERIC				
	FACTORY	1	2	3		FACTORY	1	2	3
031	50				026				
032	50				031				
033	50				032				
034	100				033				
035	100				034				
036	100				041				
037	100				042				
038	100				043				
039	100				044				
					045				
					046				
					047				
#SCAN>#SCAN NUMERIC					048				
					054				
					213				
					214				
body No:BFDxxxxx					215				

F-16-11

16.12.8 e-RDS Communication Error Log List

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Description: Detailed information output when a communication error occurs
(For the output error message, see "RDS > Error Messages".)

16.13 Download (DOWNLOAD)

16.13.1 Download

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

The following parts of this unit can be upgraded by executing download mode using the service support tool (SST) (for more information, see the "Upgrading" section):

Main unit
- Flash ROM (system + boot) mounted on the image processor PCB
- ROM mounted on the PCL board

16.14 Initialization of Set Value (CLEAR)

16.14.1 Clear

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Group	Item	Explanation
TEL & USER DATA		Clears all user-registered and -set areas of telephone registration data and user data. (Telephone registration refers to the registration of codes on one-touch dialing, abbreviated dialing, and group dialing.)
SERVICE DATA		Clears the system dump list, except for counters and clear dates.
COUNTER		Clears the maintenance counter, parts counter and mode-specific counters. Initializes the counter (numerator) in the system dump list.
TYPE		Initializes user data and service data to suit specified destination settings.
SOFT-CNT		Not used
HST	ACTIVITY	Initializes the activity report
	ACCOUNT	Clears print histories.
	JAM	Clears the jam history.
	ERR	Clear the error (error code) history.
	ALARM	Clears the alarm history.
CARD		Clears department management information held in the controller before the card reader is demounted.
ERR	E355	Not used
	E719	Clears card reader errors.
PWD		Clears the system administrator's password.
FILE SYSTEM		Not used
FORMAT	USB MEMORY	Format the USB memory. (This mode is used when the USB memory error is damaged.)
	LICENSE DRIVE	Not used
	CA-KEY	Initializes the installed CA certificate.
ALL		Clears user and service data (except for some scan parameters and print parameters), and the counter setting/registration data in the system dump list, except for the print count.

16.15 Error Display (ERROR DISPLAY)

16.15.1 Error Display

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

The error and detailed code which have happened now are shown.
The error code is displayed on the upper sida and a detailed code is displayed on the lower side.

16.16 Display of ROM Information (ROM)

16.16.1 ROM display

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

The table below lists the items of ROM display mode that are supported.

T-16-24

Item	Explanation
MAIN	Displays the version number of the ROM (SYSTEM) mounted on the image processor PCB.
MAIN2	Displays the version of the ROM (BOOT) mounted on the image processor PCB.
ECONT	Displays the version number of the ROM mounted on the DC controller PCB.
OPROM	Displays the version number of the option ROM.

16.17 Test Mode (TEST)

16.17.1 D-RAM Test<(1) D-RAM TEST>

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

D-RAM Test((1) D-RAM)
Press the numeric keypad key 1 on the test mode menu to select the D-DRAM test.
Press numeric keypad keys 1 and 2 during the D-DRAM test to carry out the individual tests described below.

Numeric keypad key 1
Checks to see if data can be correctly written to and read from all areas of D-RAM (SDRAM). If an error occurs making this check, the test is aborted, with an error appearing on the touch panel (LCD).

Numeric keypad key 2
Checks to see if data can be correctly read from all areas of D-RAM (SDRAM). If an error occurs making this check, the test is aborted, with an error appearing on the touch panel (LCD).

```
D-RAM  TEST    30208KB
[1] - [2]

            Press numeric keypad key 1          Normal end

            D-RAM  TEST    30208KB              D-RAM  TEST    30208KB
            * * * * * * . . . . . .             complete    (no error)

30208KB:Total size of D-RAM memory (Bytes)
*:Size of data written to memory
.:Size of data read from memory

                                                WRT= 33CC  RD= 33EC
                                                ADR= BF840201

            Press numeric keypad key 2          Press the      WRT:Written data
                                                start key      RD:Read data
            D-RAM  TEST    30208KB              to resume      ADR:Address
            . . . . . .
                                                Error end
30208KB:Total size of D-RAM memory (bytes)
.:Size of data read from memory                 D-RAM  TEST    30208KB
                                                complete    (error)
```
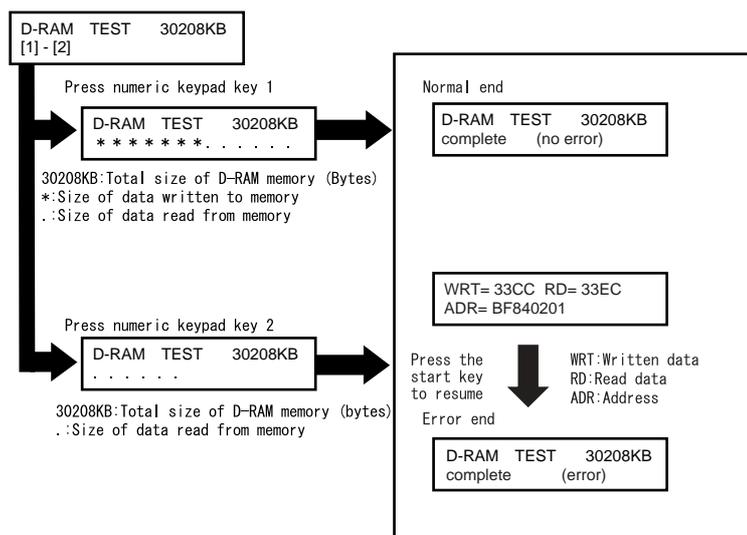
F-16-12

16.17.2 Scan Test ((2) SCAN TEST)

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Scan test ((2) SCAN TEST)

Press the numeric keypad key 2 on the test mode menu to select the CCD test.
Press numeric keypad keys 1, 3 and 4 during the CCD test to carry out the individual tests described below.

Numeric keypad key 1
Corrects the LED output of the contact sensor and sets its parameters automatically. (AGC adjustment)

Numeric keypad key 3
Adjusts the document scan position (only on models with the ADF feature installed). Adjusts the position of the contact sensor for scanning documents fed from the ADF automatically.

Numeric keypad key 4
Detects trash at reader scan positions A/B/C.
Pos A: Reference read position
Pos B: About 0.5 mm inside of the roller from the reference position
Pos C: About 1.0 mm inside of the roller from the reference position

16.17.3 Print Test ((3) PRINT TEST)

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Print test ((3) PRINT TEST)
Press the numeric keypad key 3 on the test mode menu to select the print test.
Press numeric keypad keys 2 and 4 during the print test to generate test patterns as described below. Two kinds of service test patterns are available. Other test patterns are reserved for factory/development purposes.

Numeric keypad key 2
(2) BLACK: All-black output
Numeric keypad key 4
(4) ENDURANCE: Black belt output

To cancel test printing, press the stop key.

Use it to make sure that the print pattern does not have white lines or uneven image.

Use it to make sure that the print pattern does not have contraction/ elongation of an image or dirt/black line.s

F-16-13

16.17.4 MODEM Test ((4) MODEM TEST)

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

MODEM test((4) MODEM TEST)
These tests test modem and NCU transmission and reception. The modem tests check whether signals are sent correctly from the modem by comparing the sound of the signals from the speaker with the sounds from a normal modem.
End this test by pressing the Stop key.

Keypad	Type	Description
1	Relay test	Use it to turn on/off a selected relay to execute a switch-over test
2	Frequency test	The modem sends tonal signals from the modular jack and the speaker.
4	G3 signal transmission test	The modem sends G3 signals from the modular jack and the speaker.
5	DTMF signal reception test	Use it to generate the DTMF signal coming from the modem using the telephone line terminal and the speaker.
6	Tonal signal reception test	Use it to monitor a specific frequency and the DTMF signal received from the telephone line terminal by causing them to be indicated on the LCD (i.e., the presence/absence as detected). The reception signal is generated by the speaker.
8	V.34 G3 signal transmission test	The modem sends V.34 G3 signals from the modular jack and the speaker.

Relay Test
Press '1'or '2' on the keypad on the Modem test menu to select relay test mode. Use the keypad to operate the various relays of the NCU. '2' on the keypad is used for 230V machine.
Numeric keypad key 1
The input key and relay are shown below:
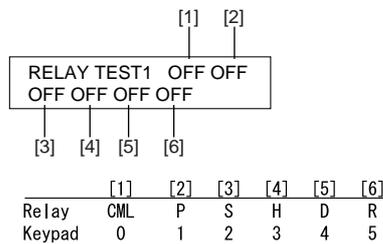
F-16-14

Numeric keypad key 2
The input key and relay are shown below:
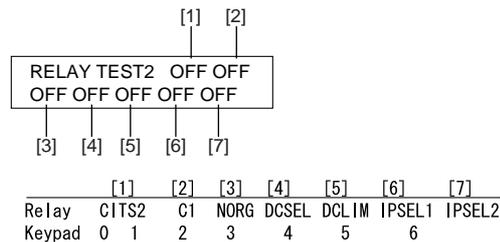
F-16-15

⚠

The touch panel (LCD) is turned on or off in relation to the transmission of the relay operation signal as is operated on the keypad; for this reason, you cannot use the touch panel (LCD) to check a fault on a single relay.

Frequency Test

A press on '2' on the keypad from the MODEM test menu selects the frequency test.

In this test, signals of the following frequencies from the modem are transmitted using the telephone line terminal and the speaker. To select a different frequency, use the keypad.

Keypad	Frequency
0	462Hz
1	1100Hz
2	1300Hz
3	1500Hz
4	1650Hz
5	1850Hz
6	2100Hz

MEMO:

The frequency and the output level of individual frequencies are in keeping with the output level set in service mode.

G3 Signal Transmission Test

A press on '4' on the keypad from the MODEM test menu selects the G3 signal transmission test. In this test, the following G3 signals from the modem are transmitted using the telephone line terminal and the speaker. To select a different transmission speed, use the keypad.

Keypad	Transmission speed
0	300bps
1	2400bps
2	4800bps
3	7200bps
4	9600bps
5	TC7200bps
6	TC9600bps
7	12000bps
8	14400bps

MEMO:

The output level of individual signals is in keeping with the setting made in service mode.

DTMF Signal Transmission Test

A press on '5' on the MODEM test menu selects the DTMF signal transmission test. In the test, the following DTMF signals from the modem are transmitted using the telephone line terminal and the speaker. The number pressed on the keypad selects a specific DTMF signal.

MEMO:

The output level of individual signals is in keeping with the setting made in service mode.

Tonal/DTMF Signal Reception Test

A press on '6' on the keypad from the MODEM test menu selects the tonal signal/DTMF signal reception 0 test. In this signal, the tonal signal/DTMF signal received from the telephone line terminal can be checked to find out if it was detected by the modem.

Tonal signal reception test

```
MODEM TEST
OFF OFF OFF
```

OFF OFF OFF
└──── changes from '0' to '1' in response to detection of a signal of 462 ± 25 Hz.
└──── changes from '0' to '1' in response to detection of a signal of 1100 ± 30 Hz.
└──── changes from '0' to '1' in response to detection of a signal of 2100 ± 25 Hz.

DTMF signal reception test

```
MODEM TEST
OFF OFF OFF   5
```

The received DTMF signals are indicated starting
from the right using the 2nd character of the display.

F-16-16

V.34 G3 Signal Transmission Test
A press on '8' on the keypad from the MODEM test menu selectes the V.34 G3 signal transmission test. The V.34 G3 signals below are sent from the modem using the modular jack and the speaker by pressing the start key. The Baud rate can be changed with the keypad, and the Speed can be changed with the left/right arrow key.

Keypad	Baud rate
0	3429baud
1	3200baud
2	3000baud
3	2800baud
4	2743baud
5	2400baud

Left/right arrow key	Transmission speed
	2400bps
	4800bps
	7200bps
	9600bps
<	12000bps
	14400bps
	16800bps
	19200bps
	21600bps
>	24000bps
	26400bps
	28800bps
	31200bps
	33600bps

16.17.5 FUNCTION TEST <(6) FUNCTION TEST>

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Function test ((6) FUNCTION TEST)
Press the numeric keypad key 6 on the test mode menu to select the function test.
Press numeric keypad keys 1 and 3 to 9 during the function test to enter the menus listed below.

T-16-25

Keypad	Item	Explanation
1	G3 signal transmission test	Transmits 4800-bps G3 signals to a telephone line and speaker.
2	Not used	
3	Sensor test	Sensor actuation test
4	ADF test	ADF operation test
5	Book test	Host machine operation test
6	Speaker test	Speaker operation test
7	Operation panel test	LCD, LED and control key operation test
8	Lamp test	Contact sensor illumination test
9	Line signal reception test	NCU board signal sensor and frequency counter operation test

G3 signal transmission test (6-1: G3 480 bps Tx)
Press numeric keypad key 1 on the FUNCTION TEST menu to select the G3 signal transmission test. This test transmits 4800-bps G3 signals from the telephone line connection terminal and speaker.

Sensor test (6-3: SENSOR)

This mode is used to verify the status of the unit sensors from LCD indications. Press numeric keypad key 3 on the FUNCTION TEST menu to select the sensor test. LCD indications change as the associated sensors turn on and off.

```
6-3:SENOR
[1] - [8]
```

Press numeric keypad key 1.

```
SENSOR CHECK
0:NORMAL 1:LATCH
```

Select a sensor mode.
 0: NORMAL
Indications change from 0
to 1 as the sensors turn on.
Indications change from 1
to 0 as the sensors turn off.
 1: LATCH
Indications change from 0
to 1 as the sensors turn on.
Indications do not change back
from 1 to 0 once the sensors turn
on from the off state.

Press numeric keypad key 0.

```
SENSOR NORMAL
[0] - [2]
```

Press numeric keypad key 1.

```
SENSOR LATCH
[0] - [2]
```

Press numeric keypad key 0.

```
CAS 0      REG 0
DEL 0 0    MULTI 0
```

CAS:Cassette paper sensor (SR9): 0/Document presence, 1/Document absence
REG:Registration sensor (SR11): 0/Document presence, 1/Document absence
DEL 0 0:
          ┬ Delivery sensor (SR5): 1/ Document presence, 0/ Document absence
          └ Not used
MULTI:Manual paper sensor (SR12): 0/Document presence, 1/Document absence

Press numeric keypad key 1.

```
TONER 0    FULL 0
2ND-DEL 0 0
```

TONER: Waste toner full detection sensor (SR6): 0/Document presence, 1/Document absence
FULL: Delivery full sensor (SR10): 0/Document presence, 1/Document absence
2ND-DEL 0 0:
              ┬ Not used
              └ Not used

Press numeric keypad key 2.

```
OP1 0 0    OP2 0 0
OP3 0 0    PATH 0 0
```

OP1 0 0:
         ┬ Not used
         └ Option casstte paper sensor (SR6)
           : 0/Document presence, 1/Document absence

OP2 0 0: Not used
OP3 0 0: Not used
PATH 0 0: Not used

Press numeric keypad key 2

```
SWITCH CHECK
[0] - [1]
```

Press numeric keypad key 0.

```
CAS 0000
LOCK 0
```

CAS 0000: Not used
LOCK 0: Not used

Press numeric keypad key 1.

```
OP1 0000    OP2 0000
OP3 0000
```

OP1: Not used
OP2: Not used
OP3: Not used

Press numeric keypad key 3

```
DS ON DES of HPS ON
BCVS of
```

DS: ADF original set sensor (SR2001): On/Paper presence, Of/Paper absence
DES: ADF document edge snsor (SR2002): On/Paper presence, Of/Paper absence
HP: CS HP sensor (SR401): On/Paper presence, Of/Paper absence
BCVS: Not used

F-16-17

Press numeric keypad key 4.

```
REF xxx   ANT xxx
|ANT - LEF| xxx
```

REF: Toner reference voltage (A/D value)
ANT: Toner antenna voltage (A/D value)
ANT - LEF: Differential voltage (A/D value)

Press numeric keypad key 5.

```
BSCT on        BDOC[A3 ]
BDSS3-0  [of of of of]
```

BSCT: Not used
BDOC: Not used
BDSS3-0 [of of of of]: Not used

Press numeric keypad key 6. [1]

```
NCR Sts : 12345678
DPT MGN OK RDY 1234
```

[2]   [3] [4] [5] [6]

[1] Card reader and card availability indication
    Card available: Eight-digit card ID
    No card: Card None
    No card reader available: NCR None

[4] Can status
    OK: Normal scan
    ERR: Scan error
    NG: Nonstandard error
    (No indication): No card

[2] Card type and card reader status indication
    DPT: Department card
    PRC: Unit pricing card
    MAX: Upper limit setting card
    ERS: Erased card
    SRV: Service card
    (No indication): No card

[5] Equipment status
    IN: Initialization in progress
    RDY: Ready

[6] Card reader version indication
    Four-digit number

[3] Card type
    MGN: Magnetic card
    OPT: Optical card

Press numeric keypad key 7.

```
LAST of      EXIT of
REG of       CVR of
```

LAST: Not used
EXIT: Not used
REG: Not used
CVR: Not used

Press numeric keypad key 8.

```
WID1 of      WID2 of
LEN1 of      LEN2 of
```

WID1: Not used
WID2: Not used
LEN1: Not used
LEN2: Not used

F-16-18

**ADF feed test (ADF FEED TEST)**
ADF operation verification mode. Press numeric keypad key 4 on the FUNCTION TEST menu to select the ADF feed test. Place a document on the document platen and press the start key to transfer the document at the speed matched to the scan resolution setting. In this test, enter a transfer speed between 500 and 2000 (mm/s) from the numeric keypad and verify the transfer speed. Select between the ON and OFF states with the left and right cursor keys to select between single-sided document feed (OFF) and double-sided document feed (ON).

Book feed test (6-5: BOOK FEED TEST)
Performs a book feed operation with a specified magnification and in a specified size.

Speaker test (6-6: SPEAKER)
Speaker operation verification mode. Press numeric keypad key 6 on the FUNCTION TEST menu to select the speaker test. In this test, the speaker generates tonal signals at 100 Hz intervals, from 200 Hz to 5 kHz, in varying sound volumes. Signal output from the speaker is thus verified.

```
6-6: SPEAKER
FREQ [1]    VOL [2]
```

Press numeric
keypad key 1.

```
SPEAKER
FREQ   TEST
```

Press the start key
to change the
transmission frequency

Press numeric
keypad key 2.

```
SPEAKER
VOL[*] :MIN  [#]:MAX
```

Signal tone volume adjustment.
* denotes the minimum, #, the maximum.
The volume is adjustable level by level
using the start key.
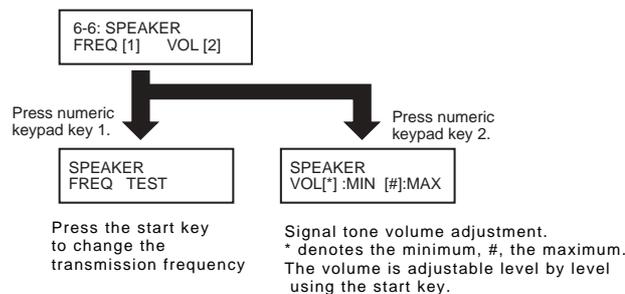
F-16-19

Operation panel test (6-7: OPERATION PANEL)
Operation panel operation verification mode. Press numeric keypad key 7 on the FUNCTION TEST menu to select the OPERATION PANEL test menu. Functions that can be verified from this menu are listed below.

- LCD test
Start the OPERATION PANEL test by pressing the start key. The LCD test is carried out first, displaying all-H characters. Press the start key once again to produce a total black display.
- LED lamp test
Press the start key after the LCD test to select the LCD lamp test, turning on all lamps on the operation panel.
- Operation key test
Press the start key after the LCD lamp test to select operation key test (1). The test succeeds if the characters appearing in the LCD are erased when the corresponding keys are pressed.
When the entire character display is erased, operation key test (2) launches (only on models with the FAX feature installed). As in (1), the test succeeds if the characters appearing in the LCD are erased when the corresponding keys are pressed.

Operation key test (1) correspondence diagram

F-16-20
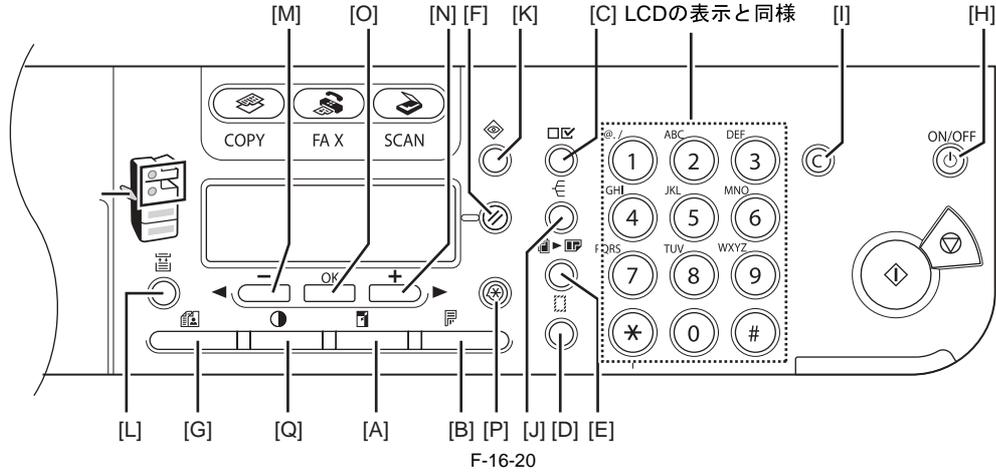
Operation key test (2) correspondence diagram

01: [A]	05: [E]	09: [I]
02: [B]	06: [F]	10: [J]
03: [C]	07: [G]	11: [K]
04: [D]	08: [H]	12: [L]

F-16-21
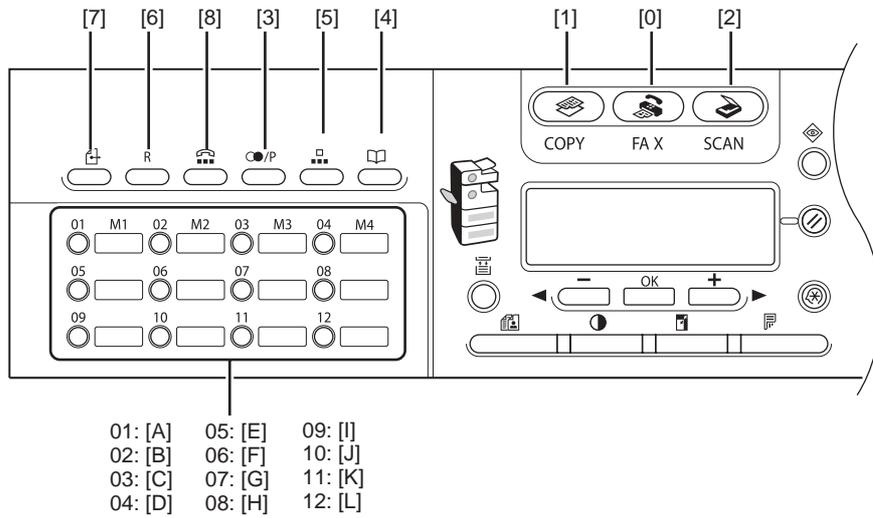
The flow of operation panel testing is shown below.

```
6-7 : OPERATION  PANEL
```

LCD test   Press the start key.

```
H H H H H H H H H H H H H H H H H H H
H H H H H H H H H H H H H H H H H H H
```
All-H character display

Press the start key.

All-black display

Press the start key.

All-LED illumination

LED lamp test   Press the start key.

```
0123456789*#ABCDEFGH
IJKLMNOPQRSTU
```
Press the keys associated with characters on display to erase the characters.

Operation key test (1)

```
012345678
ABCDEFGHIJKLMNOPQR
```
Press the one-touch dialing keys associated with characters on display to erase the characters.

Operation key test (2)

After erasing all characters on display, press the stop key to exit the test.

F-16-22

Line signal reception test (9: LINE DETECT)
Press numeric keypad key 9 on the FACULTY menu to select the line signal reception test. In this test, verify the successful operations of the NCU signal sensor and the frequency counter. Menu 1 detects the CI state, while menu 3 detects the CNG signal.

Test menu 1
Press numeric keypad key 1 on the LINE DETECT menu to select test menu 1. When CI is detected on the telephone line connection terminal, the LCD display changes from OFF to ON, indicating the received frequency. The LCD also displays the on-hook or off-hook state of an external telephone set as detected. The LCD displays, from left to right, CI, CI frequency, hook port and FC with indications of 1:ON and 0:OFF.

Test menu 2
Press numeric keypad key 2 on the LINE DETECT menu to select test menu 2. When the CNG signal is detected on the telephone line connection terminal, the LCD display changes from OFF to ON, indicating the received frequency. The LCD displays the status of CML, CNG and FED detection, from left to right, with ON/OFF indications. Numeric keypad key 2 turns on the CML relay to detect CNG.

Test menu 3
Press numeric keypad key 3 on the LINE DETECT menu to select test menu 3. When the CNG signal is detected on the telephone line connection terminal, the LCD display changes from OFF to ON, indicating the received frequency. The LCD displays the status of CML, CNG and FED detection, from left to right, with ON/OFF indications. Numeric keypad key 3 turns off the CML relay to detect CNG.

16.17.6 Roller cleaning mode ((0) ROLLER CLEAN)

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

Roller cleaning mode ((0) ROLLER CLEAN)
Press numeric keypad key 0 in test mode to select roller cleaning mode. Press numeric keypad keys 1 and 2 during this test to enter the following menus:
Numeric keypad key 1
Press the start key clean the ADF pickup/feed rollers by idling.

Press the stop key to exit this mode.

Numeric keypad key 2
Press the start key clean the unit transfer rollers by idling.
Press the stop key to exit this mode.

Chapter 17 Upgrading

Contents

17.1 Outline

17.1.1 Overview of Upgrade

iR1018

This machine and options can be upgraded by downloading system software programs from the personal computer (hereafter called as the PC) in which a service support tool (hereafter called SST) has been loaded.
System software programs and upgrade tools are listed in the following table:

T-17-1

Type	System software type	Upgrade tool	Remarks
		SST	
Main unit	Boot (boot program)	Yes	Main controller also controls the reader.
	System (main controller)	Yes	
	PCL	Yes	16MB ROM PCB

Download the system software for PCL board following the same procedure described in "Downloading the System".

⚠

When updating the version of Boot (boot program) and System (main controller) at the same time, make sure to first update Boot. If you start by updating System, the unit may not start up.

17.1.2 Overview of Service Support Tool

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF
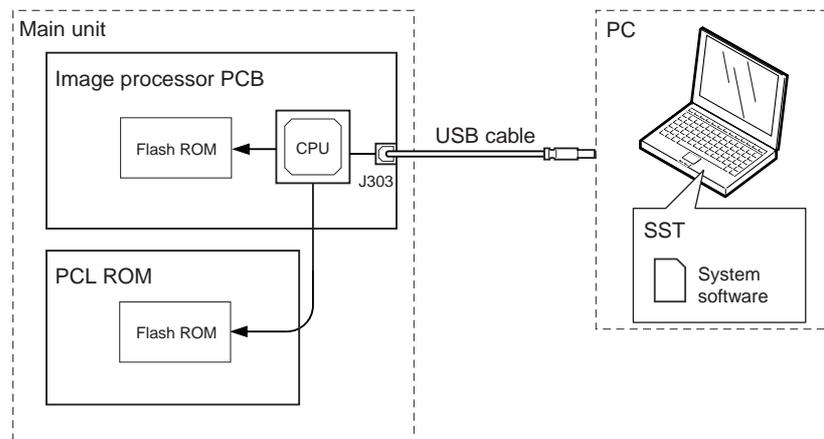
F-17-1

When using the SST, select "#DOWNLOAD" in the service mode to place the main unit in the download mode.

17.2 Making Preparations

17.2.1 Registering the System Software

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

System software programs to be downloaded need to be registered in the SST.
The system software programs are registered with the names listed below.

<Software Programs Preinstalled in Main Unit>

T-17-2

Display name	Compatible product name	Remarks
iR1018J	iR1018J, iR1019J , iR1022J	Flash ROM 12MB type
iR1022	iR1018, iR1022, iR1022A, iR1022F, iR1022i, iR1022iF, iR1023, iR1023iF, iR1023N	Flash ROM 16MB type

⚠

Use the firmware for the model suitable for the compatible product.

Unit name:
- Main controller: System
- Boot program: Boot
- PCL board: PCL
- CA certificate (distributed only as necessary)

The system software registration program is explained below taking Boot as an example.

[Preparation]
Have the following ready:
- PC in which SSTv3.21 or later is installed (Download a CA certificate of version of SSTv3.31 or higher)
- System CD containing the firmware for the relevant model

[System Software Registration Procedure]
1) Start the PC.
2) Insert the system CD in the PC.
3) Start SST.
4) Click the "Register Firmware" button.
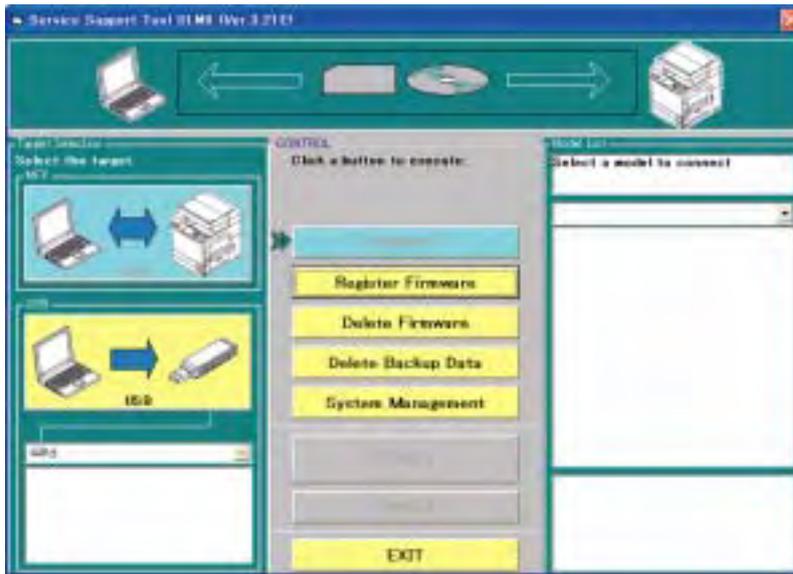
F-17-2

5) Select the drive in which the system CD is inserted, and then click the "SEARCH" button.
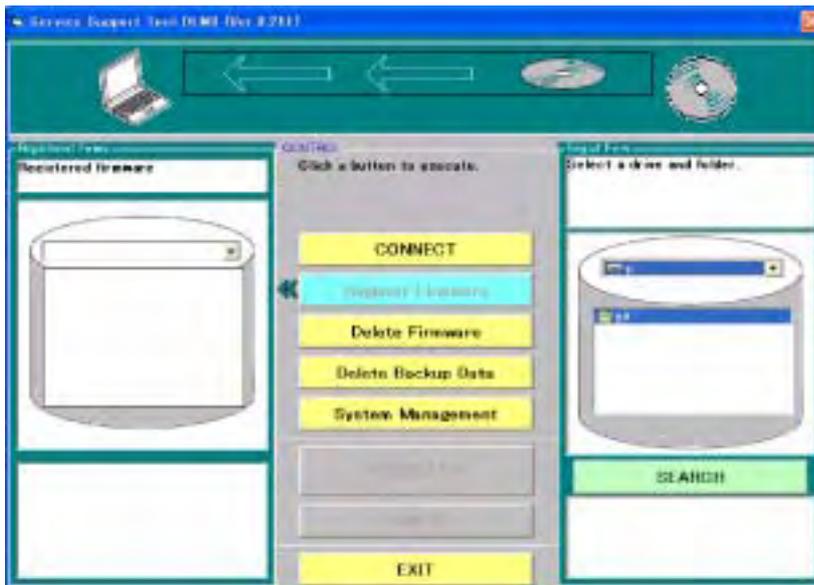
F-17-3

6) A list of system software programs contained in the system CD is displayed. Uncheck the checkboxes of unnecessary folders and system software programs, and then click the "REGISTER" button.

⚠

This machine allows two or more system software programs to be register at the same time. However, it does not allow two or more them to be downloaded at the same time. If two or more software programs need to be upgraded, download them one by one.
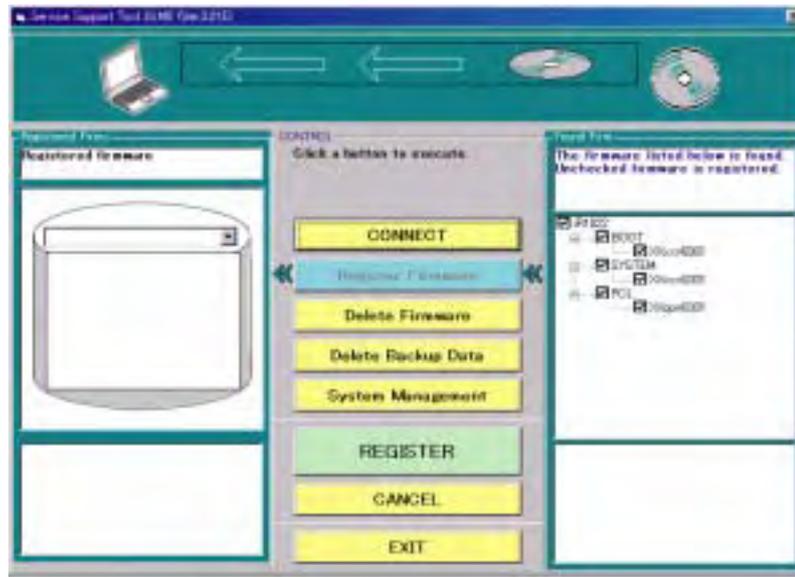
F-17-4

7) When the system software program registration result appears, click the OK button.
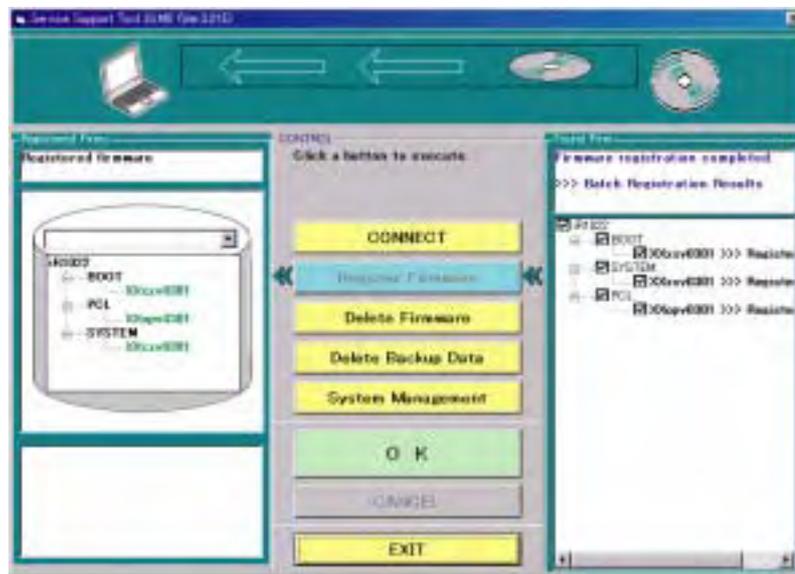
F-17-5

17.2.2 Connection

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

1) Turn off the main power switch of this machine, and then disconnect the cables connected to this machine.
   2) Connect USB connector on the back of this machine to the PC using the USB cable [1].

[1]

F-17-6
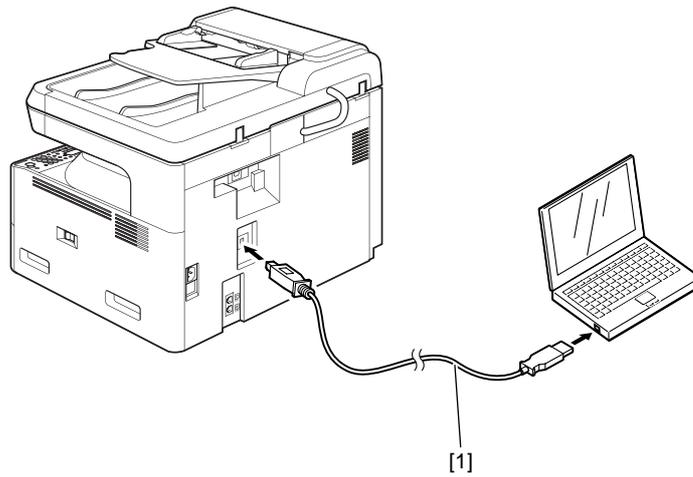
17.3 Downloading System Software

17.3.1 Downloading System

17.3.1.1 Downloading Procedure

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

To download the SYSTEM software, use the steps given for the BOOT software.

17.3.2 Downloading BOOT

17.3.2.1 Downloading Procedure

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

1) Turn on the power switch of the PC and start SST.
   2) When the power switch is turned on, the Found New hardware Wizard appears. Click "Cancel".

F-17-7

3) Select "MFP" in "Target Selection", and then select "iR1022" in "Model List".

F-17-8

4) Double-click the "System" folder in "Model List" to check the system software version. Select "USB" in "Interface", and then click the "START" button.

F-17-9

5) Turn on the power switch of the host machine.
   6) Press the following keys on the control panel to enter the service mode.
   Additional Functions Key > 2 Key > 8 Key > Additional Functions Key
7) Using the plus (+) or minus (-) key, select "#DOWNLOAD".
   8) Press the OK key on the control panel to place the host machine in the downloading wait mode ("#DOWNLOAD CONNECTED" is displayed).
   9) Press the OK button on the SST screen displayed on the display of the PC.
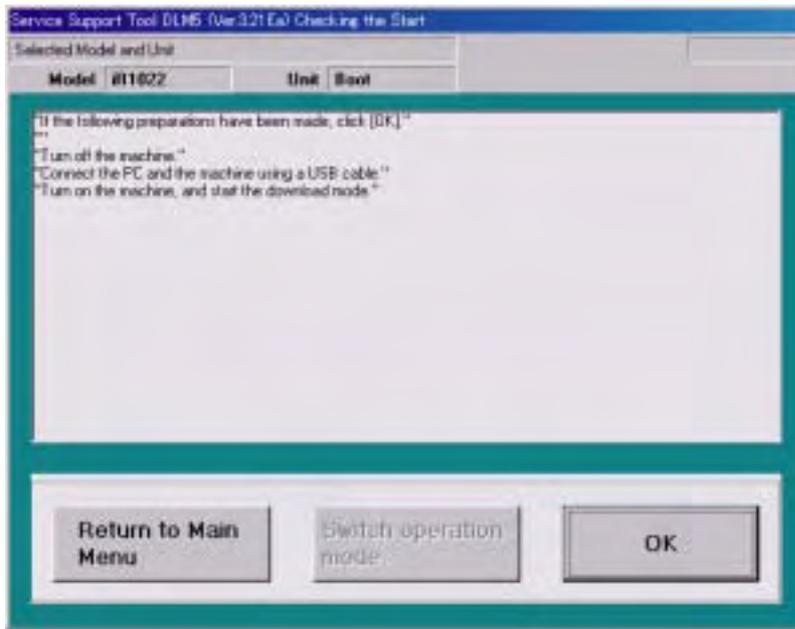
F-17-10

10) When connection is complete, the following screen appears. Click the OK button.
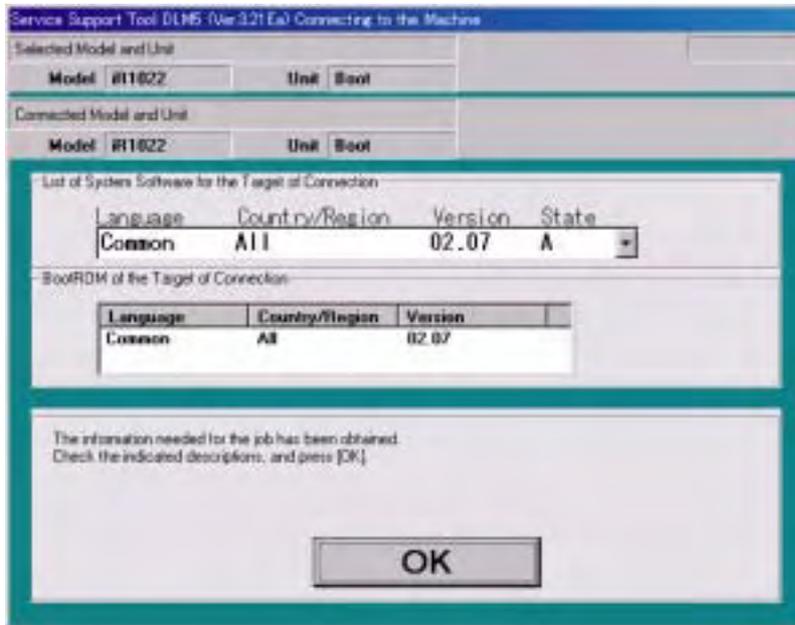
F-17-11

11) Click "BootROM Download" on the Selecting a Job screen.
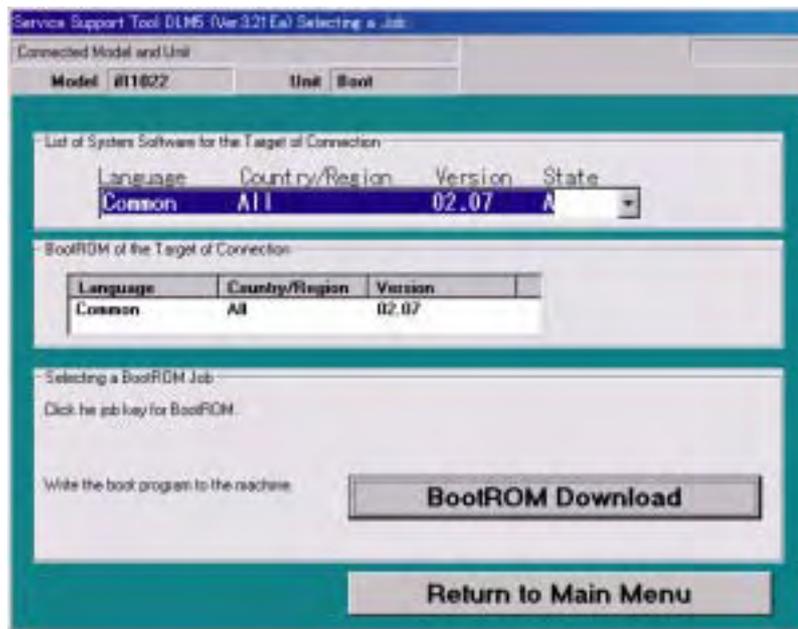
F-17-12

12) Select the version of the system software to download from the list. Check that the selected version is displayed in "Selected Version", and then click the "START" button.
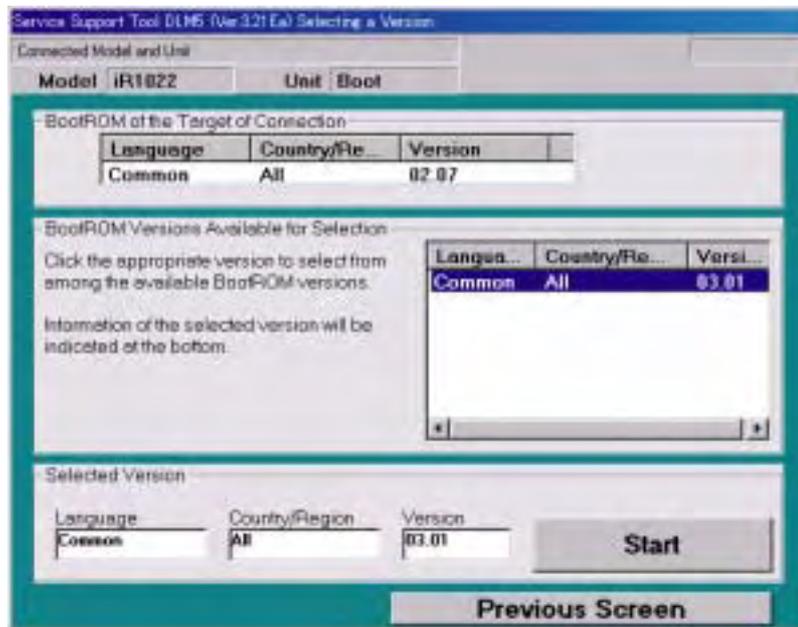
F-17-13

13) While the received data is being written to the flash ROM after completion of downloading, the following screen is displayed:
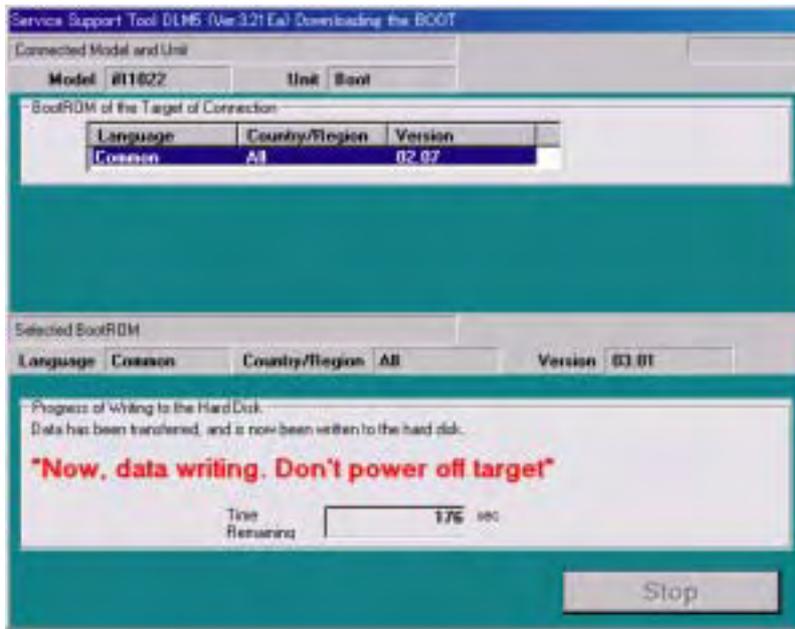
F-17-14

⚠

Never turn off the power switch of the machine while the data is being written to the flash ROM. If it becomes impossible to start this machine after turning its power switch off, the image processor PCB must be replaced.

14) When writing of the data to the Flash ROM is complete, its result is displayed. Click the OK button.
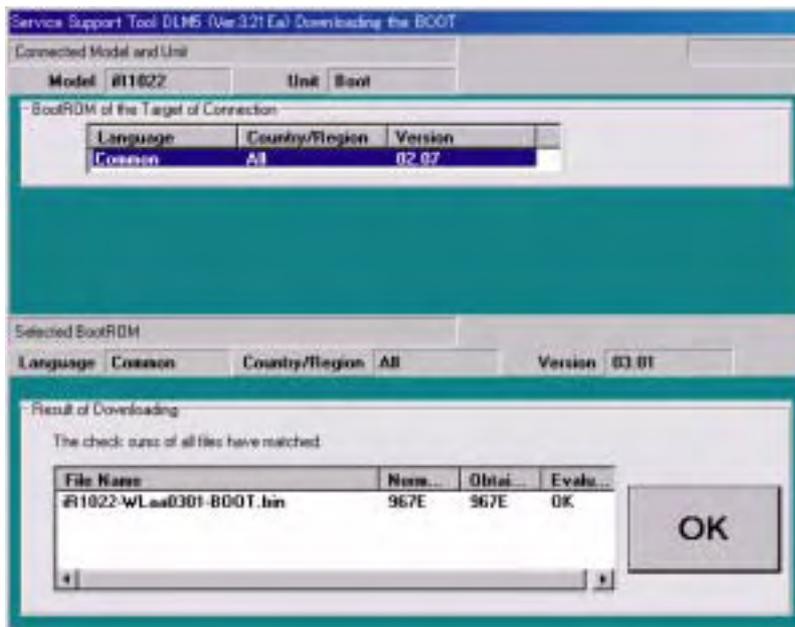
F-17-15

15) When the Selecting a Job screen appears, click "Return to Main Menu".
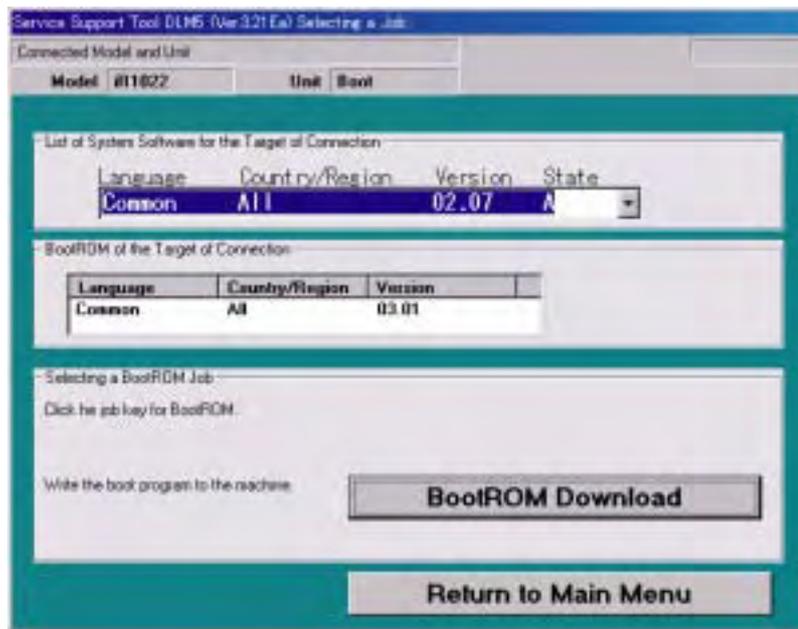
F-17-16

16) Click the "OK" button to return to the menu screen of SST.
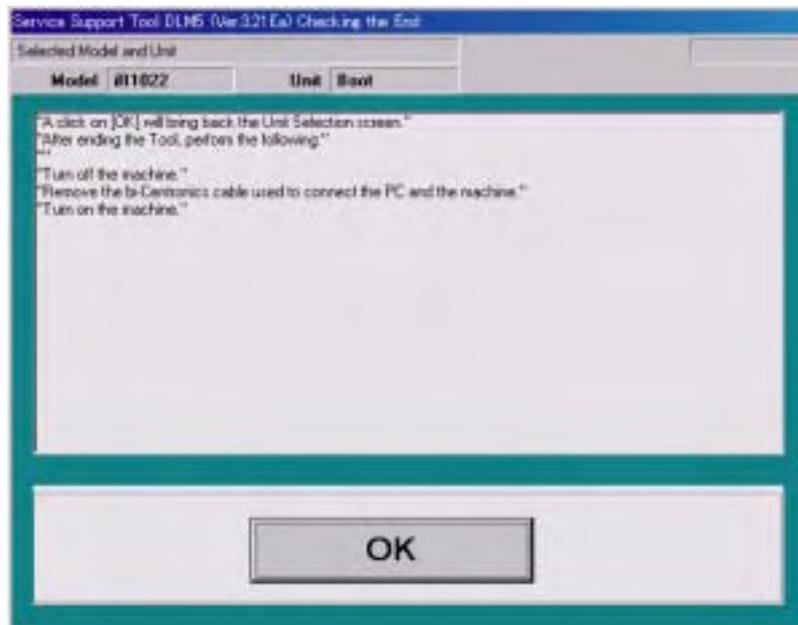
F-17-17

17) If the downloading is finished, click the "Exit" button and turn OFF/ON the main power switch.
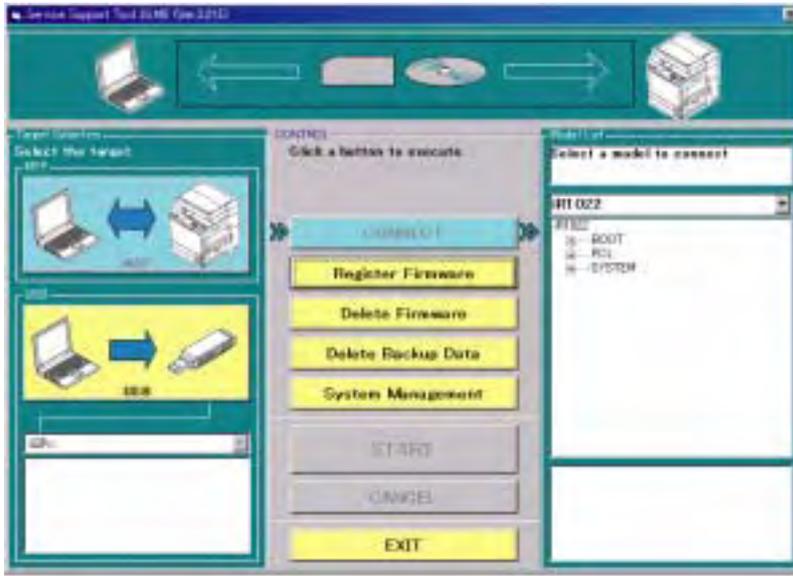
F-17-18

17.3.3 Other Upgrade Methods

17.3.3.1 Downloading the PCL Software

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

To download the software for the option PCL board, use the steps given for the BOOT software.

17.3.3.2 Downloading the CA certificate

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

⚠️
- Unless you want to change the CA certificate stored on your computer, your CA certificate will be released and there is usually no need to download it.
- The default CA certificate is maintained within the system software and can be activated by executing Service Mode>#CLAER>CA-KEY and turning the power OFF/ON, so there is no need to download it again.
- If you have updated your system software, make sure to perform the following procedure to activate the CA certificate in the updated system software.
 <Procedure> Execute Service Mode>#CLAER>CA-KEY and turn the power OFF/ON
- If you download a new CA certificate, you do not need to delete the old certificate stored on your computer; simply download as described below.

<Downloading Procedure>
1) Turn on the power switch of the PC and start SST.
   2) When the power switch is turned on, the Found New hardware Wizard appears. Click "Cancel".

F-17-19

3) Select "MFP" in "Target Selection", and then select "iR1022" in "Model List".
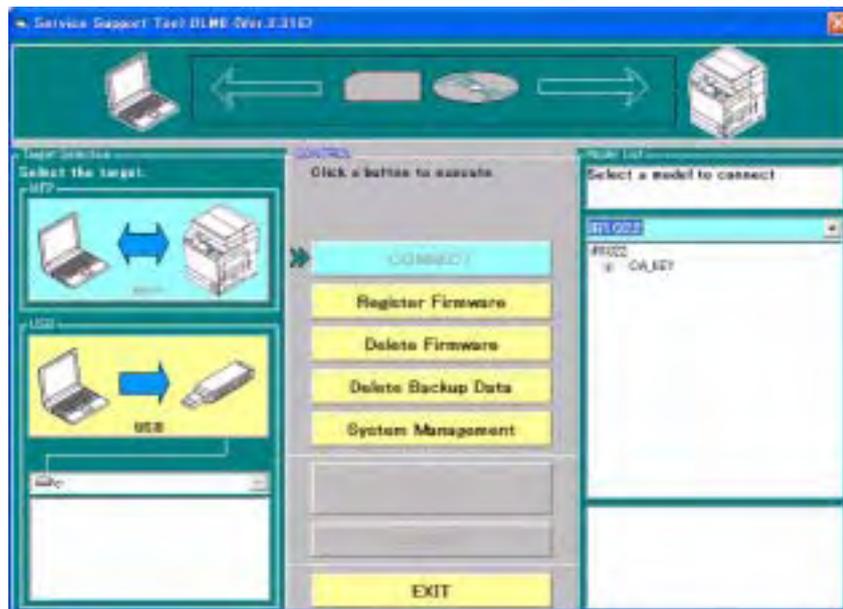
F-17-20

4) Double click the "CA-KEY" folder in "Model List" to confirm the version of the CA certificate. Select "USB" in "Interface", and then click the "START" button.
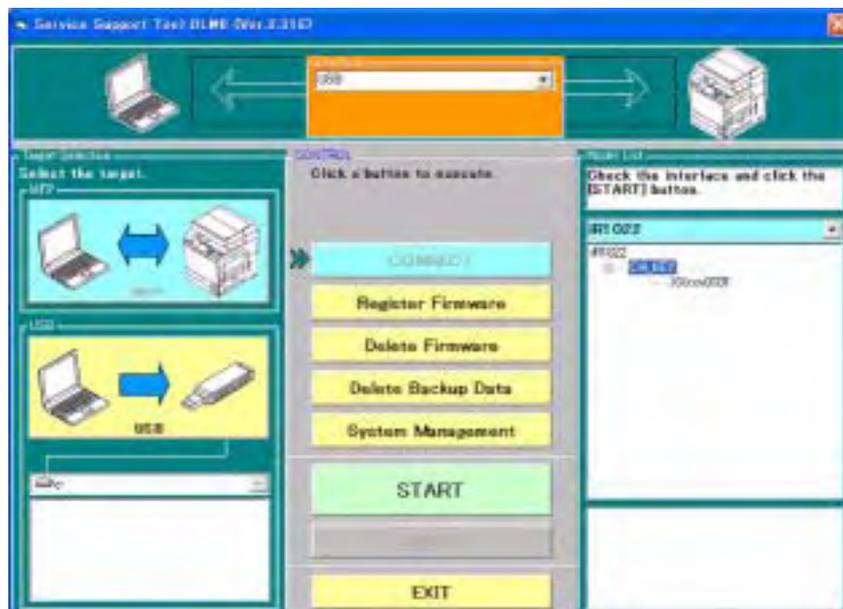

F-17-21

5) Turn on the power switch of the host machine.
   6) Press the following keys on the control panel to enter the service mode.

   $\circledast$ > 2 Key > 8 Key > $\circledast$

7) Using ◄ or ►, select "#DOWNLOAD".
   8) Press the OK key on the control panel to place the host machine in the downloading wait mode (No indicated on LCD).
   9) Press the OK button on the SST screen displayed on the display of the PC.
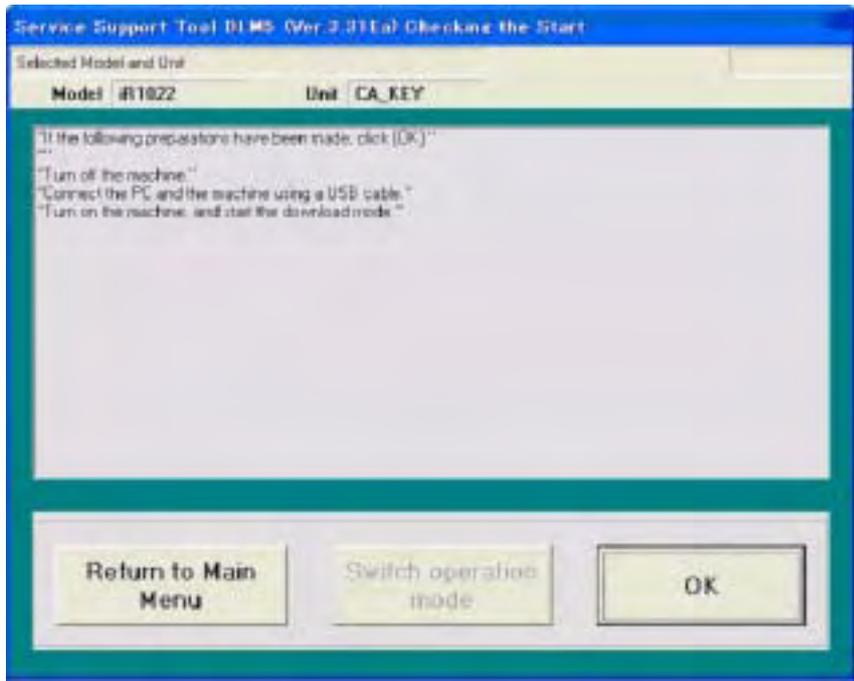
F-17-22

10) When connection is complete, the following screen appears. Click the OK button.
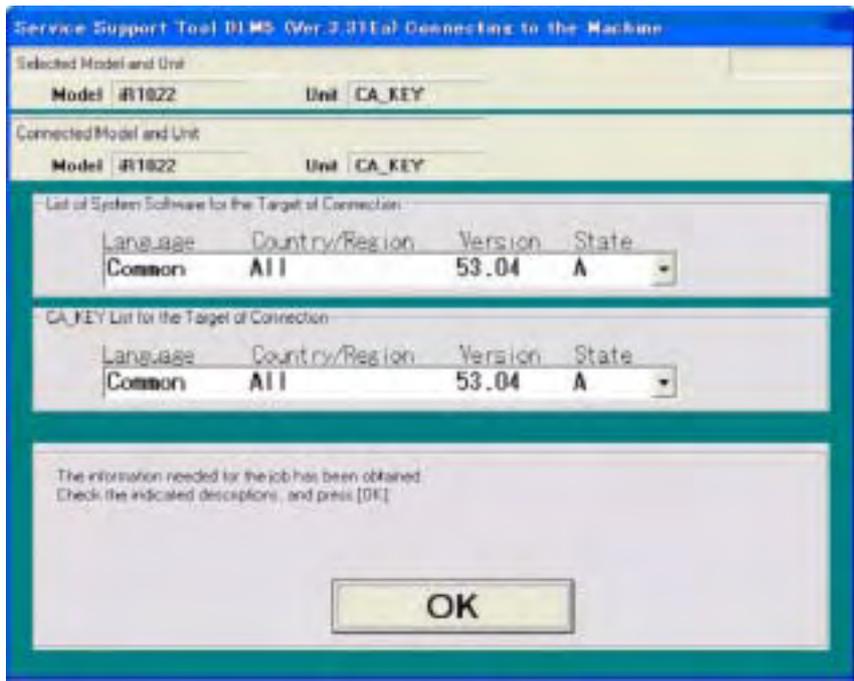
F-17-23

11) Click "CA_KEY Download" on the Selecting a Job screen.
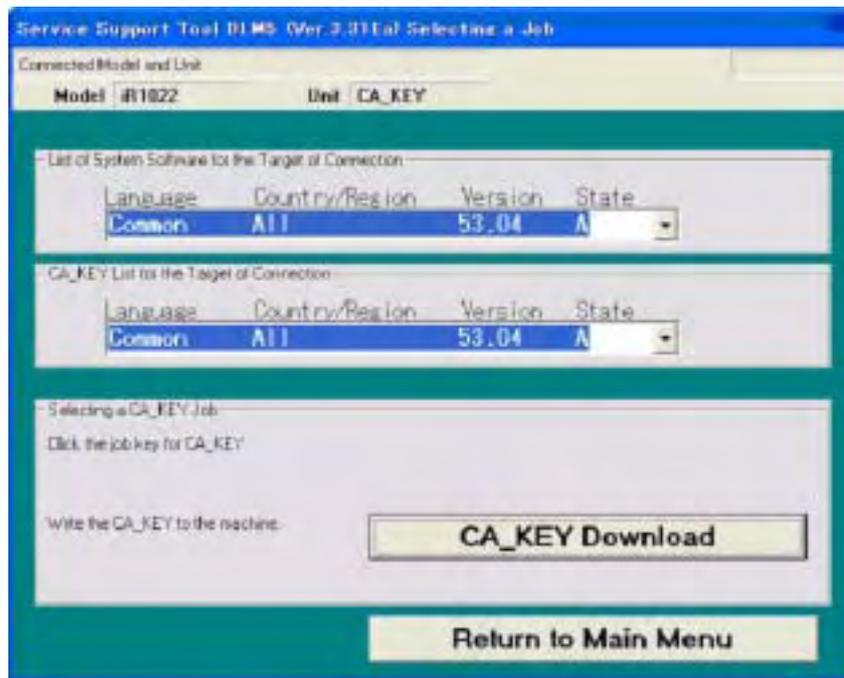
F-17-24

12) Select the version of the system software to download from the list. Check that the selected version is displayed in "Selected Version", and then click the "START" button.
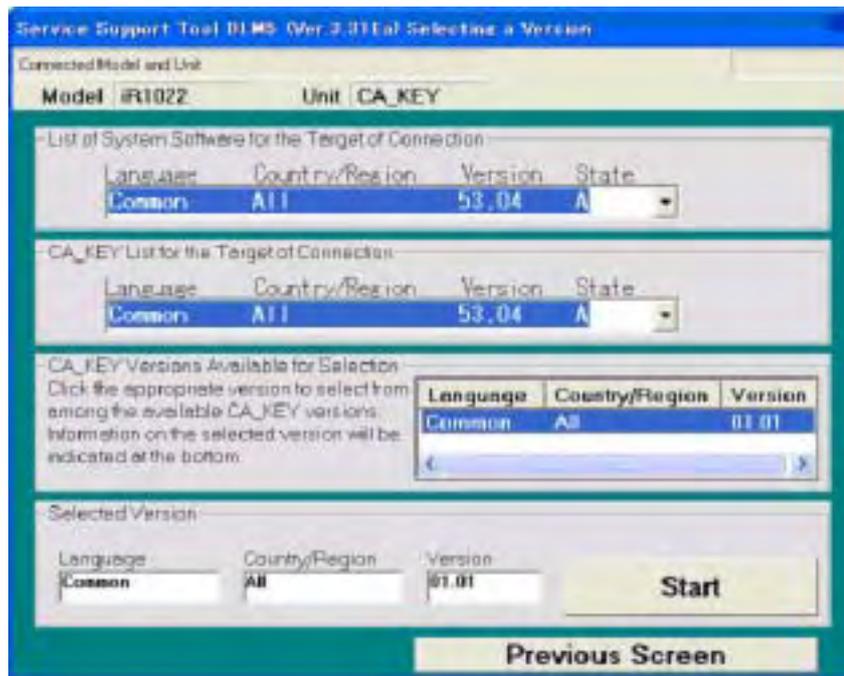
F-17-25

13) When downloading starts, the progress of downloading is displayed by the progress bar.
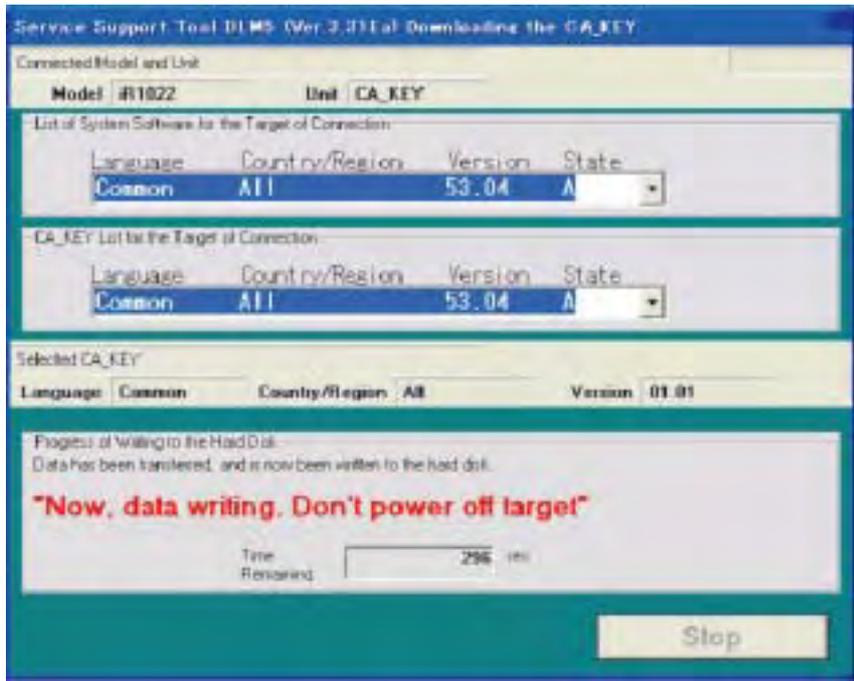
F-17-26

⚠️ Never turn off the power switch of the machine while the data is being written to the flash ROM. If it becomes impossible to start this machine after turning its power switch off, the image processor PCB must be replaced.

14) When writing of the data to the Flash ROM is complete, its result is displayed. Click the OK button.
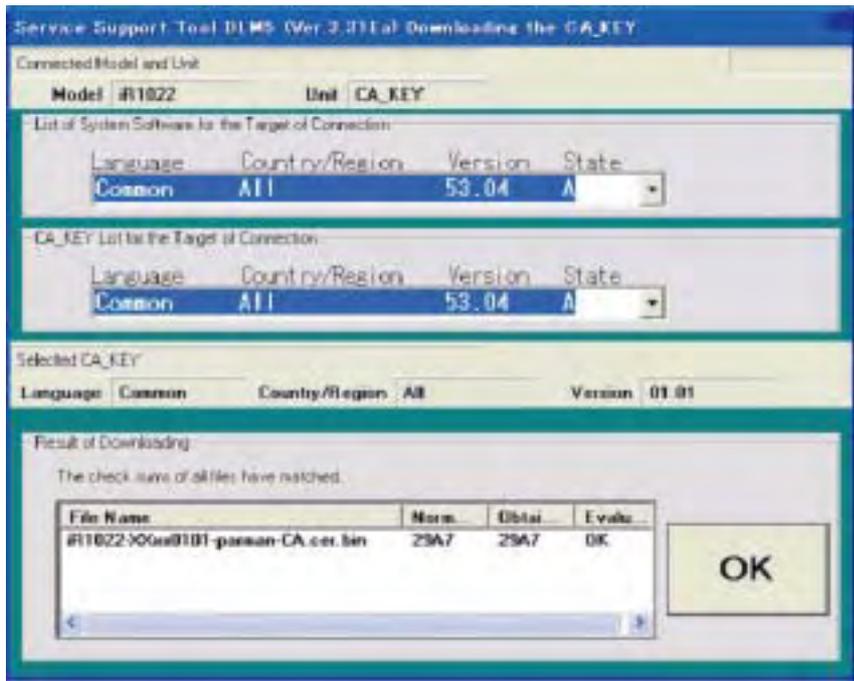

F-17-27

15) When the Selecting a Job screen appears, click "Return to Main Menu".
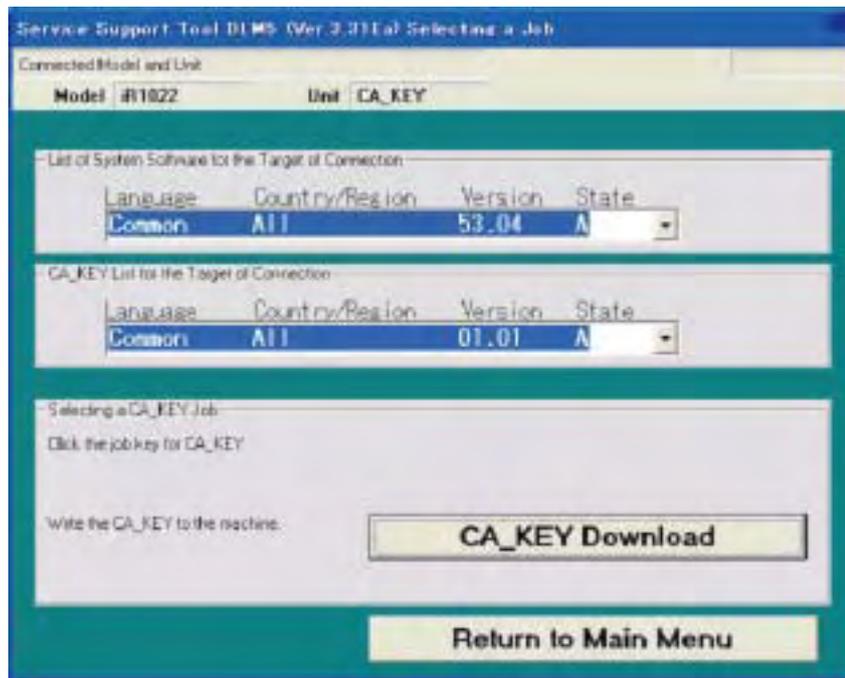
F-17-28

16) Click the "OK" button to return to the menu screen of SST.
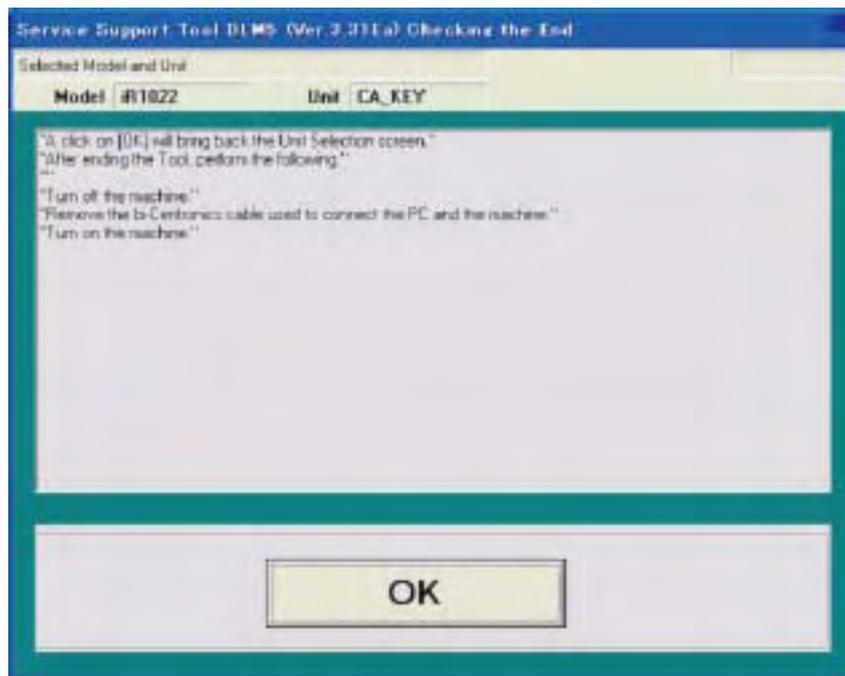
F-17-29

17) In Service Mode, open #NETWORK > #CERTIFICATE > #CA-CERTIFICATE and check if the information recorded there is the same as the CA certificate you downloaded.

Chapter 18 Service Tools

Contents

18.1 Service Tools

18.1.1 Special Tools

iR1018 / iR1018J / iR1022A / iR1022F / iR1022i / iR1022iF

In addition to the standard tools set, you will need the following special tools for servicing of the machine:

T-18-1

Tool name	Tool No.	Rank	Shape	Uses
Digital multimeter	FY9-2002	A		For making electrical checks.
NA-3 Test Chart	FY9-9196	A		For checking and adjusting images.
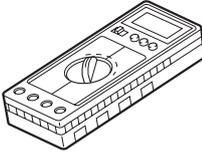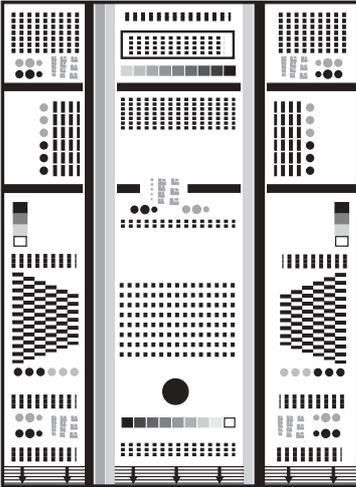
Key to Notation (rank)
 A: each service engineer is expected to carry one.

Mar 30 2007

Canon