Model AT-C2 Machine Code: D023/D025

Field Service Manual

Important Safety Notices

Prevention of Physical Injury

- 1. Before disassembling or assembling parts of the copier and peripherals, make sure that the copier power cord is unplugged.
- 2. The wall outlet should be near the copier and easily accessible.
- 3. If any adjustment or operation check has to be made with exterior covers off or open while the main switch is turned on, keep hands away from electrified or mechanically driven components.
- 4. The copier drives some of its components when it completes the warm-up period. Be careful to keep hands away from the mechanical and electrical components as the copier starts operation.
- 5. The inside and the metal parts of the fusing unit become extremely hot while the copier is operating. Be careful to avoid touching those components with your bare hands.

Health Safety Conditions

- 1. Toner and developer are non-toxic, but if you get either of them in your eyes by accident, it may cause temporary eye discomfort. Immediately wash eyes with plenty of water. If unsuccessful, get medical attention.
- 2. The copier, which use high voltage power source, can generate ozone gas. High ozone density is harmful to human health. Therefore, the machine must be installed in a well-ventilated room.

Observance of Electrical Safety Standards

The copier and its peripherals must be serviced by a customer service representative who has completed the training course on those models.

⚠WARNING

 Seep the machine away from flammable liquids, gases, and aerosols. A fire or an explosion might occur.

ACAUTION

- The Controller board on this machine contains a lithium battery. The danger of explosion exists if a
 battery of this type is incorrectly replaced. Replace only with the same or an equivalent type
 recommended by the manufacturer. Discard batteries in accordance with the manufacturer's
 instructions and local regulations.
- The optional fax and memory expansion units contain lithium batteries, which can explode if replaced incorrectly. Replace only with the same or an equivalent type recommended by the manufacturer. Do

not recharge or burn the batteries. Used batteries must be handled in accordance with local regulations.

Safety and Ecological Notes for Disposal

- 1. Do not incinerate toner bottles or used toner. Toner dust may ignite suddenly when exposed to an open flame.
- 2. Dispose of used toner, the maintenance unit which includes developer or the organic photoconductor in accordance with local regulations. (These are non-toxic supplies.)
- 3. Dispose of replaced parts in accordance with local regulations.
- 4. When keeping used lithium batteries in order to dispose of them later, do not put more than 100 batteries per sealed box. Storing larger numbers or not sealing them apart may lead to chemical reactions and heat build-up.

Laser Safety

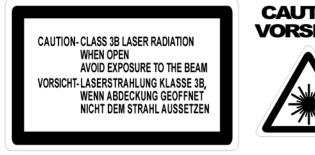
The Center for Devices and Radiological Health (CDRH) prohibits the repair of laser-based optical units in the field. The optical housing unit can only be repaired in a factory or at a location with the requisite equipment. The laser subsystem is replaceable in the field by a qualified Customer Engineer. The laser chassis is not repairable in the field. Customer engineers are therefore directed to return all chassis and laser subsystems to the factory or service depot when replacement of the optical subsystem is required.

⚠ WARNING

· Use of controls, or adjustment, or performance of procedures other than those specified in this manual may result in hazardous radiation exposure.

⚠ WARNING

- WARNING: Turn off the main switch before attempting any of the procedures in the Laser Optics Housing Unit section. Laser beams can seriously damage your eyes.
- CAUTION MARKING:

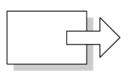


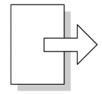


Symbols, Abbreviations and Trademarks

This manual uses several symbols and abbreviations. The meaning of those symbols and abbreviations are as follows:

•	See or Refer to
(\(\)	Clip ring
Î	Screw
	Connector
	Clamp
C	E-ring
SEF	Short Edge Feed
LEF	Long Edge Feed





Short Edge Feed (SEF)

Long Edge Feed (LEF)

Trademarks

 $Microsoft^{\otimes}$, $Windows^{\otimes}$, and $MS-DOS^{\otimes}$ are registered trademarks of Microsoft Corporation in the United States and /or other countries.

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PCL® is a registered trademark of Hewlett-Packard Company.

 $\label{eq:thermodel} \mbox{Ethernet}^{\mbox{\scriptsize \&}} \mbox{ is a registered trademark of Xerox Corporation}.$

 ${\sf PowerPC}^{\circledR} \ \text{is a registered trademark of International Business Machines Corporation}.$

Other product names used herein are for identification purposes only and may be trademarks of their respective companies. We disclaim any and all rights involved with those marks.

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1. Product Information

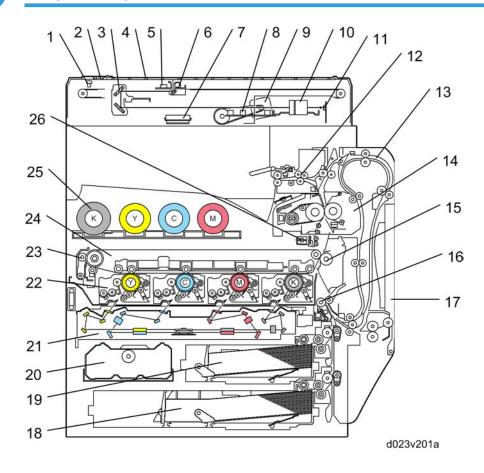
Specifications

See "Appendices" for the following information:

- Mainframe Specifications
- Printer Specifications
- Scanner Specifications
- Supported Paper Sizes
- Software Accessories
- Optional Equipment

1

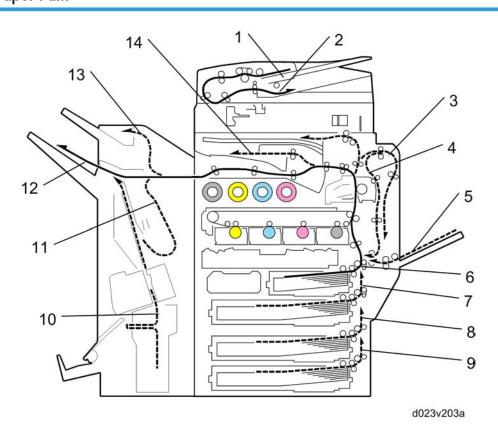
Component Layout



- 1. Scanner HP sensor
- 2. ADF exposure glass
- 3. 2nd scanner (2nd carriage)
- 4. Exposure glass
- 5. 1st scanner (1st carriage)
- 6. Scanner lamp
- 7. Original width sensor
- 8. Original length sensor
- 9. Scanner motor
- 10. Lens block
- 11. Sensor board unit (SBU)
- 12. Decurler rollers
- 13. Duplex unit

- 14. Fusing unit
- 15. Paper transfer roller
- 16. Registration roller
- 17. By-pass feed table
- 18. Tray 2
- 19. Tray 1
- 20. Toner collection bottle
- 21. Laser optics housing unit
- 22. PCU (4 colors)
- 23. Image transfer belt cleaning unit
- 24. Image transfer belt unit
- 25. Toner bottle (4 colors)
- 26. ID sensor

Paper Path

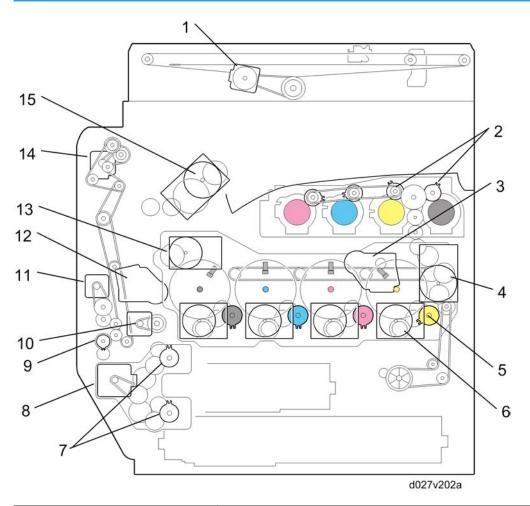


- 1. Original tray
- 2. Original exit tray
- 3. Duplex inverter
- 4. Duplex feed
- 5. By-pass tray feed
- 6. Tray 1 feed
- 7. Tray 2 feed
- 8. Tray 3: Optional paper feed unit/LCT

- 9. Tray 4: Optional paper feed unit
- 10. Finisher stapler (Optional)
- 11. Finisher punch (Optional)
- 12. Finisher lower tray (Optional)
- 13. Finisher proof tray (Optional)
- 14. Inner Tray

The 1000-sheet finisher and 1000-sheet booklet finisher require the bridge unit and one from the two-tray paper feed unit or the LCT.

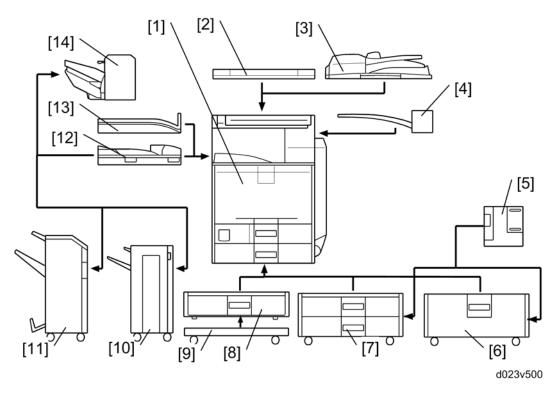
Drive Layout



1. Scanner motor:	Drives the scanner unit.
2. Toner supply clutch-K and -CMY:	Turns on/off the drive power to the toner supply unit (K and - CMY).
3.ITB (Image Transfer Belt) contact motor:	Moves the ITB into contact and away from the color PCUs.
4. Toner transport motor:	Drives the toner attraction pumps and the toner collection coils from the PCUs, from the transfer belt unit, and inside the toner collection bottle. Also rotates the toner bottles.
5. Development clutch (K, Y, M, C):	Turns on/off the drive power to the development unit (K, Y, M, C).

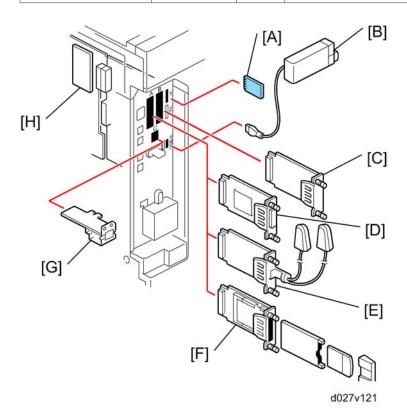
6. Drum/Development drive motor (K, Y, M, C)	Drives the color drum unit and development unit (K, Y, M, C).	
7. Paper feed clutch	Switches the drive power between tray 1 and tray 2.	
8. Paper feed motor:	Drives the paper feed mechanisms (tray 1/tray 2).	
9. By-pass feed clutch:	Turns on/off the drive power to the by-pass pick-up, feed and separation rollers.	
10. Registration motor:	Drives the registration roller.	
11. By-pass/duplex feed motor:	Drives the by-pass pick-up, feed and separation roller, and duplex transport rollers.	
12. Paper transfer contact motor:	Moves the paper transfer roller in contact with the image transfer belt.	
13. ITB drive motor:	Drives the image transfer belt unit.	
14. Duplex inverter motor	Drives the duplex inverter rollers and duplex transport rollers.	
15. Fusing/paper exit motor:	Drives the fusing unit and paper exit section.	

Machine Configuration



Item	Machine Code	Call out	Remarks
Mainframe	D023/D025	[1]	-
Platen cover	G329	[2]	One from the two
ARDF	D366	[3]	One from the two
500-sheet finisher	D372	[14]	Requires [12]
1000-sheet booklet finisher	B793	[11]	One from [10], [11] and [14]; Requires [12] one from [6] and [7]
Punch unit: 3/2 holes	B807-17	-	Requires [11]
Punch unit: 4/2 holes	B807-27	-	Requires [11]
Punch unit: 4 holes	B807-30	-	Requires [11]

Item	Machine Code	Call out	Remarks	
1000-sheet finisher	B408	[10]	One from [10], [11], and [14]; Requires [13] one from [6] and [7]	
2000-sheet LCT	D352	[6]		
Two-tray paper feed unit	D351	[7]	One from the three; The one-tray PFU requires [9].	
One-tray paper feed unit	D387	[8]	The one may the requires [7].	
Caster Table	D446	[9]	-	
1200-sheet LCT	D353	[5]	Requires [6] or [7]	
1-bin tray	D414	[4]	-	
Shift tray	D388	[13]	One from the two	
Bridge unit	D386	[12]	One from the two	



Guidance for Those Who are Familiar with Predecessor Products

Machine D023/D025 is a successor model to Machine B230/B237. If you have experience with the predecessor products, the following information will be of help when you read this manual.

Different Points from Predecessor Products

	D023/D025	B230/B237
Basic PM Interval	120K prints	80K prints
PM Operation for PCU	New steps were added to the replacement procedure for the drum unit Turn the development roller counterclockwise. Do SP 1902-001.	-
PCU Drive Mechanism	Drum/development drive motor and development clutch for each color (AP type)	K: Drum/development drive motor and development clutch CMY: Drum drive motor and development drive motor for all colors
Duplex Mechanism	Paper is inverted inside the unit (AP type).	Paper is inverted using the inverter tray of the mainframe.
SD Card Slots	2 slots	3 slots
Location of Firmware for Printer, Scanner, Netfile, NIB, WebDocBox, WebSys, and DESS	Flash ROM on the controller board	Printer/scanner SD card

Installation Requirements

Environment

2. Installation

- 1. Temperature Range: 10°C to 32°C (50°F to 89.6°F)
- 2. Humidity Range: 15% to 80% RH
- 3. Ambient Illumination: Less than 1500 lux (do not expose to direct sunlight)
- 4. Ventilation: 3 times/hr/person or more
- 5. Do not let the machine get exposed to the following:
 - 1) Cool air from an air conditioner
 - 2) Heat from a heater
- 6. Do not install the machine in areas that are exposed to corrosive gas.
- 7. Install the machine at locations lower than 2,500 m (8,200 ft.) above sea level.
- 8. Install the machine on a strong, level base. (Inclination on any side must be no more than 5 mm.)
- 9. Do not install the machine in areas that get strong vibrations.

2

Machine Level

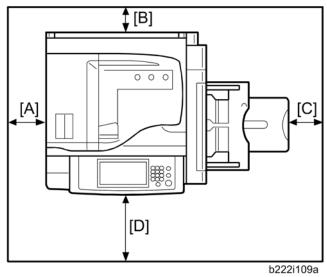
Front to back: Within 5 mm (0.2")

Right to left: Within 5 mm (0.2")

Machine Space Requirements

ACAUTION

• This machine, which uses high voltage power sources, can generate ozone gas. High ozone density is harmful to human health. Therefore, the machine must be installed in a well-ventilated room.



A: Over 100 mm (3.9")

B: Over 100 mm (3.9")

C: Over 550 mm (21.7")

D: Over 750 mm (29.5")

Put the machine near the power source with the clearance shown above.

Power Requirements

CAUTION

- Insert the plug firmly in the outlet.
- Do not use an outlet extension plug or cord.
- Ground the machine.

7

1. Input voltage level:

120 V, 60 Hz: More than 12 A

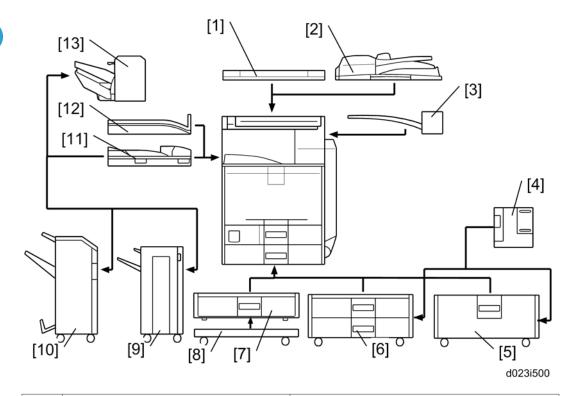
 $220\,V$ to $240\,V,\,50\,Hz/60\,Hz;$ More than $8\,A$

2. Permissible voltage fluctuation: ±10 %

3. Do not put things on the power cord.

Optional Unit Combinations

Machine Options



No.	Options	Remarks
1	Platen cover	One from No.1 or No.2
2	ARDF	One from INO. 1 or INO. 2
3	1-bin tray unit	-
4	1200-sheet LCT	Requires No.5 and No.6
5	Large capacity tray	
6	Two-tray paper feed unit	One from No.5, No.6 or No.7 No.7 requires No. 8
7	One-tray paper feed unit	110 10400
8	Caster table	-

9

9	1000-sheet finisher	One from No.9, No.10 or No.13;	
10	1000-sheet booklet finisher	Requires No.11 and one from No.6 and No.7	
11	Bridge unit	O (N 11 N 10	
12	Shift tray	One from No.11 or No.12	
13	500-sheet finisher	Requires No. 1 1	

^{*:} Child options (Child options require a parent option.)

Controller Options

No.	Options	Remarks	
1	Bluetooth		
2	IEEE 802.11a/b, g	One from the three (I/F Slot A)	
3	IEEE 1284		
4	File Format Converter	I/F Slot B	
5	Gigabit Ethernet	I/F Slot C	
6	PostScript 3		
7	PictBridge Option	One from the three (SD card slot 1)	
8	Data Overwrite Security Unit	_	
9	Browser Unit	SD card slot 2 (during installation only)	
10	VM Card	SD card slot 2	
11	HDD Encryption Unit	SD card slot 2 (during installation only)	

Fax Options

No.	Options	Remarks
1	Fax Option Type C5000	-
2	*Hand Set Type 1018	Requires No. 1. (NA Only)

3 G3 Interface Unit Type C5000	-
--------------------------------	---

^{*:} Child options (Child options require a parent option.)

Other Options

No.	Options	Remarks
1	Copy Data Security Unit	-
2	Optional Counter Interface Unit	-
3	USB2.0/SD Slot	-

Copier Installation

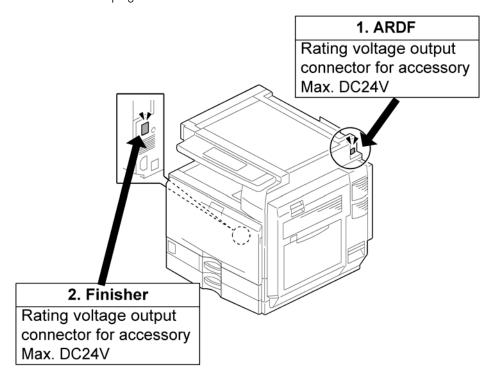
CAUTION

Make sure that the image transfer belt is in its correct position (away from the PCUs) before you move
the machine. Otherwise, the image transfer belt and the black PCU can be damaged.

Power Sockets for Peripherals

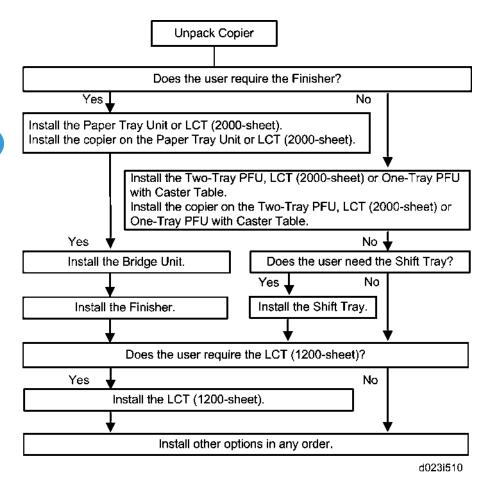
CAUTION

- Rating voltage for peripherals.
- Make sure to plug the cables into the correct sockets.



Installation Flow Chart

This flow chart shows the best procedure for installation.



You need the optional paper tray unit or the LCT if you want to install the finisher (B408, B804 or B805). The punch unit is for 2000-sheet booklet finisher (B804) and 3000-sheet finisher (B805).

Installation Procedure

ACAUTION

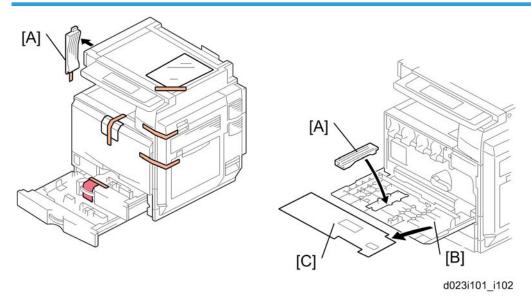
• Remove the tape from the development units before you turn the main switch on. The development units can be severely damaged if you do not remove the tape.

Put the machine on the paper tray unit or the LCT first if you install an optional paper tray unit or the optional LCT at the same time. Then install the machine and other options.



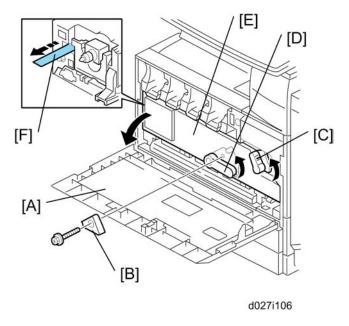
 Keep the shipping retainers after you install the machine. You may need them in the future if you transport the machine to another location.

Tapes and Retainers



- 1. Remove all the tapes and retainers on the machine.
- 2. Remove all the tapes and retainers in trays 1 and 2, and then take out the power cord from tray 1 (if applicable).
- 3. Remove the scanner unit stay [A].
- 4. Open the front door [B], and then remove the jam location sheet [C].
- 5. Keep the scanner unit stay [A] inside the front door [B].
- 6. Reattach the jam location sheet.
- 7. Close the front door.

Developer and Toner Bottles



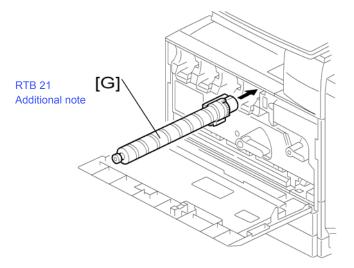
- 1. Open the front door [A].
 - GSA model (-57) and EU models (-27) do not require steps from 2 to 7. Skip to step 8 if you install these models.
- 2. Remove the stopper [B] (F x 1).



- This stopper locks the drum positioning plate lever.
- 3. Release the image transfer unit lock lever [C], and turn the drum positioning plate lever [D] counterclockwise.
- 4. Open the drum positioning plate [E].
- 5. Remove all tapes [F] from the four development units.



- When you remove the tape from the development unit, hold the development unit with your hand, and then pull the tape.
- 6. Close the drum positioning plate. Then lock the image transfer unit lock and turn the drum positioning plate lever clockwise.
- 7. Lock the drum positioning plate lever with the stopper [B] ($\mathscr{F} \times 1$).
- 8. Shake each toner bottle five or six times.



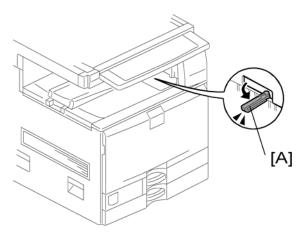
- 9. Install each toner bottle [G] in the machine.
- 10. Close the front door.

Paper Trays

1. Pull each paper tray out. Then adjust the side guides and end guide to match the paper size.

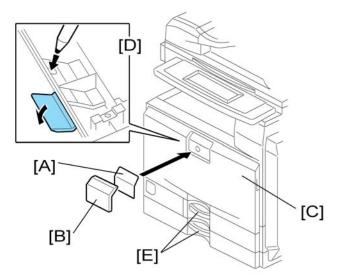


• To move the side guide, first pull out the tray fully. Then push down the green lock at the rear inside the tray.



2. Pull out the feeler [A] for the output tray full detection mechanism.

Emblem and Decals



1. Attach the correct emblem [A] and the cover [B] to the front door [C] of the machine, if the emblem is not attached.

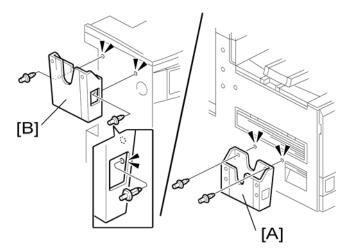


- If you want to change the emblem that has been already attached, remove the panel with an object (not a sharp object) as shown [D], and then install the correct emblem.
- 2. Attach the correct paper tray number and size decals to the paper trays [E].



Paper tray number and size decals are also used for the optional paper tray or the optional LCT.
 Keep these decals for use with these optional units.

Manual Pocket Attachment



- 1. Attach the manual pocket [A] to the left side of the copier (snap rivet x 2).
- 2. If a finisher has been installed, attach the manual pocket [B] to the rear side of the finisher (snap rivet x 2).

Initialize the Developer

- 1. Plug in the machine.
- 2. Make sure that the platen or ARDF is closed and the main power is turned off.
- 3. Turn the main power switch on. The machine automatically starts the initialization procedure. The Start button LED (③) turns green when this procedure has finished.
- 4. Make copies of image samples (text, photo, and text/photo modes).
- 5. Do the Automatic Color Calibration process (ACC) as follows:
 - 1). Print the ACC test pattern (User tools > Maintenance > ACC > Start).
 - 2). Put the printout on the exposure glass.
 - 3). Put 10 sheets of white paper on top of the test chart.
 - 4). Close the ARDF or the platen cover.
 - 5). Press "Start Scanning" on the LCD panel. The machine starts the ACC.
- 6. Check that the sample image has been copied normally.

Settings Relevant to the Service Contract

Change the necessary settings for the following SP modes if the customer has made a service contract.



 You must select one of the counter methods (developments/prints) in accordance with the contract (SP5-045-001).

Item	SP No.	Function	Default
Counting method	SP5-045-001	Specifies if the counting method used in meter charge mode is based on developments or prints. NOTE: You can set this one time only. You cannot change the setting after you have set it for the first time.	"0": Developments
A3/11" x 17" double counting	SP5-104-001	Specifies whether the counter is doubled for A3/11" x 17" paper. When you have to change this setting, contact your supervisor.	"No": Single counting
Service Tel. No. Setting	SP5-812-001 through 004	5812-002 programs the service station fax number. The number is printed on the counter list when the meter charge mode is selected. This lets the user fax the counter data to the service station.	

Settings for @Remote Service



 Prepare and check the following check points before you visit the customer site. For details, ask the @Remote key person.

Check points before making @Remote settings

- 1. The setting of SP5816-201 in the mainframe must be "0".
- 2. Device ID2 (SP5811-003) must be correctly programmed.
 - 6 spaces must be put between the 3-digit prefix and the following 8-digit number (e.g. xxx____xxxxxxxx).
 - ID2 (SP5811-003) and the serial number (SP5811-001) must be the same (e.g. ID2:
 A01______23456789 = serial No. A0123456789)
- 3. The following settings must be correctly programmed.
 - Proxy server IP address (SP5816-063)
 - Proxy server Port number (SP5816-064)
 - Proxy User ID (SP5816-065)

- Proxy Password (SP5816-066)
- 4. Get a Request Number

Execute the @Remote Settings

- 1. Enter the SP mode.
- 2. Input the Request number which you have obtained from @Remote Center GUI, and then enter [OK] with SP5816-202.
- 3. Confirm the Request number, and then click [EXECUTE] with SP5816-203.
- 4. Check the confirmation result with SP5816-204.

Value	Meaning	Solution/Workaround
0	Succeeded	-
1	Request number error	Check the request number again.
3	Communication error (proxy enabled)	Check the network condition.
4	Communication error (proxy disabled)	Check the network condition.
5	Proxy error (Illegal user name or password)	Check Proxy user name and password.
6	Communication error	Check the network condition.
8	Other error	See "SP5816-208 Error Codes" below this.
9	Request number confirmation executing	Processing Please wait.

- 5. Make sure that the screen displays the Location Information with SP5816-205 only when it has been input at the Center GUI.
- 6. Click [EXECUTE] to execute the registration with SP5816-206.
- 7. Check the registration result with SP5816-207.

Value	Meaning	Solution/Workaround
0	Succeeded	-
1	Request number error	Check the request number again.
2	Already registered	Check the registration status.
3	Communication error (proxy enabled)	Check the network condition.
4	Communication error (proxy disabled)	Check the network condition.

Value	Meaning	Solution/Workaround
5	Proxy error (Illegal user name or password)	Check Proxy user name and password.
8	Other error	See "SP5816-208 Error Codes" below this.
9	Request number confirmation executing	Processing Please wait.

8. Exit the SP mode.

SP5816-208 Error Codes

Cause	Code	Meaning	Solution/Workaround
Operation Error, Incorrect Setting	-12002	Inquiry, registration attempted without acquiring Request No.	Obtain a Request Number before attempting the Inquiry or Registration.
	-12003	Attempted registration without execution of a confirmation and no previous registration.	Perform Confirmation before attempting the Registration.
	-12004	Attempted setting with illegal entries for certification and ID2.	Check ID2 of the mainframe.
	-12005	@Remote communication is prohibited. The device has an Embedded RC gate-related problem.	Make sure that "Remote Service" in User Tools is set to "Do not prohibit".
	-12006	A confirmation request was made after the confirmation had been already completed.	Execute registration.
	-12007	The request number used at registration was different from the one used at confirmation.	Check Request No.
	-12008	Update certification failed because mainframe was in use.	Check the mainframe condition. If the mainframe is in use, try again later.

Cause	Code	Meaning	Solution/Workaround
	-2385	Other error	
	-2387	Not supported at the Service Center	
	-2389	Database out of service	
	-2390	Program out of service	
	-2391	Two registrations for the same mainframe	Check the registration condition of the mainframe
Error Caused by Response from GW URL	-2392	Parameter error	
	-2393	External RCG not managed	
	-2394	Mainframe not managed	
	-2395	Box ID for external RCG is illegal.	
	-2396	Mainframe ID for external RCG is illegal.	
	-2397	Incorrect ID2 format	Check the ID2 of the mainframe.
	-2398	Incorrect request number format	Check the Request No.

Moving the Machine

This section shows you how to manually move the machine from one floor to another floor. See the section "Transporting the Machine" if you have to pack the machine and move it a longer distance.

1. Remove all trays from the optional paper feed unit or LCT.

Transporting the Machine

Main Frame

- 1. Do SP 4806-001 to move the scanner carriage from the home position. This prevents dust from falling into the machine during transportation.
- 2. Remove the toner cartridges. This prevents toner flow into the toner supply tube, which is caused by vibration during transport. This can also cause the tube to be clogged with toner.
- 3. Make sure there is no paper left in the paper trays. Then fix down the bottom plates with a sheet of paper and tape.

- 4. Empty the toner collection bottle. Then attach securing tape to stop the toner bottle from coming out.
- 5. Do one of the following:
 - Attach shipping tape to the covers and doors.
 - · Shrink-wrap the machine tightly.

U Note

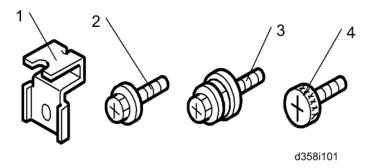
- After you move the machine, make sure you do the "Auto Color Registration" as follows. This optimizes color registration.
- 1. Do the "Forced Line Position Adj. Mode c" (SP2-111-3).
- 2. Then do the "Forced Line Position Adj. Mode a" (SP2-111-1).
 To check if SP 2-111-1 was successful, watch the screen during the process. A message is displayed at the end. Also, you can check the result with SP 2-194-10 to -12.
- Make sure that the side fences in the trays are correctly positioned to prevent color registration errors.

One-tray Paper Feed Unit (D387)

Accessory Check

Check the quantity and condition of the accessories against the following list.

No.	Description	Q'ty
1	Securing bracket	2
2	Screw (M4x10)	2
3	Spring washer screw	1
4	Knob screw	3



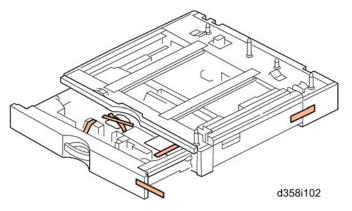
Installation Procedure

ACAUTION

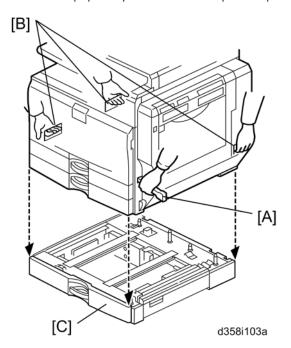
- Turn off the main switch of the copier and unplug the power cord before you start the installation procedure.
- You need two or more persons to lift the copier. The copier is highly unstable when lifted by one person, and may cause human injury or property damage.
- Do not lift the copier with the paper feed unit installed. The handle and grips may be damaged.



• The one-tray paper feed unit must be installed on the caster table (D446). Prepare the caster table first before installing this unit.



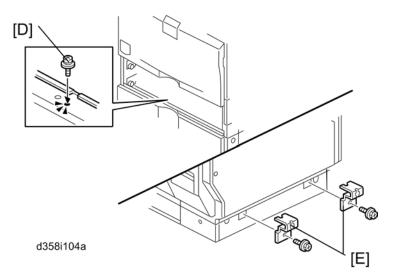
- 1. Remove all tape on the paper feed unit.
- 2. Remove the paper tray and remove all tapes and padding.



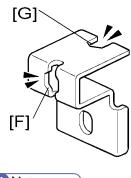
- 3. Grasp the handle [A] and grips [B] of the machine.
- 4. Lift the copier and install it on the paper feed unit [C].



• Hold the handle and grips of the machine when you lift and move the machine.



- 5. Remove tray 1 and 2 of the machine.
- 6. Fasten the spring washer screw [D].
- 7. Reinstall all trays.
- 8. Attach the securing brackets [E] (M4x10; 🛱 x 1 each).

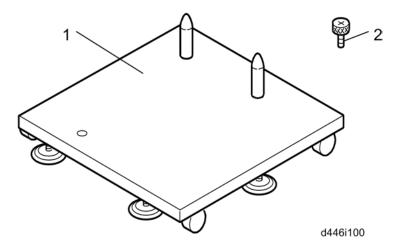


- **U** Note
 - One of the securing brackets is used as a securing tool (the cutout [F] is used in step 6). But the
 cutout [G] is for attaching the tray heater. Therefore, attach the securing brackets [E] after
 installing the tray heater if you install the tray heater.
- 9. Load paper into the paper feed unit.
- 10. Turn on the main power switch of the machine.
- 11. Check the paper feed unit operation and copy quality.

Caster Table (D446)

Component Check

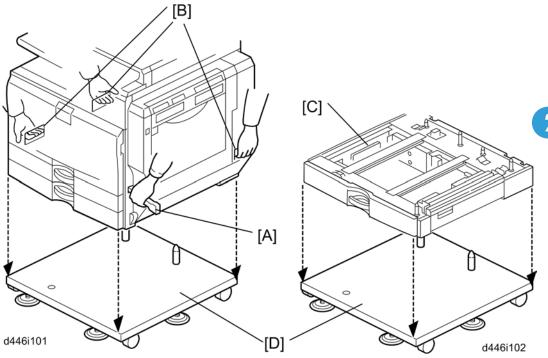
No.	Description	Q'ty
1	Caster Table	1
2	Stud Screw	1



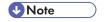
Installation Procedure

1. Put the caster table on a flat place.

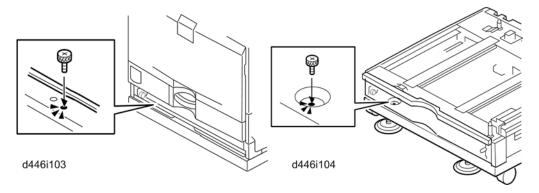
9



- 2. Grasp the handle [A] and grips [B] of the machine, if the copier is to be installed on the caster table.
- 3. Lift the copier or one-tray paper feed unit [C], and then install it on the caster table [D].



- Hold the handle and grips of the machine when you lift and move the machine.
- 4. Pull out tray 2 of the mainframe or the tray of the one-tray paper feed unit.



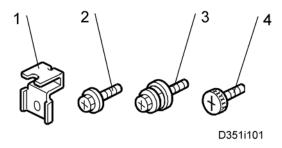
- 5. Secure the machine or one-tray paper feed unit to the caster table (stud screw x 1)
- 6. Reinstall the tray in the mainframe or one-tray paper feed unit.
- 7. Adjust the five leveling adjustors of the caster table.

Accessory Check

Check the quantity and condition of the accessories against the following list.

Paper Feed Unit Installation (D351)

No.	Description	Q'ty
1	Securing bracket	2
2	Screw (M4x10)	2
3	Spring Washer Screw	1
4	Knob screw	3

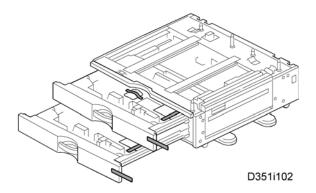


Installation Procedure

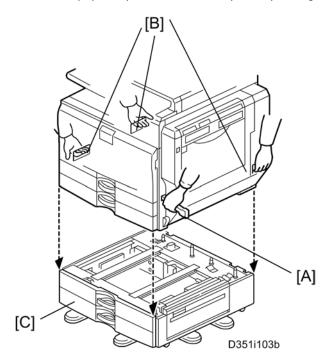
ACAUTION

- Turn off the main switch of the copier and unplug the power cord before you start the installation procedure.
- You need two or more persons to lift the copier. The copier is highly unstable when lifted by one person, and may cause injury or property damage.
- Do not lift the copier with the paper feed unit installed. The handle and grips may be damaged.

2



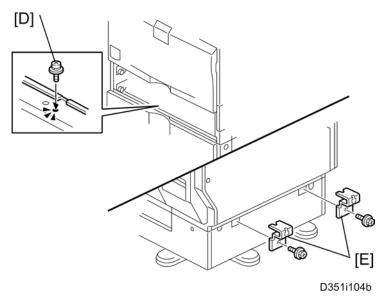
- 1. Remove all tape on the paper feed unit.
- 2. Remove the paper trays and remove all tape and padding.



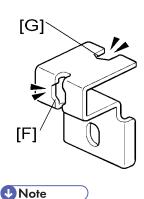
- 3. Grasp the handle [A] and grips [B] of the machine.
- 4. Lift the copier and install it on the paper feed unit [C].



• Hold the handle and grips of the machine when you lift and move the machine.



- 5. Remove trays 1 and 2 of the machine.
- 6. Fasten the spring washer screw [D].
- 7. Reinstall all trays.
- 8. Attach the securing brackets [E] ($\hat{\mathscr{E}}$ x 1 each; M4x10).



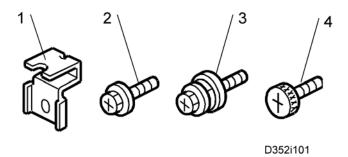
- One of the securing brackets is used as a securing tool (the cutout [F] is used in step 6). But the
 cutout [G] is for attaching the tray heater. Therefore, attach the securing brackets [E] after
 installing the tray heater if you install the tray heater.
- 9. Load paper into the paper feed unit.
- 10. Turn on the main power switch of the machine.
- 11. Check the paper feed unit operation and copy quality.

2000-sheet LCT

Accessory Check

Check the quantity and condition of the accessories against the following list.

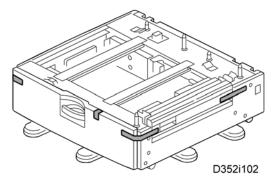
No.	Description	Q'ty
1	Securing bracket	2
2	Screw (M4x10)	2
3	Spring washer screw	1
4	Knob screw	3



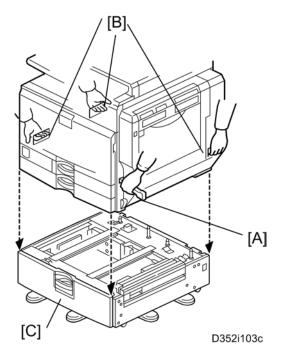
Installation Procedure

ACAUTION

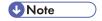
- Turn off the main switch of the copier and unplug the power cord before you start the installation procedure.
- You need two or more persons to lift the copier. The copier is highly unstable when lifted by one person, and may cause injury or property damage.
- Do not lift the copier with the paper feed unit installed. The handle and grips may be damaged.



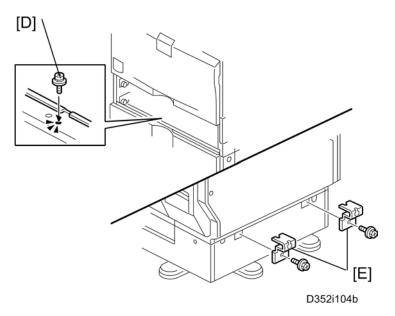
1. Remove all tapes and retainers in the LCT.



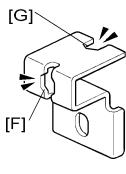
- 2. Grasp the handle [A] and grips [B] of the machine.
- 3. Lift the copier and install it on the LCT [C].



• Hold the handle [A] and grips [B] of the machine when you lift and move the machine.



- 4. Remove trays 1 and 2 of the machine.
- 5. Fasten the spring washer screw [D].
- 6. Reinstall all trays.
- 7. Attach the securing brackets [E] (x 1 each; M4x10).





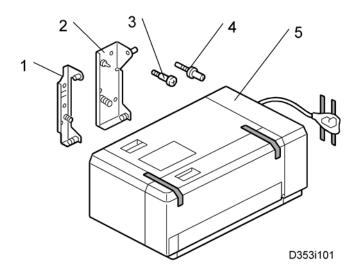
- One of the securing brackets is used as a securing tool (the cutout [F] is used in step 5). But the
 cutout [G] is for attaching the tray heater. Therefore, attach the securing brackets [E] after
 installing the tray heater if you install the tray heater.
- 8. Load paper into the LCT.
- 9. Turn on the main power switch of the machine.
- 10. Check the LCT operation and copy quality.

1200-sheet LCT (D353)

Component Check

Check the quantity and condition of the components against the following list.

No.	Description	Q'ty
1	Front Bracket	1
2	Rear Bracket	1
3	Stud Screw	4
4	Joint Pin	2
5	LCT	1



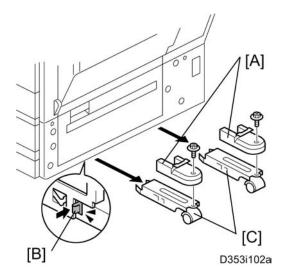
Installation Procedure

ACAUTION

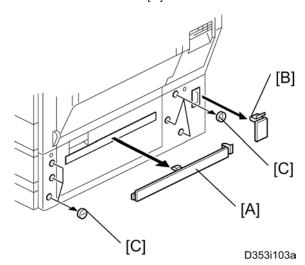
• Unplug the main machine power cord before starting the following procedure.



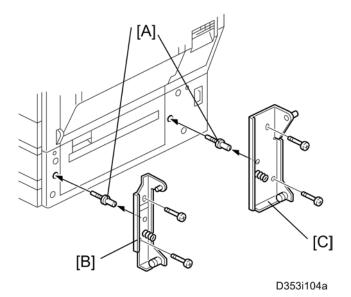
• The Paper Tray Unit (D351) or LCT 2000-sheet (D352) must be installed before installing this 1200-sheet LCT.



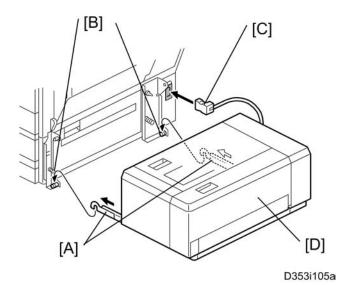
- 1. Unpack the LCT and remove the tapes.
- 2. Remove the stand covers [A].
- 3. Release the locks [B] of the front and rear caster stands.
- 4. Remove the caster stands [C].



5. Remove the paper path cover [A], connector cover [B] and six hole covers [C].



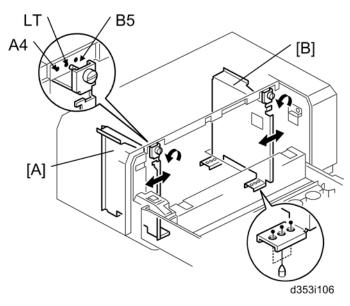
- 6. Insert the joint pins [A].
- 7. Attach the front [B] and rear brackets [C].



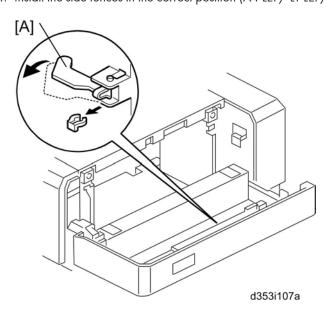
- 8. Pull out the front and rear rails [A], and then hang them on each bracket [B].
- 9. Connect the LCT cable [C] to the main machine.
- 10. Slide the LCT [D] into the main machine.
- 11. Make sure that the front and rear sides of the LCT are closely attached to the main machine.

Side Fence Position Change

- 1. Open the right door of the LCT.
- 2. Push the down switch to lower the tray bottom plate until it reaches its lowest position.



- 3. Remove the front and rear side fences [A, B] (\hat{E} x 1 each).
- 4. Install the side fences in the correct position (A4 LEF/LT LEF/B5 LEF).



5. Pull the end fence [A] for B5 size paper as shown (③ x 1) if the side fences are adjusted for B5 size paper.

- 6. Close the right door.
- 7. Turn on the main power switch, and then go into the SP mode.
- 8. Input the correct paper size for the 1200-sheet LCT with SP5181-018.

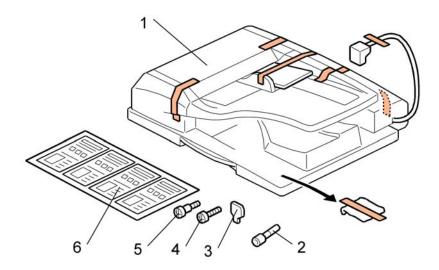
2

Auto Reverse Document Feeder (D366)

Component Check

Check the quantity and condition of the components against the following list.

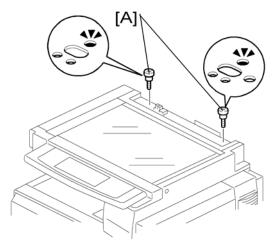
No.	Description	Q'ty
1	ARDF	1
2	Stamp Cartridge	1
3	Screwdriver Tool	1
4	Knob Screw	2
5	Stud Screw	2
6	Attention Decal – Top Cover	1



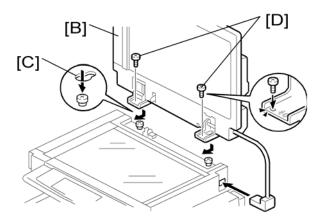
Installation Procedure

ACAUTION

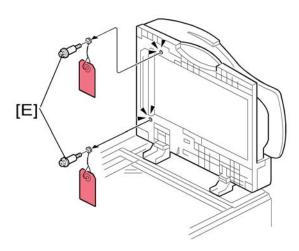
• Unplug the copier power cord before starting the following procedure.



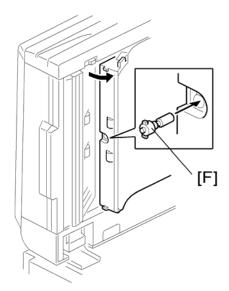
- 1. Remove all tapes and shipping retainers.
- 2. Remove the two screws already installed at the top rear of the machine.
- 3. Insert the two stud screws [A] on the top of the machine.



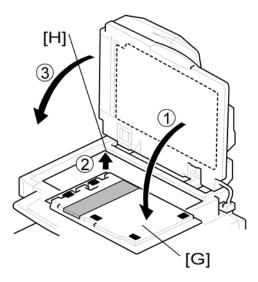
- 4. Mount the ARDF [B] by aligning the screw keyholes [C] in the ARDF support plate over the stud screws.
- 5. Slide the ARDF toward the front of the machine.
- 6. Secure the ARDF with the two knob screws [D].



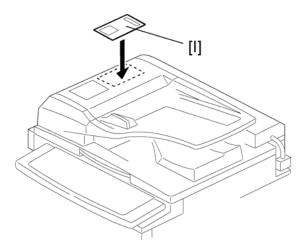
7. Remove two screws [E] from the bottom of the ARDF.



8. Install the stamp cartridge [F] in the ARDF.



- 9. Peel off the platen sheet [G] and place it on the exposure glass.
- 10. Align the rear left corner of the platen sheet with the corner [H] on the exposure glass.
- 11. Close the ARDF.
- 12. Open the ARDF and check that the platen sheet is correctly attached.



- 13. Attach the decal [I] to the top cover as shown. Choose the language you want.
- 14. Plug in and turn on the main power switch of the machine, and then check the ARDF operation.
- 15. Make a full size copy. Check that the registrations (side-to-side and leading edge) and image skew are correct. If they are not, adjust the registrations and image skew referring to "Copy Adjustments" in the "Replacements and Adjustments" section.

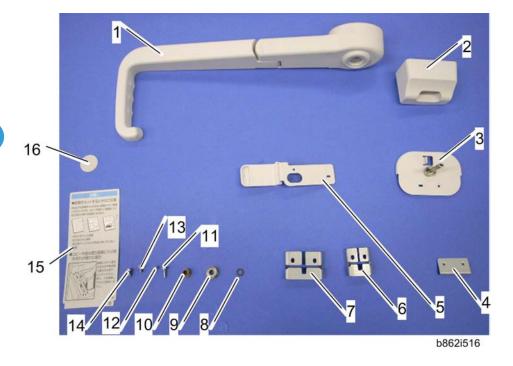
9

Document Feeder Handle Type 5

Component Check

Check the quantity and condition of the accessories against the following list.

No.	Description	Q'ty
1	Handle Unit	1
2	Holder	1
3	Stud Bracket	1
4	Securing Bracket	1
5	Handle Bracket	1
6	Hinge Stopper - Right	1
7	Hinge Stopper - Left	1
8	Spacer	1
9	Bushing: M6	1
10	Bushing: 6MM	1
11	Tapping Screw: M3 x 12	2
12	Tapping Screw (Self Binding): M3 x 12	2
13	Screw: M3 x 8	3
14	Tapping Screw: M4 x 8	4
15	Operation Decal	1
16	Stud Decal	1



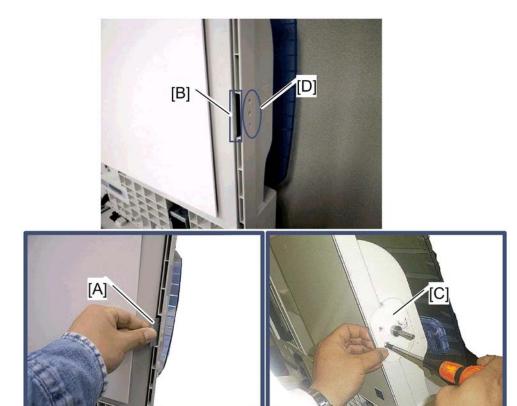
Installation Procedure

ACAUTION

• Turn off the main switch of the copier and unplug the power cord before you start the installation procedure.

Preparing before Installing the DF Handle

1. Open the ADF unit.

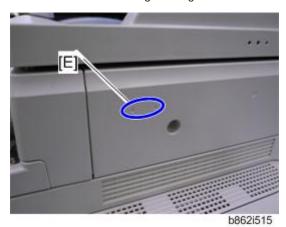


b862i501

- 2. Hold the securing bracket [A] at the location [B], inside the ADF cover.
- 3. Secure the stud bracket [C] to the outside of the ADF cover at location [D] with two screws (\mathscr{F} x 2: M3x8).



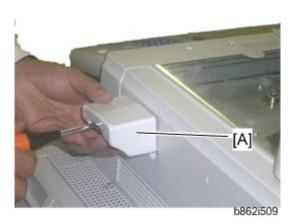
• The two screws must go through the ADF cover and the securing bracket [A].



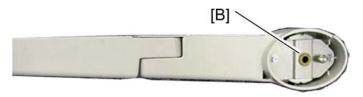
63

4. Make two screw holes [E] in the scanner right cover with an M3x12 tapping screw from the accessories.

Installing the DF Handle

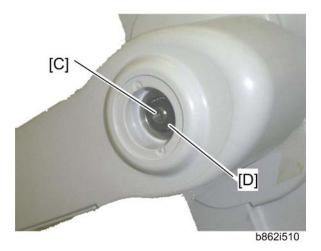


- 1. Attach the holder [A] to the scanner right cover (Tapping Screw M3x12: ${\mathscr{F}}$ x 2).
 - At first, secure the screw at the rear side (away from the operation panel) temporarily and then at the front side temporarily. After that, secure them fully.



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- 2. Install the bushing: 6MM [B] in the inside of the handle unit.
- 3. Attach the handle unit to the stud bracket on the left side of the ADF.



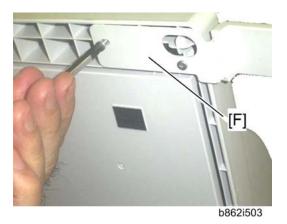
4. In the outside of the handle unit, install the bushing - M6 [C] first, and then the spacer [D].



5. Secure the handle unit with a screw (\mathscr{F} x 1: M3x8).



6. Clean the handle unit with alcohol. Then attach the stud decal [E] at the location that was cleaned.



- 7. Attach the handle bracket [F] at the front right side on the bottom of the ADF unit (Tapping Screw [Self Binding] x 2: M3x12).
- 8. Close the ADF unit.



9. Attach the hinge stoppers (left [G] and right [H]) to the left and right hinges (Tapping screw x 2: M4x8 each).



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10. Clean the front side of the duplex unit with alcohol. Then attach the operation decal [I] at the location that was cleaned.



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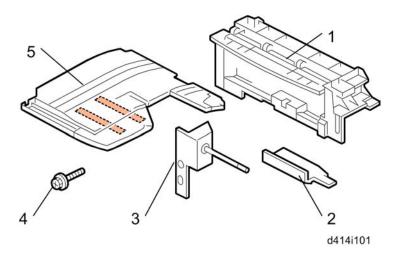
11. Check the operation of the handle unit [J].

1-Bin Tray Unit (D414)

Component Check

Check the quantity and condition of the components against the following list.

No.	Description	Q'ty
1	1-Bin Tray Unit	1
2	End-fence	1
3	Tray Support Bar	1
4	Screws (M3 x 16)	2
5	Tray	1



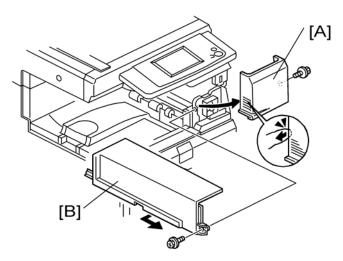
Installation Procedure

ACAUTION

• Unplug the copier power cord before starting the following procedure.

If the bridge unit (D386) has already been installed in the machine, remove it before installing 1-bin tray unit (D414). This will make it easier for you to do the following procedure.

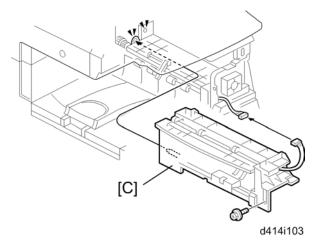
- 1. Remove all tapes.
- 2. Open the right door of the machine.



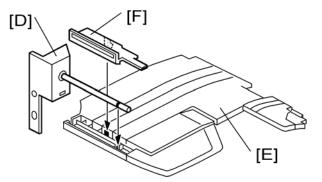
- 3. Remove the front right cover [A] ($\mathscr{F} \times 1$).
- 4. Remove the inner cover [B] ($\mathscr{F} \times 1$).



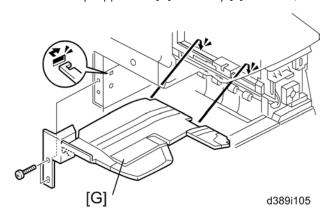
• Keep this screw for step 5.



5. Install the 1-bin tray unit [C] ($\mathbb{Z} \times 1, \mathbb{Z} \times 1, \mathbb{Z} \times 1$ [This screw was removed in step 4]).



6. Attach the tray support bar [D] to the tray [E] as shown, and then attach the end-fence [F].



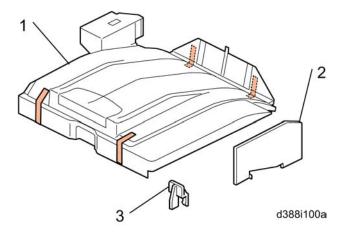
- 7. Install the tray [G] (with the tray support bar) in the machine (M3 x 16: \mathscr{F} x 2).
- 8. Reinstall the front right cover in the machine, and then close the right door of the machine.
- 9. Turn on the main power switch of the machine.
- 10. Check the 1-bin tray unit operation.

Shift Tray Unit (D388)

Component Check

Check the quantity and condition of the components against the following list.

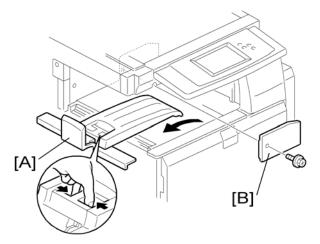
No.	Description	Q'ty
1	Shift Tray Unit	1
2	Paper Guide - Small	2
3	Connector Cover	1



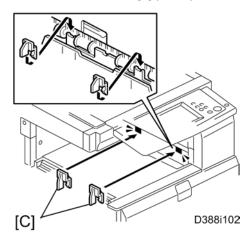
Installation Procedure

ACAUTION

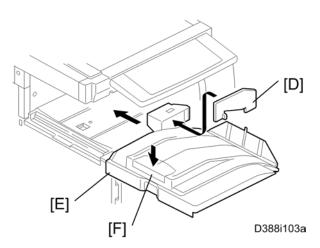
• Unplug the copier power cord before starting the following procedure.



- 1. Remove all tapes.
- 2. Remove the standard tray [A].
- 3. Remove the inner cover [B] ($\hat{\mathcal{E}}$ x 1).



4. Install the small paper guides [C].



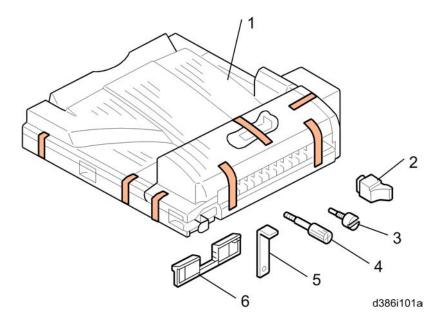
- 5. Attach the connector cover [D] to the shift tray unit [E].
- 6. Install the shift tray unit [E] to the machine.
- 7. Push down the left edge [F] of the shift tray.
- 8. Turn on the main power switch of the machine.
- 9. Check the shift tray unit operation.

Bridge Unit (D386)

Component Check

Check the quantity and condition of the components against the following list.

No.	Description	Q'ty
1	Bridge Unit	1
2	Frame Cover	1
3	Knob screw	1
4	Long knob screw	1
5	Holder bracket	1
6	Guide	2



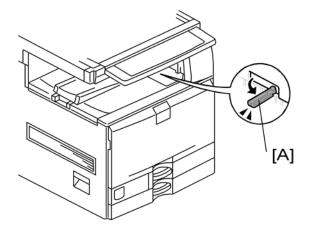
Installation Procedure

ACAUTION

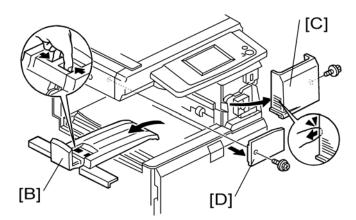
• Unplug the copier power cord before starting the following procedure.

U Note

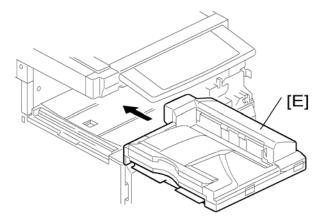
- 1. If you will install the 1-bin tray (D414) in the machine, install the 1-bin tray before you install the bridge unit (D386). This will make it easier for you to do the following procedure.
- 2. If you will install a finisher (B408 or B793) in the machine, install the finisher after you install the bridge unit (D386).
- 1. Remove all tapes.



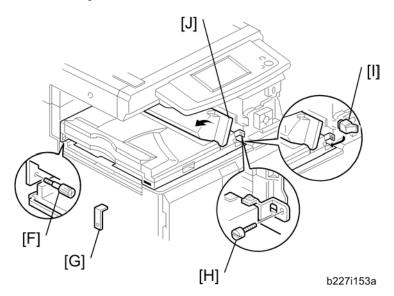
- 2. If the sensor feeler [A] is out, fold it into the machine.
- 3. Open the right door of the machine.



- 4. Remove the inner tray [B].
- 5. Remove the front right cover [C] ($\mathscr{F} \times 1$).
- 6. Remove the connector cover [D] ($\mathscr{F} \times 1$).



7. Install the bridge unit [E] in the machine.



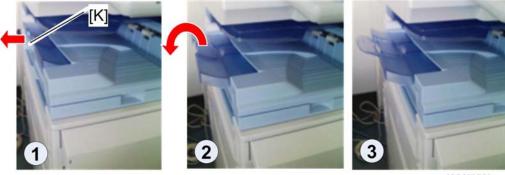
- 8. Secure the bridge unit with the knob screw [F] and screw [H].
- 9. Attach the frame cover [1].
- 10. Reinstall the front right cover in the machine. Then close the right door of the machine.



- Open the bridge unit cover [J] when installing the front right cover. Otherwise, the bridge unit cover is an obstacle for attaching the front right cover.
- 11. Install the optional finisher (refer to the finisher installation procedure).



- If you will not install the finisher at this time, install the holder bracket [G]. Otherwise, the customer will damage the bridge unit if they pull up the bridge unit tray. When you install the finisher, you will need this bracket during the installation procedure.
- 12. Turn on the main power switch of the machine.
- 13. Check the bridge unit operation.



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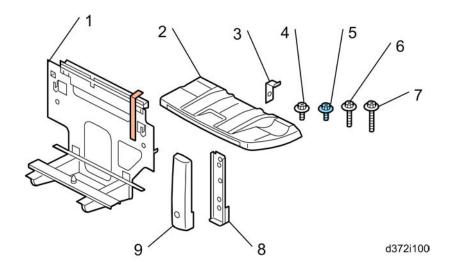
14. Pull the extension tray [K] only if the 1000-sheet finisher (B408) or the 500-sheet finisher (D372) is to be installed in the main machine.

500-Sheet Finisher (D372)

Accessory Check

Check the quantity and condition of the accessories against the following list.

No	Description	Q'ty
1	Unit Holder	1
2	Shift Tray	1
3	Holder Bracket	1
4	Screw: M3 x 8	4
5	Screw: M3 x 6	1
6	Screw: M4 x 14	4
7	Screw: M4 x 20	4
8	Support Bracket	2
9	Support Bracket Cover	2



9

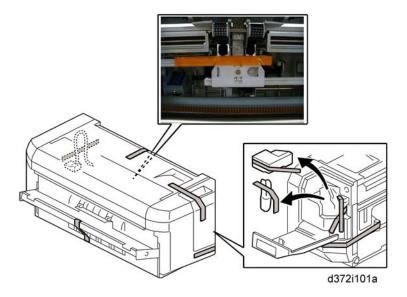
Installation Procedure

ACAUTION

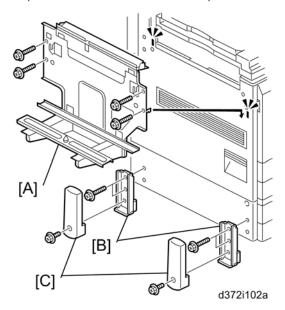
• Unplug the main machine power cord before starting the following procedure.



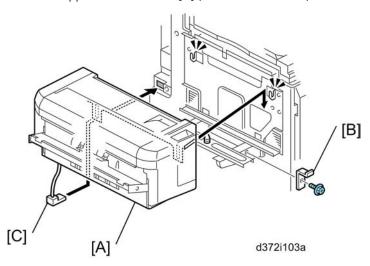
• Before you install the 500-sheet finisher, the optional bridge unit (D386) must be installed.



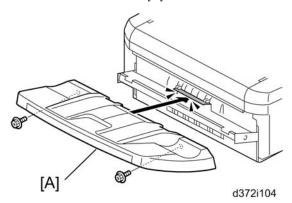
1. Unpack the finisher and remove the tapes.



- 2. Install the unit holder [A] ($\widehat{\mathscr{F}} \times 3$ M4 \times 14).
- 3. Install the support brackets [B] ($\widehat{\mathscr{F}} \times 2$ each: M4 \times 20)
- 4. Install the support bracket covers [C] ($\mbox{\ensuremath{\beta}}\mbox{ x 1 each: M3 x 8)}$



- 5. Install the 500-sheet finisher [A].
- 6. Install the holder bracket [B] (\mathscr{F} x 1; M3 x 6).
- 7. Connect the finisher cable [C].



- 8. Install the shift tray [A] ($\widehat{\mathscr{F}}$ x 2 M3 x 8).
- 9. Turn on the main power switch and check the finisher operation.

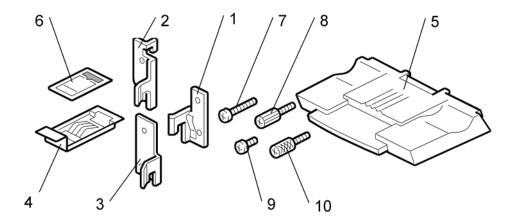
1000-Sheet Finisher (B408)

Accessory Check

Check the quantity and condition of the accessories against the following list.

No.	Description	Q'ty	D023/D025
1	Front Joint Bracket	1	0
2	Rear Joint Bracket	1	
3	Rear Joint Bracket	1	0
4	Grounding Plate	1	0
5	Copy Tray	1	0
6	Staple Position Decal	1	0
7	Screw - M4 x 14	4	0
8	Knob Screw - M4 x 10	1	0
9	Screw - M3 x 8	1	0
10	Knob Screw - M3 x 8	1	0

O = Necessary, --- = Not necessary



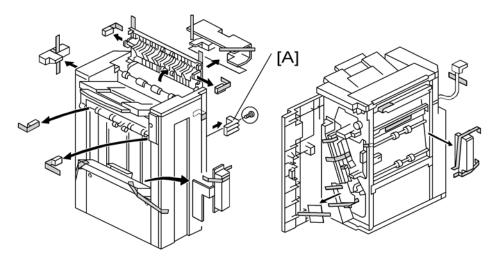
Installation Procedure

ACAUTION

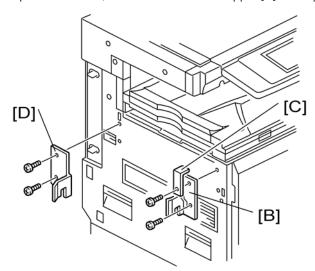
• Unplug the main machine power cord before starting the following procedure.

If this finisher will be installed on the D023 or D025 copier, the following options must be installed before installing this finisher.

- Bridge Unit (D386)
- Paper Feed Unit (D351) or LCT (D352)



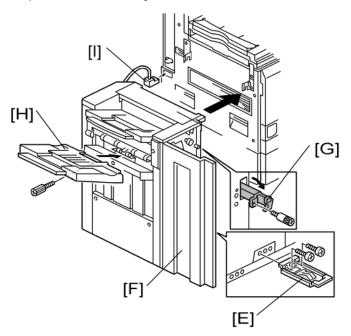
1. Unpack the finisher, and then remove the stopper [A] and tapes (\mathscr{F} x 1).



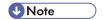
2. Install the front joint bracket [B], holder bracket [C] (\mathscr{F} x 2 - M4 x 14), and rear joint bracket [D] (\mathscr{F} x 2 - M4 x 14).



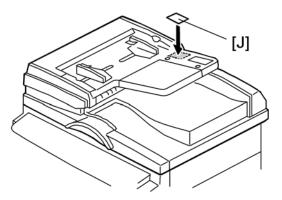
• The holder bracket [C] must be placed outside the front joint bracket [B]. The holder bracket is provided with the bridge unit (D386).



3. Install the grounding plate [E] on the finisher ($\hat{F} \times 2 - M3 \times 8$).



- Use the screw removed in step 1 and the screw from the accessory box.
- 4. Open the front door [F] of the finisher, and then pull the locking lever [G] (1 knob screw M3 x 8).
- 5. Align the finisher on the joint brackets, and lock it in place by pushing the locking lever.
- 6. Secure the locking lever (1 knob screw M3 x 8).
- 7. Close the front door.
- 8. Install the copy tray [H] (1 knob screw $M4 \times 10$).
- 9. Connect the finisher cable [1] to the main machine below the right rear handle.



- 10. Attach the staple position decal [J] to the ARDF as shown.
- 11. Turn on the main power switch and check the finisher operation.

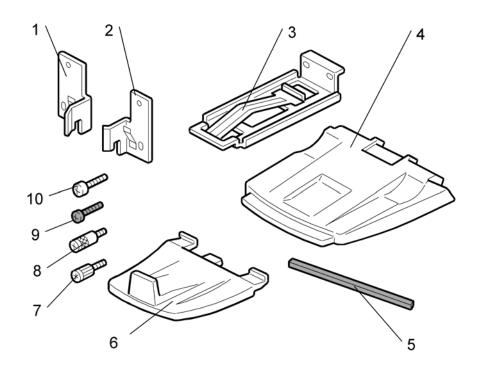
2

1000-Sheet Booklet Finisher (B793)

Accessory Check

Check the quantity and condition of the accessories against the following list.

No.	Description	Q'ty
1	Rear Joint Bracket	1
2	Front Joint Bracket	1
3	Grounding Plate	1
4	Upper Output Tray	1
5	Cushion	2
6	Lower Output Tray	1
7	Short Knob Screw	1
8	Long Knob Screw	1
9	Screw (M3 x 8)	2
10	Screw (M4 x 14)	4

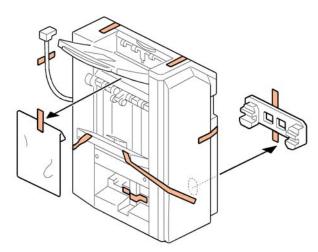


Installation Procedure

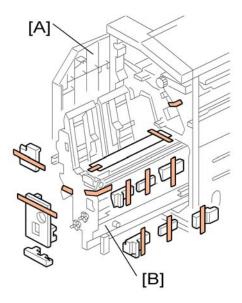
ACAUTION

• Unplug the main machine power cord before starting the following procedure.

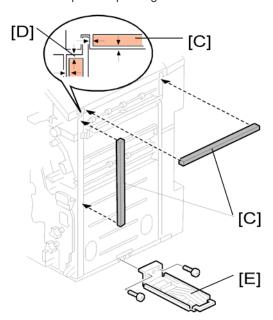
The bridge unit (D386) and optional paper feed unit (D387 or D351) must be installed before installing this finisher (B793).







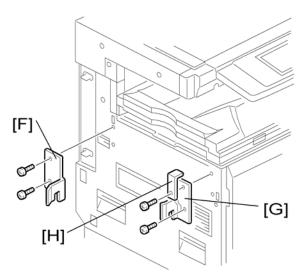
- 2. Open the front door [A] of the 1000-sheet booklet finisher, and then pull out the jogger unit [B].
- 3. Remove all tapes and packing materials from the inside of the finisher.



4. Attach the cushions [C] to the finisher.



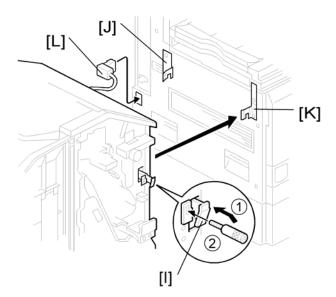
- Make sure that the cushions are placed within 0 to 1 mm [D] from the edge of the cover or frame.
- 5. Install the ground plate [E] on the finisher (\mathscr{F} x 2; M3 x 8).



- 6. Attach the rear joint bracket [F] (\mathscr{F} x 2, M4 x 14).
- 7. Attach the front joint bracket [G] and the holder bracket [H] ($\hat{\mathscr{F}}$ x 2; M4 x 14).

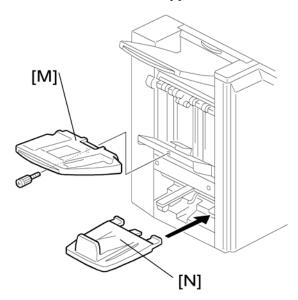


• The holder bracket [H] must be placed outside the front joint bracket [G]. The holder bracket is provided with the bridge unit (D386).



- 8. Pull the lock lever [1] (Long knob screw x 1).
- 9. Slowly push the finisher to the left side of the machine, keeping its front door open until the brackets [J] [K] go into their slots.
- 10. Push the lock lever [1], and then secure it (Long knob screw x 1).

- 11. Close the front door of the finisher.
- 12. Connect the finisher connector [L] to the machine.

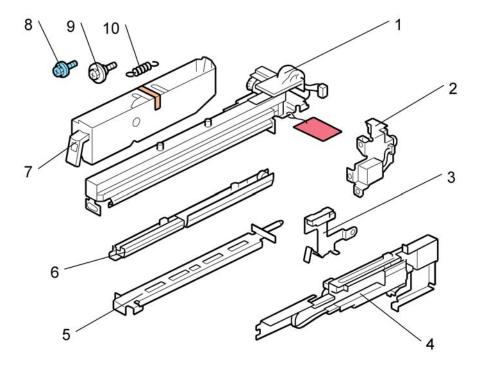


- 13. Install the upper output tray [M] (Short knob screw x 1).
- 14. Install the lower output tray [N].
- 15. Turn on the main power switch of the machine.
- 16. Check the 1000-sheet booklet finisher operation.

Component Check

Check the quantity and condition of the components against the following list.

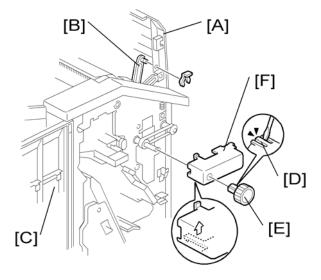
No.	Description	Q'ty
1	Punch Unit	1
2	Punch Drive Motor	1
3	Hopper Full Sensor Arm	1
4	Sub-scan Registration Sensor Unit	1
5	Punch Unit Stay	1
6	Sub-scan Registration Sensor Guide	1
7	Hopper	1
8	Screw	1
9	Step Screw	1
10	Spring	1



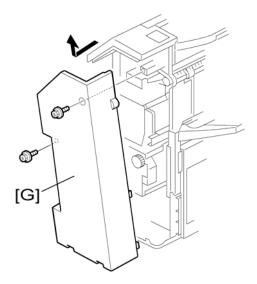
Installation

ACAUTION

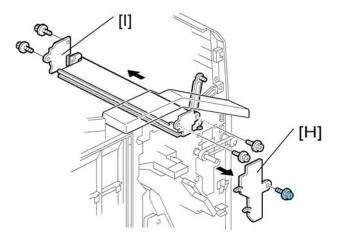
• Unplug the main machine power cord before starting the following procedure. If the 1000-sheet booklet finisher has been installed, disconnect it and pull it away from the machine.



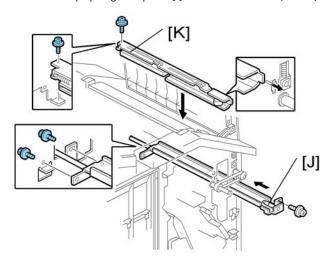
- 1. If the finisher is connected to the machine, disconnect it.
- 2. Open the top cover [A] and then release the guide arm [B] ($\overline{(\!\lozenge)}$ x 1).
- 3. Open the front door [C].
- 4. Pull the hook [D] up then remove the knob [E].
- 5. Timing belt cover [F].



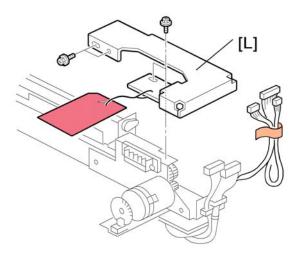
6. Rear cover of the 1000-sheet booklet finisher [G] ($\slash\hspace{-0.6em}\widehat{} \slash\hspace{-0.6em} x$ 2).



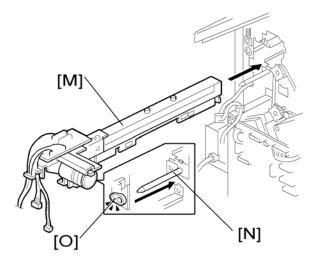
- 7. Cover bracket [H] (🛱 x 1)
- 8. Remove the paper guide plate [1] from the rear side ($\hat{\mathbb{F}}^1\times 4$).



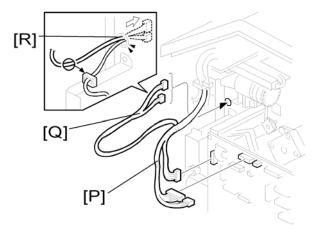
- 9. Install the punch unit stay [J] from the front side ($\ensuremath{\mathscr{F}} \times 3$).
- 10. Install the sub-scan registration sensor guide [K] from the top ($\widehat{\mathscr{F}}\times 1$).



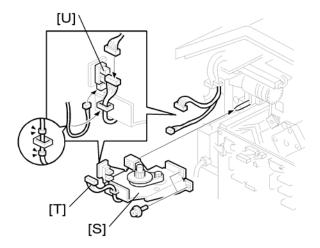
11. Remove the bracket [L] from the punch unit ($\ensuremath{\mathscr{F}} \times 1$).



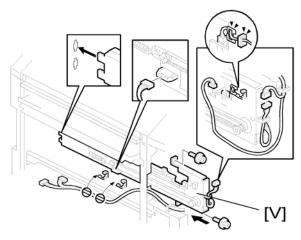
- 12. Install the punch unit [M] along the punch unit stay from the rear side.
- 13. Make sure to put the punch unit stay pin [N] through the hole [O].



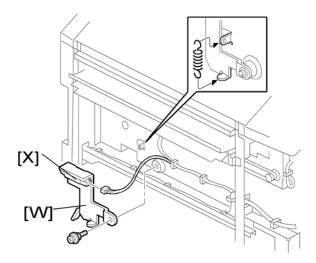
- 14. Connect the harnesses [P] to the main PCB.
- 15. Put the harnesses [Q] through the hole [R] in the rear frame ($\stackrel{\frown}{\bowtie}$ x 1).



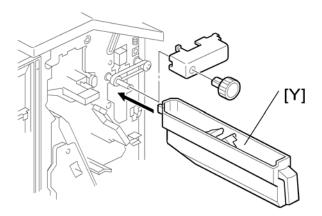
- 16. Install the punch drive motor [S] on the rear frame ($\mathscr{F} \times 2$).
- 17. Connect the drive motor harness [T] to the harness from the punch unit ($\stackrel{\smile}{\cong}$ x 1).
- 18. Connect the home position sensor harness from the punch unit to the home position sensor [U].



- 19. Install the sub-scan registration sensor unit [V] from the rear side ($\hat{\mathscr{F}}\times 2$).
- 20. Route and connect the harnesses as shown (🖺 x 2).



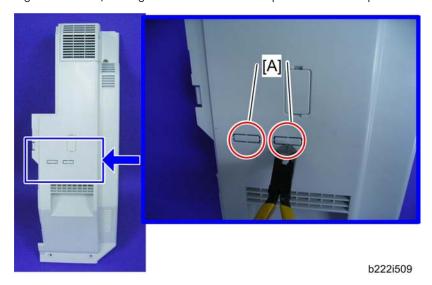
- 21. Install the hopper full sensor arm [W] ($\hat{\mathscr{F}} \times 1$, spring x 1).
- 22. Connect the harness from the sub-scan registration sensor unit to the hopper full sensor [X].



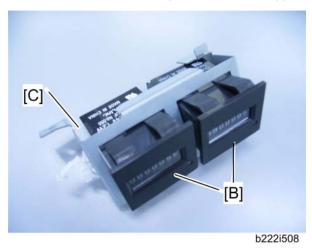
- 23. Install the hopper [Y] from the front side.
- 24. Reinstall the timing belt cover and knob.
- 25. Reinstall the rear cover ($\mathscr{F} \times 2$).
- 26. Close the front door and top cover.
- 27. Install the 1000-sheet booklet finisher on the copier.
- 28. Plug in and turn on the main power switch.
- 29. Check the 1000-sheet booklet finisher operation.

Installation Procedure

- 1. Rear cover (see "Rear Cover" in the "Replacement and Adjustment" section)
- 2. Right rear cover (see "Right Rear Cover" in the "Replacement and Adjustment" section)

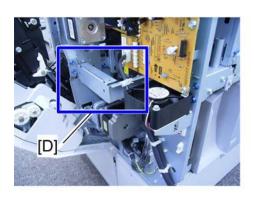


3. Remove the cutouts [A] in the right rear cover with nippers.



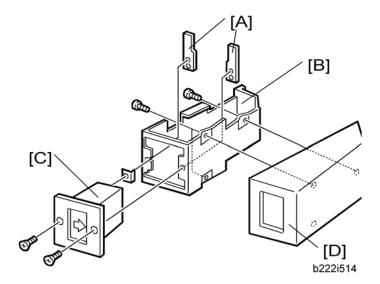
4. Attach the mechanical counters [B] to the bracket [C] and connect the harness to each mechanical counter.

9

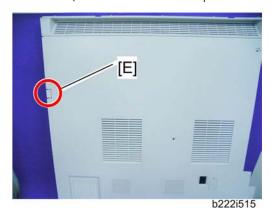




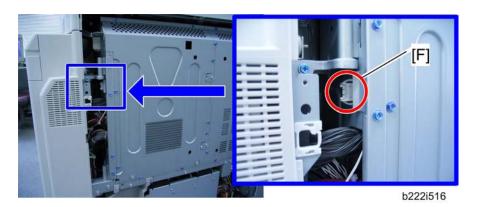
- 5. Attach the mechanical counter bracket to the frame [D] ($\mbox{$\not \sim$} \times 1, \mbox{$\not \sim$} \times 2, \mbox{$\not \sim$} \times 1).$
- 6. Reassemble the machine.
- 7. Plug in the machine and turn on the main power switch.
- 8. Enter the SP mode.
- 9. Set SP5987-001 to "1: ON".
- 10. Exit the SP mode, and then turn the machine off and on.



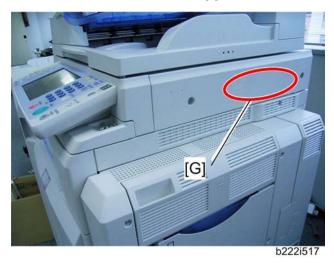
- 1. Hold the key counter plate nuts [A] on the inside of the key counter bracket [B] and insert the key counter holder [C].
- 2. Secure the key counter holder to the bracket ($\hat{F} \times 2$).
- 3. Install the key counter cover [D] ($\mathscr{F} \times 2$).
- 4. Rear cover ("Rear Cover" in the Replacement and Adjustment section)



5. Cut off the part [E] of the rear cover.



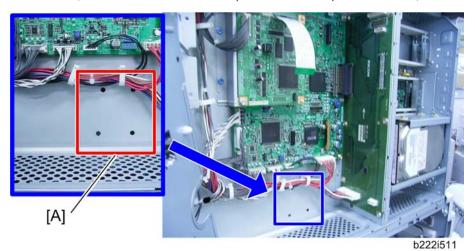
6. Connect the harness to the connector [F] inside the machine.



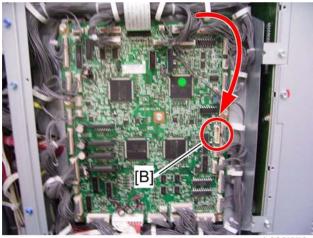
- 7. Peel off double sided tape on the key counter bracket and attach the key counter to the scanner right cover [G].
- 8. Reassemble the machine.

Installation Procedure

- 1. Rear cover (see "Rear Cover" in the "Replacement and Adjustment" section)
- 2. IOB bracket (see "Controller Box" in the "Replacement and Adjustment" section)



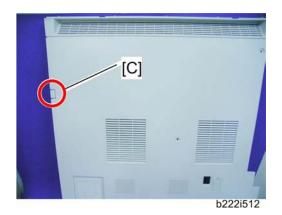
- 3. Install the four stud stays in the location [A] in the controller box.
- 4. Install the key counter interface board on the four stud stays in the controller box.
- 5. Connect the harness to CN3 on the key counter interface board.



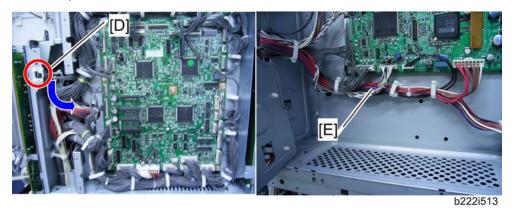
b222i676

6. Close the IOB bracket and connect the other terminal to CN215 [B] on the IOB.

9



7. Cut off the part [C] of the rear cover.



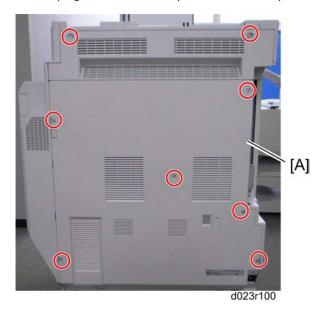
- 8. Clamp the harness from the counter device with the clamp [D] and put it as shown by the blue arrow (x 1).
- 9. Route the harness from the counter device in the same way as the other harnesses [E] ($\trianglerighteq x$ 3).
- 10. Connect the harness from the counter device to CN4 on the key counter interface board.
- 11. Reattach the IOB bracket (see "Controller Box" in the "Replacement and Adjustment" section)
- 12. Reassemble the machine.

Installation

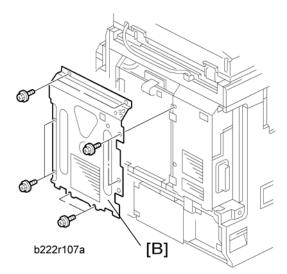
ACAUTION

• Unplug the main machine power cord before you do the following procedure.

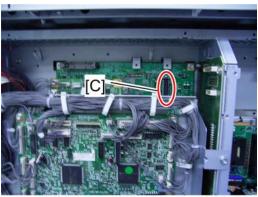
Copy Data Security Unit Type F (B829)



1. Remove the rear cover [A] of the machine ($\hat{\mathscr{F}}$ x 8).



2



b222i507

- 3. Attach the ICIB-3 (copy data security board) to CN 508 [C] on the BICU (\$\beta\$ x 2).
- 4. Reassemble the machine.

User Tool Setting

- 1. Plug in and turn on the main power switch.
- 2. Go into the User Tools mode, and select System Settings > Administrator Tools > Copy Data Security Option > "On".
- 3. Exit User Tools.
- 4. Check the operation.



- The machine will issue an SC165 error if the machine is powered on with the ICIB-3 removed and the "Data Security for Copying "feature set to "ON".
- When you remove this option from the machine, first set the setting to "OFF" with the user tool
 before removing this board. If you forget to do this, "Data Security for Copying "feature cannot
 appear in the user tool setting. And then SC165 will appear every time the machine is switched
 on, and the machine cannot be used.

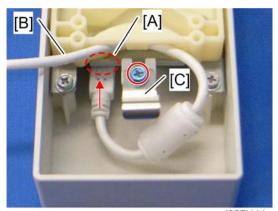
Make sure that the machine can recognize the option (see 'Check All Connections' at the end of this section).

Accessory Check

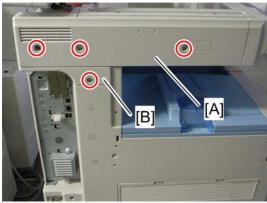
Check the quantity and condition of the accessories against the following list.

No.	Description	Q'ty
1	USB2.0/SD Slot	1
2	Ground Plate	1
3	USB Cable	1
4	Screw: M3 x 6 blue	1
5	Screw: M3 x 8	4
6	Screw: M3 x 6	1
7	Bracket	1

Installation Procedure

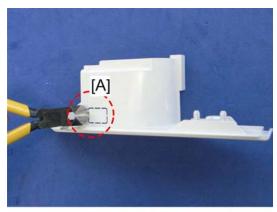


- d027i111
- 1. Connect the USB cable [B] to the USB slot [A] in the USB2.0/SD Slot as shown above.
- 2. Attach the ground plate [C] to the bracket of the USB2.0/SD Slot (${\mathscr F}$ x 1: M3x6 blue).



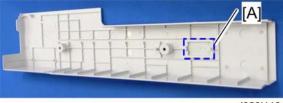
d023i110

- 3. Rear cover of the machine ($\widehat{\mathscr{E}} \times 8)$
- 4. Remove the scanner left cover [A] ($\hat{\mathscr{E}}$ x 2).
- 5. Remove the left frame cover [B] ($\mbox{\emsuberdef} x\ 1$).



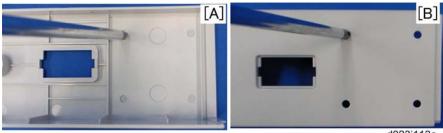
d027i112

- 6. Remove the part [A] of the left frame cover with pliers or a similar tool.
- 7. Reinstall the left frame cover ($\mathscr{F} \times 1$).



d023i113

8. Remove the part [A] on the scanner left cover.

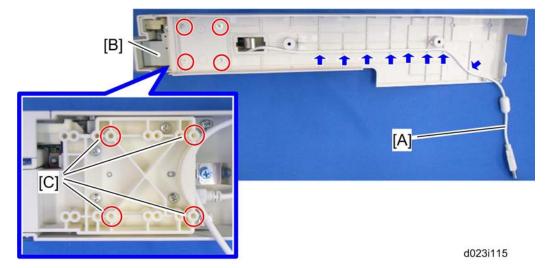


d023i113a

9. Make four holes in the scanner left cover with a screwdriver as shown [A].



• Smooth the four holes in the scanner left cover as shown [B].



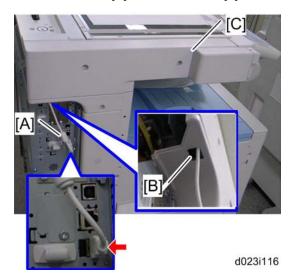
- 10. Route the USB cable [A] through the gaps in the left scanner cover.
- 11. Secure the USB2.0/SD Slot [B] with the left scanner cover as shown above (${\hat {\mathbb F}}$ x 4: M3x8).



• Use the screw holes [C] as shown above.



12. Attach the bracket [A] with its two hooks [B] as shown above ($\hat{\mathcal{E}}$ x 1: M3x6).

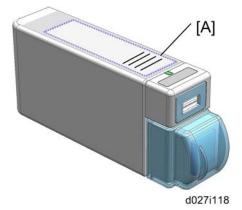


- 13. Put the USB cable [A] through the cutout [B] of the left frame cover.
- 14. Attach the scanner left cover [C] to the mainframe, and then connect the USB cable [A] to USB-A (front side) as shown above.



- Make sure that the USB cable is inserted in USB-A (front side).
- 15. Reinstall the rear cover (x 8).
- 16. Plug in and turn on the mainframe.

17. Enter the SP mode, and then change the setting of SP1013-001 from "0" to "1".



18. Attach the decal [A] to the USB2.0/SD Slot as shown above.

Testing the SD Card/USB Slot

1. Insert an SD card or USB memory device in the slot.

You can connect only one removable memory device at a time.

2. Close the media slot cover.

If you leave the cover open, static electricity conducted through an inserted SD card could cause the machine to malfunction.

3. Make sure that no previous settings remain.

If a previous setting remains, press the [Clear Modes] key.

- 4. Place an original on the exposure glass.
- 5. Press [Store File].
- 6. Press [Store to Memory Device].
- 7. Press [OK].
- 8. Press the [Start] key.

When writing is complete, a confirmation message appears.

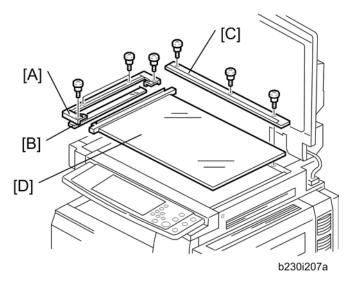
- 9. Press [Exit].
- 10. Remove the memory device from the media slot.

Do not remove the memory device while writing is in process.

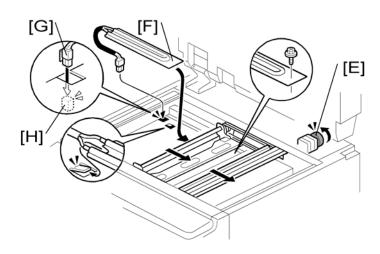
2

Anti-Condensation Heater (Scanner)

Installation Procedure



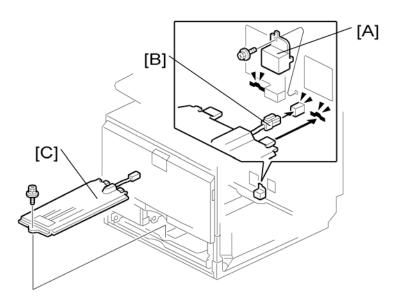
- 1. Rear cover (see "Rear Cover" in the "Replacement and Adjustment" section)
- 2. Open the ARDF or platen cover.
- 3. Glass cover [A] (🛱 x 4)
- 4. ARDF exposure glass [B]
- 5. Rear scale [C] (🛱 x 3)
- 6. Exposure glass with left scale [D]



- 7. Move the scanner carriage to the right side by rotating the scanner motor [E].
- 8. Install the heater [F] in the scanner unit ($\hat{\mathscr{F}} \times 1$, hook)
- 9. Put the connector [G] through the cutout.
- 10. Connect it to the connector [H] (blue and red cords) in the frame of the machine.
- 11. Reassemble the machine.

Tray Heater

Installation Procedure

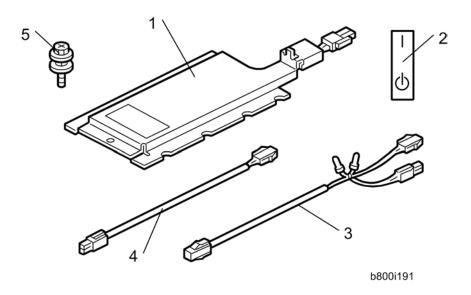


- 1. Remove trays 1 and 2 from the machine.
- 2. Remove the connector cover [A] ($\mbox{\ensuremath{\beta}}$ x 1).
- 3. Connect the connector [B] of the heater to the connector of the main machine.
- 4. Install the heater [C] inside the machine ($\ensuremath{\widehat{\mathcal{F}}} \times 1)$
- 5. Reassemble the machine.

Anti-Condensation Heater Type A

Component Check

No.	Description	Q'ty
1	Tray heater	1
2	On-standby decal	1 (-90) or 2 (-91)
3	Harness 2 (For D387)	1
4	Harness 1 (For D351/D352)	1
5	Screw M4 x 10	2
-	Installation procedure	1



Installation Procedure

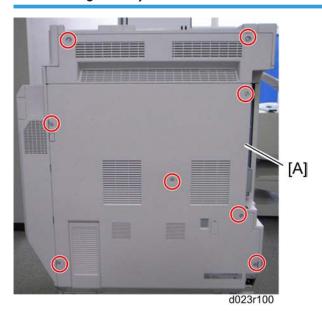
ACAUTION

- Unplug the machine power cord before starting the following procedure.
- Do the following procedure not to damage any harnesses.

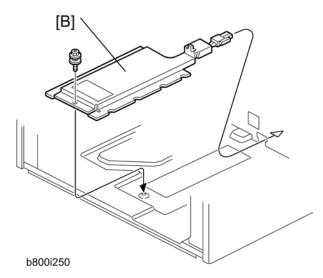
2

• Check that all harnesses are not damaged nor pinched after installation.

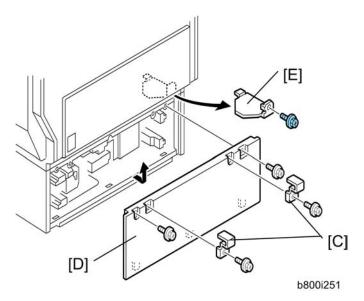
For installing the tray heater in D351



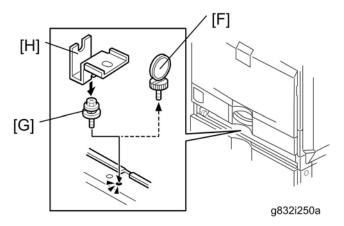
- 1. Rear cover [A] (\$\hat{\beta} \times 8)
- 2. Pull out the two trays in the optional paper feed unit.



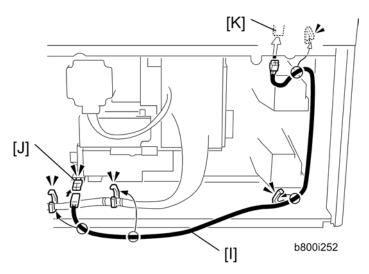
3. Install the tray heater [B] in the optional paper feed unit ($\ensuremath{\mathscr{F}}$ x 1).



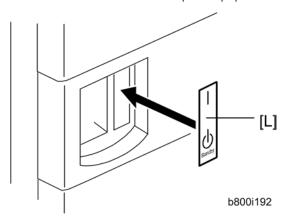
- 4. Remove the two securing brackets [C] ($\mathscr{F} \times 1$ each), and then the rear cover [D] of the optional paper feed unit ($\mathscr{F} \times 2$).
- 5. Remove the harness cover bracket [E] (\mathscr{F} x 1).



- 6. Pull out tray 2 from the mainframe.
- 7. Replace the shoulder screw [F] with the washer screw [G], using securing bracket [H] ($\hat{\mathscr{E}}$ x 1).



- 8. Connect the harness [I] to the connector [J] of the tray heater.
- 9. Route the harness [1] as shown and clamp it with four clamps.
- 10. Connect the harness [I] to the connector [K] of the mainframe.
- 11. Reassemble the mainframe and optional paper feed unit.



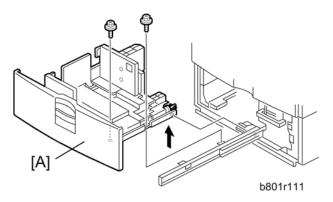
12. Attach the on/standby decal [L] to the right-hand side of the main power switch.

For Installing the Tray Heater in D352

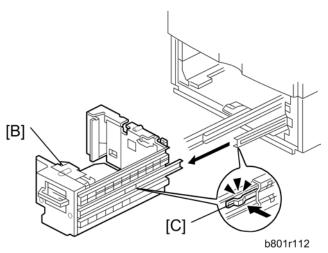
- 1. Remove the rear cover of the mainframe (step 1 in For Installing the Tray Heater in D321).
- 2. Pull out the LCT drawer.



• If the right tray comes out with the left tray, push the right tray into the LCT.



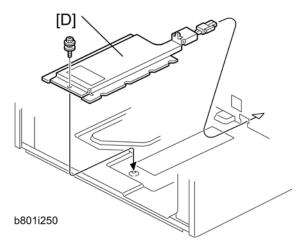
3. Left tray [A] (F x 2)



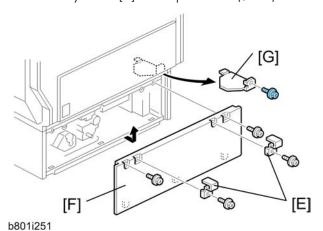
4. Remove the right tray [B] while pressing down the stopper [C].



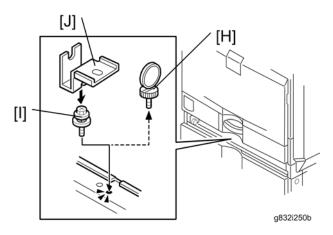
• When reinstalling the right tray, set the right tray on the guide rail and carefully push the tray in, making sure to keep the tray level.



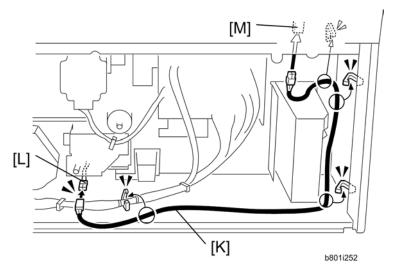
5. Install the tray heater [D] in the optional LCT ($\ensuremath{\mathscr{F}}$ x 1).



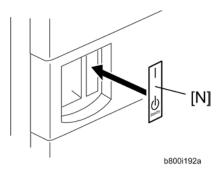
- 6. Remove the two securing brackets [E] ($\hat{\mathscr{F}} \times 1$ each), and the then rear cover [F] of the optional LCT ($\hat{\mathscr{F}} \times 2$).
- 7. Remove the harness cover bracket [G] ($\hat{\beta}^{x} \times 1$).



- 8. Pull out tray 2 from the mainframe.
- 9. Replace the shoulder screw [H] with the washer screw [I], using the securing bracket [J] (F x 1).



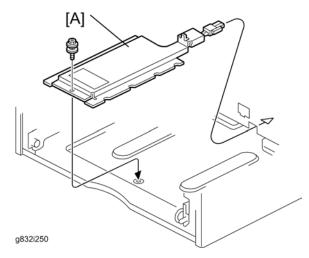
- 10. Connect the harness [K] to the connector [L] of the tray heater.
- 12. Connect the harness [K] to the connector [M] of the mainframe.
- 13. Reassemble the mainframe and optional LCT.



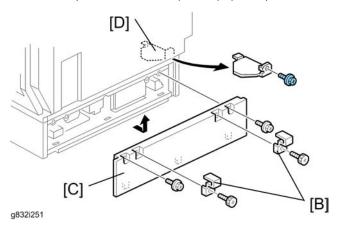
- 14. Reassemble the mainframe and optional paper feed unit.
- 15. Attach the on/standby decal [N] to the right-hand side of the main power switch.

For Installing the Tray Heater in D387

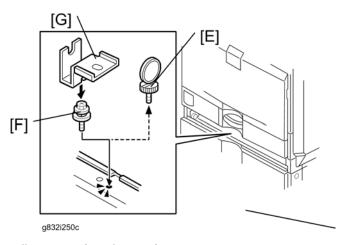
- 1. Remove the rear cover of the mainframe (step 1 in For Installing the Tray Heater in D321).
- 2. Pull out the tray in the optional paper tray.



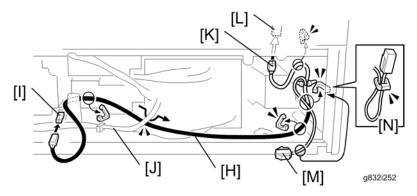
3. Install the tray heater [A] in the optional paper tray ($\ensuremath{\mathcal{P}}$ x 1).



- 4. Remove the two securing brackets [B] ($\mathscr{F} \times 1$ each), and then the rear cover [C] of the optional paper tray ($\mathscr{F} \times 2$).
- 5. Remove the harness cover bracket [D] ($\hat{\beta}^{x} \times 1$).



- 6. Pull out tray 2 from the mainframe.
- 7. Replace the shoulder screw [E] with the washer screw [F], using securing bracket [G] ($\hat{\mathscr{E}}$ x 1).



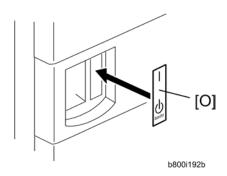
- 1. Connect the harness [H] to the connector [I] of the tray heater.
- 2. Route the harness [H] as shown and clamp it with four clamps ($\mathscr{F} \times 4$).



- Make sure that the harness [H] is placed below the harness [J].
- 3. Connect one harness [K] of the two-way harness to the connector [L] of the mainframe.



- The harness [K] of the two-way harness, which has two binds, is for the connector of the
 mainframe. The harness [M], which has one bind, is for another optional paper feed unit.
- 4. Clamp the other harness [M] of the two-way harness as shown [N] if you do not install another optional paper feed unit.
- 5. Reassemble the mainframe and optional paper tray.

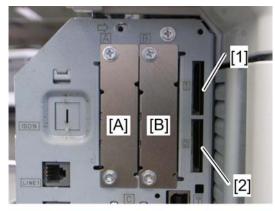


 $6. \ \, \text{Attach the on/standby decal [O] to the right-hand side of the main power switch.}$

Overview

This machine has I/F card slots for optional I/F connections and SD card slots applications.

After you install an option, check that the machine can recognize it (see "Check All Connections" at the end of this section).



Controller Options

d027i400

I/F Card Slots

- Slot A is used for one of the optional I/F connections (only one can be installed): IEEE1284, IEEE802.11a/g, g (Wireless LAN), Bluetooth, or Remote Communication Gate.
- Slot B is used for the File Format Converter or Remote Communication Gate.

SD Card Slots

- Slot 1 is used for one of the optional applications: PostScript 3, Data Overwrite Security Unit, PictBridge
- Slot 2 is used for installing the Browser Unit, HDD Encryption unit, VM card or for service only (for example, updating the firmware).

SD Card Appli Move

Overview

The service program "SD Card Appli Move" (SP5-873) lets you copy application programs from one SD card to another SD card.

Slot 1 is used to store application programs. But there are 3 possible applications (PostScript 3, DOS unit, PictBridge). You cannot run application programs from Slot 2. However you can move application programs from Slot 2 to Slot 1 with the following procedure.

For this model, the printer/scanner card in slot 1 has enough space for the PictBridge and the DOS applications. Use the card that is already in slot 1 (printer/scanner card). Do not remove the printer/scanner card from slot 1.

Make sure that the target SD card has enough space.

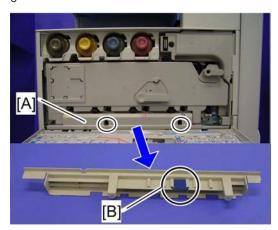
- 1. Enter SP5873 "SD Card Appli Move".
- 2. Then move the application from the SD Card in Slot 2 to the SD Card in Slot 1.



- Do steps 1-2 again if you want to move another application program.
- 3. Exit the SP mode.

Be very careful when you do the SD Card Appli Move procedure:

- The data necessary for authentication is transferred with the application program from an SD card to another SD card. Authentication fails if you try to use the SD card after you copy the application program from one card to another card.
- Do not use the SD card if it has been used before for other purposes. Normal operation is not guaranteed when such an SD card is used.



Remove the cover [A] (\$\hat{\varepsilon}^2 \times 2)\$, and then keep the SD card in the place [B] after you copy the application program from one card to another card. This is done for the following reasons:

- The SD card can be the only proof that the user is licensed to use the application program.
- You may need to check the SD card and its data to solve a problem in the future.
- You cannot copy PostScript application and VM card to another SD card. You have to copy the other
 application (PictBridge, DOS Unit) to the SD card that stores the PostScript application or VM card.

Move Exec

The menu "Move Exec" (SP5-873-001) lets you copy application programs from the original SD card to another SD card.

Mportant (

- Do not turn ON the write protect switch of the system SD card or application SD card on the machine.
 If the write protect switch is ON, a download error (e.g. Error Code 44) occurs during a firmware upgrade or application merge.
- 1. Turn the main switch off.
- 2. Make sure that an SD card is in SD Card Slot 1. The application program is copied to this SD card.
- 3. Insert the SD card with the application program in SD Card Slot 2. The application program is copied from this SD card.
- 4. Turn the main switch on.
- 5. Start the SP mode.
- Select SP5-873-001 "Move Exec."
- 7. Follow the messages shown on the operation panel.
- 8. Turn the main switch off.
- 9. Remove the SD card from SD Card Slot 2.
- 10. Turn the main switch on.
- 11. Check that the application programs run normally.

Undo Exec

"Undo Exec" (SP5-873-002) lets you copy back application programs from an SD card to the original SD card. You can use this program when, for example, you have mistakenly copied some programs by using Move Exec (SP5-873-001).

- Do not turn ON the write protect switch of the system SD card or application SD card on the machine.
 If the write protect switch is ON, a download error (e.g. Error Code 44) occurs during a firmware upgrade or application merge.
- 1. Turn the main switch off.

- 2. Insert the original SD card in SD Card Slot 2. The application program is copied back into this card.
- 3. Insert the SD card with the application program in SD Card Slot 1. The application program is copied back from this SD card.
- 4. Turn the main switch on.
- 5. Start the SP mode.
- 6. Select SP5-873-002 "Undo Exec."
- 7. Follow the messages shown on the operation panel.
- 8. Turn the main switch off.
- 9. Remove the SD card from SD Card Slot 2.

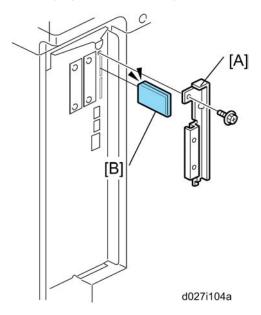


- This step assumes that the application programs in the SD card are used by the machine.
- 10. Turn the main switch on.
- 11. Check that the application programs run normally.
- 12. Make sure that the machine can recognize the option (see 'Check All Connections' at the end of this section).

PostScript 3

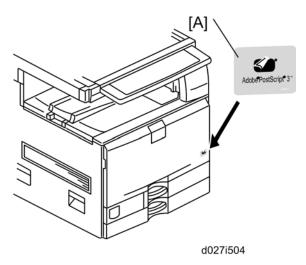
ACAUTION

• Unplug the main machine power cord before you do the following procedure.



1. Remove the SD-card slot cover [A] from SD card slots (F x 1).

- 2. Turn the SD-card label face [B] to the rear of the machine. Then push it slowly into slot 1 until you hear a click.
 - Only one SD card slot is available for applications provided on SD cards.
 - If the customer wants to use two or more applications from SD cards, the applications must be moved to a single SD card.
 - The PostScript3 application and fonts cannot be moved to another SD card. However, other
 applications can be moved onto the PostScript3 SD card.
- 3. Attach the slot cover [A] (x 1).

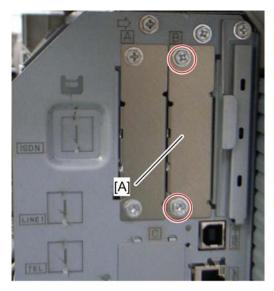


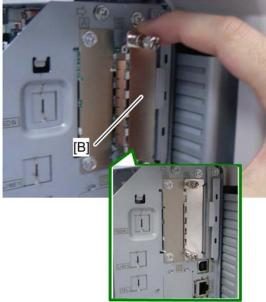
- 4. Attach the "Adobe PostScript 3" decal [A] to the front door.
- 5. Make sure that the machine can recognize the option (see 'Check All Connections' at the end of this section).

File Format Converter

ACAUTION

• Unplug the main machine power cord before you do the following procedure.





D027i402

- 1. Remove the slot cover [A] (x 2).
- 2. Install the file format converter [B] into slot B and then fasten it with screws.
- 3. Plug in and turn on the main power switch.
- 4. Check or set the following SP codes with the values shown below.

SP No.	Title	Setting
SP5-836-001	Capture Function (0:Off 1:On)	"]"
SP5-836-002	Panel Setting	"0"

- 5. Check the operation.
- 6. Make sure that the machine can recognize the option (see 'Check All Connections' at the end of this section).

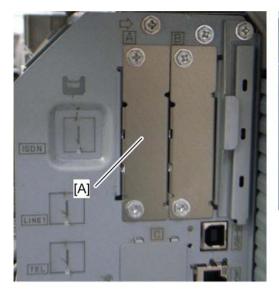
IEEE1284

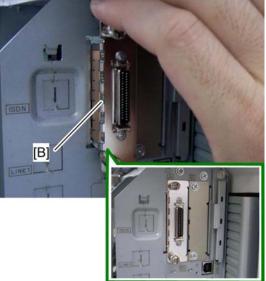
Installation Procedure



• Unplug the main machine power cord before you do the following procedure.

You can only install one of the following network interfaces at a time: (IEEE 802.11 a/g, g (Wireless LAN), IEEE1284, Bluetooth).





D027i404

- 1. Remove the slot cover [A] (\mathscr{F} x 2).
- 2. Install the interface board [B] (Knob-screw x 2) into the slot A.
- 3. Make sure that the machine can recognize the option (see 'Check All Connections' at the end of this section).

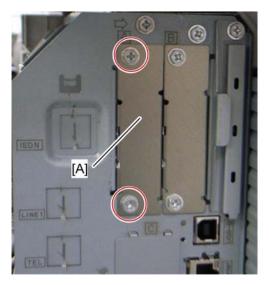
IEEE 802.11 a/g, g (Wireless LAN)

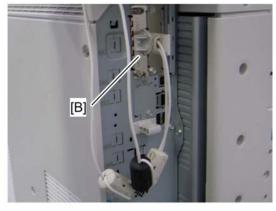
Installation Procedure

ACAUTION

• Unplug the main machine power cord before you do the following procedure.

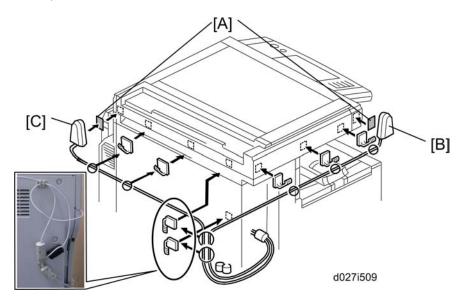
You can only install one of the following network interfaces at one time: (IEEE 802.11 a/g, g (Wireless LAN), IEEE1284, Bluetooth).





d027i403a

- 1. Remove the slot cover [A] from the board slot ($\widehat{\mathbb{F}}^{\!\!\!\!/} \times 2$).
- 2. Install the wireless LAN board [B] (Knob-screw x 2) into the board slot.
- 3. Make sure that the machine can recognize the option (see 'Check All Connections' at the end of this section).



- 4. Peel off the double-sided tapes on the Velcro fasteners [A], and then attach them [A] at the front left and rear left of the machine.
- 5. Attach "ANT1" (having a black ferrite core) [B] to the front left of the machine.
- 6. Attach "ANT2" (having a white ferrite core) [C] to the rear right of the machine.



- "ANT1" is a transmission/reception antenna and "ANT2" is a reception antenna. Do not attach
 them at the wrong places.
- 7. Attach the clamps as shown above.
- 8. Wire the cables and clamp them ($\frac{1}{2}$ x 7).

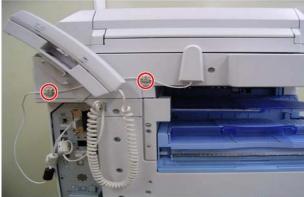


• Make sure that the cables are not slack. Keep them wired tightly along the covers.

You may have to move the machine if the reception is not clear.

- Make sure that the machine is not located near an appliance or any type of equipment that generates strong magnetic fields.
- Put the machine as close as possible to the access point.

Installing Hardware Combinations



d023i511

• Refer to the above picture when installing the handset and the USB2.0/SD.

UP Mode Settings for Wireless LAN

Enter the UP mode. Then do the procedure below to perform the initial interface settings for IEEE 802.11 a/g, g. These settings take effect every time the machine is powered on.



- You cannot use the wireless LAN if you use Ethernet.
- 1. Press the "User Tools/Counter" key.
- 2. On the touch panel, press "System Settings".



• The Network I/F (default: Ethernet) must be set for either Ethernet or wireless LAN.

- 3. Select "Interface Settings".
- 4. Press "Wireless LAN". Only the wireless LAN options show.
- 5. Communication Mode. Select either "802.11 Ad hoc", "Ad hoc" or "Infrastructure".
- 6. SSID Setting. Enter the SSID setting. (The setting is case sensitive.)
- 7. Channel. You need this setting when Ad Hoc Mode is selected.

Range: 1 to 14 (default: 11)



- The allowed range for the channel settings may vary for different countries.
- 8. WEP (Encryption) Setting. The WEP (Wired Equivalent Privacy) setting is designed to protect wireless data transmission. The same WEP key is required on the receiving side in order to unlock encoded data. There are 64 bit and 128 bit WEP keys.

WEP:

Selects "Active" or "Inactive" ("Inactive" is default.).

Range of Allowed Settings:

64 bit: 10 characters

128 bit: 26 characters

9. Transmission Speed. Press the Next button to show more settings. Then select the transmission speed for the mode: Auto, 11 Mbps, 5.5 Mbps, 2 Mbps, 1 Mbps (default: Auto). This setting should match the distance between the closest machine or access point. This depends on which mode is selected.



- For the Ad Hoc Mode, this is the distance between the machine and the closest PC in the network.
 For the Infrastructure Mode, this is the distance between the machine and the closest access point.
- 11 Mbps: 140 m (153 yd.)
- 5.5 Mbps: 200 m (219 yd.)
- 2 Mbps: 270 m (295 yd.)
- 1 Mbps: 400 m (437 yd.)
- 10. Press "Return to Default" to initialize the wireless LAN settings.

Press "Yes" to initialize the following settings:

- Transmission mode
- Channel
- Transmission Speed
- WEP
- SSID

• WEP Key

SP Mode and UP Mode Settings for IEEE 802.11 α/g , g Wireless LAN

The following SP commands and UP modes can be set for IEEE 802.11 a/g, g.

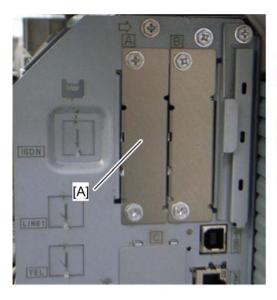
SP No.	Name	Function	
5840-006	Channel MAX	Sets the maximum range of the channel settings for the country.	
5840-007	Channel MIN	Sets the minimum range of the channels settings allowed for your country.	
5840-011	WEP Key Select	Used to select the WEP key (Default: 00).	
UP mode	Name Function		
	SSID	Used to confirm the current SSID setting.	
	WEP Key	Used to confirm the current WEP key setting.	
	WEP Mode	Used to show the maximum length of the string that can be used for the WEP Key entry.	

Bluetooth

ACAUTION

• Unplug the main machine power cord before you do the following procedure.

You can only install one of the following network interfaces at a time: (IEEE 802.11 a/g, g (Wireless LAN), IEEE1284, Bluetooth).





D027i405

- 1. Remove the slot cover [A] ($\hat{\mathbb{F}}$ x 2).
- 2. Install the Bluetooth board [B] (Knob-screw x 2) into the slot A.
- 3. Insert the Bluetooth card into the Bluetooth card adaptor.
- 4. Install the Bluetooth card adaptor on the Bluetooth board.
- 5. Attach the antenna cap to the Bluetooth board.
- 6. Make sure that the machine can recognize the option (see 'Check All Connections' at the end of this section).

Data Overwrite Security Unit Type H (D377)

Before You Begin the Procedure

 Confirm that the Data Overwrite Security unit SD card is the correct type for the machine. The correct type for this machine is "Type H".



- If you install any version other than "Type H", you will have to replace the NVRAM and do this
 installation procedure again.
- 2. Make sure that the following settings are not at their factory default values:
 - Supervisor login password
 - · Administrator login name
 - Administrator login password

If any of these settings is at a factory default value, tell the customer these settings must be changed before you do the installation procedure.

3. Make sure that "Admin. Authentication" is ON.

[System Settings] – [Administrator Tools] – [Administrator Authentication Management] - [Admin. Authentication]

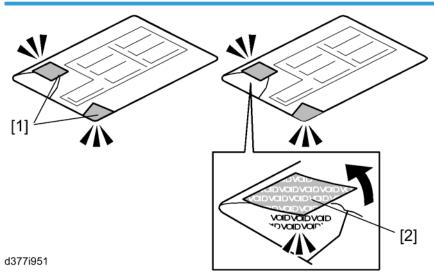
If this setting is OFF, tell the customer this setting must be ON before you do the installation procedure.

4. Make sure that "Administrator Tools" is enabled (selected).

[System Settings] – [Administrator Tools] – [Administrator Authentication Management] - [Available Settings]

If this setting is disabled (not selected), tell the customer this setting must be enabled (selected) before you do the installation procedure.

Seal Check and Removal



ACAUTION

- You must check the box seals to make sure that they were not removed after the items were sealed in the box at the factory before you do the installation.
- 1. Check the box seals [1] on each corner of the box.
 - Make sure that a tape is attached to each corner.
 - The surfaces of the tapes must be blank. If you see "VOID" on the tapes, do not install the components in the box.
- 2. If the surfaces of the tapes do not show "VOID", remove them from the corners of the box.
- 3. You can see the "VOID" marks [2] when you remove each seal. In this condition, they cannot be attached to the box again.

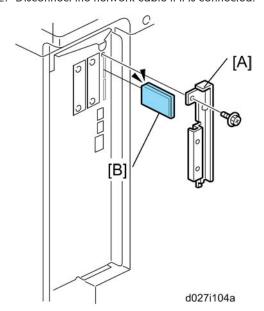
Installation Procedure

ACAUTION

• Unplug the main machine power cord before you do the following procedure.



- You must install the Data Overwrite Security unit in SD Card slot 1. However, the Postscript option and others are also installed in SD Card slot 1. You must do the "SD Card Appli Move" procedure first if you want to install the Data Overwrite Security unit.
- 1. Turn off the main power switch if the machine is turned on.
- 2. Disconnect the network cable if it is connected.



- 3. Remove the slot cover [A] for SD cards (\mathscr{F} x 1).
- 4. Turn the SD-card label face [B] to the rear of the machine. Then push it slowly into slot 1 until you hear a click.
- 5. Connect the network cable if it needs to be connected.
- 6. Turn on the main power switch.
- 7. Go into the SP mode and push "EXECUTE" with SP5-878-001.
- 8. Exit the SP mode and turn off the operation switch. Then turn off the main power switch.
- 9. Turn on the machine power.
- 10. Do SP5990-005 (SP print mode Diagnostic Report).
- 11. Make sure the ROM number and firmware version in area [a] of the diagnostic report are the same as those in area [b].

- [a]: "ROM Number/Firmware Version" "HDD Format Option"
- [b]: "Loading Program" "GW5a_zoffym"

Diagnostic Report:	"ROM No. / Firmware Version" [a]	"Loading Program" [b]
Data Overwrite Security Unit	HDD Format Option: D3775912 / 1.00m	GW5a_zoffym: D3775912 / 1.00m

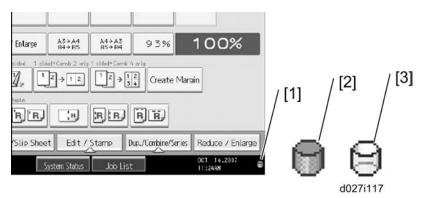


- The ROM number and firmware version number change when the firmware is upgraded. However, the important thing is to make sure the numbers in [a] are the same as the numbers in [b].
- If the ROM numbers are not the same, or the version numbers are not the same, this means the unit was not installed correctly.

If this happens:

Make sure of the unit type (must be Type H).

- 12. Go into the User Tools mode, and select System Settings> Administrator Tools> Auto Erase Memory Setting> On.
- 13. Exit the User Tools mode.



- 14. Check the display and make sure that the overwrite erase icon [1] shows.
- 15. Check the overwrite erase icon.
 - The icon [2]: This icon is lit when there is temporary data to be overwritten, and blinks during overwriting.
 - The icon [3]: This icon is lit when there is no temporary data to be overwritten.

HDD Encryption Unit

Before You Begin the Procedure

- 1. Make sure that the following settings are not at the factory default settings:
 - Supervisor login password
 - · Administrator login name
 - Administrator login password



- These settings must be set up by the customer before the HDD Encryption unit can be installed.
- 2. Confirm that "Admin. Authentication" is on:

[User Tools] > "System Settings" > "Administrator Tools" > "Administrator Authentication Management" > "Admin. Authentication" > "On"

If this setting is "Off", tell the customer that this setting must be "On" before you can do the installation procedure.

3. Confirm that "Administrator Tools" is selected and enabled:

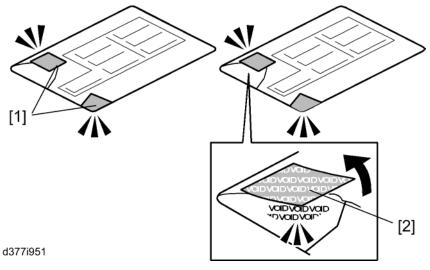
[User Tools]>"System Settings">"Administrator Tools">"Administrator Authentication Management">
"Available Settings"



• "Available Settings" is not displayed until Step 2 is done.

If this setting is not selected, tell the customer that this setting must be selected before you can do the installation procedure.

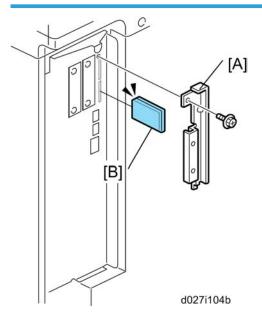
Seal Check and Removal



ACAUTION

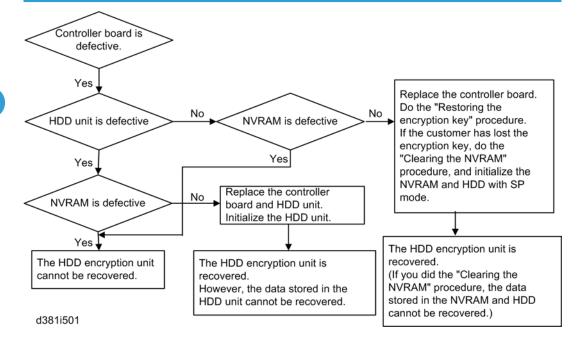
- You must check the box seals to make sure that they were not removed after the items were sealed in the box at the factory before you do the installation.
- 1. Check the box seals [1] on each corner of the box.
 - Make sure that a tape is attached to each corner.
 - The surfaces of the tapes must be blank. If you see "VOID" on the tapes, do not install the components in the box.
- 2. If the surfaces of the tapes do not show "VOID", remove them from the corners of the box.
- 3. You can see the "VOID" marks [2] when you remove each seal. In this condition, they cannot be attached to the box again.

Installation Procedure



- 1. Remove the SD card slot cover [A] ($\hat{\mathscr{F}} \times 1$).
- 2. Turn the SD-card label [B] to face the rear of the machine. Then push it slowly into slot 2 until you hear a click.
- 3. Turn on the main power switch, and then enter the SP mode.
- 4. Select SP5878-002, and then press "Execute" on the LCD.
- 5. Exit the SP mode after "Completed" is displayed on the LCD.
- 6. Turn off the main power switch.
- 7. Remove the SD card from slot 2.
- 8. Attach the SD card slot cover [A] ($\mathscr{F} \times 1$).

Recovery from a Device Problem



Restoring the encryption key

When replacing the controller board for a model in which the HDD encryption unit has been installed, updating the encryption key is required.

- 1. Prepare an SD card which is initialized.
- 2. Make the "restore_key" folder in the SD card.
- 3. Make an "nyram_key.txt" file in the "restore_key" folder in the SD card.
- 4. Ask an administrator to input the encryption key (this has been printed out earlier by the user) into the "nvram_key.txt" file.
- 5. Remove only the HDD unit (p.296 "HDD").
- 6. Turn on the main power switch.
- 7. Confirm that the prompt on the LCD tells you to install the SD card (storing the encryption key) in the machine.
- 8. Turn off the main power switch.
- 9. Insert the SD card that contains the encryption key into slot 2.
- 10. Turn on the main power switch, and the machine automatically restores the encryption key in the flash memory on the controller board.
- 11. Turn off the main power switch after the machine has returned to normal status.
- 12. Remove the SD card from slot 2.

13. Reinstall the HDD unit.

Clearing the NVRAM

When replacing the controller board for a model in which the HDD encryption unit has been installed and a customer has lost the encryption key, clearing the NVRAM is required to recover the HDD encryption unit.

- 1. Prepare an SD card which is initialized.
- 2. Make the "restore_key" folder in the SD card.
- 3. Make an "nyram_key.txt" file in the "restore_key" folder in the SD card.
- 4. Input "nvclear" into the "nvram_key.txt" file.
- 5. Turn on the main power switch.
- 6. Confirm that the prompt on the LCD tells you to install the SD card (storing the encryption key) in the machine.
- 7. Turn off the main power switch.
- 8. Insert the SD card that contains "nyclear" into slot 2.
- 9. Turn on the main power switch, and the machine automatically restores the encryption key in the flash memory on the controller board.
- 10. Turn off the main power switch after the machine has returned to normal status.
- 11. Remove the SD card from slot 2.
- 12. Turn on the main power switch.
- 13. Initialize the NVRAM (SP5801-001) and HDD unit (SP5832-001) with SP mode.
- 14. The user must enable the HDD encryption unit with a user tool.

PictBridge

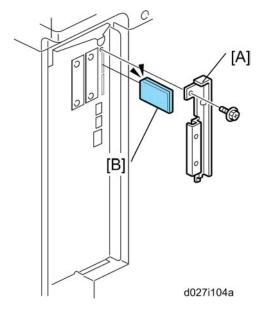


• Unplug the main machine power cord before you do the following procedure.



You must install the PictBridge option in SD Card slot 1. However, the Postscript option and the data
overwrite security unit option are also installed in SD Card slot 1. You must do the SD Card Appli
move procedure first if you have the postscript or data overwrite security unit option installed and you
want to install the PictBridge unit.

You must install the USB Host Interface when using the PictBridge unit.



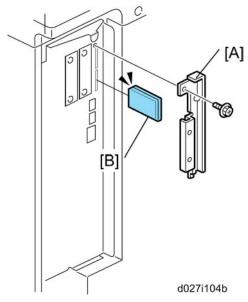
- 1. Remove the SD-card slot cover [A] for SD cards (\mathscr{F} x 1).
- 2. Turn the SD-card label face [B] to the rear of the machine. Then push it slowly into slot 1 until you hear a click.
- 3. Attach the SD-card slot cover [A] (\mathscr{F} x 1).
- 4. Make sure that the machine can recognize the option (see 'Check All Connections' at the end of this section).

VM Card Type I

The VM card application cannot be moved to another SD card. However, other applications can be moved onto the VM card.

Installation Procedure

1. Switch the machine off.



- 2. Remove the SD card slot cover [A] (\$\beta\$ x1).
- 3. Turn the SD-card label face [B] to the rear of the machine. Then push it slowly into slot 1 until you hear a click.
- 4. Reattach the SD card slot cover.
- 5. Switch the machine on.
- 6. On the operation panel, remove the bottom blank keytop and replace it with the keytop provided.
- 7. Attach the decal to the copier.

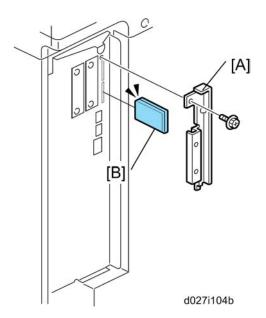
Browser Unit Type B

Installation Procedure



• Unplug the main machine power cord before you do the following procedure.

SD card slot 2 is basically used only for service maintenance. Do not leave an SD card in slot 2 after installing an application.



Browser unit RTB 2
Installation procedure was modified

- 1. Remove the slot cover [A] for SD cards (\mathscr{F} x 1).
- 2. Turn the SD-card label face [B] to the rear of the machine. Then push it slowly into slot 2 until you hear a click.
- 3. Plug in and turn on the main power switch.
- 4. Push the "User Tools" key.
 - If an administrator setting is registered for the machine, step 5 and 6 are required. Otherwise, skip to the step 7
- 5. Push the "Login/ Logout" key.
- 6. Login with the administrator user name and password.
- 7. Touch "Extended Feature Settings" twice on the LCD.
- 8. Touch "Install" on the LCD.
- 9. Touch "SD Card".
- 10. Touch the "Browser" line.
- 11. Under "Install to" touch "Machine HDD" and touch "Next".
- 12. When you see "Ready to Install", check the information on the screen to confirm your previous selection.
- 13. Touch "OK". You will see "Installing the extended feature... Please wait.", and then "Completed".
- 14. Touch "Exit" to go back to the setting screen.
- 15. Touch "Change Allocation".
- 16. Touch the "Browser" line.

- 17. Press one of the hard keys, which you want to use for the Browser Unit. In default, this function is assigned to the "Other Functions" key (bottom key of function keys).
- 18. Touch "OK".
- 19. Touch "Exit" twice to go back to the copy screen.
- 20. Turn off the main power switch.
- 21. Install the key for "Browser Unit" to the place, where you want.
- 22. Remove the SD card from slot 2.
- 23. Attach the slot cover [1] (x 1).
- 24. Keep the SD card in the place (p.326 "SD Card Appli Move") after you install the application program from the card to HDD. This is because: The SD card can be the only proof that the user is licensed to use the application program. You may need to check the SD card and its data to solve a problem in the future.

Update Procedure

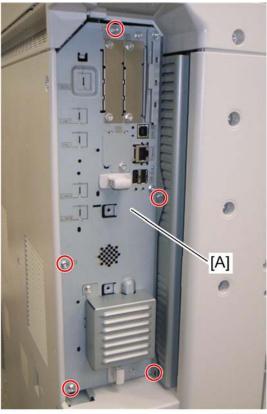
- 1. Remove the slot cover [1] for SD cards ($\mathscr{F} \times 1$).
- 2. Turn the SD-card label face to the rear of the machine. Then push it slowly into slot 2 [2] until you hear a click.
- 3. Plug in and turn on the main power switch.
- 4. Push the "User Tools" key.
 - If an administrator setting is registered for the machine, step 5 and 6 are required. Otherwise,
 skip to the step 7
- 5. Push the "Login/Logout" key.
- 6. Login with the administrator user name and password.
- 7. Touch "Extended Feature Settings" twice on the LCD.
- 8. Touch "Uninstall" on the LCD.
- 9. Touch the "Browser" line
- 10. Confirmation message appears on the LCD.
- 11. Touch "Yes" to proceed.
- 12. Reconfirmation message appears on the LCD.
- 13. Touch "Yes" to uninstall the browser unit.
- 14. You will see "Uninstalling the extended feature... Please wait.", and then "Completed".
- 15. Touch "Exit" to go back to the setting screen.
- 16. Exit "User/Tools" setting, and then turn off the main power switch.
- 17. Remove the SD card from SD card slot 2.

- 18. Overwrite the updated program in the "sdk" folder of the browser unit application with PC.
- 19. Do the "Installation Procedure" to install the browser unit.

Gigabit Ethernet

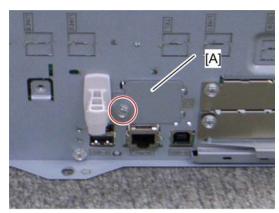
ACAUTION

• Unplug the main machine power cord before you do the following procedure.



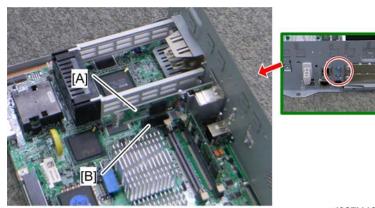
d027i075

1. Pull out the controller board [A] ($\mathscr{F} \times 5$).



d027i409

2. Remove the slot cover [A] ($\hat{\mathscr{F}}$ x 1).



d027i410

3. Attach the Gigabit Ethernet controller [A] into the slot [B] (\mathscr{F} x 2).

Check All Connections

- 1. Plug in the power cord. Then turn on the main switch.
- Enter the printer user mode. Then print the configuration page.
 User Tools > Printer Settings > List Test Print > Config. Page

All installed options are shown in the "System Reference" column.

4

3. Preventive Maintenance

Maintenance Tables

See "Appendices" for the following information:

- Preventive Maintenance Items
- Other Yield Parts

PM Parts Settings

Before Removing the old PM Parts

- 1. Enter the SP mode.
- 2. Output the SMC logging data with SP5-990-004.
- 3. Set the following SPs to "1" before you turn the power off. Then, the machine will reset the PM counters automatically. In the case of developer, the developer initialization will also be done automatically.
- 4. Exit the SP mode.

Item	SP
	Black: 3902-005
Developer	Yellow: 3902-006
Developer	Cyan: 3902-007
	Magenta: 3902-008
	Black: 3902-009
Drum Unit	Yellow: 3902-010
Diam only	Cyan: 3902-011
	Magenta: 3902-012
Fusing Unit Parts (not necessary for complete fusing units; see below)	3902-014
Image Transfer Belt Cleaning Unit	3902-015
Paper Transfer Unit	3902-016
Toner Collection Bottle (if not full or near-full)	3902-017

For the following units, there is a new unit detection mechanism. It is not necessary to reset PM counters.

- PCU
- Development unit
- · Complete fusing unit
- Toner Collection Bottle (if full or near-full)

After installing the new PM parts

- 1. Turn on the main power switch.
- 2. Output the SMC logging data with SP5-990-004 and check the counter values.
- 3. Make sure that the PM counters for the replaced units are "0" with SP7-803. If the PM counter for a unit was not reset, then reset that counter with SP 7-804.
- 4. Make sure that the exchange counter counts up with SP7-853.
- 5. Make sure that the counters for the previous units (SP7-906) on the new SMC logging data list (from step 2 above) are equal to the counters (SP7-803) for these units on the previous SMC logging data list (the list that was output in the "Before removing the old parts" section).
- 6. Make sure that the unit replacement date is updated with SP7-950.

Preparation before operation check

- 1. Clean the exposure glasses (for DF and book scanning).
- 2. Enter the user tools mode.
- 3. Do the "Automatic Color Calibration" (ACC) for the copier mode & printer mode as follows:
 - Print the ACC test pattern (User Tools > Maintenance > ACC > Start).
 - Put the printout on the exposure glass.
 - Put 10 sheets of white paper on the test chart. This ensures the precise ACC adjustment.
 - Close the ARDF or the platen cover.
 - Press "Start Scanning" on the LCD. Then, the machine starts the ACC.
- 4. Exit the User Tools mode, and then enter the SP mode.
- 5. Do the "Forced line position adjustment" as follows.
 - First do SP2-111-3 (Mode c).
 - Then do SP2-111-1 (Mode a).
 - To check if SP 2-111-1 was successful, watch the screen during the process. A message is displayed at the end. Also, you can check the result with SP 2-194-10 to -12.
- 6. Exit the SP mode.

Operation check

Check if the sample image has been copied normally.

4. Replacement and Adjustment

Beforehand

ACAUTION

- Before installing options, please do the following:
- If there is a fax unit in the machine, print out all messages stored in the memory, the lists of user-programmed items, and the system parameter list.
- If there are printer jobs in the machine, print out all jobs in the printer buffer.
- Turn off the main switch and disconnect the power cord, the telephone line, and the network cable.



• The "Loop-back Connector-Parallel" requires the "Plug-IEEE1284 Type A", and the optional IEEE1284 interface option must also be installed.

Z

Image Adjustment

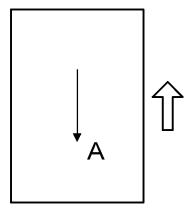
Scanning

Check the printing registration/side-to-side adjustment and the blank margin adjustment before you do the following scanner adjustments.



• Use S-2-1 test chart to do the following adjustments.

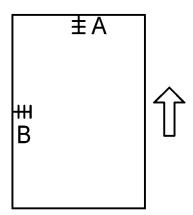
Scanner sub-scan magnification



A: Sub-scan magnification

- 1. Put the test chart on the exposure glass. Then make a copy from one of the feed stations.
- Check the magnification ratio. Adjust with SP4-008 if necessary.
 Standard: ±1.0%.

Scanner leading edge and side-to-side registration



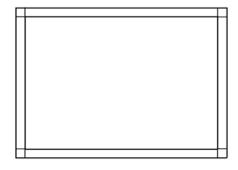
A: Leading Edge Registration

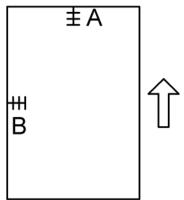
- 1. Put the test chart on the exposure glass. Then make a copy from one of the feed stations.
- 2. Check the leading edge and side-to-side registration. Adjust the following SP modes if necessary. Standard: 0 ± 2mm for the leading edge registration, 0 ± 2.5mm for the side-to-side registration.

	SP mode
Leading Edge Registration	SP4-010-001
Side-to-Side Registration	SP4-011-001

ARDF

ARDF side-to-side, leading edge registration and trailing edge





A: Leading edge registration

Use A3/DLT paper to make a temporary test chart as shown above.

- 1. Put the temporary test chart on the ARDF. Then make a copy from one of the feed stations.
- 2. Check the registration. Check the leading edge and side-to-side registration. Adjust the following SP modes if necessary.

Standard: 4.2 ± 2 mm for the leading edge registration, 2 ± 1 mm for the side-to-side registration. Use the following SP modes to adjust if necessary.

SP Code	What It Does	Adjustment Range	
SP6-006-001	Side-to-Side Registration	± 3.0 mm	
SP6-006-003	Leading Edge Registration	± 5.0 mm	
SP6-006-005	Buckle: Duplex Front	± 3.0 mm	
SP6-006-006	Buckle: Duplex Rear	± 2.5 mm	
SP6-006-007	Rear Edge Erase (Trailing Edge)	± 10.0 mm	

ARDF sub-scan magnification

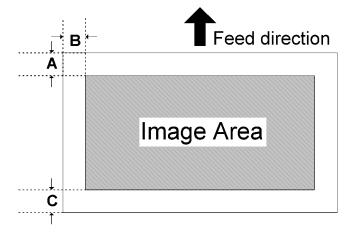
- 1. Put the temporary test chart on the ARDF. Then make a copy from one of the feed stations.
- 2. Check the magnification ratio. Adjust with SP6-017-001 if necessary.

• Standard: ±1.0%

• Reduction mode: ±1.0%

• Enlargement mode: ±1.0%

Image Area



A = C = 5.2 mm (0.2"), B = 2.0 mm

Make sure that the registration is adjusted within the adjustment standard range as shown below.

Leading Edge

Adjusts the leading edge registration for each paper type and process line speed.

Side to Side

Adjusts the side-to-side registration for each paper feed station. Use SP mode (SP1-002) to adjust the side-to-side registration for the optional paper feed unit, LCT, and duplex unit.

Adjustment Standard

• Leading edge (sub-scan direction): 5.2 ± 2 mm

• Side to side (main-scan direction): 2 ± 1 mm

Paper Registration Standard

The registration in both main- and sub-scan directions can change within the following tolerance.

• Sub-scan direction: 0 ± 9 mm

• Main-scan direction: 0 ± 4 mm

Adjustment Procedure

- 1. Enter SP2-109-003.
- 2. Print out the test pattern (14: 1-dot trimming pattern) with SP2-109-003.

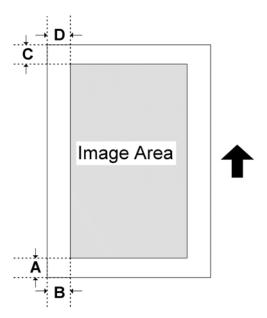


- Registration can change slightly as shown on the previous page. Print some pages of the 1-dot trimming pattern for step 3 and 4. Then average the leading edge and side-to-side registration values, and adjust each SP mode.
- 3. Do the leading edge registration adjustment.
 - 1) Check the leading edge registration and adjust it with SP1-001.
 - 2) Select the adjustment conditions (paper type and process line speed).
 - 3) Input the value. Then press the # key.
 - 4) Generate a trim pattern to check the leading edge adjustment.
- 4. Do the side-to-side registration adjustment.
 - 1) Check the side-to-side registration and adjust it with SP1-002.
 - 2) Select the adjustment conditions (paper feed station).
 - 3) Input the value. Then press the # key.
 - 4) Generate a trim pattern to check the leading edge adjustment.

Erase Margin Adjustment



• Adjust the erase margin C and D only if the registration (main scan and sub scan) cannot be adjusted within the standard values. Do the registration adjustment after adjusting the erase margin C and D, and then adjust the erase margin A and B.



- 1. Enter SP2-109-003.
- 2. Print out the test pattern (14: 1-dot trimming pattern) with SP2-109-003.
- 3. Check the erase margin A and B. Adjust them with SP2-103-001 to -010 if necessary.

• Leading edge: 1.5 to 5.0 mm,

• Side-to-side: 0.5 to 4.0 mm,

• Trailing edge: 0.5 to 0.6 mm

Color Registration

Line Position Adjustment

The automatic line position adjustment usually is done for a specified condition to get the best color prints.

Do the following if color registration shifts:

- Do "Auto Color Registration" as follows to do the forced line position adjustment.
 - 1. First do SP2-111-3.
 - 2. Then do SP2-111-1.

To check if SP 2-111-1 was successful, watch the screen during the process. A message is displayed at the end. Also, you can check the result with SP 2-194-10 to -12.

• You should also do the line position adjustment at these times:

- After you transport or move the machine (you should do the forced line position adjustment if
 you install the machine at the user location.) if the machine is pre-installed at the workshop and
 moved to the user location,
- When you open the drum positioning plate
- When you remove or replace the motors, clutches, and/or gears related to the drum/ development/transfer sections
- When you remove or replace the image transfer belt, image transfer belt unit or laser optical housing unit

Printer Gamma Correction



• The ACC is usually sufficient to adjust the color balance to get the best print output. You only need the printer gamma correction to fine-tune to meet user requirements.

Use SP modes if you want to modify the printer gamma curve created with ACC. You can adjust the gamma data for the following:

- Highlight
- Middle
- Shadow areas
- IDmax.

The adjustable range is from 0 to 30 (31 steps).

Copy Mode

- KCMY Color Balance Adjustment -

The adjustment uses only "Offset" values.



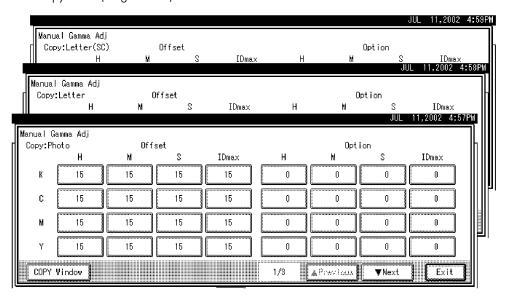
• Never change "Option" values (default value is 0).

Highlight (Low ID)	Levels 2 through 5 in the C4 chart 10-level scale
Middle (Middle ID)	Levels 3 through 7 in the C4 chart 10-level scale
Shadow (High ID)	Levels 6 through 9 in the C4 chart 10-level scale
ID max	Level 10 in the C4 chart 10-level scale (affects the entire image density.)
Offset	The higher the number in the range associated with the low ID, middle ID, high ID, and ID max, the greater the density.

4

There are four adjustable modes (can be adjusted with SP4-918-009):

- Copy Photo mode
- · Copy Letter mode
- Copy Letter (Single Color) mode
- Copy Photo (Single Color) mode



- Adjustment Procedure -

- 1. Copy the C-4 chart in the mode that you want to adjust.
- 2. Enter the SP mode.
- 3. Select "Copy SP."
- 4. Select SP4-918-009.
- 5. Adjust the offset values until the copy quality conforms to the standard (* the table below).



- 1. Never change "Option" value (default value is "0").
- 2. Adjust the density in this order: "ID Max," "Middle," "Shadow," "Highlight."

- Photo Mode, Full Color -

	Item to Adjust	Level on the C-4 chart	Adjustment Standard
1	ID max: (K, C, M, and Y)	1 2 3 4 5 6 7 8 9 10	Adjust the offset value so that the density of level 10 matches that of level 10 on the C-4 chart.

2	Middle (Middle ID) (K, C, M, and Y)	1 2 3 4 5 6 7 8 9 10	Adjust the offset value so that the density of level 6 matches that of level 6 on the C-4 chart.
3	Shadow (High ID) (K, C, M, and Y)	1 2 3 4 5 6 7 8 9 10	Adjust the offset value so that the density of level 8 matches that of level 8 on the C-4 chart.
4	Highlight (Low ID) (K, C, M, and Y)	1 2 3 4 5 6 7 8 9 10	Adjust the offset value so that dirty background does not show on the copy and the density of level 3 is slightly lighter than that of level 3 on the C-4 chart.
5	K Highlight (Low ID) (C,M, and Y) <on color="" copy="" full="" the=""></on>	1 2 3 4 5 6 7 8 9 10	Adjust the offset value so that the color balance of black scale levels 3 through 5 in the copy is seen as gray (no C, M, or Y should be visible). If the black scale contains C, M, or Y, do steps 1 to 4 again.

- Photo Mode, Single Color -

	Item to Adjust	Level on the C-4 chart	Adjustment Standard
1	ID max: (K)	1 2 3 4 5 6 7 8 9 10	Adjust the offset value so that the density of level 10 matches that of level 10 on the C-4 chart.
2	Middle (Middle ID) (K)	1 2 3 4 5 6 7 8 9 10	Adjust the offset value so that the density of level 6 matches that of level 6 on the C-4 chart.
3	Shadow (High ID) (K)	1 2 3 4 5 6 7 8 9 10	Adjust the offset value so that the density of level 8 matches that of level 8 on the C-4 chart.
4	Highlight (Low ID) (K)	1 2 3 4 5 6 7 8 9 10	Adjust the offset value so that dirty background does not show on the copy and the density of level 3 is slightly lighter than that of level 3 on the C-4 chart.

- Text (Letter) Mode, Full Color -

	Item to Adjust	Level on the C-4 chart (K)	Adjustment Standard	
1	ID max: (K, C, M, and Y)	1 2 3 4 5 6 7 8 9 10	Adjust the offset value so that the density of level 10 matches that of level 10 on the C-4 chart.	
2	Middle (Middle ID) (K, C, M, and Y)	1 2 3 4 5 6 7 8 9 10	Adjust the offset value so that the density of level 6 matches that of level 6 on the C-4 chart.	
3	Shadow (High ID) (K, C, M, and Y)	1 2 3 4 5 6 7 8 9 10	Adjust the offset value so that the density of level 8 matches that of level 8 on the C-4 chart.	
4	Highlight (Low ID) (K, C, M, and Y)	1 2 3 4 5 6 7 8 9 10	Adjust the offset value so that dirty background does not show on the copy and the density of level 3 is slightly lighter than that of level 3 on the C-4 chart.	

- Text (Letter) Mode, Single Color -

	Item to Adjust	Level on the C-4 chart (K)	Adjustment Standard	
1	ID max: (K)	1 2 3 4 5 6 7 8 9 10	Adjust the offset value so that the density of level 10 matches that of level 10 on the C-4 chart.	
2	Middle (Middle ID) (K)	1 2 3 4 5 6 7 8 9 10	Adjust the offset value so that the density of level 6 matches that of level 6 on the C-4 chart.	
3	Shadow (High ID) (K)	1 2 3 4 5 6 7 8 9 10	Adjust the offset value so that the density of level 8 matches that of level 8 on the C-4 chart.	
4	Highlight (Low ID) (K)	1 2 3 4 5 6 7 8 9 10	Adjust the offset value so that dirty background does not show on the copy and the density of level 3 is slightly lighter than that of level 3 on the C-4 chart.	



Text parts of the test pattern cannot be printed clearly after you adjust "shadow" as shown above. At
this time, check if the 5 line/mm pattern at each corner is printed clearly. If it is not, adjust the offset
value of "shadow" again until it is.

Printer Mode

There are six adjustable modes (select these modes with printer SP1-102-001):

- 1200 x 1200 photo mode
- 1200 x 1200 text mode
- 2400 x 600 photo mode
- 2400 x 600 text mode
- 1800 x 600 photo mode
- 1800 x 600 text mode
- 600 x 600 photo mode
- 600 x 600 text mode

	K	С	М	Y
Highlight	SP1-104-1	SP1-104-21	SP1-104-41	SP1-104-61
Shadow	SP1-104-2	SP1-104-22	SP1-104-42	SP1-104-62
Middle	SP1-104-3	SP1-104-23	SP1-104-43	SP1-104-63
IDmax	SP1-104-4	SP1-104-24	SP1-104-44	SP1-104-64

- Adjustment Procedure -

- 1. Do ACC for the printer mode.
- 2. Turn the main power off and on.
- 3. Enter SP mode.
- 4. Select "Printer SP".
- 5. Select SP1-102-001. Then select the necessary print mode to adjust.
- 6. Choose SP1-103-1 to print out a tone control test sheet if you want to examine the image quality for these settings.
- 7. Adjust the color density with SP1-104. Compare the tone control test sheet with the C4 test chart.



- Adjust the density in this order: "ID Max", "Shadow", "Middle", "Highlight".
- 8. Use SP1-105-001 to keep the adjusted settings.

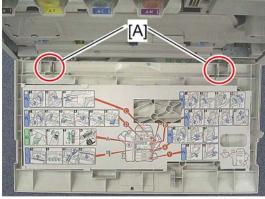
Exterior Covers

Front Door



b222r512

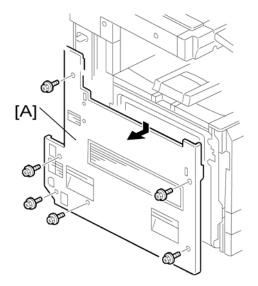
1. Open the front door [A].



d027r513

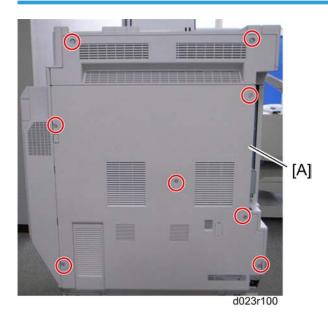
2. Remove the two pins [B], and then remove the front cover.

Left Cover



1. Left cover [A] (🛱 x 6)

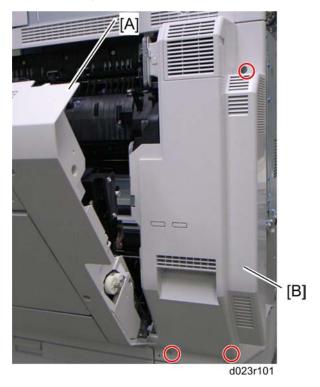
Rear Cover



1. Rear cover [A] (🛱 x 8)

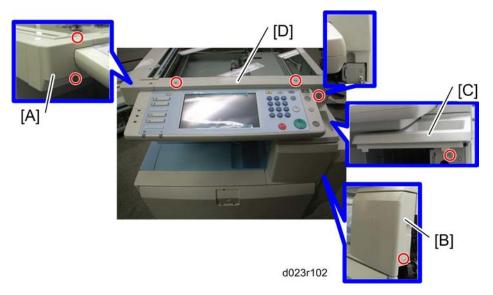
Right Rear Cover

1. Rear cover (p.169 "Rear Cover")

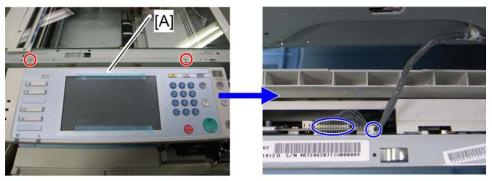


- 2. Open the right door [A].
- 3. Right rear cover [B] (F x 3)

Operation Panel



- 1. Top left front cover [A] (F x 2)
- 2. Open the right door.
- 3. Front right cover [B] (Fx 1)
- 4. Clip table cover [C] (x 1)
- 5. Top front cover [D] (\$\hat{p} \times 3)

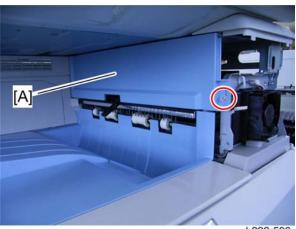


d023r103

6. Operation panel [A] (♠ x 2, 🗐 x 1, 🗐 x 1)

Paper Exit Cover

1. Front right cover (p.171 "Operation Panel")

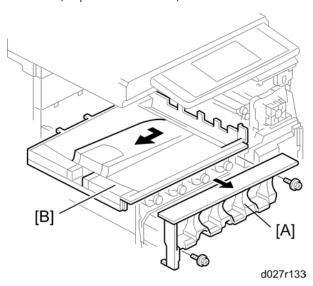


b222r593

2. Paper exit cover [A] ($\mathscr{F} \times 1$)

Inner Tray

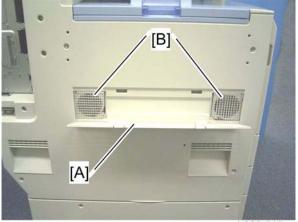
- 1. Image transfer belt unit (p.213 "Image Transfer Belt Unit")
- 2. Paper exit cover (p.171 "Paper Exit Cover")
- 3. Left cover (p.169 "Left Cover")



- 4. Toner cartridge cover [A] ($\mathscr{F} \times 2$)
- 5. Inner tray [B]

4

Dust Filter

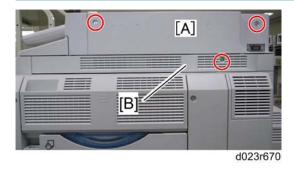


b222r516

- 1. Dust filter cover [A]
- 2. Two dust filters [B]

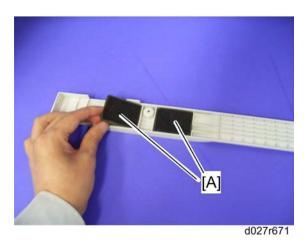
Ozone Filter

Ozone filters for the scanner unit



- 1. Scanner right cover [A] ($\mathscr{F} \times 2$)
- 2. Right top cover [B] (x 1)

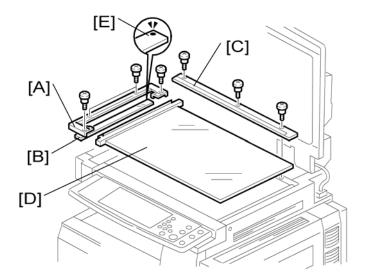




3. Ozone filters [A] in the right top cover.

Scanner Unit

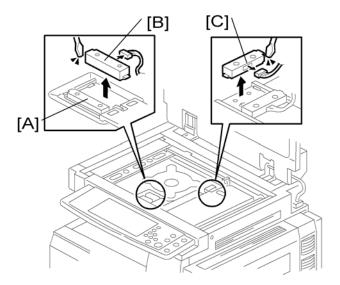
Exposure Glass



- 1. Glass cover [A] (🛱 x 4)
- 2. ARDF exposure glass [B]
- 3. Rear scale [C] (🛱 x 3)
- 4. Exposure glass with left scale [D]



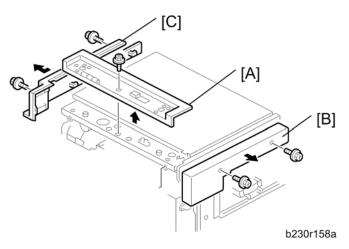
• Position the white marker [E] at the rear-left corner and the black or blue marker at the front-left corner when you reattach the ARDF exposure glass.



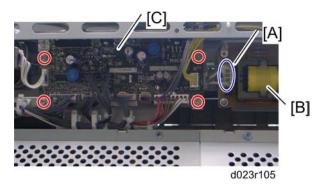
- 1. Exposure glass with left scale (p.175 "Exposure Glass")
- 2. Original length sensor bracket [A] (x 1, 2x1)
- 3. Original length sensors [B] (snap, 록 x 1 each)
- 4. The number of the original length sensors depends on the model; 3 for EU, 2 for others.
- 5. Original width sensors [C] (snap, 🖗 x 1, 🗐 x1 each)

Exposure Lamp

- 1. Rear cover (p.169 "Rear Cover")
- 2. Operation panel (p.171 "Operation Panel")
- 3. Exposure glass (p.175 "Exposure Glass")



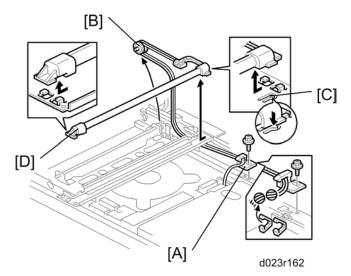
- 4. Scanner rear cover [A] (Fx 1)
- 5. Scanner left cover [B] (\$\hat{\beta} \times 2)
- 6. Scanner right cover [C] (F x 2)



- 7. Disconnect the connector [A] from the lamp stabilizer [B].
- 8. SIO [C] (ℱx 4, ℡ x All)

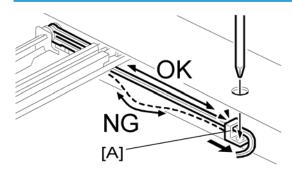


d023r106



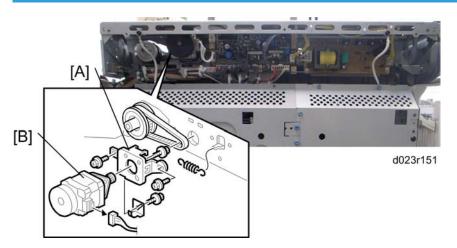
- 10. Release the clamp [A] ($\hat{\mathscr{F}}$ x 1).
- 11. Remove the pulley [B].
- 12. Hold down the snap [C], and then slide the exposure lamp [D] to the front side.
- 13. Exposure lamp [D]

Reassembling



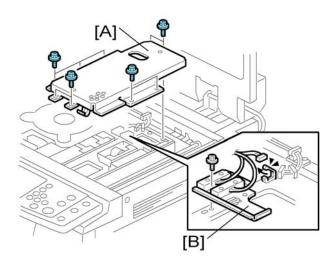
Run the cable so there is no slack. Slide the clamp [A] to adjust the cable slack.

Scanner Motor

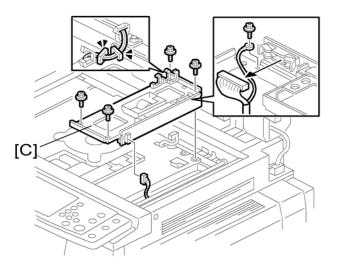


- 1. Rear cover (p.169 "Rear Cover")
- 2. Scanner motor assembly [A] ($\widehat{\mathscr{F}}$ x 2, spring x 1)
- 3. Scanner motor [B] (♠ x 2, ➡ x 1,)

Sensor Board Unit (SBU)



- 1. Exposure glass (p.175 "Exposure Glass")
- 2. SBU cover bracket [A] (\$\hat{\new} \times 9)
- 3. Original length sensor bracket [B] (& x 1, ఓ x 1)



4. Sensor board unit [C] (F x 4, Grand screw x 1, 🗗 x 2, 🗟 x 2)

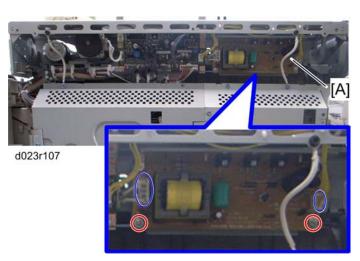
When reassembling

Adjust the following SP modes after you replace the sensor board unit:

- SP4-008 (Sub Scan Mag): See "Image Adjustment: Scanning".
- SP4-010 (Sub Mag Reg.): See "Image Adjustment: Scanning".
- SP4-011 (Main Scan Reg): See "Image Adjustment: Scanning".
- SP4-688 (DF: Density Adjustment): Use this to adjust the density level if the ID of outputs made in the DF and Platen mode is different.

Exposure Lamp Stabilizer

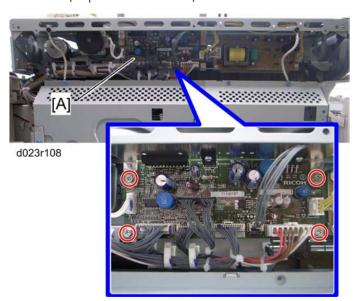
1. Rear cover (p.169 "Rear Cover")



2. Exposure lamp stabilizer [A] ($\mathscr{F} \times 2$, $\mathsf{E} \times 2$)

SIO (Scanner In/Out) Board

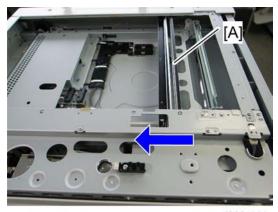
1. Rear cover (p.169 "Rear Cover")



2. SIO [A] (♠ x 4, 🗐 x All)

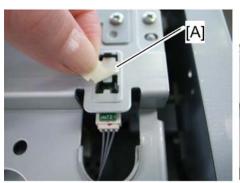
Scanner HP Sensor

- 1. Scanner left cover and scanner rear cover (p.176 "Exposure Lamp")
- 2. Exposure glass (p.175 "Exposure Glass")



d023r111

3. Move the 1st scanner carriage [A] to the right side.



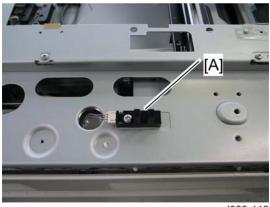


d023r112

- 4. Remove the mylar [A]
- 5. Remove the scanner HP sensor [B] (x 1, three snaps)

Platen Cover Sensor

1. Scanner left cover and scanner rear cover (p.176 "Exposure Lamp")

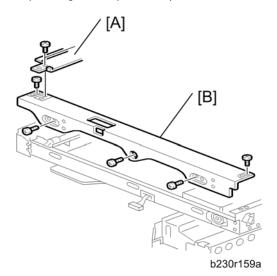


d023r113

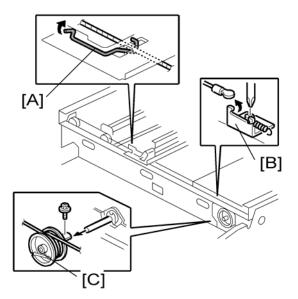
2. Platen cover sensor [A] (♀x 1, □ x 1)

Front Scanner Wire

1. Exposure glass (p.175 "Exposure Glass")



- 2. Scanner left stay [A] (\$\hat{k}^2 x 3)
- 3. Front frame [B] (\$\hat{k}^2 \times 5)\$



- 4. Front scanner wire clamp [A]
- 5. Front scanner wire bracket [B] (🖗 x 1)
- 6. Front scanner wire and scanner drive pulley [C] (\mathscr{F} x 1)

Reinstalling the Front Scanner Wire

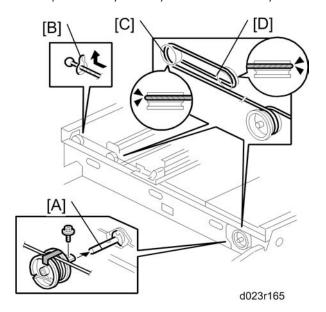


b230r0164

- 1. Position the center ball [A] in the middle of the forked holder.
- 2. Pass the right end (with the ball) [B] through the square hole. Pass the left end (with the ring) [C] through the notch.
- 3. Wind the right end counterclockwise (shown from the machine's front) five times. Wind the left end clockwise twice.



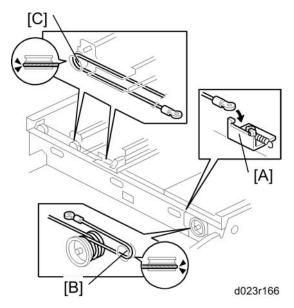
• The two red marks [D] come together when you have done this. Stick the wire to the pulley with tape. This lets you easily handle the assembly at the time of installation.



4. Install the drive pulley on the shaft [A].



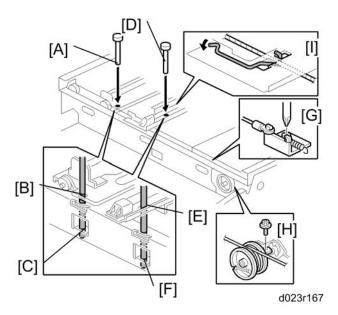
- Do not attach the pulley to the shaft with the screw at this time.
- 5. Insert the left end into the slit [B]. The end should go via the rear track of the left pulley [C] and the rear track of the movable pulley [D].



6. Hook the right end onto the front scanner wire bracket [A]. The end should go via the front track of the right pulley [B] and the front track of the movable pulley [C].



• Do not attach the scanner wire bracket with the screw at this time.



- 7. Remove the tape from the drive pulley.
- 8. Insert a scanner-positioning pin [A] through the 2nd carriage hole [B] and the left holes [C] in the front rail. Insert another scanner positioning pin [D] through the 1st carriage hole [E] and the right holes in the front rail [F].

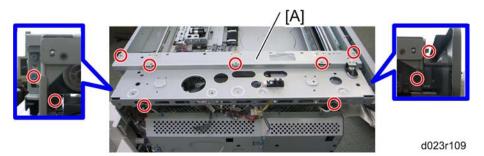
- 9. Insert two more scanner positioning pins through the holes in the rear rail.
- 10. Screw the drive pulley to the shaft [G].
- 11. Screw the scanner wire bracket to the front rail [H].
- 12. Install the scanner wire clamp [I].
- 13. Pull out the positioning pins.



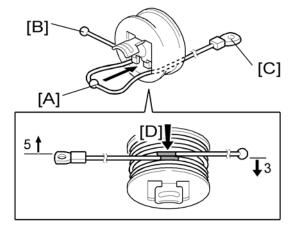
• Make sure the 1st and 2nd carriages move smoothly after you remove the positioning pins. Do steps 8 through 13 again if they do not.

Rear Scanner Wire

- 1. Exposure glass (p.175 "Exposure Glass")
- 2. Scanner left stay (p.183 "Front Scanner Wire")



- 3. Scanner rear frame [A] (F x 9, ground screw x 2, x All)
- 4. Follow the steps 3 through 5 in the "" Section. You can remove the rear scanner wire with the same manner for replacing the front scanner wire.



- 1. Position the center ball [A] in the middle of the forked holder.
- 2. Pass the left end (with the ball) [B] through the drive pulley notch. Pass the right end (with the ring) [C] through the drive pulley hole.
- 3. Wind the left end [B] clockwise (shown from the machine's front) five times. Wind the right end [C] counterclockwise three times.



- The two red marks [D] come together when you do this. Attach the wire to the pulley with tape.
 This lets you easily handle the assembly at the time of installation.
- 4. Install the drive pulley on the shaft.



- Do not attach the pulley on the shaft with the screw at this time.
- 5. Install the wire.



• The winding of the wire on the three pulleys at the rear of the scanner should be the same as the winding on the three pulleys at the front. This must show as a mirror image.

Example: At the front of the machine, the side of the drive pulley with the three windings must face the front of the machine. At the rear of the machine, it must face the rear.

6. Do steps 7 through 13 again in the "" Section.

Touch Panel Position Adjustment

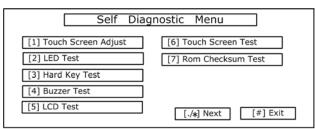


• It is necessary to calibrate touch panel at the following times:

- When you replace the operation panel.
- When you replace the controller board.
- When the touch panel detection function does not operate correctly

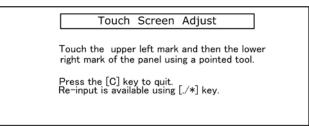
Do not use items [2] to [9] on the Self-Diagnostic Menu. These items are for design use only.

1. Press \P , press \P \P \P \P \P press \P \P times to open the Self-Diagnostics menu.



b178r548

- 2. On the touch screen press "Touch Screen Adjust" (or press 1).
- 3. Use a pointed (not sharp) tool to press the upper left mark $^{\mathbf{O}}\mathbf{k}$.



b178r549

- Press the lower right mark when "[™]o" shows.
- 5. Press [#] OK on the screen (or press $^{\scriptsize\textcircled{\#}}$) when you are finished.
- 6. Touch [#] Exit on the screen to close the Self-Diagnostic menu. Save the calibration settings.

Laser Optics

⚠ WARNING

• Turn off the main switch and unplug the machine before beginning any of the procedures in this section. Laser beams can cause serious eye injury.

Caution Decal Location

Caution decals are placed as shown below.



MARNING

• Be sure to turn off the main switch and disconnect the power plug from the power outlet before beginning any disassembly or adjustment of the laser unit. This copier uses a class IIIb laser beam with a wavelength of 655 nm and an output of 7 mW. The laser can cause serious eye injury.

Laser Optics Housing Unit

CAUTION

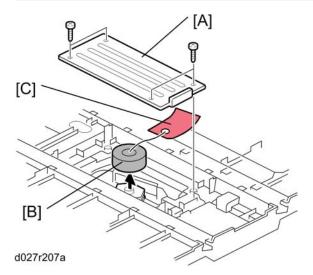
 Before installing a new laser optics housing unit, remove the sponge padding and the tag from the new unit.

U Note

- A new laser optics housing unit has a bracket to protect the LD units. When you install the new unit,
 do not remove the bracket until near the end of the installation procedure (the correct time is stated
 in the manual).
- This bracket protects a capacitor on the unit. If the bracket is removed too early, you could break the
 capacitor on the corner of the main frame when you install the new unit.

4

Preparing the new laser optics housing unit



- 1. Polygon motor cover [A] of the laser optics housing unit ($\mathscr{F} \times 4$)
- 2. Sponge padding [B]
- 3. Tag [C]
- 4. Reinstall the polygon motor cover [A].

Before removing the old laser optics housing unit

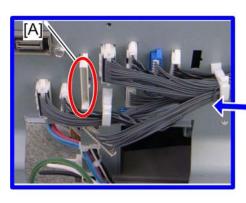
Do the following settings before removing the laser optics housing unit. These are adjustments for skew adjustment motors in the laser optics housing unit.

- 1. Plug in and turn on the main power switch of the copier.
- 2. Enter the SP mode.
- 3. Execute SP9511-001 to clear the L2 lens positioning motor setting for Magenta.
- 4. Execute SP9511-002 to clear the L2 lens positioning motor setting for Cyan.
- 5. Execute SP9511-003 to clear the L2 lens positioning motor setting for Yellow.
- 6. Exit the SP mode.
- 7. Turn off the main power switch and disconnect the power cord of the copier.

Recovery procedure for no replacement preparation of laser optics housing unit

If you did not do the procedure in 'Before removing the old laser optics housing' before removing the old laser optics housing unit, you must do the following.

1. Turn off the main power switch and disconnect the power cord of the copier.

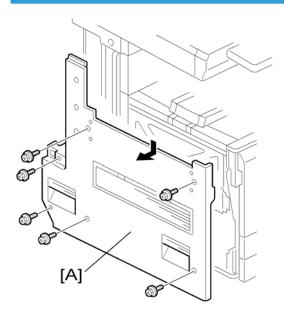




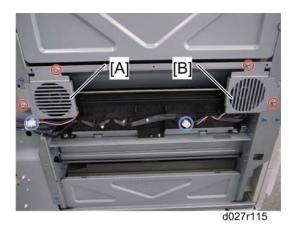
d027r610

- 3. Disconnect the harness [A] of the skew correction motor.
- 4. Do steps 1 to 7 of "Before removing the old laser optics housing unit".
- 5. Connect the harness [A] and reinstall the harness bracket and left cover.
- 6. Plug in and turn on the main power switch.

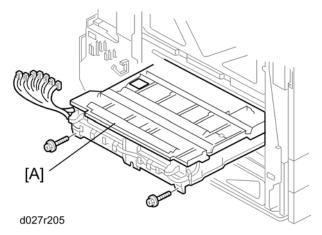
Removing the old laser optics housing unit



1. Left cover [A] (🛱 x 6)



- 2. Rear fan bracket [A] for the laser housing optics unit (\$\hat{E}\$ x 2, \$\mathbb{Z}\$ x 1)
- 3. Front fan bracket [B] for the laser housing optics unit (\mathscr{F} x 2, $\mathrel{\mathbb{Z}}$ x 1)

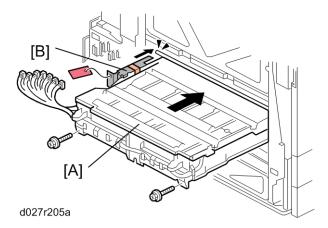


4. Remove the old laser optics housing unit [A] ($\mbox{$\widehat{\mathcal{F}}$} \times 2$, All $\mbox{$\mathbb{Z}^{0}$}$'s, $\mbox{$\mathbb{Z}$} \times 3$)

Installing a new Laser Optics Housing Unit



- A new laser optics housing unit has a bracket to protect the LD units. When you install the new unit,
 do not remove the bracket until near the end of the installation procedure (the correct time is stated
 in the manual).
- This bracket protects a capacitor on the unit. If the bracket is removed too early, you could break the
 capacitor on the corner of the main frame when you install the new unit.

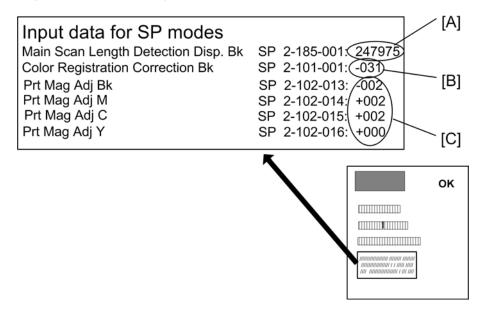


- 1. Push the new laser optics housing unit [A] slowly into the copier until the bracket [B] bumps against the frame of the copier.
- 2. Remove the bracket [B], and then push the new laser optics housing unit fully into the copier ($\mathscr{F} \times 2$, All \mathbb{Z} 's, $\mathbb{R} \times 3$).
- 3. Reassemble the machine.

After installing the new laser optics housing unit

Do the following adjustment after installing the new laser optics housing unit.

1. Plug in and turn on the main power switch.



2. Adjust the main scan magnification for K, M, C, Y.

• Input the standard values [C] provided with a new laser optics housing unit for the main scan magnification adjustment with SP2-102-013, 014, 015, 016.



- The values [C] are different for each laser optics housing unit.
- 3. Adjust the main scan magnification only for black (K).
 - Input the standard value [A] provided with a new laser optics housing unit for the main scan magnification adjustment with SP2-185-001.



- The value [A] is different for each laser optics housing unit.
- Print the test pattern (14: 1-dot trimming pattern in the SP2-109-003).
- Check that the left and right trim margin is within 4 ± 1 mm. If not, change the standard value for the main scan magnification adjustment.
- 4. Adjust the main scan registration only for black (K).
 - Input the registration value [B] provided with a new laser optics housing unit for the main scan registration adjustment with SP2101-001.

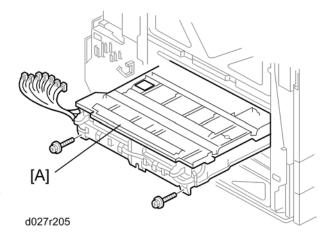


- The value [B] is different for each laser optics housing unit.
- Print the test pattern (14: 1-dot trimming pattern in the SP2-109-003).
- Check that the left trim margin is within 2 ± 1 mm. If not, change the registration value for the main scan registration adjustment.
- 5. Select "0" with SP2-109-003 after printing the "1-dot trimming pattern.
- 6. Do the line position adjustment.
 - First do SP2-111-3.
 - Then do SP2-111-1.

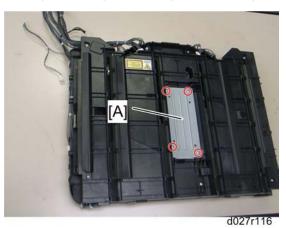
To check if SP 2-111-1 was successful, watch the screen during the process. A message is displayed at the end. Also, you can check the result with SP 2-194-10 to -12.

7. Exit the SP mode.

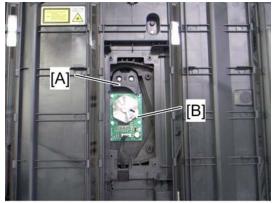
After you replace the housing unit, do the adjustments in the following section of the manual: Image Adjustment – Registration.



1. Laser optics housing unit [A] (p.190 "Laser Optics Housing Unit")



2. Polygon mirror motor cover [A] of the laser optics housing unit ($\hat{\mathscr{F}} \times 4)$



d027r117

- 3. Polygon mirror motor holder [A] (F x 2)
- 4. Polygon mirror motor [B] (♠ x 4, □ x 1)

After installing the polygon mirror motor:

- 1. Do the "Forced Line Position Adj. Mode c" (SP2-111-3).
- 2. Then do the "Forced Line Position Adj. Mode a" (SP2-111-1).

To check if SP 2-111-1 was successful, watch the screen during the process. A message is displayed at the end. Also, you can check the result with SP 2-194-10 to -12.

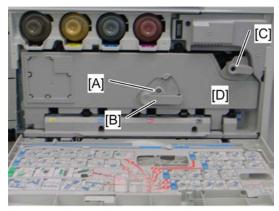
After you replace the motor, do the adjustments in the following section of the manual: Image Adjustment – Registration.

Image Creation

PCU



- Do not touch the OPC drum. Do not let metal objects touch the development sleeve.
- 1. Open the front door.



d027r118

- 2. Lever lock [A] (🛱 x 1)
- 3. Turn the drum positioning plate lever [B] and the image transfer unit lock lever [C] counter-clockwise.
- 4. Open the drum positioning plate [D].



d027r119

5. Pull out the PCU (hold the grip while you pull it out).

4

4

Drum Unit and Development Unit

The new drum unit has a front cover and a front joint. When you attach the new drum unit to the development unit, remove a front cover and a front joint at first.

And use them for reassembling the new drum unit and development unit.

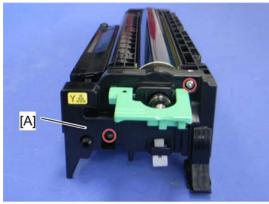
1. If you install a new drum unit, set SP 3902-xxx to "1".

Black: 3902-009Yellow: 3902-010

Cyan: 3902-011Magenta: 3902-012

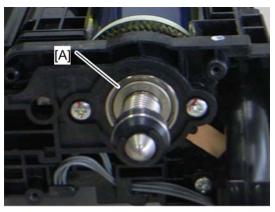


- If you do this, then the machine will reset the PM counter for the drum unit automatically, after you turn the power on again.
- 2. Turn the machine power off.
- 3. PCU (p.198 "PCU")



d027r120

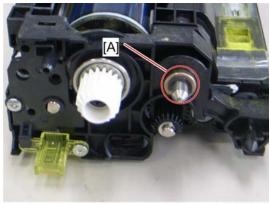
4. Front cover [A] (\$\hat{x} \times 2)



d027r121

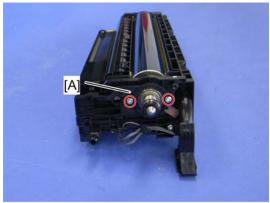


• Do not touch the bearing [A] after removing the front cover. The bearing is properly applied with lubricant.



d027r122

5. Remove the bushing [A] of the development roller at the rear of the PCU ($\mathbb C$ x 1).

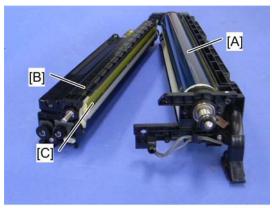


d027r123

6. Remove the front joint [A] (♀ x 2, □ x 1).

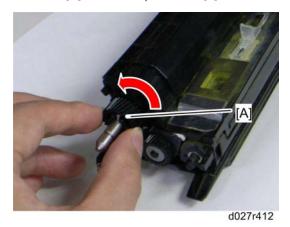


• The front joint [D] is firmly set. Remove it with a flat screwdriver.



d027r124

7. Drum unit [A] and Development Unit [B]



8. Rotate the development roller [A] five or six times in the counterclockwise direction.

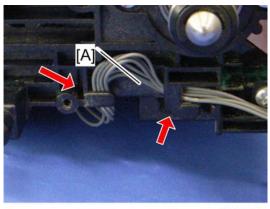


 This step removes developer that has stuck to the development roller, which would cause color unevenness.



- When the development unit is removed from the drum unit, clean the entrance mylar [C] with a vacuum.
- 9. If you change the development unit, do the ACC procedure.
- 10. Execute the drum phase adjustment with SP1902-001 twice.

When reassembling the PCU:



d027r681

• Make sure that the harness [A] is hooked as shown.

Developer

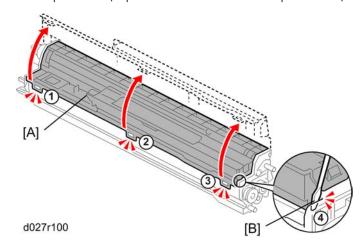
1. Set SP 3902-xxx to "1".

Black: 3902-005

Yellow: 3902-006 Cyan: 3902-007

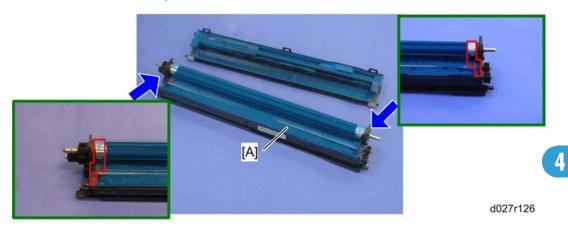
Magenta: 3902-008

- 2. Turn the machine power off.
- 3. Development unit (*p.199 "Drum Unit and Development Unit")



- 4. Hopper cover [A] (4 hooks)
 - Release the three hooks first in the correct order (from ① to ③).
 - Put the head of a screwdriver in the groove gap [B] as shown, and then release the hook $ext{@}$.

- Follow the correct order ① to ④. Otherwise, the hopper cover may be damaged.
- The hook 4 breaks easily.



- 5. Shake a bag of developer and pour it into the development hopper [A].
- 6. Reattach the hopper cover (hook x 3).

ACAUTION

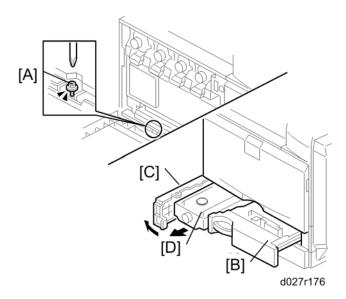
- Keep the developer off at both ends of the development unit enclosed in red lines in the diagram.
- 7. Turn the machine power on. The machine initializes the developer and resets the PM counter for the developer. (For details of the developer initialization result, see "Developer Initialization Result" in the "Troubleshooting" chapter.
- 8. Do the ACC procedure.

Toner Collection Bottle

If you will install a new bottle, and the old bottle is not in a full or near-full condition, then set SP 3902-017 to 1.



- If you do this, then the machine will reset the PM counter for the bottle automatically, after you turn the power on again.
- If the bottle is in a full or near-full condition, it is not necessary to do this.



- 1. Turn off the main power switch.
- 2. Open the front door and remove the screw [A].
- 3. Close the front door.
- 4. Pull out tray 1 [B].
- 5. Open the toner collection bottle door [C].
- 6. Pull out the toner collection bottle [D].

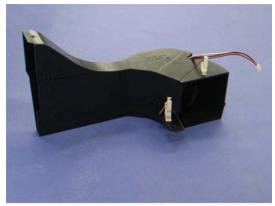
Second Duct Fan

- 1. Rear cover (p.169 "Rear Cover")
- 2. Right rear cover (p.170 "Right Rear Cover")
- 3. Open the controller box (p.287 "Controller Box")



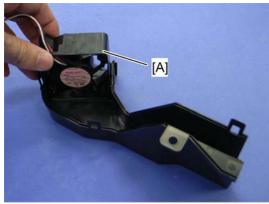
d027r127

4. Second duct [A] (ℰ x 2, 🕮 x 1, ឝ x 2)



d027r128

5. Split the second duct (4 hooks).



d027r129

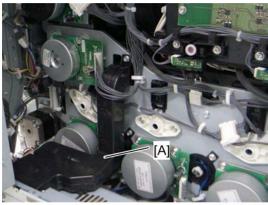
6. Second duct fan [A]

When reinstalling the second duct fan

Make sure that the second duct fan is installed with its decal facing to the front of the machine.

Third Duct Fan

- 1. Rear cover (p.169 "Rear Cover")
- 2. Right rear cover (p.170 "Right Rear Cover")
- 3. Controller box (p.287 "Controller Box")



d027r130



d027r131

5. Third duct fan [A] (3 hooks)

When reinstalling the third duct fan

Make sure that the third duct fan is installed with its decal facing to the upper side of the machine.

Toner Pump Unit

There are four pump units inside the machine. This procedure describes the replacement procedure only for one unit. If you need to replace another unit, do the same as this procedure.



• Put some sheets of paper on the floor before doing this procedure. Toner may fall on the floor.

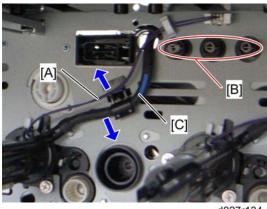


d027r132

- 1. Front door (p.169 "Rear Cover")
- 2. Image transfer belt unit (p.213 "Image Transfer Belt Unit")
- 3. All PCUs (**☞**p.198 "PCU")
- 4. Put a sheet of paper (A3/DLT) inside the machine as shown and on the floor.



• The sheet of paper on the floor is used in a later step.

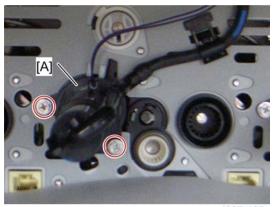


d027r134

5. Release the harness [A] from the clamp (x 1 for YCM, x 2 for K) and hook, and then disconnect the harness.



- Avoid touching these spring terminals [B].
- 6. Release the toner supply tube [C].



d027r135

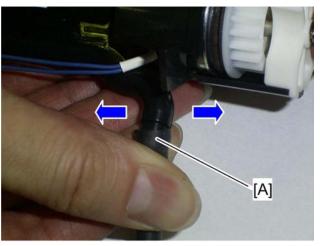
7. Remove the toner pump unit [A] ($\mathscr{F} \times 2$)





d027r136

Make sure that a sheet of paper is attached to the frame of the rear side. The picture on the left shows
a sheet of paper that is correctly set, but the picture on the right shows a sheet of paper that is not
correctly set. This sheet of paper prevents toner and screws from falling into the laser optics housing
unit through cutouts.

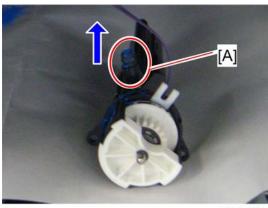


d027r705

- 1. Slowly remove the toner supply tube [A] from the toner pump unit by pulling the tube right and left.
- 2. Turn up the openings of the toner pump unit and toner supply tube just after removing the tube.

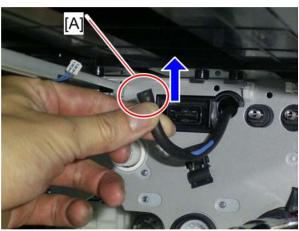


• If not, the toner may scatter away and fall down.



d027r137

3. Put the toner pump unit on the sheet of paper, which has been put in step 4, with its opening [A] up.

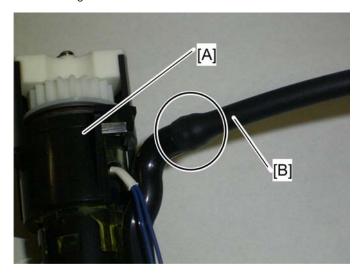


d027r707

4. Keep the opening [A] of the toner supply tube up, and then clip the opening of the toner supply.

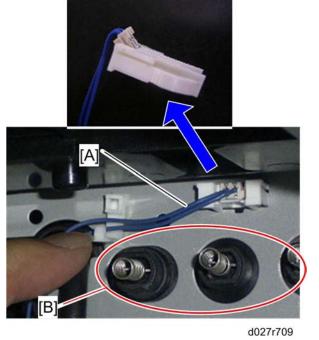
When you install the new toner pump unit

Before installing the new toner pump unit, mask the opening of the old toner pump unit with tape. Dispose of it following local rules.



- 1. Put a sheet of paper (A3/DLT) inside the machine.
- 2. Turn up the opening of the toner supply tube, and then remove the object that was used to clip the opening of the toner supply tube.
- 3. Insert the opening of the toner pump unit [A] into the opening of the toner supply tube [B] as far as possible.

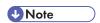




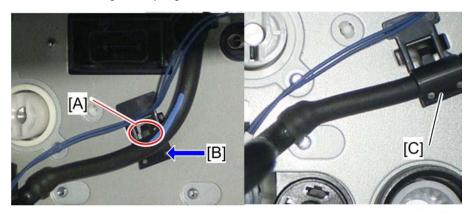
4. Connect the harness [A] to the connector of the machine.



- On the above picture, the magnified picture of the connector shows the easiest way to connect it.
- 5. Clamp the harness [A] (常 x 1 for YCM, 常 x 2 for K).



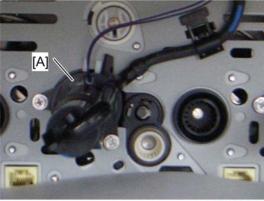
• Avoid touching these spring terminals [B].



d027r710

- 6. Pass the harness of the toner pump unit behind the hook [A], while pressing at [B].
- 7. Secure the toner supply tube with the holder [C], lifting up the edge of the holder "very gently".

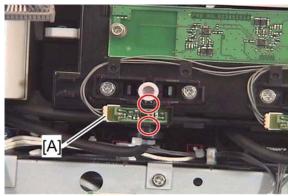
• Be careful when you lift the edge of the holder, because the holder is easily broken.



d027r135a

8. Insert the toner pump unit [A] into the rear frame of the machine ($\hat{\mathscr{E}} \times 2$).

Toner End Sensor



d027r042

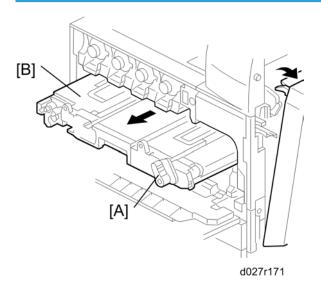
- 1. Rear cover (p.169 "Rear Cover")
- 2. Open the controller box (p.287 "Controller Box")
- 3. Toner end sensor [A] (\mathbb{Z} x 1, 2 hooks each)

4

4

Image Transfer

Image Transfer Belt Unit



- 1. Open the right door.
- 2. Open the front door.
- 3. Open the drum positioning plate. (p.198 "PCU")
- 4. Turn the image transfer belt unit lock lever [A] counterclockwise.
- 5. Pull out the image transfer belt unit [B] halfway.

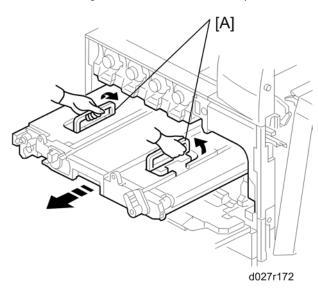
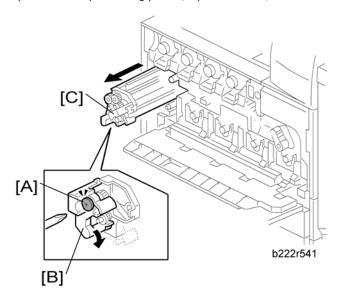


Image Transfer Belt Cleaning Unit

1. If you will install a new belt cleaning unit, then set SP 3902-015 to 1.



- If you do this, then the machine will reset the PM counter for the belt cleaning unit automatically, after you turn the power on again.
 - Do not use SP3902-015 or 013 if you replace the complete ITB unit.
- 2. Turn off the main power switch.
- 3. Open the right door.
- 4. Open the front door.
- 5. Open the drum positioning plate. (p. 198 "PCU")

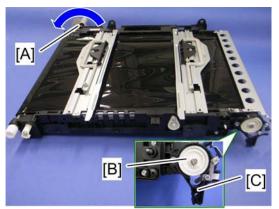


- 6. Loosen the screw [A].
- 7. Turn the lock lever [B] clockwise
- 8. Pull out the image transfer belt cleaning unit [C].

4

4

Image Transfer Belt



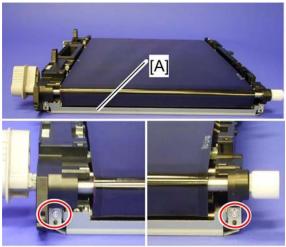
d027r138

- 1. Image transfer belt cleaning unit (*p.214 "Image Transfer Belt Cleaning Unit")
- 2. Image transfer belt unit (p.213 "Image Transfer Belt Unit")
- 3. Turn the image transfer unit contact lover [A] counterclockwise (as seen from the rear).
- 4. Gear [B] (hook x 1)
- 5. Turn the gear cover [C] clockwise (as seen from the rear) (${\widehat{\mathbb F}}^1\times 1$).



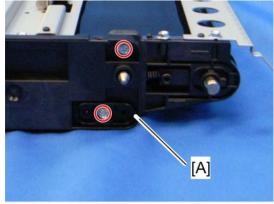
d027r139

6. Three stays [A] (🛱 x 6)



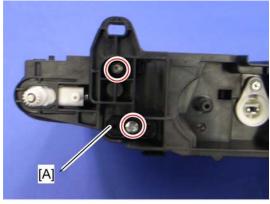
d027r545

7. Guide plate [A] (as seen from the right side of the machine) ($\hat{\mathscr{F}} \times 2)$



d027r545a

8. Remove the two screws and then the rear holder bracket [A] (as seen from the rear).



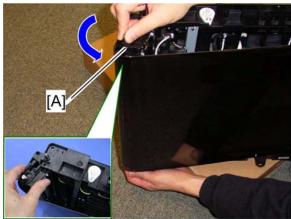
d027r140

9. Remove the two screws and then the front holder bracket [A] (as seen from the front).



b222r548

10. Put the front side of the image transfer belt unit on a corner of the table or a box as shown.



d027r549

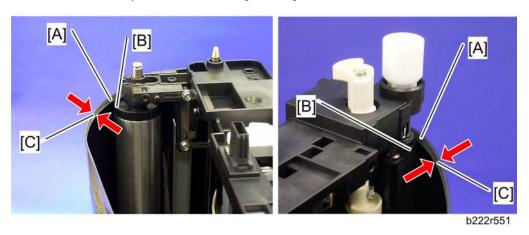
11. Pull the tension roller [A] as shown.



12. Image transfer belt [A]

When reinstalling the image transfer belt

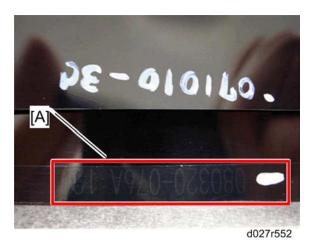
• Clean all rollers with dry cloth before installing the image transfer belt.



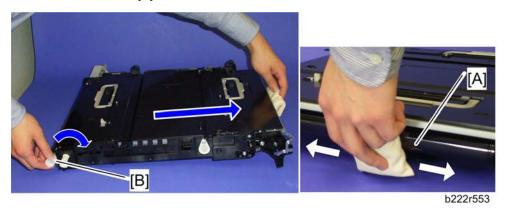
• There is a rim [A] at each edge of the transfer belt. The ends of all the rollers ([B] for example) in the transfer belt unit must be between the two rims.



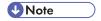
• There are two rims (width [C]: about 5 mm) on the underside of the front and rear edges of the image transfer belt.



 This belt must be installed the correct way around. When you reinstall the image transfer belt unit, install it with the number [A] on the belt at the rear side of the unit.



Put "Lubricant Powder" (B132 9700) on the surface of the image transfer belt [A], while you turn the
drive gear [B] at a constant speed, as shown. (The straight arrow in the picture shows belt movement
direction.) Lubricant powder prevents the image transfer cleaning blade from turning up.



Do not put the lubricant powder at the right side of the image transfer belt unit (the above picture
is taken from the rear). Otherwise, lubricant powder may damage the encoder sensor.

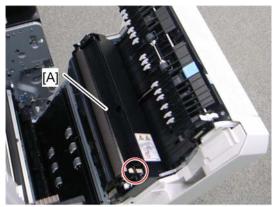
Paper Transfer

Paper Transfer Roller Unit

If you will install a new paper transfer unit, then set SP 3902-016 to 1.



• If you do this, then the machine will reset the PM counter for the paper transfer unit automatically, after you turn the power on again.



d027r141

- 1. Open the right door.
- 2. Release the white hook.
- 3. Paper transfer roller unit [A]

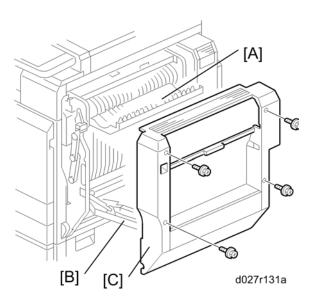
Paper Transfer Unit

If you will install a new paper transfer unit, then set SP3-902-016 to 1.

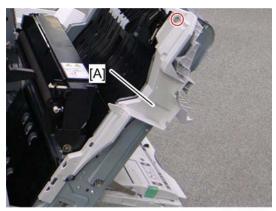


- If you do this, then the machine will reset the PM counter for the paper transfer unit automatically, after you turn the power on again.
- 1. Turn off the main power switch.

4

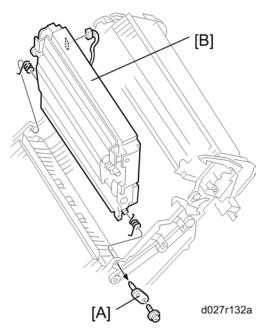


- 2. Open the duplex door [A].
- 3. Open the by-pass tray [B]
- 4. Right door cover [C] (\$\hat{k}^2 \times 4)\$
- 5. Open the right door.



d027r143

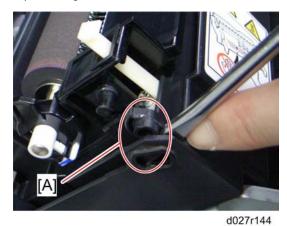
6. Right door inner cover [A] ($\hat{\mathcal{F}} \times 1$)



- 7. Pivot bracket [A] (🛱 x 1)
- 8. Paper transfer unit [B] ($\mathbb{Z}^{\parallel} \times 1$, 2 springs)

High Voltage Supply Board - Discharge Plate

1. Open the right door.

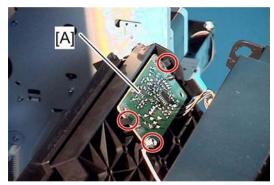


2. Release the front [A] and rear pivots of the paper transfer roller case.



d027r557

3. Paper transfer roller case [A]

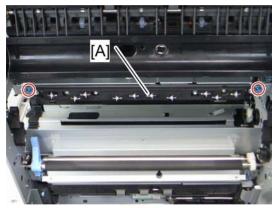


d027r558

4. High voltage supply board [A] ($\mathscr{F} \times 3$, x = 1, ground cable x = 1)

ID Sensor Board

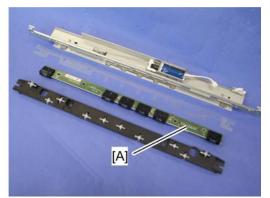
- 1. K PCU (**☞**p.198 "PCU")
- 2. Open the right door.
- 3. Fusing unit (p.248 "Fusing Unit")
- 4. Image transfer belt unit (p.213 "Image Transfer Belt Unit")



d027r145

5. ID sensor unit [A] ($\hat{\mathscr{F}} \times 2$, $\mathbb{Z} \times 2$, $\mathbb{Z} \times 1$)



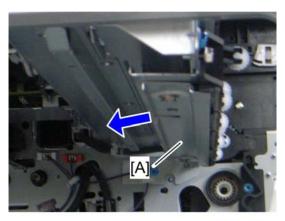


d027r146

6. ID sensor board [A] (\$\hat{k}^2 x 6)

Cleaning for ID sensors

ID sensors require a cleaning procedure every EM. Do the following steps for ID sensor cleaning.



d027r147

- 1. K PCU (**☞**p.198 "PCU")
- 2. Fusing unit (p.248 "Fusing Unit")
- 3. Image transfer belt unit (p.213 "Image Transfer Belt Unit")
- 4. Slide the ID sensor shutter [A] to the left side.
- 5. Clean the ID sensors keeping the ID sensor shutter to the left.

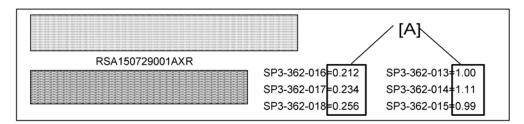
After installing a new ID sensor unit/board

Do the following adjustment after installing a new ID sensor unit/board.

- 1. Plug in and turn on the main power switch of the copier.
- 2. Enter the SP mode.
- 3. Input all correction coefficients [A] for the ID sensor with the SP modes referring to the barcode sheet provided with the new ID sensor unit/board.

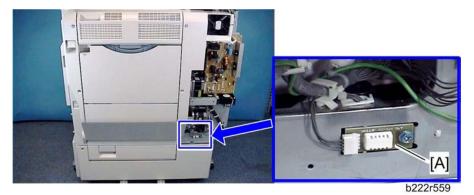


- For example, input "1.00" with SP3-362-013.
- 4. Exit the SP mode.



Temperature and Humidity Sensor

- 1. Rear cover (p.169 "Rear Cover")
- 2. Right rear cover (*p.170 "Right Rear Cover")

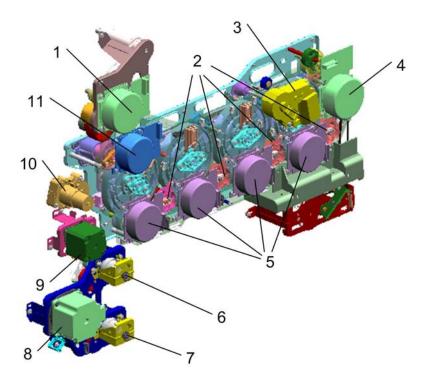


3. Temperature and humidity sensor [A] ($\mbox{\ensuremath{\not}\sl P} \times 1$, $\mbox{\ensuremath{\sl P} \hspace{-0.07cm} =} \times 1$

4

4

Drive Unit



The drawing above shows the drive unit layout.

- 1. Fusing/paper exit motor
- 2. Development clutches
- 3. Image transfer belt contact motor
- 4. Toner transport motor
- 5. Drum/Development drive motors
- 6. Paper feed clutch Tray 1

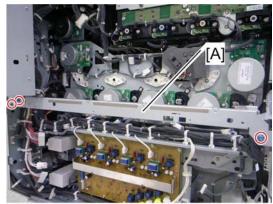
- 7. Paper feed clutch Tray 2
- 8. Paper feed motor
- 9. Registration motor
- 10. Paper transfer contact motor
- 11. ITB drive motor

There are some motors and clutches that are not shown in the above drawing:

- Tray lift motor 1 and 2
- Duplex inverter motor
- Duplex/By-pass Motor

- Junction gate 1 motor
- Shutter motor
- By-pass clutch

- 1. All PCU's (p.198")
- 2. Image transfer belt unit ("p.213")
- 3. Rear cover ("p.169")
- 4. Open the controller box (p.287")
- 5. Third duct ("p.205")
- 6. Left cover ("p.169")
- 7. PSU bracket ("p.292")



d027r148

8. Remove the rear stay [A] (\mathscr{F} x 3).



d027r149

9. Remove three clamps (red arrows) and release seven clamps (blue arrows).

4



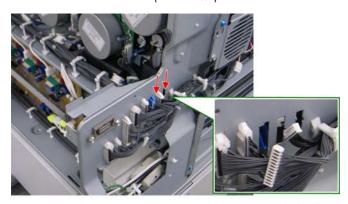
d027r150

10. Release seven clamps and turn each harness aside.



d027r151

11. Disconnect four connectors (red arrows).



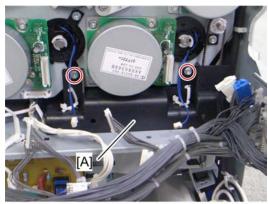
d027r152

12. Disconnect two connectors (red arrows) and put these harnesses inside the machine.



d027r153

- 13. Disconnect each connector (red circles) from the drum/development drive motors ($\mathbb{Z} \times 1$, $\mathbb{R} \times 1$ each).
- 14. Disconnect each connector (blue circles) from the development clutches (\mathbb{Z}^{3} x 1 each).



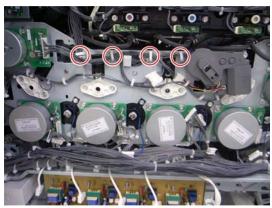
d027r155

15. Cover [A] (x 2)



d027r156

16. Disconnect eight connectors from the high voltage supply board ($\mathbb{Z} \times 8$, $\times \times 2$).



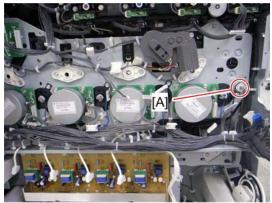
d027r157h

17. Release four clamps (red circles) and turn the harnesses aside.

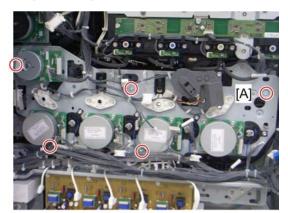


d027r158

- 18. Disconnect five connectors (red circles) (x 5).
- 19. Toner transport motor [A] ($\mathscr{F} \times 3$)



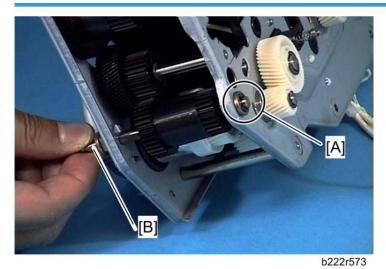
d027r159



d027r160a

21. Gear unit [A] (x 8)

When installing the drive unit



Make sure that the bushing [A] is fully set in the frame of the gear unit before installing the timing belt and pulley to the shaft [B].

Adjustment after replacing the gear unit

Do the following procedures after replacing the gear unit.

- 1. Turn on the main power switch.
- 2. Enter "Copy SP" in the SP mode.
- 3. Do "Amplitude Control" with SP1-902-001.

- 4. Check the result of the Amplitude Control with SP1-902-002.
 - 0: Success, 1: Failure due to no sampling data,
 - 2: Failure due to insufficient number of pattern detections

When the result of this adjustment is "1" or "2":

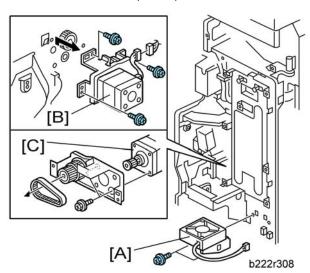
- Check that all the PCUs are correctly set and that the image transfer belt unit is correctly set.
- Do "Amplitude Control" again after checking the PCUs and image transfer belt unit.

When the result is still "1" or "2" after checking the PCUs and image transfer belt unit:

- Check that the gear unit is installed correctly.
- 5. Exit the SP mode.

Registration Motor

- 1. Rear cover ("p.169")
- 2. Right rear cover ("p.170")
- 3. Ventilation duct ("p.292")
- 4. Turn the harnesses aside (婦 x 5)



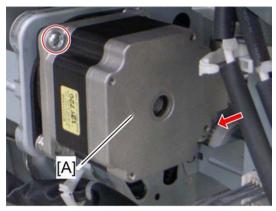
- 5. Fusing power supply board fan bracket [A] (x 2, 🗐 x 1)
- 6. Registration motor assembly [B] (🖗 x 3, 🗐 x 1)
- 7. Registration motor [C] ($\mathscr{F} \times 2$, timing belt)

- 1. Rear cover ("p.169")
- 2. Right rear cover ("p.170")



d027r161

3. Release the two clamps.



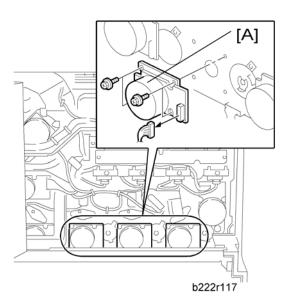
d027r162a

4. Paper feed motor [A] (\mathbb{Z} x 1, \mathscr{F} x 2, timing belt)

Drum/Development Motors for M, C, and Y

- 1. Rear cover ("p.169")
- 2. PSU bracket ("p.292")
- 3. Open the controller box.

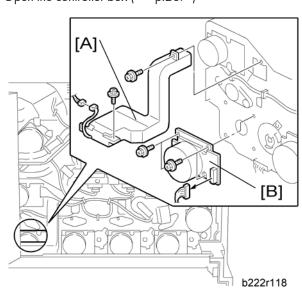
4



4. Drum/Development motors (three motors, one each for MCY) [A] ($\mathscr{F} \times 4$, $\mathsf{T} \times 1$ each)

Drum/Development Motor-K

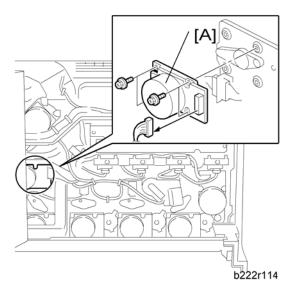
- 1. Rear cover (p.169")
- 2. PSU bracket ("p.292")
- 3. Open the controller box (p.287")



4. Third duct [A] (♠ x 2, 🗐 x 1)

- ITB Drive Motor
 - 1. Rear cover (p.169")
 - 2. Open the controller box ("p.287")

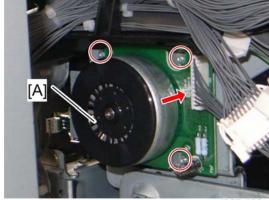
5. Drum/Development motor-K [B] (\mathscr{F} x 4, \bowtie x 1)



3. ITB drive motor [A] ($\hat{\mathscr{E}} \times 4$, $\mathbb{Z} \times 1$)

Fusing/Paper Exit Motor

- 1. Rear cover ("p.169")
- 2. Open the controller box (p.287")



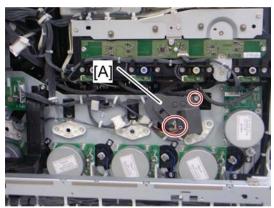
d027r163

4

3. Fusing/paper exit motor [A] (♠ x 3, □ x 1)

Image Transfer Belt Contact Motor

- 1. Rear cover ("p.169")
- 2. Open the controller box. (p.287")

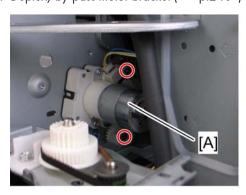


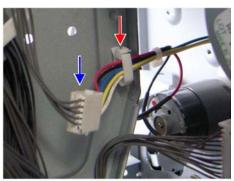
d027r164

3. Transfer belt contact motor [A] (F x 2, F x 2)

Paper Transfer Contact Motor

- 1. Rear cover (p.169")
- 2. Right rear cover ("p.170")
- 3. Open the controller box (p.287")
- 4. Duplex/by-pass motor bracket ("p.240")





d023r726

5. Paper transfer contact motor [A] (x 2, x 1, x 1,



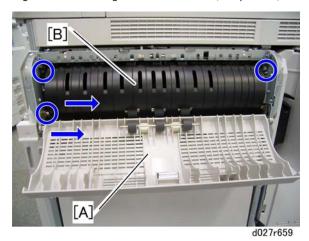
• The picture below shows how to use the screwdriver to remove the screws of the paper transfer contact motor.



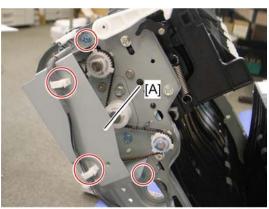
d023r727

Duplex Inverter Motor

- 1. Open the right door.
- 2. Right door cover, right door rear cover ("p.269")

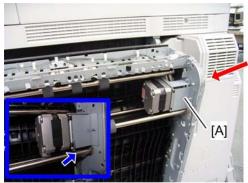


- 3. Duplex door [A] (2 hooks)
- 4. Duplex guide plate [B] (Fx 3, 2 hooks)



d027r166

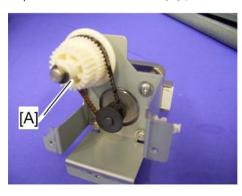
5. Duplex inverter motor bracket cover [A] ($\widehat{\mathscr{E}}^2 \times 2$, $\widehat{\mathbb{A}}^3 \times 2$)

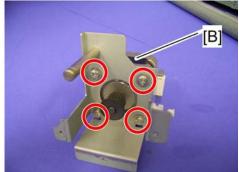




d027r660b

6. Duplex inverter motor bracket [A] (ℰ x 3, 🗐 x 1, 🗟 x 1)



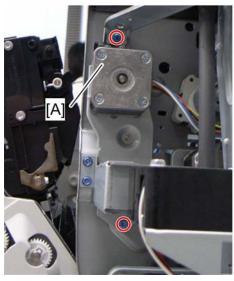


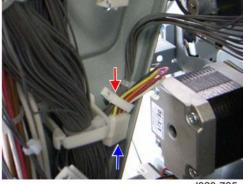
d027r661

- 7. Gear [A] (© x 1, belt x 1)
- 8. Duplex inverter motor [B] ($\mathscr{F} \times 4$)

Duplex/By-pass Motor

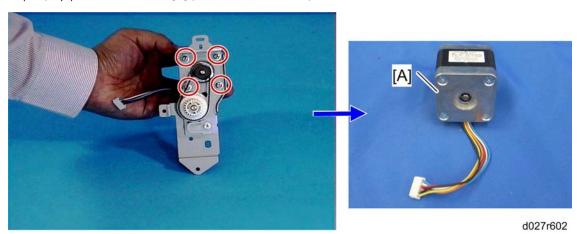
- 1. Rear cover ("p.169")
- 2. Right rear cover ("p.170")
- 3. Open the controller box (p.287").





d023r725

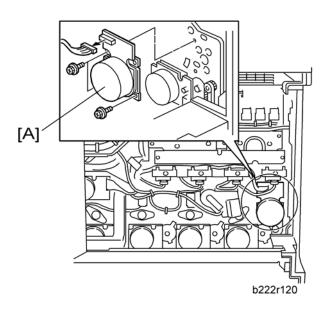
4. Duplex/by-pass motor bracket [A] (♠ x 2, ■x 1, ♠ x 1)



5. Duplex/by-pass motor [A] ($\hat{F} \times 4$, belt x 1)

Toner Transport Motor

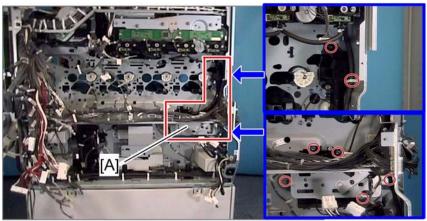
- 1. Rear cover ("p.169")
- 2. Open the controller box (p.287")



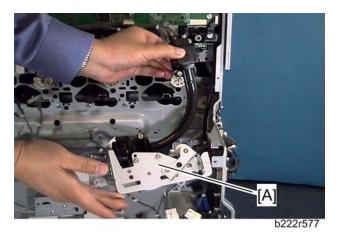
3. Toner transport motor [A] ($\mbox{\ensuremath{\beta}} \times 3$, $\mbox{\ensuremath{\Box}} \times 1$)

Toner Collection Unit

1. Gear Unit ("p.228")



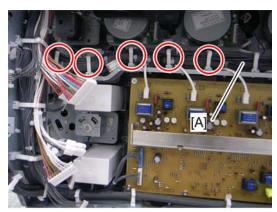
b222r576



2. Toner collection unit [A] ($\widehat{\!\mathscr{E}} \times 6, \stackrel{\mbox{\tiny L}}{\hookrightarrow} \times 1)$

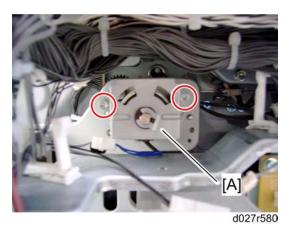
Paper Feed Clutches

- 1. Rear cover (p.169")
- 2. PSU bracket ("p.292")

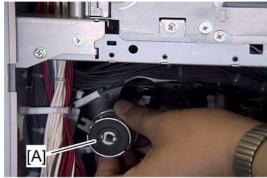


d027r578

3. Release five clamps, and then turn the harness [A] aside.

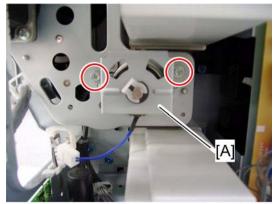


4. Paper feed clutch 1 bracket [A] ($\mbox{\ensuremath{\not{}}} \times 2$, $\mbox{\ensuremath{\not{}}} \times 1$, $\mbox{\ensuremath{\not{}}} \times 1$)



d027r581

5. Paper feed clutch 1 [A]



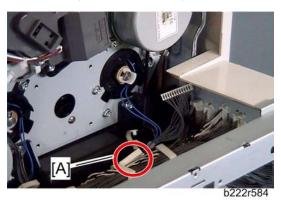
d027r582

d027r583

7. Paper feed clutch 2 [A]

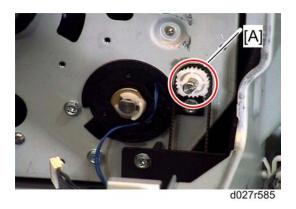
Development Clutch-Y

- 1. Rear cover ("p.169")
- 2. PSU bracket ("p.292")
- 3. Open the controller box. ("p.287").
- 4. Drum/development motor-Y ("p.234")

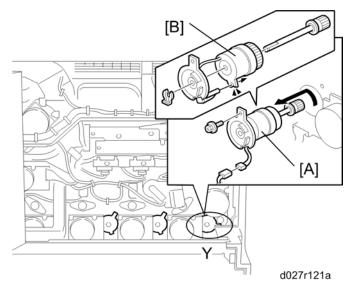


5. Disconnect the connector [A] (□ x 1).

4



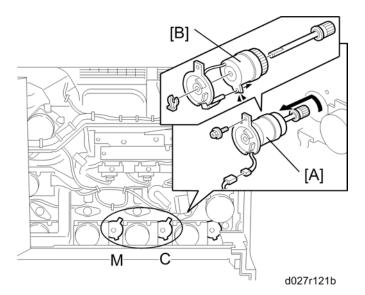
6. Remove the pulley and bushing [A].



- 7. Turn the development clutch unit [A] counter-clockwise and then pull it out ($\mbox{\ensuremath{\not{\not}}} \times 1$).
- 8. Development clutch-Y [B] (x 1)

Development Clutches for M and C

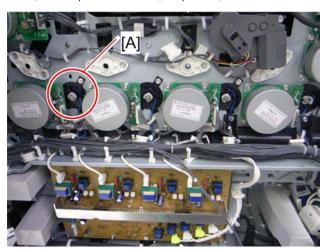
- 1. Rear cover ("p.169")
- 2. PSU bracket ("p.292")
- 3. Open the controller box. (p.287").
- 4. Drum/development motors for M and C ("p.234")
- 5. Disconnect the connector for each development clutch (\mathbb{Z} x 1).



- 6. Turn the development clutch unit [A] counter-clockwise and then pull it out (\mathscr{F} x 1).
- 7. Development clutches for M and C [B] ($\langle \overline{\rangle} \rangle \times 1$)

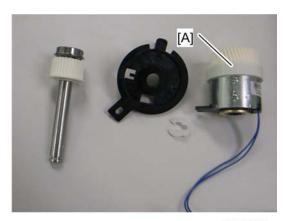
Development Clutch-K

- 1. Rear cover ("p.169")
- 2. PSU bracket ("p.292")
- 3. Open the controller box. (p.287")
- 4. Drum/development motor-K ("p.235")



d027r586

5. Turn the development clutch unit [A] counter-clockwise and then pull it out (\mathscr{F} x 1).



d027r167

6. Development clutch-K [A] ($\overline{\lozenge}$ x 1)

Fusing

PM Parts

PM Parts	Replacement Procedure
Heating Roller	▼ p.256 "Heating, Fusing and Tension Roller"
-Bearing	▼ p.253 "Fusing Belt and Pressure Roller"
-Insulating Bushing	▼ p.253 "Fusing Belt and Pressure Roller"
Fusing Belt	▼ p.253 "Fusing Belt and Pressure Roller"
Fusing Roller	
-Bearing	
Pressure Roller	▼ p.253 "Fusing Belt and Pressure Roller"
-Bearing	p.260 "Pressure Roller Bearing"
Heating Roller Thermistor	▼ p.258 "Heating Roller Thermistor"
Pressure Roller Thermistor	p.258 "Pressure Roller Thermistor and Thermostat"
Lower Cover	
Stripper Plate	
Entrance Guide Plate	
Exit Guide Plate	
Thermopile	☞ p.262 "Thermopile"

Fusing Unit

CAUTION

- Turn off the main switch and wait until the fusing unit cools down before beginning any of the procedures in this section. The fusing unit can cause serious burns.
- 1. If you will install a lot of new parts in the fusing unit (at PM for example), then set SP 3902-014 to "1".

RTB 23

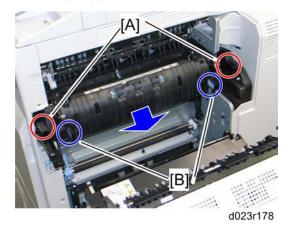
Important Information about the Detection of a New Fusing Unit



- If you do this, then the machine will reset the PM counter for the fusing unit automatically, after you turn the power on again.
 - Do not do this if you replace the complete fusing unit. This is because the fusing unit has a new detection mechanism.
- 2. Turn off the main power switch.
- 3. Open the right door.



- 4. Front fusing stopper [A] (F x 1)
- 5. Rear fusing stopper [B] (F x 1)

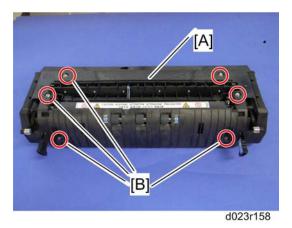


- 6. Release the lock levers [A].
- 7. Hold the fusing unit handles [B], and then pull out the fusing unit.

Pressure Roller Lamp

1. Fusing unit (p.248 "Fusing Unit")

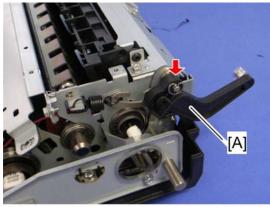




2. Fusing upper cover [A] ($\hat{\mathbb{F}} \times 6$)

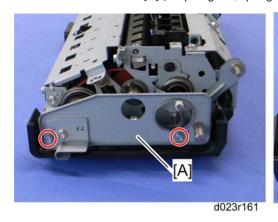


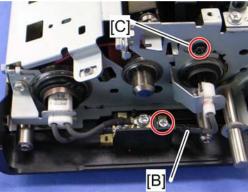
• These are four stepped screws [B] on the fusing upper cover.



d023r159

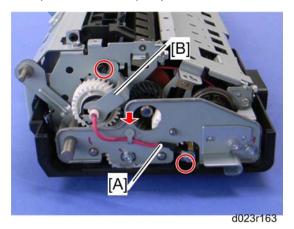
3. Lock lever front and rear [A] (snap ring $x\ 1$, spring $x\ 1$ each)





d023r179

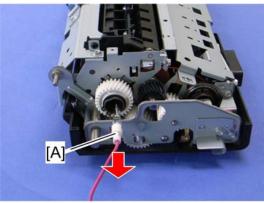
- 4. Front side stay [A] (\$\hat{x} \times 2)
- 5. Pressure roller lamp cable [B] (x 1)
- 6. Front pressure roller lamp stay [C] ($\hat{\mathcal{E}}$ x 1)



7. Release the pressure roller lamp cord [A] ($\mathscr{F} \times 1$).



- The color of the fusing lamp cord differs depending on the destination.
- Red: 220 240 V, Blue: 120 V
- 8. Rear pressure roller lamp stay [B] (\$\hat{\beta} \times 1)

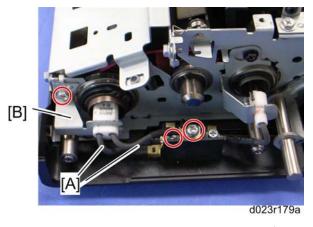


d023r180

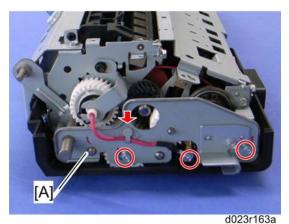
9. Pressure roller lamp [A]

Fusing Lamp

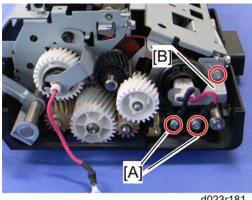
- 1. Fusing unit (p.248 "Fusing Unit")
- 2. Front side stay (p.249 "Pressure Roller Lamp")



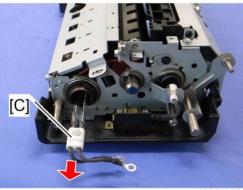
- 3. Release the fusing lamp cords [A] at the front side ($\mathscr{F} \times 2$).
- 4. Front fusing lamp stay [B] ($\mathscr{F} \times 1$)



5. Rear side stay [A] (🛱 x 3)



d023r181



d023r182

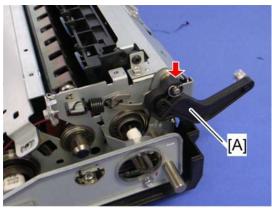
- 6. Release the fusing lamp cords [A] at the rear side ($\ensuremath{\widehat{\mathcal{F}}}$ x 2).
- 7. Rear fusing lamp stay [B] (🛱 x 1)

4

8. Fusing lamp [C]

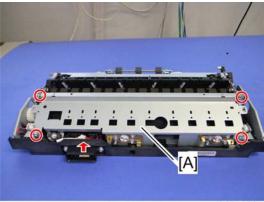
Fusing Belt and Pressure Roller

- 1. Fusing unit (p.248 "Fusing Unit")
- 2. Fusing upper cover (p.249 "Pressure Roller Lamp")



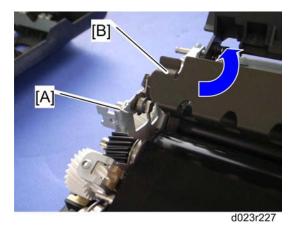
d023r159

3. Lock lever front and rear [A] (snap ring x 1, spring x 1 each)

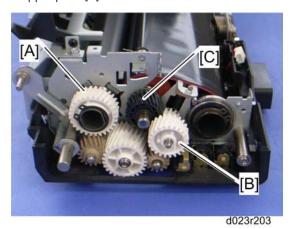


d023r160

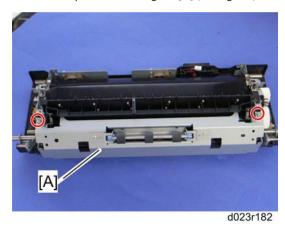
- 4. Top frame [A] (♠ x 4, 🗐 x 1)
- 5. Pressure roller lamp (p.249 "Pressure Roller Lamp")
- 6. Fusing lamp (p.251 "Fusing Lamp")



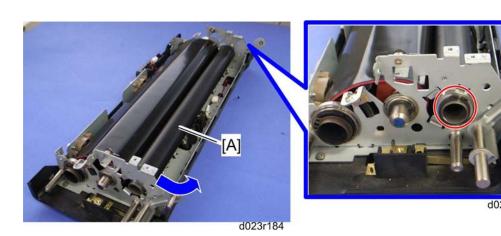
- 7. Release the springs [A] at the front and rear side.
- 8. Stripper plate [B]



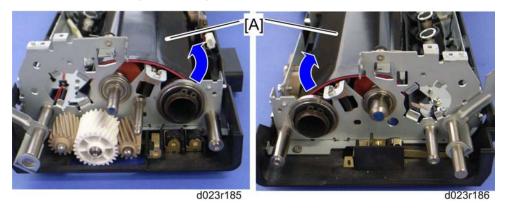
9. Remove the pressure roller gear [A] (C-ring \times 1), idle gear [B] and one-way clutch gear [C] (C-ring).



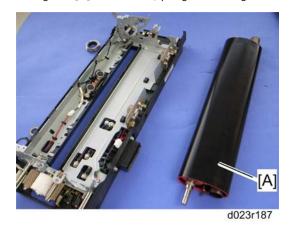
10. Top right frame [A] ($\hat{\mathscr{F}} \times 2$)



11. Pressure roller [A] (C-ring x 1, bearing x 2)



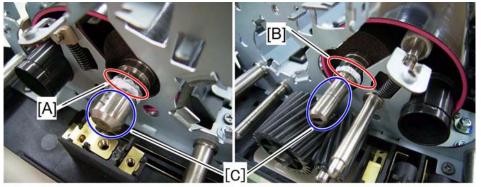
12. Fusing belt [A] with rollers (spring x 2, C-ring x 3, bearing x 4, insulating bushing x 2)



13. Fusing belt [A]

When replacing the fusing roller or pressure roller, you have to apply lubricant to the following places.

Fusing Roller



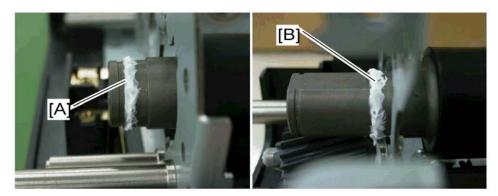
d023r0243b

- Apply "Barrierta S552R" to the notch [A] at the front side of the fusing roller.
- Apply "Barrierta S552R" to the edge [B] of the step at the rear side of the fusing roller.



• Do not apply lubricant to the area [C] as shown.

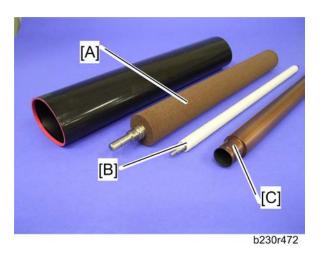
Pressure Roller



• Apply "Barrierta S552R" to the front edge [A] and rear edge [B] of the pressure roller as shown above.

Heating, Fusing and Tension Roller

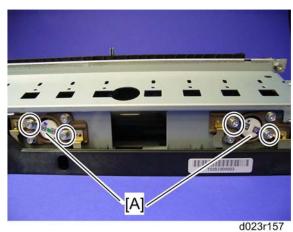
1. Fusing belt with rollers (*p.253 "Fusing Belt and Pressure Roller")



- 2. Fusing roller [A]
- 3. Tension roller [B]
- 4. Heating roller [C]

Heating Roller Thermostats

1. Fusing upper cover (p.249 "Pressure Roller Lamp")



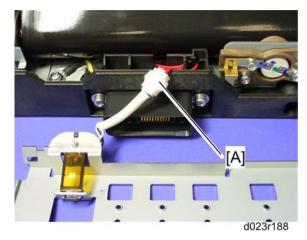
2. Heating roller thermostats [A] (F x 2 each)



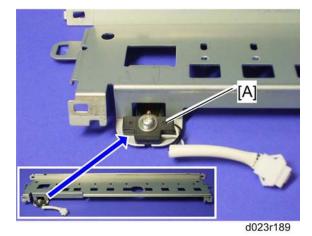
• Do not re-use a thermostat that is already opened. Safety is not guaranteed if you do this.

Heating Roller Thermistor

- 1. Fusing upper cover (p.249 "Pressure Roller Lamp")
- 2. Top frame (p.253 "Fusing Belt and Pressure Roller")



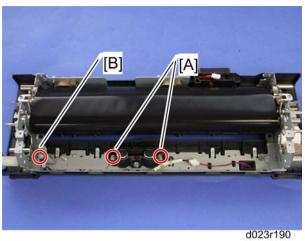
3. Release the connector [A].



4. Heating roller thermistor [A] ($\mathscr{F} \times 1$)

Pressure Roller Thermistor and Thermostat

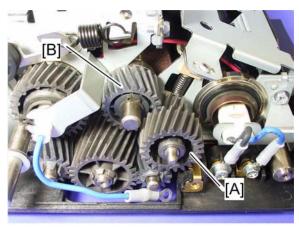
- 1. Fusing upper cover (p.249 "Pressure Roller Lamp")
- 2. Pressure roller (p.253 "Fusing Belt and Pressure Roller")



- 3. Pressure roller thermostats [A]($\mathscr{F} \times 2$)
- 4. Pressure roller thermistor [B] ($\mathscr{F} \times 1$, $\mathrel{\blacksquare}^{\!\!\!\!/} \times 1$)

Fusing Gear and One-way Clutch

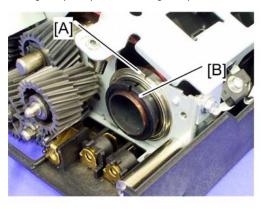
- 1. Fusing unit (p.248)
- 2. Fusing upper cover (p.249 "Pressure Roller Lamp")
- 3. Rear side stay (p.251 "Fusing Lamp")

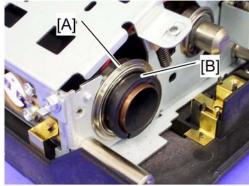


b230r308

- 4. Release the idle gear [A]
- 5. Release the One-way clutch gear [B] (C-ring x 1)

- 1. Fusing unit (p.248 "Fusing Unit")
- 2. Fusing upper cover (p.249 "Pressure Roller Lamp")
- 3. Rear side stay (p.251 "Fusing Lamp")
- 4. Front side stay (p.249 "Pressure Roller Lamp")
- 5. Fusing lamp (p.251 "Fusing Lamp")





b230r441

6. Remove the rear and front heating roller bearings [A] and insulating bushings [B].

Pressure Roller Bearing

- 1. Fusing upper cover (p.249 "Pressure Roller Lamp")
- 2. Front side stay (p.249 "Pressure Roller Lamp")
- 3. Rear side stay (p.251 "Fusing Lamp")
- 4. Pressure roller lamp (**☞**p.249 "Pressure Roller Lamp")

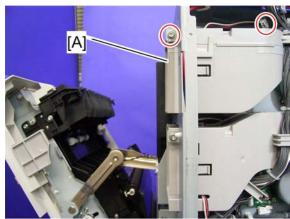


b230r0164

5. Pressure roller bearings [A] (front and rear)

Fusing/Paper Exit Fan

- 1. Open the right door.
- 2. Rear cover (p.169 "Rear Cover")
- 3. Right rear cover (*p.170 "Right Rear Cover")
- 4. High voltage supply board bracket (p.294 "High Voltage Supply Board Bracket")



b230r197a

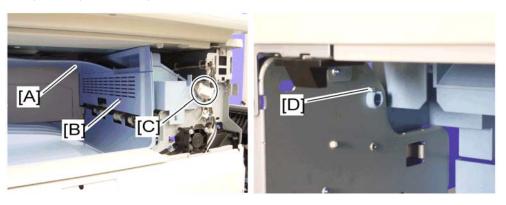
When Reinstalling the Fan



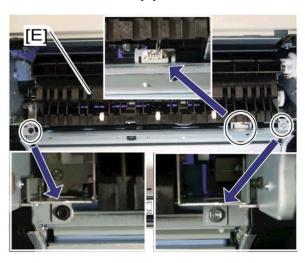
Make sure that the fusing/paper exit fan is installed with its decal facing to the right side.

Thermopile

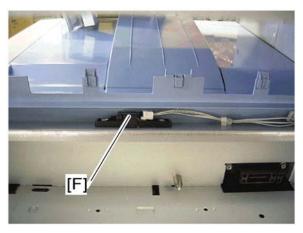
- 1. Open the right door.
- 2. Front right cover (p.171 "Operation Panel")
- 3. Fusing unit (p.248 "Fusing Unit")



- 4. Remove the inverter tray [A].
- 5. Release the hook [D] of the inner cover at the inside frame, and then remove the inner cover [B].
- 6. Disconnect the connector [C].



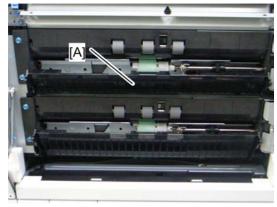
7. Paper exit unit [E] (⟨⟨x 2, □⟨| x 1) ⟩



8. Thermopile [F] (*F* x 2, □ x 1)

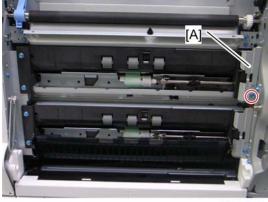
Paper Feed Unit

- 1. Rear cover (p.169 "Rear Cover")
- 2. Right rear cover (*p.170 "Right Rear Cover")
- 3. Duplex unit (p.279 "Duplex Unit")
- 4. Pull out tray 1 and tray 2.



d027r168

5. Paper guide plate [A] (hook x 2)

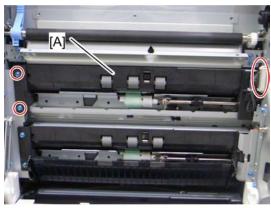


d027r169

6. Harness cover [A] (⋛ x 1)

Λ





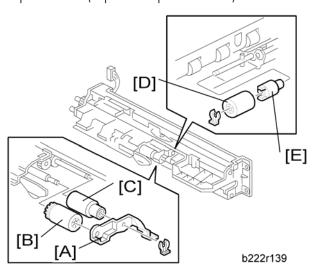
d027r170

7. Paper feed unit [A] (⋛ x 2, 🗐 x 1)

Pick-Up, Feed and Separation Rollers

Tray 1 and Tray 2

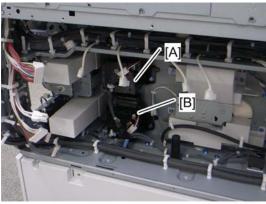
1. Paper feed unit (p.264 "Paper Feed Unit")



- 2. Roller holder [A] (⟨⟨⟨⟩ x 1)
- 3. Pick-up roller [B]
- 4. Feed roller [C]
- 5. Separation roller [D] and torque limiter [E] ($\langle \overline{\rangle} \rangle \times 1$)

Tray Lift Motor

- 1. Rear cover (p.169 "Rear Cover")
- 2. PSU bracket (p.292)
- 3. High voltage supply board bracket (p.294 "High Voltage Supply Board Bracket")

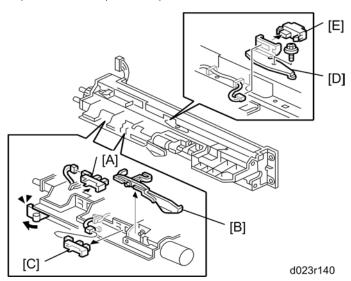


d027r173

4. Tray lift motor 1 [A] or 2 [B] ($\widehat{\mathscr{E}} \times 2$, $\square\!\!\!\!/ \times 3$, $\square\!\!\!\!/ \times 1$ each)

Vertical Transport, Paper Overflow and Paper End Sensor

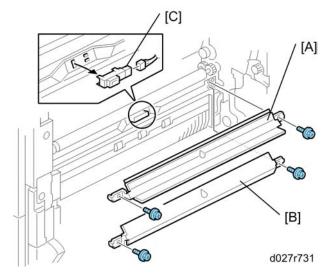
- 1. Rear cover (p.169 "Rear Cover")
- 2. Right rear cover (p.170 "Right Rear Cover")
- 3. Paper feed unit (p.264 "Paper Feed Unit")



- 4. Paper overflow sensor [A]
- 5. Paper end feeler [B] and paper end sensor [C] (hook, □ x 1 each)
- 6. Vertical transport sensor bracket [D] (♠ x 1, ♠ x 1)
- 7. Vertical transport sensor [E] (□ x 1, hook)

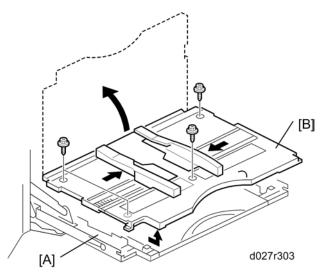
Registration Sensor

- 1. Rear cover (p.169 "Rear Cover")
- 2. Right rear cover (p.170 "Right Rear Cover")

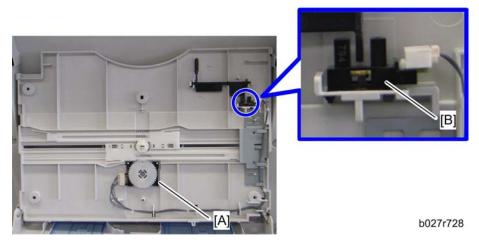


- 3. Paper guide plate 1 [A] and 2 [B] ($\mbox{\ensuremath{\beta}}\mbox{ x 2 each})$
- 4. Registration sensor [C] (□ x 1, hook)

By-pass Paper Size Sensor and By-pass Paper Length Sensor

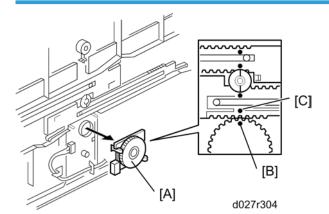


- 1. Open the by-pass tray [A].
- 2. Move the side fences to the center.
- 3. By-pass tray cover [B] (F x 4)



- 4. By-pass paper size sensor [A] (□ x 1).
- 5. By-pass paper length sensor [B] (□ x 1)

When reinstalling the by-pass paper size sensor



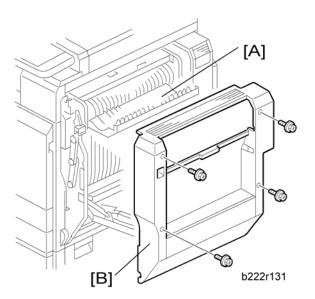
- 1. Adjust the projection [A] of the left side fence bar (it must be centered).
- 2. Install the by-pass paper size detection switch so that the hole [B] in this switch faces the projection [C] of the left side fence bar.
- 3. Reassemble the copier.
- 4. Plug in and turn on the main power switch.
- 5. Check this switch operation with SP5803-011 (By-pass paper size < Input Check).

- Display on the LCD -

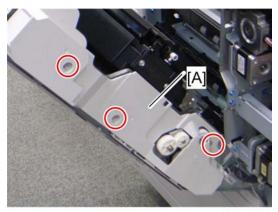
Paper Size	Display	Paper Size	Display
A3 SEF	00001110	A5 SEF	00001011
B4 SEF	00001100	B6 SEF	00000011
A4 SEF	00001101	A6 SEF	00000111
B5 SEF	00001001	Smaller A6 SEF	00001111

By-pass Bottom Tray

- 1. Open the right door.
- 2. By-pass tray cover (*p.268 "By-pass Paper Size Sensor and By-pass Paper Length Sensor")

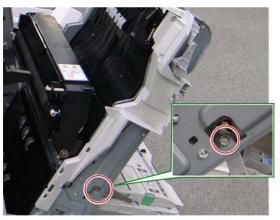


- 3. Open the duplex door [A].
- 4. Right door cover [B] ($\mathscr{F} \times 4$)



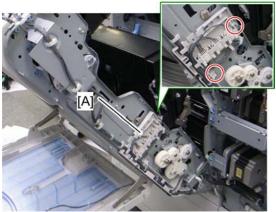
d027r174

5. Right door rear cover [A] (🛱 x 3)



d027r175

6. Remove the screw at the front side ($\hat{\mathscr{F}}\times 1$).



d027r177

7. Remove the cover [A] (2 hooks).

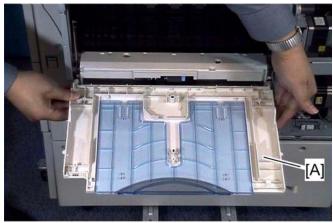


d027r178

8. Remove the screw at the rear side.

d027r597

9. Release the front [A] and rear [B] arms ($\langle\!\!\langle\bar{\rangle}\!\!\rangle$ x 1 each).



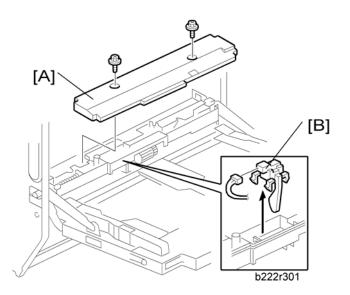
d027r598

10. By-pass bottom tray [A]

By-pass Paper End Sensor

1. Right door cover (p.269 "By-pass Bottom Tray")

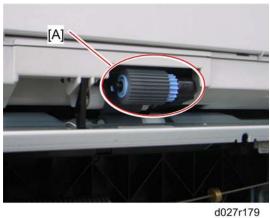
Л



- 2. By-pass feed unit cover [A] ($\hat{\mathbb{F}}$ x 2).
- 3. By-pass paper end sensor [B] (□ x 1, hook)

By-pass Pick-up, Feed and Separation Roller, Torque Limiter

1. Right door cover (*p.269 "By-pass Bottom Tray")

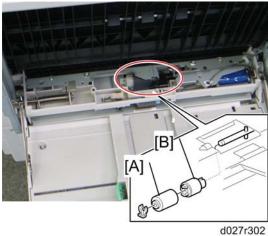


2. By-pass pick-up roller [A] (hook)



d027r180

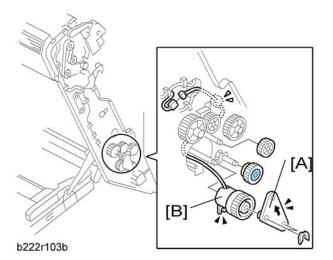
- 3. By-pass feed roller [A] ((() x 1)
- 4. By-pass feed unit cover (p.272 "By-pass Paper End Sensor")



- 5. By-pass separation roller [A] (🖏 x 1)
- 6. Torque limiter [B]

By-pass Feed Clutch

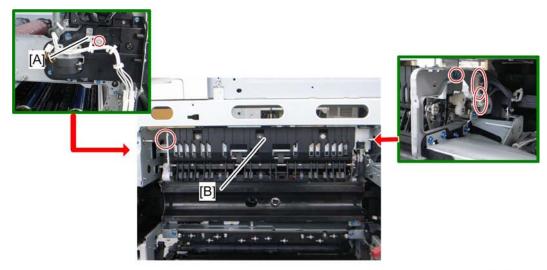
- 1. Open the right door.
- 2. Right door rear cover (p.269)



- 3. By-pass feed clutch holder [A] ((\(\)\) x 2)
- 4. By-pass feed clutch [B] (□ x 1, □ x 1)

Paper Exit Unit

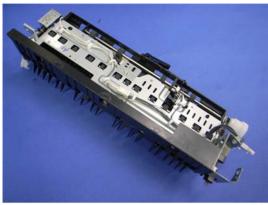
- 1. Fusing Unit (p.248 "Fusing Unit")
- 2. Front right cover (**☞**p.171)
- 3. Image transfer belt unit (p.213 "Image Transfer Belt Unit")
- 4. Inner Tray (p.172 "Inner Tray")
- 5. Thermopile (p.262 "Thermopile")
- 6. Rear cover (p.169 "Rear Cover")
- 7. Right rear cover (p.170 "Right Rear Cover")
- 8. Fusing duct (p.261 "Fusing/Paper Exit Fan")
- 9. Open the controller box (p.287 "Controller Box").



d027r181

- 10. Gear cover [A] (x 1)
- 11. Paper exit unit [B] (🖗 x 2, 🗐 x 2)

Fusing Exit, Paper Overflow, Junction Paper Jam and Paper Exit Sensor



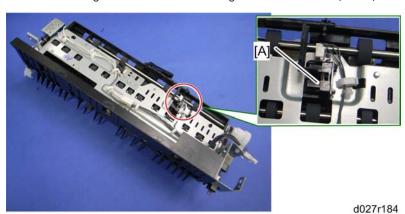
d027r182

1. Paper exit unit (p.275 "Paper Exit Unit")

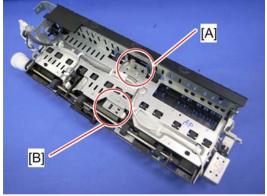


d027r183

- 2. Fusing exit sensor bracket [A] ($\mathscr{F} \times 1$, $\mathsf{T} \times 1$)
- 3. Remove the fusing exit sensor from the fusing exit sensor bracket (\mathscr{F} x 1).



4. Paper overflow sensor [A] (□ x 1, hook)



d027r185

5. Junction paper jam sensor bracket [A] (ℰx 1, ➪ x 1)

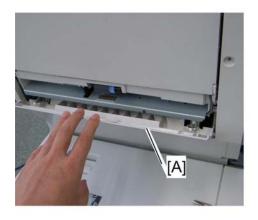
- 6. Remove the junction paper jam sensor from the junction paper jam sensor bracket (hook)
- 7. Paper exit sensor bracket [B] (⋛x 1, 🗐 x 1)
- 8. Remove the paper exit sensor from the paper exit sensor bracket (hook).

4

Duplex Unit

Duplex Unit

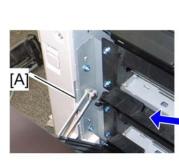
- 1. Rear cover (**☞**p.169)
- 2. Right rear cover (p.170)





d027r554a

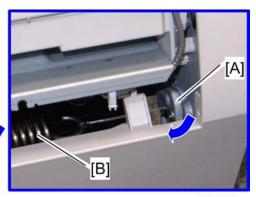
- 3. Open the lower door [A] of the duplex unit.
- 4. Release the tab [B] and remove the lower door (spring \times 2).
- 5. Open the right door.





d027r555a

- 7. Keep the right door fully open.

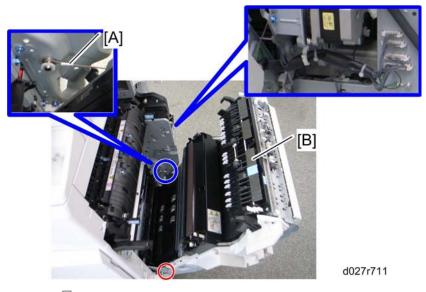


d027r556a

8. Push up the duplex unit a little bit, while pressing the bracket [A] to lock the spring [B].



• Do not let the duplex unit open fully before releasing the wire (step 9). Otherwise, the lock for the spring [B] is released.



- 9. Wire [A] (🖏 x 1)
- 10. Duplex unit [B] (\mathscr{E} x 1, Stud screw x 1, $\overset{\triangle}{\hookrightarrow}$ x 1, $\overset{\square}{\Longrightarrow}$ x 4, ground cable x 1)

Duplex Door Sensor

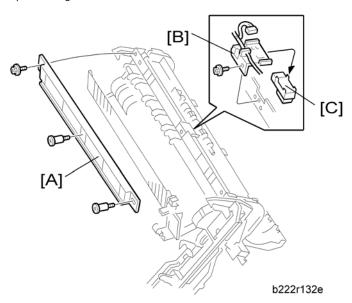
- 1. Right door cover ("p.279")
- 2. Open the right door.



3. Duplex door sensor [A] (□ x 1, hook)

Duplex Entrance Sensor

- 1. Right door cover ("p.279")
- 2. Open the right door.

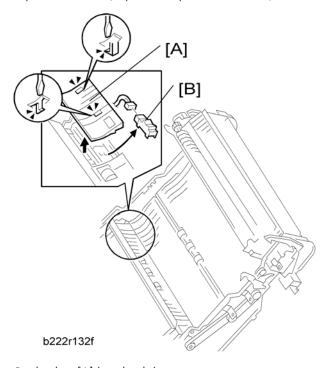


- 3. Duplex entrance guide [A] ($\hat{\mathscr{E}}$ x1, stepped screw x 2)
- 4. Duplex entrance sensor bracket [B] (♠ x 1, x 1)

5. Duplex entrance sensor [C] (hook)

Duplex Exit Sensor

1. Paper transfer unit (p.220 "Paper Transfer Unit")



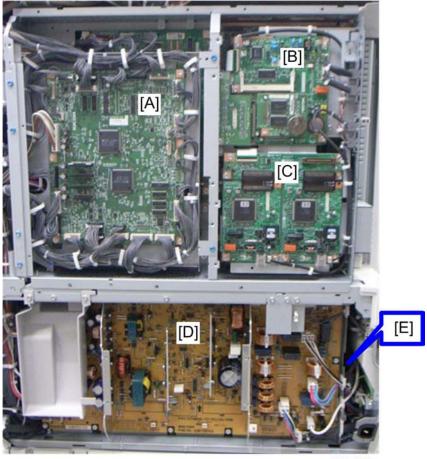
- 2. Guide plate [A] (two hooks)
- 3. Duplex exit sensor [B] (□ x 1, hook)

4

Electrical Components

Boards

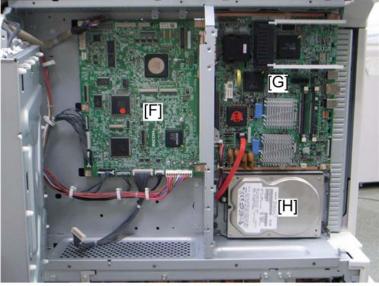
Controller Box closed



d027r729

[A]	IOB
[B]	FCU (Option)
[C]	G3 Interface Unit (Option)
[D]	PSU
[E]	High Voltage Supply Board (Behind the PSU [D])

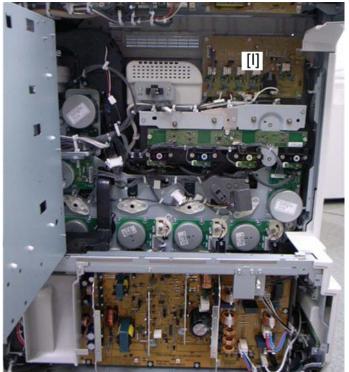
Behind the IOB, FCU and G3 Interface Unit



d027r729a

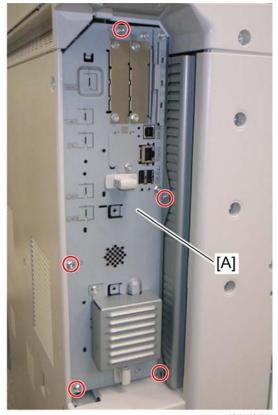
[F]	BICU
[G]	Controller Board
[H]	HDD

Controller Box Open



d027r730

[I] ITB Power Supply Board

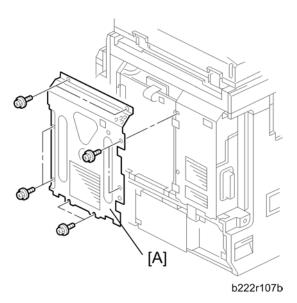


d027i075

1. Controller unit [A] (\$\hat{x} \times 5)

Controller Box Right Cover

- 1. Rear cover (p.169 "Rear Cover")
- 2. Scanner rear cover (p.176 "Exposure Lamp")



D144 RTB 89
Take caution when removing the controller board cover, because the edges of the cover are sharp.

3. Controller box right cover [A] (F x 8)

Controller Box

When opening the controller box

- 1. Rear cover (p.169 "Rear Cover")
- 2. Scanner rear cover (p.176 "Exposure Lamp")



d023r603

3. Remove seven screws.



d023r110

4. Open the controller box [A].

When removing the controller box

- 1. Rear cover (p.169 "Rear Cover")
- 2. Scanner rear cover (p.176 "Exposure Lamp")
- 3. Right rear cover (p.170 "Right Rear Cover")
- 4. Controller box right cover (p.286 "Controller Box Right Cover")



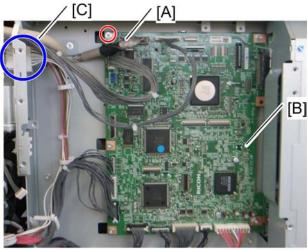
d027r714

5. Remove the controller box stay [A] ($\mathscr{F} \times 4$).



d027r713

6. Move the IOB bracket [A] aside ($\hat{\mathscr{E}} \times 4$, and x All).



d027r715

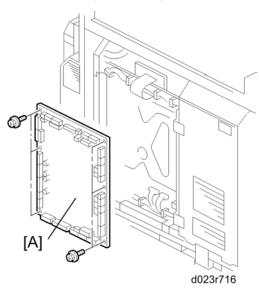
- 7. Disconnect the scanner interface cable [A] (ground cable)
- 8. Release all clamps on the controller box frame.
- 9. Disconnect all connectors on the BICU [B] board.
- 10. Disconnect the connector [C] at the outer controller box and at the inner controller box.

b023r607

11. Lift up the controller box [A], and then remove it.

IOB (In/Out Board)

- 1. Rear cover (p.169 "Rear Cover")
- 2. Scanner rear cover (p.176 "Exposure Lamp")
- 3. Controller box right cover (p.286 "Controller Box Right Cover ")

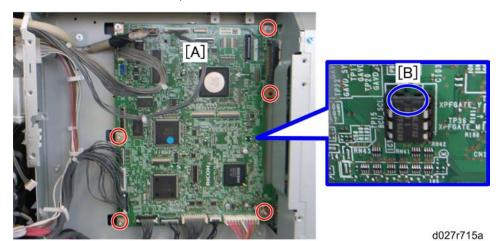


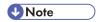
4. IOB [A] (⋛ x 6, All 🗐 s)

BICU

- 1. Rear cover (p.169 "Rear Cover")
- 2. Scanner rear cover (p.176 "Exposure Lamp")

- 3. Controller box right cover (**p**.286 "Controller Box Right Cover ")
- 4. Disconnect the harness (CN225) on the IOB board.
- 5. Move the IOB bracket aside (p.287 "Controller Box")





Make sure the NVRAM is correctly installed on the BICU. Insert the NVRAM in the NVRAM slot
with the "half-moon" pointing [B] to the upward side.

When installing the new BICU

Remove the NVRAM from the old BICU. Then install it on the new BICU after you replace the BICU. Replace the NVRAM ("NVRAM Replacement Procedure" in the Appendices) if the NVRAM on the old BICU is defective.



Make sure you print out the SMC reports ("SP Mode Data" and "Logging Data") before you replace
the NVRAM.

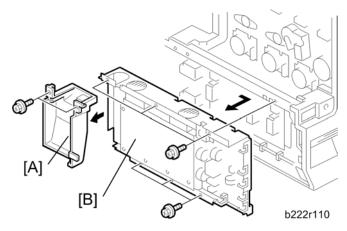
ACAUTION

- Keep NVRAMs away from any objects that can cause static electricity. Static electricity can damage NVRAM data.
- Make sure that the DIP-switch settings on the old BICU are the same for the new BICU when. Do not
 change the DIP switches on the BICU in the field.
- Make sure the serial number is input in the machine for the NVRAM data; if not, SC 995-001 occurs.

PSU

PSU bracket

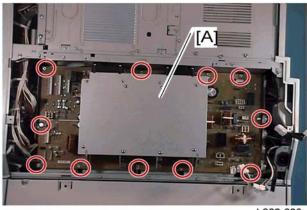
1. Rear cover (p.169 "Rear Cover")



- 2. Ventilation duct [A] (Fx 2)
- 3. PSU bracket [B] (⋛ x 6, x All, ₡ x All)

PSU board

- 1. Rear cover (p.169 "Rear Cover")
- 2. Ventilation duct (see "PSU bracket")



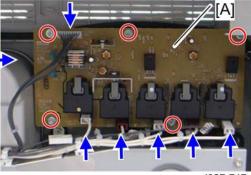
b222r608

3. PSU board [A] ($\mbox{\it F} \times 11$, all $\mbox{\it II} \mbox{\it s}$, all $\mbox{\it II} \mbox{\it s}$

ITB Power Supply Board

- 1. Rear cover (p.169 "Rear Cover")
- 2. Scanner rear cover (p.176 "Exposure Lamp")
- 3. Open the controller box (p.287 "Controller Box")



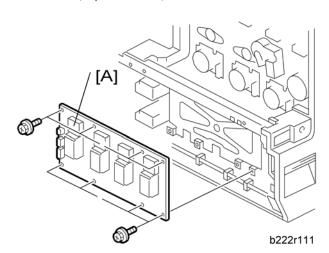


d027r717

4. ITB power supply board [A] ($\mathscr{F} \times 5$, $\exists \mathscr{V} \times 6$)

High Voltage Supply Board

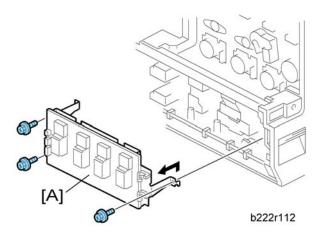
- 1. Rear cover (p.169 "Rear Cover")
- 2. PSU bracket (p.292 "PSU")



3. High voltage supply board [A] (ℰ x 8, All 🗐 s, 🖨 x 2)

High Voltage Supply Board Bracket

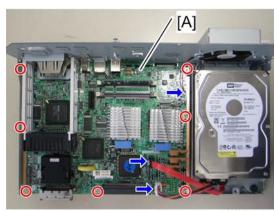
- 1. Rear cover (p.169 "Rear Cover")
- 2. PSU bracket (p.292 "PSU")



3. High voltage supply board bracket [A] ($\mbox{\ensuremath{\beta}}\mbox{ x 3, }\mbox{\ensuremath{\Box}}\mbox{\ensuremath{\Box}}\mbox{ x All, }\mbox{\ensuremath{\Box}}\mbox{\ensuremath{\Delta}}\mbox{ x 2)}$

Controller Board

1. Controller unit (p.286 "Controller Unit")



d027r720

2. Controller board [A] (♠ x 7, □ x 3)



3. Interface rails [A], NV-RAM [B], RAM-DIMM [C]

When installing the new controller board

Remove the NVRAM from the old controller board. Then install it on the new controller board after you replace the controller board. Replace the NVRAM ("NVRAM Replacement Procedure" in the Appendices) if the NVRAM on the old controller board is defective.



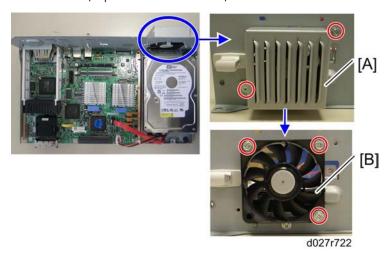
 Make sure you print out the SMC reports ("SP Mode Data" and "Logging Data") before you replace the NVRAM.

ACAUTION

- Keep NVRAMs away from any objects that can cause static electricity. Static electricity can damage NVRAM data.
- Make sure the NVRAM is correctly installed on the controller board.

HDD Fan

1. Controller unit (p.286 "Controller Unit")



- 2. HDD fan cover [A] (x 2)
- 3. HDD fan [B] (⋛ x 3, 🗐 x 1)

HDD

1. Controller unit (p.286 "Controller Unit")



d027r718

2. Remove the HDD [A] with the bracket ($\mathscr{F} \times 4$, $\mathsf{E} \times 2$).



3. Remove the HDD from the bracket [A] ($\mathscr{F} \times 4$).

When installing a new HDD unit

- 1. Turn the main power switch on. The disk is automatically formatted.
- 2. Install the stamp data using "SP5853".
- 3. Switch the machine off and on to enable the fixed stamps for use.

Disposal of HDD Units

- Never remove an HDD unit from the work site without the consent of the client.
- If the customer has any concerns about the security of any information on the HDD, the HDD must remain with the customer for disposal or safe keeping.
- The HDD may contain proprietary or classified (Confidential, Secret) information. Specifically, the
 HDD contains document server documents and data stored in temporary files created automatically
 during copy job sorting and jam recovery. Such data is stored on the HDD in a special format so it
 cannot normally be read but can be recovered with illegal methods.

Reinstallation

Explain to the customer that the following information stored on the HDD is lost when the HDD is replaced:

- Document server documents
- Custom-made stamps
- Document server address book

The address book and document server documents (if needed) must be input again.

If you previously backed up the address book to an SD card with SP5846 051, you can use SP 5846 052 to copy the data from the SD card to the hard disk.

If the customer is using the Data Overwrite Security feature, the DOS function must be set up again. For more, see Section 1 (Installation).

If the customer is using the optional Browser Unit, this unit must be installed again. For more, see Section 1 (Installation).

NVRAM Replacement Procedure

NVRAM on the BICU

- 1. Make sure that you have the SMC report (factory settings). This report comes with the machine.
- 2. Output the SMC data (SP5-990-001) if possible.
- 3. Turn the main switch off.
- 4. Install an SD card into SD card slot 3. Then turn the main power on.
- 5. Copy the NVRAM data to an SD card (SP5-824-001) if possible.
- 6. Turn off the main switch. Then unplug the power cord.
- 7. Replace the NVRAM on the BICU and reassemble the machine.
- 8. Plug in the power cord. Then turn the main switch on.
- 9. Select a paper-size type (SP5-131-001).
- 10. Specify the serial number and destination code of the machine.



- Contact your supervisor for details on how to enter the serial number and destination code.
- SC 999 or "Fusing Unit Setting Error" can be shown until the serial number and destination code are correctly programmed.
- 11. Turn the main switch off and on.
- 12. Copy the data from the SD card to the NVRAM (SP5-825-001) if you have successfully copied them to the SD card.
- 13. Turn the main switch off. Then remove the SD card from SD card slot 3.
- 14. Turn the main switch on.
- 15. Specify the SP and UP mode settings.
- 16. Do the process control self-check.
- 17. Do ACC for the copier application program.
- 18. Do ACC for the printer application program.

NVRAM on the Controller

- 1. Make sure that you have the SMC report (factory settings). This report comes with the machine.
- 2. Output the SMC data (SP5-990-001) if possible.
- 3. Turn the main switch off. Then put a blank formatted SD card into SD card slot 3.
- 4. Turn the main switch on.
- 5. Copy the NVRAM data (SP5-824-001) and the address book data in the HDD (SP5846-051) to an SD card if possible.



- An error message shows if local user information cannot be stored in an SD card because the capacity is not enough.
- You cannot do this procedure if the SD card is write-protected.
- 6. Enter SP mode. Then print out the SMC reports (SP5-990-001) if possible.
- 7. Turn off the main switch. Then unplug the power cord.
- 8. Replace the NVRAM on the controller. Then reassemble the machine.
- 9. Check if the serial number shows on the operation panel. (SP5-811-002). Input the serial number if it does not show. (Contact your supervisor about this setting.)
- 10. Plug in the power cord. Then turn the main switch on.
- 11. Copy the data from the SD card to the NVRAM (SP5-825-001) and HDD (SP5-846-52) if you have successfully copied them to the SD card.



- The counter data in the user code information clears even if step 11 is done correctly.
- An error message shows if the download is incomplete. However, you can still use the part of the address book data that has already been downloaded in step 11.
- An error message shows when the download data does not exist in the SD card, or, if it is already deleted.
- You cannot do this procedure if the SD card is write-protected.
- 12. Go out of SP mode. Then turn the main switch off. Then remove the SD card from SD card slot 3.
- 13. Turn the main switch on.
- 14. Specify the SP and UP mode settings.
- 15. Do ACC for the copier application program.
- 16. Do ACC for the printer application program.

Using Dip Switches

Controller Board

DIP SW No.	OFF	ON
1	Boot-up from Flash Memory	Boot-up from SD card
2 to 8	Factory Use Only: Do not change the switch settings.	

BICU Board

DIP SW No.	OFF	ON
1 and 2	Factory Use Only: Do not change the switch settings.	

5. System Maintenance Reference

Service Program Mode

ACAUTION

Make sure that the data-in LED (♦) is not on before you go into the SP mode. This LED indicates that
some data is coming to the machine. When the LED is on, wait for the copier to process the data.

SP Tables

See "Appendices" for the following information:

- System SP Tables
- Printer SP Tables
- Scanner SP Tables

Enabling and Disabling Service Program Mode



The Service Program Mode is for use by service representatives only. If this mode is used by anyone
other than service representatives for any reason, data might be deleted or settings might be changed.
In such case, product quality cannot be guaranteed any more.

Entering SP Mode

- 1. Press the "Clear Mode" key (©).
- 2. Use keypad to enter "107" (107).
- 3. Hold down "Clear/Stop" ($^{\text{\tiny CO}}$) for 3 seconds at least.
- 4. Enter the Service Mode.

Exiting SP Mode

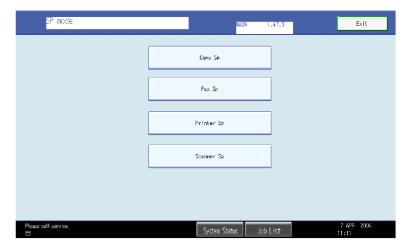
1. Press "Exit" on the LCD twice to return to the copy window.

Types of SP Modes

• System SP: SP modes related to the engine functions

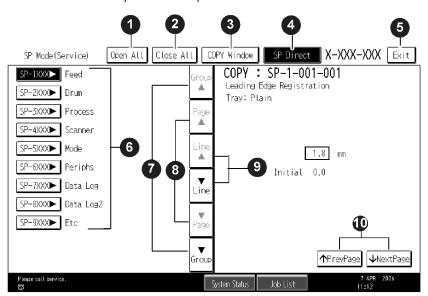
- Printer SP: SP modes related to the controller functions
- Scanner SP: SP modes related to the scanner functions
- Fax SP: SP modes related to the fax functions

Select one of the Service Program modes (System, Printer, Scanner, or Fax) from the touch panel as shown in the diagram below after you access the SP mode. This section explains the functions of the System/Printer/Scanner SP modes. Refer to the Fax service manual for the Fax SP modes.



SP Mode Button Summary

Here is a short summary of the touch-panel buttons.



Opens all SP groups and sublevels.

2 Closes all open groups and sublevels and restores the initial SP mode display. Opens the copy window (copy mode) so you can make test copies. Press SP Mode (highlighted) 6 in the copy window to return to the SP mode screen, Enter the SP code directly with the number keys if you know the SP number. Then press[#]. (The required SP Mode number will be highlighted when pressing #. If not, just press the required 4 SP Mode number.) 0 Press two times to leave the SP mode and return to the copy window to resume normal operation. 0 Press any Class 1 number to open a list of Class 2 SP modes. 0 Press to scroll the show to the previous or next group. 8 Press to scroll to the previous or next display in segments the size of the screen display (page). 0 Press to scroll the show the previous or next line (line by line). 0 Press to move the highlight on the left to the previous or next selection in the list.

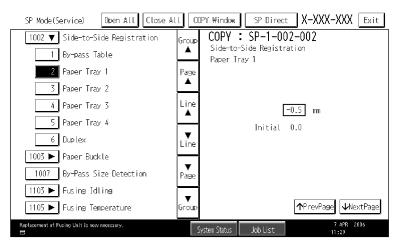
Switching Between SP Mode and Copy Mode for Test Printing

- 1. In the SP mode, select the test print. Then press "Copy Window".
- 2. Use the copy window (copier mode), to select the appropriate settings (paper size, etc.) for the test print.
- 3. Press Start ® to start the test print.
- 4. Press SP Mode (highlighted) to return to the SP mode screen and repeat from step 1.

Selecting the Program Number

Program numbers have two or three levels.

- 1. Refer to the Service Tables to find the SP that you want to adjust before you begin.
- 2. Press the Group number on the left side SP Mode window that contains the SP that you want to adjust.
- 3. Use the scrolling buttons in the center of the SP mode window to show the SP number that you want to open. Then press that number to expand the list.
- 4. Use the center touch-panel buttons to scroll to the number and title of the item that you want to set and press it. The small entry box on the right activates and shows the below default or the current settings.





- Refer to the Service Tables for the range of allowed settings.
- 1. Do this procedure to enter a setting:
 - Press to toggle between plus and minus and use the keypad to enter the appropriate number.
 The number you enter writes over the previous setting.
 - Press # to enter the setting. (The value is not registered if you enter a number that is out of range.)
 - Press "Yes" when you are prompted to complete the selection.
- 2. If you need to perform a test print, press Copy Window to open the copy window and select the settings for the test print. Press Start (*) and then press SP Mode (highlighted) in the copy window to return to the SP mode display.
- 3. Press Exit two times to return to the copy window when you are finished.

Exiting Service Mode

Press the Exit key on the touch-panel.

Service Mode Lock/Unlock

At locations where the machine contains sensitive data, the customer engineer cannot operate the machine until the Administrator turns the service mode lock off. This function makes sure that work on the machine is always done with the permission of the Administrator.

1. If you cannot go into the SP mode, ask the Administrator to log in with the User Tool and then set "Service Mode Lock" to OFF after he or she logs in:

User Tools > System Settings > Administrator Tools > Service Mode Lock > OFF

• This unlocks the machine and lets you get access to all the SP codes.

- The CE can service the machine and turn the machine off and on. It is not necessary to ask the Administrator to log in again each time the machine is turned on.
- 2. Go into the SP mode and set SP5169 to "1" if you must use the printer bit switches.
- 3. After machine servicing is completed:
 - Change SP5169 from "1" to "0".
 - Turn the machine off and on. Tell the administrator that you have completed servicing the machine.
 - The Administrator will then set the "Service Mode Lock" to ON.

Remarks

Display on the Control Panel Screen

The maximum number of characters which can show on the control panel screen is limited to 30 characters. For this reason, some of the SP modes shown on the screen need to be abbreviated. The following are abbreviations used for the SP modes for which the full description is over 20 characters.

Paper Weight

Thin paper: 60 g/m^2

Plain Paper: 60-90 g/m², 16-24lb.

Middle Thick: $91-105 \text{ g/m}^2$, 24-28 lb.

Thick Paper 1: 106-169 g/m², 28.5-44.9lb.

Thick Paper 2: 170-220 g/m², 45-58lb.
Thick Paper 3: 221-256 g/m², 59lb-68lb

Paper Type

N: Normal paper

MTH: Middle thick paper

TH: Thick paper

Paper Feed Station

P: Paper tray

B: By-pass table

Color Mode [Color]

[K]: Black in B&W mode

[Y], [M], or [C]: Yellow, Magenta, or Cyan in Full Color mode

[YMC]: Only for Yellow, Magenta, and Cyan

[FC]: Full Color mode

[FC, K], [FC, Y], [FC, M], or [FC, C]: Black, Yellow, Magenta, or Cyan in full color mode

Print Mode	Process Speed
S: Simplex	L: Low speed (77 mm/s)
D: Duplex	M: Middle speed (154 mm/s)

Others

The following symbols are used in the SP mode tables.

FA: Factory setting

(Data may be adjusted from the default setting at the factory. Refer to the factory setting sheets enclosed. You can find it under the jammed paper removal decal.)

DFU: Design/Factory Use only

Do not touch these SP modes in the field.

A sharp (#) to the right hand side of the mode number column means that the main switch must be turned off and on to effect the setting change.

An asterisk (*) to the right hand side of the mode number column means that this mode is stored in the NVRAM. If you do a RAM clear, this SP mode will be reset to the default value. "ENG" and "CTL" show which NVRAM contains the data.

- ENG: NVRAM on the BICU board
- CTL: NVRAM on the controller board

The settings of each SP mode are explained in the right-hand column of the SP table in the following way.

[Adjustable range / Default setting / Step] Alphanumeric



• If "Alphanumeric" is written to the right of the bracket as shown above, the setting of the SP mode shows on the screen using alphanumeric characters instead of only numbers. However, the settings in the bracket in the SP mode table are explained by using only the numbers.

SSP: This denotes a "Special Service Program" mode setting.

Firmware Update

To update the firmware for this machine, you must have the new version of the firmware downloaded onto an SD (Secure Digital) Card. The SD Card is inserted into SD Card Slot 2 on the left rear side of the controller box.

Type of Firmware

There are 19 types of firmware as shown below.

Type of firmware	Function	Location of firmware	Message shown
Engine	Printer engine control	BICU Flash ROM	Engine
System/Copy Application	Operating system	Flash ROM on the controller board	System/Copy
Netfile Application	Feature application	Flash ROM on the controller board	NetworkDocBox
Printer Application	Feature application	Flash ROM on the controller board	SD Printer
Scanner Application	Feature application	Flash ROM on the controller board	SD Scanner
Fax Application	Feature application	Flash ROM on the controller board	Fax
NIB	Network Interface	Flash ROM on the controller board	Network
Operation Panel	Panel control	Operation Panel	OpePanel.
Jam Animation	Jam animation	Flash ROM on the controller board	Animation
Fax FCU	Fax control	FCU	GWFCU 3-3
Remote Fax	Fax control	Flash ROM on the controller board	Fax (option)
Language (16 languages)	Language firmware Two languages can be selected from 16 languages.	Operation Panel	LANG

WebDocBox	Document server application	Flash ROM on the controller board	Web Uapl
WebSys	Web Service application	Flash ROM on the controller board	Web Support
PS3	Page description language (PostScript3)	PS3 SD card	Option PS3
PictBridge	PictBridge control	PictBridge SD card	Option PctBrgd
DESS	Security control	Flash ROM on the controller board	Security Module
ARDF	ARDF control	ARDF	ADF
Finisher (B793)	Finisher control	Finisher (B793)	Finisher

Before You Begin

An SD card is a precision device. Always observe the following precautions when you handle SD cards:

- Always switch the machine off before you insert an SD card. Never insert the SD card into the slot with the power on.
- Do not remove the SD card from the service slot after the power has been switched on.
- Never switch the machine off while the firmware is downloading from the SD card.
- Keep SD cards in a safe location where they are not exposed to high temperature, high humidity, or exposure to direct sunlight.
- Always handle SD cards with care. Do not bend or scratch them. Do not let the SD card get exposed
 to shock or vibration.
- Make sure that the write protection of an SD card is unlocked when you download an application to
 it. If not, downloading fails and a download error (e.g. Error Code 44) occurs during a firmware
 upgrade.

Keep the following points in mind when you use the firmware update software:

- "Upload" means to send data from the machine to the SD card. "Download" means to send data from the SD card to the machine.
- To select an item on the LCD, touch the appropriate button on the soft touch-screen of the LCD, or, press the appropriate number key on the 10-key pad of the operation panel. For example, when "Exit (0)" shows on the screen you can touch the Exit button on the screen, or, press the ⁽¹⁾ button on the operation panel of the copier.
- Make sure that the machine is disconnected from the network to prevent a print job for arriving while
 the firmware update is in progress before you start the firmware update procedure.

5

Updating Firmware

Preparation

- If the SD card is blank, copy the entire "romdata" folder onto the SD card.
- If the card already contains the "romdata" folder, copy the "D023" folder onto the card.

If the card already contains folders up to "D023", copy the necessary firmware files (e.g. D023xxxx.fwu) into this folder.



 Do not put multiple machine firmware programs on the same SD card. Copy the only model firmware you want.

Updating Procedure

- 1. Turn the main power switch off.
- 2. Remove the slot cover ($\hat{F} \times 1$).
- 3. Insert the SD card into SD Card Slot 2. Make sure the label on the SD card faces the front side of the machine.
- 4. Slowly push the SD card into the slot so it locks in place. You will hear it click. Make sure the SD card locks in place.



- To remove the SD, push it in to unlock the spring lock. Then release it so it pops out of the slot.
- 5. Disconnect the network cable from the copier if the machine is connected to a network.
- 6. Switch the main power switch on. After about 45 seconds, the initial version update screen appears on the LCD in English.
- 7. On the screen, touch the button or press the corresponding number key on the operation panel to select the item in the menu that you want to update.

ROM/NEW	What it means	
ROM:	Tells you the number of the module and name of the version currently installed. The first line is the module number, the second line the version name.	
NEW:	Tells you the number of the module and name version on the SD card. The first line is the module number, the second line the version name.	



- Controller, engine and operation panel firmware cannot be updated at the same time. It is recommended to update firmware modules one by one.
- 8. Touch "UpDate (#)" (or #) to start the update.



- The progress bar does not show for the operation panel firmware after you touch "OpPanel".
 The power on key flashes on and off at 0.5 s intervals when the LCDC firmware is updating. The power key flashes on and off at 3 s intervals when the update is finished.
- 9. The "Update is Done" message appears on the operation panel after completing the updating. The message differs depending on the firmware that has been updated.
- 10. Switch the copier main power switch off when you see the "Update is Done" message or follow the procedure that is displayed on the operation panel.
- 11. Press in the SD card to release it. Then remove it from the slot.
- 12. Switch the copier on for normal operation.

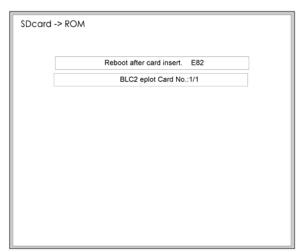
Error Messages

An error message shows in the first line if an error occurs during the download.

The error code consists of the letter "E" and a number. The example above shows error "E24" displayed. For details, refer to the Error Message Table. ("Handling Firmware Update Error")

Firmware Update Error

If a firmware update error occurs, this means the update was cancelled during the update because the module selected for update was not on the SD card.



Recovery after Power Loss

If the ROM update is interrupted as a result of accidental loss of power while the firmware is updating, then the correct operation of the machine cannot be guaranteed after the machine is switched on again. If the ROM update does not complete successfully for any reason, then in order to ensure the correct operation of the machine, the ROM update error will continue to show until the ROM is updated successfully.

In this case, insert the card again and switch on the machine to continue the firmware download automatically from the card without the menu display.

Updating the LCDC for the Operation Panel

Do the following procedure to update the LCDC (LCD Control Board).

- 1. Turn the copier main switch off.
- 2. Remove the SD slot cover (F x 1).
- 3. Insert the SD card into SD Card Slot 2.
- 4. Switch the copier main switch on.
- 5. The initial screen opens in English after about 45 seconds.
- 6. Touch "Ope Panel.xx".
- 7. "xx" differs depending on the destination.
- 8. Touch "UpDate(#) or (#) to start the update.
- 9. Downloading starts after about 9 seconds.
- 10. The operation panel goes off and the main power on key flashes in red at 0.5 s intervals when the data is downloading. The same key starts flashing in green at 1 s intervals when the update is finished.
- 11. Switch the copier main power switch off and remove the SD card. Then switch the copier on.

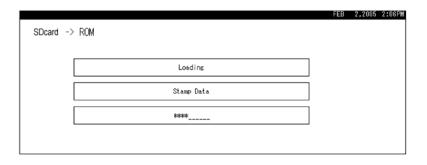
Downloading Stamp Data

The stamp data should be downloaded from the controller firmware to the hard disks at the following times:

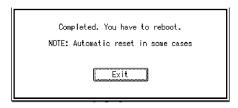
• After the hard disks have been replaced.

The print data contains the controller software. Execute SP 5853 to download the fixed stamp data required by the hard disks.

- 1. Enter the SP mode.
- 2. Select SP5853 and then press "EXECUTE". The following screen opens while the stamp data is downloading.



The download is finished when the message prompts you to close.



3. Press the "Exit" button. Then turn the copier off and on again.

NVRAM Data Upload/Download

Uploading Content of NVRAM to an SD card

Do the following procedure to upload SP code settings from NVRAM to an SD card.



- This data should always be uploaded to an SD card before the NVRAM is replaced.
- Make sure that the write protection of an SD card is unlocked
- 1. Do SP5990-001 (SMC Print) before you switch the machine off. You will need a record of the NVRAM settings if the upload fails.
- 2. Switch the copier main power switch off.
- 3. Remove the SD slot cover ($\mathscr{F} \times 1$).
- 4. Insert the SD card into SD card slot 3. Then switch the copier on.
- 5. Execute SP5824-001 (NVRAM Data Upload) and then press the "Execute" key.
- 6. The following files are coped to an NVRAM folder on the SD card when the upload procedure is finished. The file is saved to the path and the following filename:

NVRAM\<serial number>.NV

Here is an example with Serial Number "K5000017114":

5

NVRAM\K5000017114.NV

7. In order to prevent an error during the download, be sure to mark the SD card that holds the uploaded data with the number of the machine from which the data was uploaded.



• You can upload NVRAM data from more than one machine to the same SD card.

Downloading an SD Card to NVRAM

Do the following procedure to download SP data from an SD card to the NVRAM in the machine.

- The NVRAM data down load may fail if the SD card with the NVRAM data is damaged, or if the connection between the controller and BICU is defective.
- Do the download procedure again if the download fails.
- Do the following procedure if the second attempt fails:
- Enter the NVRAM data manually using the SMC print you created before uploading the NVRAM data.
- 1. Switch the copier main power switch off.
- 2. Remove the SD slot cover ($\mathscr{F} \times 1$).
- 3. Insert the SD card with the NVRAM data into SD Card Slot 3.
- 4. Switch the copier main power switch on.
- 5. Do SP5825-001 (NVRAM Data Download) and press the "Execute" key.



 The serial number of the file on the SD card must match the serial number of the machine for the NVRAM data to download successfully. The download fails if the serial numbers do not match.

This procedure does not download the following data to the NVRAM:

- Total Count
- C/O, P/O Count

Address Book Upload/Download

Information List

The following information is possible to be uploaded and downloaded.



• E-mail

• Protection Code

• Fax Destination

Fax Option

• Group Name

• Key Display

Select Title

Folder

Local Authentication

Folder Authentication

Account ACL

• New Document Initial ACL

LDAP Authentication

Download

1. Prepare a formatted SD card.

2. Make sure that the write-protection on the SD card is off.

3. Turn off the main power switch of the main machine.

4. Remove the SD slot cover at the left rear side of the machine ($\hat{\beta}^2 \times 1$).

5. Install the SD card into SD card slot 2 (for service use).

6. Turn on the main power switch.

7. Enter the SP mode.

8. Do SP5-846-051 (Backup All Addr Book).

9. Exit the SP mode, and then turn off the main power switch.

10. Remove the SD card form SD card slot 2.

11. Install the SD slot cover.



• If the capacity of SD card is not enough to store the local user information, an error message is displayed.

 Carefully handle the SD card, which contains user information. Do not take it back to your location.

Upload

1. Turn off the main power switch of the main machine.

2. Remove the SD slot cover at the left rear side of the machine ($\mathscr{F} \times 1$).

3. Install the SD card, which has already been uploaded, into SD card slot 2.

4. Turn on the main power switch.

- 5. Enter the SP mode.
- 6. Do SP5-846-052 (Restore All Addr Book).
- 7. Exit the SP mode, and then turn off the main power switch.
- 8. Remove the SD card form SD card slot 2.
- 9. Install the SD slot cover.

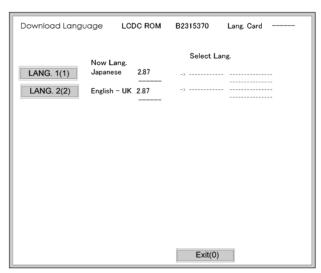


- The counter in the user code information is initialized after uploading.
- The information of an administrator and supervisor cannot be downloaded nor uploaded.
- If there is no data of address book information in the SD card, an error message is displayed.

Installing Another Language

Many languages are available. But you can only switch between two languages at a time. Do the following procedure to select the two languages you want. You can select both of the languages you want from the user interface on the operation panel.

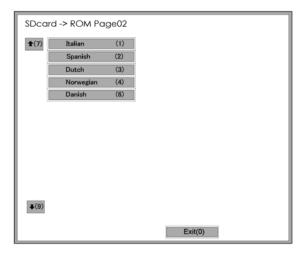
- 1. Switch the copier main power switch off.
- 2. Remove the SD slot cover (\hat{F} x 1).
- 3. Insert the SD card with the language data into SD Card Slot 3.
- 4. Switch the copier main power switch on. The initial screen opens after about 45 seconds.
- 5. Touch "Language Data (2)" on the screen (or press ²).



6. Touch "LANG. 1(1)" or "LANG. 2(2)"

Key	What it does
LANG. 1(1)	Touch this button on the screen (or press ① on the 10-key pad) to open the next screen so you can select the 1st language.
LANG. 1(2)	Touch this button on the screen (or press ② on the 10-key pad) to open the next screen so you can select the 2nd language.
Exit(O)	Touch this key on the screen (or press ① on the 10-key pad) to quit the update procedure and return to normal screen.

7. Touch "LANG 1(1)" to select the 1st Language. Touch "LANG (2)" to select the 2nd Language.



- 8. Touch the appropriate button on the screen (or press the number on the 10-keypad) to select a language as the 1st (or 2nd) language.
 - If a language is already selected, it will show in reverse.
 - Touching "Exit (0)" returns you to the previous screen.
- 9. If you do not see the language that you want to select, touch "↑(7)" or "↓(9)" on the screen (or press ⑦ or ⑨) to show more choices.

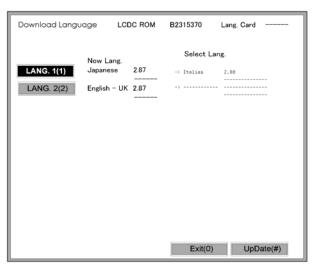
The Download Screen opens after you select a language.

The 1st or 2nd language selected for updating shows.

The following show to right of the selection:

- 1. The first column shows the language currently selected.
- 2. The 2nd column shows the language selected to replace that language.

The example below shows that the download will replace "Japanese" with "Italian" as the 1st language.



10. Touch "Update(#)" on the screen (or press[#])) to start the download.

Another screen with a progress bar does not show when the language is downloading.

The following occur at the time the language is downloading:

- The operation panel switches off.
- The LED on the power on key flashes rapidly.
- 11. After the message of installation completed has shown on the LCD, switch the copier main power switch off. Then remove the SD card from the slot.
- 12. Switch the copier main power switch on to resume normal operation.

Handling Firmware Update Errors

An error message shows in the first line if an error occurs during a download. The error code consists of the letter "E" and a number ("E20", for example).

Error Message Table

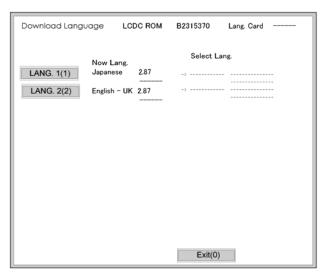
Code	Meaning	Solution
20	Cannot map logical address	Make sure the SD card is inserted correctly.
21	Cannot access memory	HDD connection incorrect or replace hard disks.
22	Cannot decompress compressed data	Incorrect ROM data on the SD card, or data is corrupted.

23	Error occurred when ROM update program started	Controller program abnormal. If the second attempt fails, replace controller board.
24	SD card access error	Make sure SD card inserted correctly, or use another SD card.
30	No HDD available for stamp data download	HDD connection incorrect or replace hard disks.
31	Data incorrect for continuous download	Insert the SD card with the remaining data required for the download, the re-start the procedure.
32	Data incorrect after download interrupted	Execute the recovery procedure for the intended module download, then repeat the installation procedure.
33	Incorrect SD card version	Incorrect ROM data on the SD card, or data is corrupted.
34	Module mismatch - Correct module is not on the SD card)	SD update data is incorrect. Acquire the correct data (Japan, Overseas, OEM, etc.) then install again.
35	Module mismatch – Module on SD card is not for this machine	SD update data is incorrect. The data on the SD card is for another machine. Acquire correct update data then install again.
36	Cannot write module – Cause other than E34, E35	SD update data is incorrect. The data on the SD card is for another machine. Acquire correct update data then install again.
40	Engine module download failed	Replace the update data for the module on the SD card and try again, or replace the BICU board.
42	Operation panel module download failed	Replace the update data for the module on the SD card and try again, or replace the LCDC.
43	Stamp data module download failed	Replace the update data for the module on the SD card and try again, or replace the hard disks.
44	Controller module download failed	Replace the update data for the module on the SD card and tray again, or replace controller board.
50	Electronic confirmation check failed	SD update data is incorrect. The data on the SD card is for another machine. Acquire correct update data then install again.

Installing Another Language

Many languages are available. But you can only switch between two languages at a time. Do the following procedure to select the two languages you want. You can select both of the languages you want from the user interface on the operation panel.

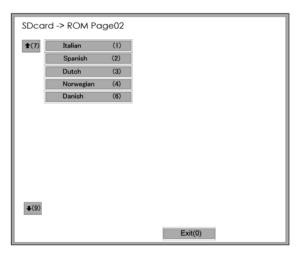
- 1. Switch the copier main power switch off.
- 2. Remove the SD slot cover (x 1).
- 3. Insert the SD card with the language data into SD Card Slot 2.
- 4. Switch the copier main power switch on. The initial screen opens after about 45 seconds.
- 5. Touch "Language Data (2)" on the screen (or press 2).



6. Touch "LANG. 1(1)" or "LANG. 2(2)"

Key	What it does
LANG. 1(1)	Touch this button on the screen (or press ① on the 10-key pad) to open the next screen so you can select the 1st language.
LANG. 1(2)	Touch this button on the screen (or press ② on the 10-key pad) to open the next screen so you can select the 2nd language.
Exit(0)	Touch this key on the screen (or press ① on the 10-key pad) to quit the update procedure and return to normal screen.

7. Touch "LANG 1(1)" to select the 1st Language. Touch "LANG (2)" to select the 2nd Language.



- 8. Touch the appropriate button on the screen (or press the number on the 10-keypad) to select a language as the 1st (or 2nd) language.
 - If a language is already selected, it will show in reverse.
 - Touching "Exit (0)" returns you to the previous screen.
- 9. If you do not see the language that you want to select, touch "↑(7)" or "↓(9)" on the screen (or press ⑦ or ⑨) to show more choices.

The Download Screen opens after you select a language.

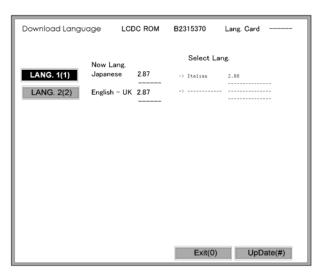
The 1st or 2nd language selected for updating shows.

The following show to right of the selection:

- 1. The first column shows the language currently selected.
- 2. The 2nd column shows the language selected to replace that language.

The example below shows that the download will replace "Japanese" with "Italian" as the 1st language.





10. Touch "Update(#)" on the screen (or press[#]) to start the download.

Another screen with a progress bar does not show when the language is downloading.

The following occur at the time the language is downloading:

- The operation panel switches off.
- The LED on the power on key flashes rapidly.
- 11. After the message of installation completed has shown on the LCD, switch the copier main power switch off. Then remove the SD card from the slot.
- 12. Switch the copier main power switch on to resume normal operation.

Reboot/System Setting Reset

Software Reset

You can reboot the software with one of the following two procedures:

- 1. Turn the main power switch off and on.
- 2. Press and hold down (**) (#*) together for over 10 seconds. When the machine beeps once, release both buttons. After "Now loading. Please wait" shows for a few seconds, the copy window will open. The machine is ready for normal operation.

System Settings and Copy Setting Reset

System Setting Reset

The system settings in the UP mode can be reset to their defaults. Use the following procedure.

- 1. Press User Tools/Counter 💇.
- 2. Hold down # and then press System Settings.



• You must press # first.



- 3. Press yes when the message prompts you to confirm that you want to reset the system settings.
- 4. Press exit when the message tells you that the settings have been reset.

Copier Setting Reset

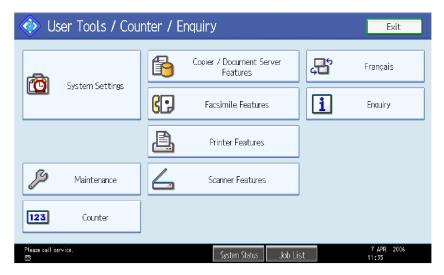
Use the following procedure to reset the copy settings in the UP mode to their defaults.

- 1. Press User Tools/Counter 🐠 .
- 2. Hold down $^{\#}$ and then press Copier/Document Server Settings.





• You must press # first.



- 3. Press "Yes" when the message prompts you to confirm that you want to reset the Copier Document Server settings.
- 4. Press exit when the message tells you that the settings have been reset.

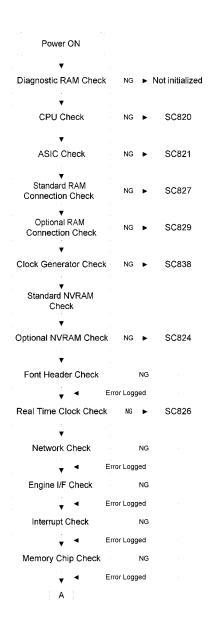
Controller Self-Diagnostics

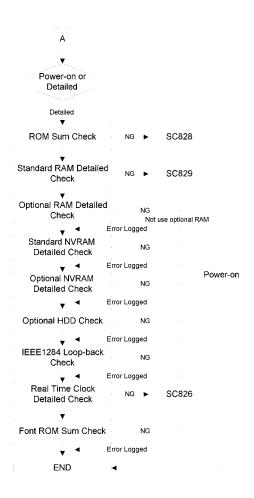
Overview

There are three types of self-diagnostics for the controller.

- 1. Power-on self-diagnostics: The machine automatically starts the self-diagnostics just after the power has been turned on.
- 2. SC detection: The machine automatically detects SC conditions at power-on or during operation.

The following shows the workflow of the power-on and detailed self-diagnostics.





SD Card Appli Move

Overview

The service program "SD Card Appli Move" (SP5-873) lets you to copy application programs from one SD card to another SD card.

Slot 1 and Slot 2 are used to store application programs. However, more than two optional applications are supplied for this machine. In that case, you can move application programs from Slot 2 to Slot 1 with the following procedure.

Consider the following limitations when you try to merge SD cards.

- PostScript3 cannot be moved to the other SD card.
- The destination SD card should have the largest memory size of all the application SD cards. Refer
 to the following table for the memory size of each SD card.

Outline of SD Card Appli Move:

1. Choose a SD card with enough space.

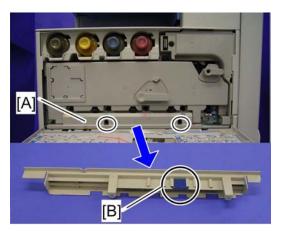


- Do not use an SD card if it has been used on a computer. Normal operation is not guaranteed
 when such an SD card is used.
- Enter SP5873 "SD Card Appli Move". Then move the application from the SD Card in Slot 2 to the card in slot 1.
- 3. Exit the SP mode

Use caution when you do the SD Card Appli Move procedure:



 The data necessary for authentication is transferred with the application program from an SD card to another SD card. Authentication fails if you try to use the SD card after you copy the application program from one card to another card.



- 4. Remove the cover [A] ($\mathscr{F} \times 2$).
- 5. Keep the SD card in the place [B] after you have copied the application program from one card to another card. This is done for the following reasons:
 - 1) The SD card can be the only proof that the user is licensed to use the application program.
 - 2) You may need to check the SD card and its data to solve a problem in the future.

Move Exec

The menu "Move Exec" (SP5-873-001) lets you copy application programs from the original SD card to another SD card.

Mportant (

- Do not turn ON the write protect switch of an application SD card on the machine. If the write protect switch is ON, a download error (e.g. Error Code 44) occurs during a firmware upgrade or application merge.
- 1. Turn the main switch off.
- 2. Make sure that an SD card is in SD Card Slot 1. The application program is copied into this SD card.
- 3. Insert the SD card (having stored the application program) to SD Card Slot 2. The application program is copied from this SD card.
- 4. Turn the main switch on.
- 5. Start the SP mode.
- 6. Select SP5-873-001 "Move Exec."
- 7. Follow the messages shown on the operation panel.
- 8. Turn the main switch off.
- 9. Remove the SD card from SD Card Slot 2.
- 10. Turn the main switch on.

11. Check that the application programs run normally.

Undo Exec

The menu "Undo Exec" (SP5-873-002) lets you copy back application programs from an SD card to the original SD card. You can use this program when, for example, you have mistakenly copied some programs by using Move Exec (SP5-873-001).



- Do not turn ON the write protect switch of an application SD card on the machine. If the write protect switch is ON, a download error (e.g. Error Code 44) occurs during a firmware upgrade or application merge.
- 1. Turn the main switch off.
- 2. Insert the original SD card in SD Card Slot 2. The application program is copied back into this card.
- 3. Insert the SD card (having stored the application program) to SD Card Slot 1. The application program is copied back from this SD card.
- 4. Turn the main switch on.
- 5. Start the SP mode.
- 6. Select SP5-873-002 "Undo Exec."
- 7. Follow the messages shown on the operation panel.
- 8. Turn the main switch off.
- 9. Remove the SD card from SD Card Slot 2.



- This step assumes that the application programs in the SD card are used by the machine.
- 10. Turn the main switch on.
- 11. Check that the application programs run normally.

5

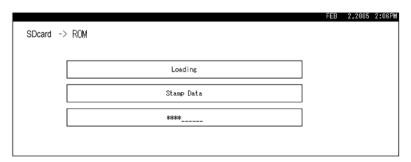
Downloading Stamp Data

The stamp data should be downloaded from the controller firmware to the hard disks at the following times:

• After the hard disks have been replaced.

The print data contains the controller software. Execute SP 5853 to download the fixed stamp data required by the hard disks.

- 1. Enter the SP mode.
- 2. Select SP5853 and then press "EXECUTE". The following screen opens while the stamp data is downloading.



The download is finished when the message prompts you to close.



3. Press the "Exit" button. Then turn the copier off and on again.

NVRAM Data Upload/Download

Uploading Content of NVRAM to an SD card

Do the following procedure to upload SP code settings from NVRAM to an SD card.



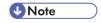
- This data should always be uploaded to an SD card before the NVRAM is replaced.
- · Make sure that the write protection of an SD card is unlocked
- Do SP5990-001 (SMC Print) before you switch the machine off. You will need a record of the NVRAM settings if the upload fails.
- 2. Switch the copier main power switch off.
- 3. Remove the SD slot cover ($\mathscr{F} \times 1$).
- 4. Insert the SD card into SD card slot 2. Then switch the copier on.
- 5. Execute SP5824-001 (NVRAM Data Upload) and then press the "Execute" key.
- 6. The following files are coped to an NVRAM folder on the SD card when the upload procedure is finished. The file is saved to the path and the following filename:

NVRAM\<serial number>.NV

Here is an example with Serial Number "K5000017114":

NVRAM\K5000017114.NV

7. In order to prevent an error during the download, be sure to mark the SD card that holds the uploaded data with the number of the machine from which the data was uploaded.



You can upload NVRAM data from more than one machine to the same SD card.

Downloading an SD Card to NVRAM

Do the following procedure to download SP data from an SD card to the NVRAM in the machine.

- The NVRAM data down load may fail if the SD card with the NVRAM data is damaged, or if the connection between the controller and BICU is defective.
- Do the download procedure again if the download fails.
- Do the following procedure if the second attempt fails:
- Enter the NVRAM data manually using the SMC print you created before uploading the NVRAM data.
- 1. Switch the copier main power switch off.

5

- 2. Remove the SD slot cover (x 1).
- 3. Insert the SD card with the NVRAM data into SD Card Slot 2.
- 4. Switch the copier main power switch on.
- 5. Do SP5825-001 (NVRAM Data Download) and press the "Execute" key.



• The serial number of the file on the SD card must match the serial number of the machine for the NVRAM data to download successfully. The download fails if the serial numbers do not match.

This procedure does not download the following data to the NVRAM:

- Total Count
- C/O, P/O Count

Address Book Upload/Download

Information List

The following information is possible to be uploaded and downloaded.

Information			
Registration No.	Select Title		
User Code	Folder		
E-mail Protection Code	Local Authentication		
	Folder Authentication		
Fax Destination	Account ACI		
Fax Option	New Document Initial ACL		
Group Name	IDAP Authentication		
Key Display	- LDAI Admenticulion		

Download

- 1. Prepare a formatted SD card.
- 2. Make sure that the write-protection on the SD card is off.
- 3. Turn off the main power switch of the main machine.
- 4. Remove the SD slot cover at the left rear side of the machine ($\hat{F} \times 1$).
- 5. Install the SD card into the SD card slot 2 (for service use).
- 6. Turn on the main power switch.
- 7. Enter the SP mode.
- 8. Do SP5-846-051 (Backup All Addr Book).
- 9. Exit the SP mode, and then turn off the main power switch.
- 10. Remove the SD card form the SD card slot 2.
- 11. Install the SD slot cover.



- If the capacity of SD card is not enough to store the local user information, an error message is displayed.
- Carefully handle the SD card, which contains user information. Do not take it back to your location.

Upload

- 1. Turn off the main power switch of the main machine.
- 2. Remove the SD slot cover at the left rear side of the machine ($\mathscr{F} \times 1$).
- 3. Install the SD card, which has already been uploaded, into the SD card slot 2.
- 4. Turn on the main power switch.
- 5. Enter the SP mode.
- 6. Do SP5-846-052 (Restore All Addr Book).
- 7. Exit the SP mode, and then turn off the main power switch.
- 8. Remove the SD card form the SD card slot 2.
- 9. Install the SD slot cover.



- The counter in the user code information is initialized after uploading.
- The information of an administrator and supervisor cannot be downloaded nor uploaded.
- If there is no data of address book information in the SD card, an error message is displayed.

Using the Debug Log

Overview

This machine provides a Save Debug Log feature that allows the Customer Engineer to save and retrieve error information for analysis.

Every time an error occurs, debug information is recorded in volatile memory. But this information is lost when the machine is switched off and on.

To capture this debug information, the Save Debug Log feature provides two main features:

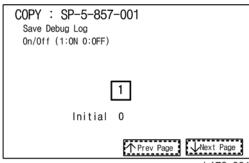
- Switching on the debug feature so error information is saved directly to the HDD for later retrieval.
- Copying the error information from the HDD to an SD card.

Do the following procedure below to set up the machine so the error information is saved automatically to the HDD when a user has problems with the machine. Then ask the user to reproduce the problem.

Switching ON and Setting UP Save Debug Log

The debug information cannot be saved until the "Save Debug Log" function has been switched on and a target has been selected.

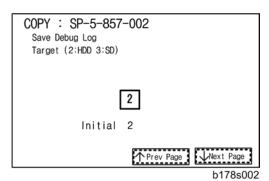
- 1. Enter the SP mode and switch the Save Debug Log feature on.
 - Press then use the 10-key pad to enter (1)(0)(7).
 - Press and hold down ® for more than 3 seconds.
 - Touch "Copy SP".
 - On the LCD panel, open SP5857.
- 2. Under "5857 Save Debug Log", touch "1 On/Off".



3. On the control panel keypad, press "1". Then press #. This switches the Save Debug Log feature on.



• The default setting is "0" (OFF). This feature must be switched on in order for the debug information to be saved.



4. Select the target destination where the debug information will be saved. Under "5857 Save Debug Log", touch "2 Target", enter "2" with the operation panel key to select the hard disk as the target destination. Then press #.



- Select "3 SD Card" to save the debug information directly to the SD card if it is inserted in the service slot.
- 5. Now touch "5858" and specify the events that you want to record in the debug log. SP5858 (Debug Save When) provides the following items for selection.

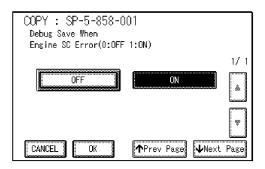
1	Engine SC Error	Saves data when an engine-related SC code is generated.
2	Controller SC Error	Saves debug data when a controller-related SC Code is generated.
3	Any SC Error	Saves data only for the SC code that you specify by entering code number.
4	Jam	Saves data for jams.



• More than one event can be selected.

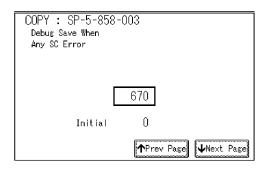
Example 1: To Select Items 1, 2, 4

Touch the appropriate items(s). Press "ON" for each selection. This example shows "Engine SC Error" selected.



Example 2: To Specify an SC Code

Touch "3 Any SC Error", enter the 3-digit SC code number with the control panel number keys. Then press (#). This example shows an entry for SC670.



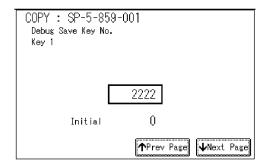


- For details about SC code numbers, please refer to the SC tables in Section 4. "Troubleshooting".
- Select one or more memory modules for reading and recording debug information. Touch "5859".
 Under "5859" press the necessary key item for the module that you want to record.
 Enter the appropriate 4-digit number. Then press (#).



• Refer to the two tables below for the 4-digit numbers to enter for each key.

The example below shows "Key 1" with "2222" entered.



The following keys can be set with the corresponding numbers. (The initials in parentheses indicate the names of the modules.)

4-Digit Entries for Keys 1 to 10

Key No.	Сору	Printer	Scanner	Web
1	2222 (SCS)			
2	14000 (SRM)			
3	256 (IMH)			
4	1000 (ECS)			
5		1025 (MCS)		
6	4848 (COPY)	4400 (GPS)	5375 (Scan)	5682 (NFA)
7	2224 (BICU)	4500 (PDL)	5682 (NFA)	6600 (WebDB)
8		4600 (GPS-PM)	3000 (UCS)	3300 (PTS)
9		2000 (NCS)	2000 (NCS)	6666 (WebSys)
10		2224 (BICU)	4126 (DCS)	2000 (NCS)



• The default settings for Keys 1 to 10 are all zero ("0").

Key to Acronyms

Acronym	Meaning	Acronym	Meaning
ECS	Engine Control Service	NFA	Net File Application
GPS	GW Print Service	PDL	Printer Design Language
GSP-PM	GW Print Service – Print Module	PTS	Print Server
IMH	Image Memory Handler	SCS	System Control Service
MCS	Memory Control Service	SRM	System Resource Management
NCS	Network Control Service	WebDB	Web Document Box (Document Server)

1. The machine is now set to record the debugging information automatically on the HDD (the target selected with SP5857-002) for the events that you selected with SP5858 and the memory modules selected with SP5859.

- Note that the number entries for Keys 1 to 5 are the same for the Copy, Printer, Scanner, and Web memory modules.
- The initial settings are all zero.
- These settings remain in effect until you change them. Be sure to check all the settings, especially the settings for Keys 6 to 10. To switch off a key setting, enter a zero for that key.
- You can select any number of keys from 1 to 10 (or all) by entering the corresponding 4-digit numbers from the table.
- You cannot mix settings for the groups (COPY, PRINTER, etc.) for 006 to 010. For example, if you
 want to create a PRINTER debug log you must select the settings from the 9 available selections for
 the "PRINTER" column only.
- One area of the disk is reserved to store the debug log. The size of this area is limited to 4 MB.

Retrieving the Debug Log from the HDD

Retrieve the debug log by copying it from the hard disk to an SD card.

- 1. Insert the SD card into slot 2 (service slot) of the copier.
- 2. Enter the SP mode and execute SP5857-009 (Copy HDD to SD Card (Latest 4 MB)) to write the debugging data to the SD card.
- 3. Use a card reader to copy the file and send it for analysis to your local Ricoh representative by email. You can also send the SD card by regular mail if you want.

Recording Errors Manually

SC errors and jams only are recorded to the debug log automatically. Please instruct the user to do the following immediately after occurrence to save the debug data for any other errors that occur while the customer engineer is not on site. Such problems also include a controller or panel freeze.



- You must previously switch on the Save Debug Feature (SP5857-001) and select the hard disk as the save destination (SP5857-002) if you want to use this feature.
- 1. Press (Clear Modes).on the operation panel when the error occurs.
- 2. On the control panel, enter "01". Then hold down ^{©®} for at least 3 seconds until the machine beeps and then release it. This saves the debug log to the hard disk for later retrieval with an SD card by the service representatives.
- 3. Switch the machine off and on to resume operation.

The debug information for the error is saved on the hard disk. This lets the service representative retrieve it on their next visit by copying it from the HDD to an SD card.

New Debug Log Codes

SP5857-015 Copy SD Card-to-SD Card: Any Desired Key

This SP copies the log on an SD card (the file that contains the information written directly from shared memory) to a log specified by key number. The copy operation is executed in the log directory of the SD card inserted in the same slot. (This function does not copy from one slot to another.) Each SD card can hold up to 4 MB of file data. Unique file names are created for the data during the copy operation to prevent overwriting files of the same name. This means that log data from more than one machine can be copied onto the same SD card. This command does not execute if there is no log on the HDD for the name of the specified key.

SP5857-016 Create a File on HDD to Store a Log

This SP creates a 32 MB file to store a log on the HDD. However, this is not a completely empty file. The created file will hold the number "2225" as the SCS key number and other non-volatile information. Even if this SP is not executed, a file is created on the HDD when the first log is stored on the HDD (it takes some time to complete this operation). This creates the possibility that the machine may be switched off and on before the log can be created completely. If you execute this SP to create the log file beforehand, this will greatly reduce the amount of time required to acquire the log information and save onto the HDD. With the file already created on the HDD for the log file, the data only needs to be recorded. A new log file does not need to be created. To create a new log file, do SP5857-011 to delete the debug log data from the HDD. Then do SP5857-016.

SP5857-017 Create a File on SD Card to Store a Log

This SP creates a 4 MB file to store a log on an SD card. However, this is not a completely empty file. The created file will hold the number "2225" as the SCS key number and other non-volatile information. Even if this SP is not executed, a file is created on the SD card when the first log is stored on the SD card (it takes some time to complete this operation). This creates the possibility that the machine may be switched off and on before the log can be created completely. If you execute this SP to create the log file beforehand, this will greatly reduce the amount of time required to acquire the log information and save onto the SD card. With the file already created on the SD card for the log file, the data only needs to be recorded; a new log file does not require creation. To create a new log file, do SP5857-012 to delete the debug log data from the SD card. Then do SP5857-017.

Card Save Function

Overview

Card Save:

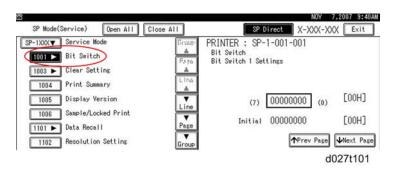
- The Card Save function is used to save print jobs received by the printer on an SD card with no print
 output. Card Save mode is toggled using printer Bit Switch #1 bit number 4. Card Save will remain
 enabled until the SD card becomes full, or until all file names have been used.
- Captures are stored on the SD card in the folder /prt/cardsave. File names are assigned sequentially
 from PRT00000.prn to PRT99999.prn. An additional file PRT.CTL will be created. This file contains a
 list of all files created on the card by the card save function.
- Previously stored files on the SD card can be overwritten or left intact. Card Save SD has "Add" and
 "New" menu items.
 - Card Save (Add): Appends files to the SD Card. Does not overwrite existing files. If the card
 becomes full or if all file names are used, an error will be displayed on the operation panel.
 Subsequent jobs will not be stored.
 - Card Save (New): Overwrites files in the card's /prt/cardsave directory.

Limitation:

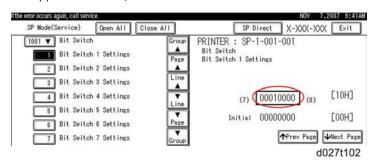
Card Save cannot be used with PJL Status Readback commands. PJL Status Readbacks will not work.
 In addition they will cause the Card Save to fail.

Procedure

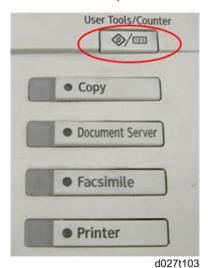
- 1. Turn the main power switch OFF.
- 2. Insert the SD card into slot 2. Then turn the power ON.
- 3. Enter SP mode.
- 4. Select the "Printer Sp".
- 5. Select SP-1001 "Bit Switch".



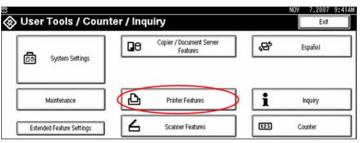
6. Select "Bit Switch 1 Settings" and use the numeric keypad to turn bit 4 ON and then press the "#" button to register the change. The result should look like: 00010000. By doing this, Card Save option will appear in the "List/Test Print" menu.



- 7. Press "Exit" to exit SP Mode.
- 8. Press the "User Tools/Counter" button.

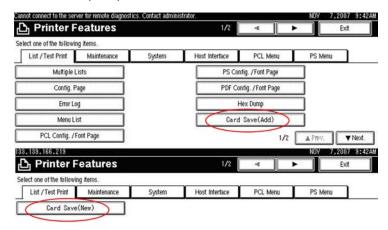


9. Select "Printer Features".



d027t105

 Card Save (Add) and Card Save (New) should be displayed on the screen. Select Card Save (Add) or Card Save (New).



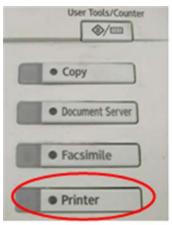
2/2 ▲ Prev. ▼ Next d027t106

11. Press "OK" and then exit the "User Tools/Counter" menu.



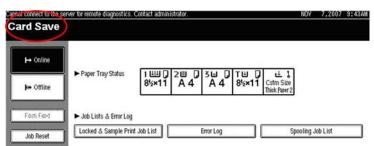
d027t107

12. Press the "Printer" button.



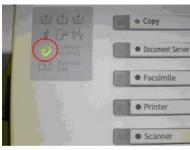
d027t108

13. Card Save should be displayed in the top left of the display panel.



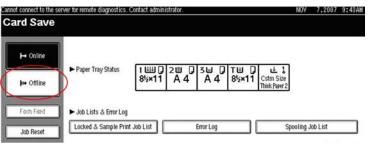
d027t109

14. Send a job to the printer. The Communicating light should start blinking as shown below.



d027t110

- 15. As soon as the printer receives the data, it will be stored on the SD card automatically with no print output. Nothing is displayed on the screen, indicating that a Card Save operation was successful.
- 16. Press "Offline" and then the "Clear/Stop" button to exit Card Save mode.



d027t111

- 17. Change the Bit Switch Settings back to the default **0000000**. Press the "#" button in the numeric keypad to register the changes.
- 18. Remove the SD card after the main power switch is turned off.

Error Messages

Card Save error messages:

- Init error: A card save process (e.g. card detection, change to kernel mode) failed to initialize.
- Card not found: Card cannot be detected in the slot.
- No memory: Insufficient working memory to process the job.
- Write error: Failed to write to the card.
- Other error: An unknown error occurred.

If an error occurs, pressing "OK" will cause the device to discard the job and return to the ready state.

4

6. Troubleshooting

Service Call Conditions

See "Appendices" for the following information:

• SC Tables

Process Control Error Conditions

See "Appendices" for the following information:

- Developer Initialization Result
- Process Control Self-Check Result
- Line Position Adjustment Result

0

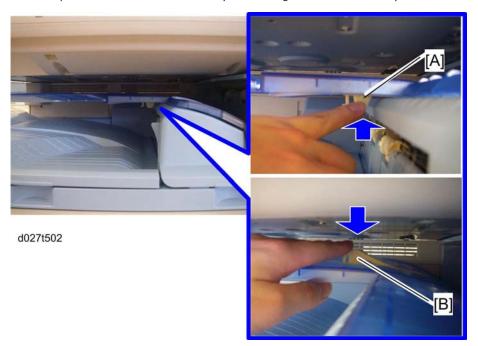
Troubleshooting Guide

See "Appendices" for the following information:

- Image Quality
- Line Position Adjustment

Stack Problem in the 1-Bin Tray

If a stack problem occurs on the 1-bin tray, raise the guide on the 1-bin tray.



If a stack problem occurs;

• Push the guide to lift the guide [A].

If another type or size of paper is used;

Press down the guide [B].

Jam Detection

See "Appendices" for the following information:

- Paper Jam Display
- Jam Codes and Display Codes (Paper Size Code)
 (Sensor Locations)

6

Electrical Component Defects

See "Appendices" for the following information:

- Sensors
- Blown Fuse Conditions (Power Supply Unit)

Scanner Test Mode

SBU Test Mode

Output the SBU test pattern with SP4-807-001 to make sure the scanner SBU control operates correctly. The SBU test pattern prints out after you have set the SP mode settings and pressed the start key.

- The CCD on the SBU board may be defective if the copy is abnormal and the SBU test pattern is normal.
- The followings can be the cause if the copy is normal and the SBU test pattern is abnormal:
 - The harness may not be correctly connected between the SBU and the BICU.
 - The BICU or SBU board may be defective.

IPU Test Mode

You can check the BICU board with the SP mode menu, SP4-904-1.

If no error is detected, the test ends. Then the completion code shows in the operation panel display. If an error is detected, the test is interrupted. Then an error code shows. The table below lists the completion and error codes.

SP4-904-1 Register Access

There are 16 bits switches in this SP. Each bit indicates a different CPU. The error result is displayed on the operation panel as a decimal number.

0: Normal, 1: Error

SP4-904-2 Image Path

There are 16 bits switches in this SP. Each bit indicates a different CPU path. The error result is displayed on the operation panel as a decimal number.

0: Normal, 1: Error

Errors may be caused by the following problems:

- 1. Short circuit on the signal lines
 - When the BICU board is installed, a pin or two on the ASIC is damaged.
 - · Some conductive matter or object is trapped among the pins.
 - Condensation
- 2. Destruction of circuit elements



- Over current or a defective element breaks the circuit.
- 3. Abnormal power supply
 - The required voltage is not supplied to the devices.
- 4. Overheat/overcooling
 - The environment is inappropriate for the board (the scanner unit).
- 5. Static electricity
 - Static electricity of a high voltage occurs during the test.
- 6. Others
 - The scanner and BICU are incorrectly connected.

When you have completed a check, turn the main switch off and on before you do another check. When you have completed all necessary checks, turn the main switch off and on.

MEMO

Model AT-C2 Machine Code: D023/D025

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1. Appendixe: Specifications

Main Frame

Configuration:	Desktop
Print Process:	Laser beam scanning & Dry electrostatic transfer system
Tilli Tiocess.	4 drums tandem method
Number of scans:	1
Resolution:	Scan: 600 dpi
Resolution.	Print: 600 dpi
Gradation:	Scan: 600dpi / 10bits/pixel
Gradalion.	Print: 600dpi / 4 bits/pixel
Original type:	Sheets, book, objects
Maximum original size:	A3/11" x 17"
Original reference position:	Left rear corner, ad hoc lists
	Plain (ADF 1 to 1, LT/ A4 LEF)
	C2a: 28 cpm (color/black & white)
	C2b: 33 cpm (color/black & white)
	Thick 1 (169 g/m ² or less)
	C2a: 16 cpm (color/black & white)
	C2b 16 cpm (color/black & white)
	Thick 2 (220 g/m ² or less)
Copy speed:	C2a: 16 cpm (color/black & white)
	C2b 16 cpm (color/black & white)
	Thick 3 (256 g/m ² or less)
	C2a: 16 cpm (color/black & white)
	C2b 16 cpm (color/black & white)
	OHP, Glossy (1200 dpi)
	C2a: 16 cpm (color/black & white)
	C2b 16 cpm (color/black & white)

	C2a/b					
First copy (normal mode):	Color: 8 seconds or less	(A4/LT LEF)				
	Black & white: 5 seconds or less (A4/LT LEF)					
NA/	NA: 29 seconds or less	(20°C)				
Warm-up time:	EU: 27 seconds or less ((20°C)				
	Standard tray: 550 shee	ets x 2 + 100				
Print Paper Capacity:	' ' '	s (Normal), 40 sheets (Th 70 - 256 g/m ²), 35 shee	0, ,,			
(80 g/m², 20 lb)	Optional paper feed tra	y: 550 sheets x 2				
	2000-sheet LCT: 2000	sheets				
	1200-sheet LCT: 1200	sheets				
	(Refer to "Supported Pa	per Sizes".)				
	-	Minimum	Maximum			
	Tray 1	A4/8.5" x 11" (LEF)				
	Tray 2	A5 (LEF)/	A3/11" x 17"			
D D		8.5" x 11"				
Print Paper Size:	By-pass	90 x 148 mm	305 x 600 mm			
	Optional Tray	A5 (LEF)/	A3/11" x 1 <i>7</i> "			
	Opiloliai ITay	8.5" x 11"	A3/11 X1/			
	2000-sheet LCT	A4/8.5">	< 11" (LEF)			
	1200 de 141CT	B5 (LEF)/	A4 (LEF)/			
	1200-sheet LCT	257 x 182mm	297 x 210mm			
	Standard tray: 60 to 256 g/m ² (16 to 68 lb.)					
	Optional paper tray: 60 to 256 g/m² (16 to 68 lb.)					
Printing Paper Weight:	By-pass tray: 60 to 256 g/m² (16 to 68 lb.)					
	Duplex unit: 60 to 169 g/m² (16 to 45 lb.)					
	LCT 1200: 60 to 216 g/m ² (10 to 5711b)					
	Standard exit tray: 500	sheets or more (face dow	vn)* ¹			
Output Paper Capacity:	Shift Tray: 250 sheets (8	80 g/m²)				
	1-bin Tray: 125 (80 g/	m ²)				

	500-sheet finisher 500 (80 g/m²)						
	1000-sheet finisher 250 + 1000 sheets (80 g/m²)						
	1000-sheet booklet finisher: 100 + 1000 sheets (80 g/m²)						
	*1: T6200, A4 LEF	* 1: T6200, A4 LEF					
Continuous copy:	Up to 999 sheets	Up to 999 sheets					
	Arbitrary: From 25 t	o 400% (1% step	၁)				
		Fixe	ed:				
	North Am	erica		Europe			
	25%			25%			
	50%			50%			
Zoom:	65%			61%			
	73%		71%				
	78%		82%				
	85%		87%				
	93%			93%			
	100%	, 0		100%			
	121%	, 0		115%			
	129%	ó		122%			
	155%	ó	141%				
	200%	ó	200%				
	400%	ó	400%				
Memory:	Standard: 1024 ME	3					
Power Source:	120 V, 60 Hz: More than 12A (for North America)						
Tower oddree.	220 V – 240 V, 50	220 V – 240 V, 50/60 Hz: More than 8A (for Europe/					
	-	120V		220 - 240V			
Power Consumption:	Maximum	1500 W o	r less	1600 W or less			
	Energy Saver	Energy Saver 3.0 W or		3.0 W or less		6.0 W or less	

	Model	State	Mainframe	Complete system (* 1)
		Standby	40 dB(A) or Less	44 dB(A) or Less
	C2a	Operating	B/W: 65.8 dB(A) or Less	-
Noise Emission: (Sound Power Level)			Color: 66.4 dB(A) or Less	Color: 70.4 dB(A) or Less
(coolid i ower Levely		Standby	40 dB(A) or Less	46.9 dB(A) or Less
	C2b	Operating	B/W: 67.6 dB(A) or Less	-
		Sperding	Color: 67.9 dB(A) or Less	Color: 71.9 dB(A) or Less

(* 1) The complete system consists of mainframe, ARDF, finisher, and LCT.

The above measurements were made in accordance with Ricoh standard methodology.

Dimensions (W \times D \times H):

Copier: 670 x 671 x 760 mm (26.4" x 26.4" x 29.9")

Copier + PFU or LCT: 670 x 671 x 1020 mm (26.4" x 26.4" x 40.2")

Weight: Less than 120 kg (265 lb.) [with ARDF excluding toner]

Printer

	PCL 6/5c				
	RPCS (Refined Printing Command Stream)				
Printer Languages:	Adobe PostScript 3 (optional)				
	PDF Direct (optional)				
	PictBridge (optional)				
	PCL 5c:				
	300 x 300 dpi : Available only in B/W mode				
	600 x 600 dpi : Fast (1 bit), Standard (2 bits), Fine (4 bits)				
	PCL 6:				
Resolution and	600 x 600 dpi : Fast (1 bit), Standard (2 bits), Fine (4 bits) / 1200 x 1200 dpi				
Gradation:	RPCS:				
	600 x 600 dpi, 1,800 x 600 dpi*, 9600 dpi x 600 dpi*				
	*1,800 x 600 dpi = 600 x 600 dpi (2 bits)				
	9600 dpi x 600 dpi = 600 x 600 dpi (4 bits)				
	PS3:				
	600 x 600 dpi : Fast (1 bit), Standard (2 bits), Fine (4 bits)				
	C2a:				
	28 ppm in Plain/Middle Thick mode				
Distriction	16 ppm in Thick/OHP mode (depending on paper type)				
Printing speed:	C2b:				
	33 ppm in Plain/Middle Thick mode				
	16 ppm in Thick/OHP mode (depending on paper type)				
	PCL 6/5c (Standard):				
	45 Compatible fonts				
Resident Fonts:	13 International fonts				
kesideni ronis:	1 Bitmap font				
	Adobe PostScript 3 (Optional):				
	136 fonts (24 Type 2 fonts, 112 Type 14 fonts)				
Host Interfaces:	USB2.0: Standard				

	USB Host (PictBridge): Optional
	Ethernet (100 Base-TX/10 Base-T): Standard
	Gigabit Ethernet (1000 Base-T): Optional
	IEEE1284 parallel x 1: Optional
	IEEE802.11a/g, g (Wireless LAN): Optional
	Bluetooth (Wireless): Optional
Network Protocols:	TCP/IP (IPv4, IPv6), IPX/SPX, AppleTalk (Auto Switching)

Т

Scanner

Standard Scanner Resolution:	Main scan/Sub scan 600 dpi
Available scanning Resolution Range:	Twain Mode: 100 to 1200 dpi Delivery Mode: 100/200/300/400/600 dpi
Grayscales:	1 bit or 8 bits/pixel each for RGB
Scanning Throughput (ARDF mode):	Scan to E-mail / Folder: BW: 50 ppm (A4LEF / BW Text (Print) / 200dpi / Compression: On (MH)) FC: 50 ppm (A4LEF / FC Text / Photo / 200dpi / Compression: Standard)
Interface:	Ethernet (100 Base-TX/10 Base-T/1000 Base-T for TCP/IP), Wireless LAN, USB2.0/SD Slot
Compression Method:	B&W: TIFF (MH, MR, MMR) Gray Scale, Full Color: JPEG

Supported Paper Sizes

Paper Feed

North America

BT: By-pass Tray, T1: Tray 1, T2/3/4: Tray 2/3/4, LCT 2000: Large Capacity Tray: 2000-sheet, LCT 1200: Large Capacity Tray: 1200-sheet, DU: Duplex Unit

Paper	Size (W x L)	ВТ	T1	T2/3/	LCT 2000	LCT 1200	DU
A3 W	12" x 18"	М	-	-	-	-	-
A3 SEF	297 x 420mm	М	-	М	-	-	М
A4 SEF	210 x 297mm	М	-	Α	-	-	М
A4 LEF	297 x 210mm	М	S	М	S	S	М
A5 SEF	148 x 210mm	М	-	-	-	-	-
A5 LEF	210 x 148mm	М	S	Α	-	-	М
A6 SEF	105 x 148mm	М	-	-	-	-	-
B4 SEF	257 x 364mm	М	-	М	-	-	М
B5 SEF	182 x 257mm	М	-	Α	-	-	М
B5 LEF	257 x 182mm	М	S	М	-	S	М
B6 SEF	128 x 182mm	М	-	-	-	-	-
Ledger	11" x 17"	Α	-	Α	-	-	М
Letter SEF	8.5" x 11"	Α	-	Α	-	-	М
Letter LEF	11" x 8.5"	Α	М	Α	М	М	М
Legal SEF	8.5" x 14"	М	-	Α	-	-	М
Government Legal SEF	8.25" x 14"	М	-	М	-	-	М
Half Letter SEF	5.5" x 8.5"	А	-	-	-	-	-

Paper	Size (W x L)	ВТ	T1	T2/3/ 4	LCT 2000	LCT 1200	DU
Executive SEF	7.25" x 10.5"	М	-	М	-	-	М
Executive LEF	10.5" x 7.25"	М	-	Α	-	-	М
F SEF	8" x 13"	М	-	М	-	-	М
Foolscap SEF	8.5" x 13"	М	-	М	-	-	М
	8.25" x 13"	М	-	М	-	-	М
5 h 055	11" x 15"	М	-	М	-	-	М
Folio SEF	10" x 14"	М	-	М	-	-	М
	8" x 10"	М	-	М	-	-	М
8K	267 x 390mm	М	-	М	-	-	М
16K SEF	195 x 267mm	М	-	М	-	-	М
16K LEF	267 x 195mm	М	-	М	-	-	М
Custom		М	-	М	-	-	-
Com 10 Env.	4.125" x 9.5"	М	-	-	-	-	-
Monarch Env.	3.875" x 7.5"	М	-	-	-	-	-
C6 Env.	114 x 162mm	М	-	-	-	-	-
C5 Env.	162 x 229mm	М	-	-	-	-	-
DL Env.	110 x 220mm	М	-	-	-	-	-

Remarks:

А	Supported: the sensor detects the paper size.
М	Supported: the user specifies the paper size.
S	Supported: depends on a technician adjustment
-	Not supported

Europe/ Asia

BT: By-pass Tray, T1: Tray 1, T2/3/4: Tray 2/3/4, LCT 2000: Large Capacity Tray: 2000-sheet, LCT 1200: Large Capacity Tray: 1200-sheet, DU: Duplex Unit

Paper	Size (W x L)	ВТ	T1	T2/3/ 4	LCT 2000	LCT 1200	DU
A3 W	12" x 18"	М	-	-	-	-	-
A3 SEF	297 x 420mm	Α	-	Α	-	-	М
A4 SEF	210 x 297mm	А	-	Α	-	-	М
A4 LEF	297 x 210mm	Α	М	Α	М	S	М
A5 SEF	148 x 210mm	А	-	-	-	-	-
A5 LEF	210 x 148mm	Α	S	А	-	-	М
A6 SEF	105 x 148mm	А	-	-	-	-	-
B4 SEF	257 x 364mm	М	-	Α	-	-	М
B5 SEF	182 x 257mm	М	-	Α	-	-	М
B5 LEF	257 x 182mm	М	S	Α	-	S	М
B6 SEF	128 x 182mm	М	-	-	-	-	-
Ledger	11" x 1 <i>7</i> "	М	-	М	-	-	М
Letter SEF	8.5" x 11"	М	-	Α	-	-	М
Letter LEF	11" x 8.5"	М	S	М	S	S	М
Legal SEF	8.5" x 14"	М	-	М	-	-	М
Government Legal SEF	8.25" x 14"	М	-	М	-	-	М
Half Letter SEF	5.5" x 8.5"	М	-	-	-	-	-
Executive SEF	7.25" x 10.5"	М	-	М	-	-	М
Executive LEF	10.5" x 7.25"	М	-	М	-	-	М
F SEF	8" x 13"	М	-	М	-	-	М
Foolscap SEF	8.5" x 13"	М	-	М	-	-	М

Paper	Size (W x L)	ВТ	T1	T2/3/ 4	LCT 2000	LCT 1200	DU
	8.25" x 13"	М	-	М	-	-	М
F 1. CFF	11" x 15"	М	-	М	-	-	М
Folio SEF	10" x 14"	М	-	М	-	-	М
	8" x 10"	М	-	М	-	-	М
8K	267 x 390mm	М	-	М	-	-	М
16K SEF	195 x 267mm	М	-	М	-	-	М
16K LEF	267 x 195mm	М	-	М	-	-	М
Custom		М	-	М	-	-	-
Com 10 Env.	4.125" x 9.5"	М	-	-	-	-	-
Monarch Env.	3.875" x 7.5"	М	-	-	-	-	-
C6 Env.	114 x 162mm	М	-	-	-	-	-
C5 Env.	162 x 229mm	М	-	-	-	-	-
DL Env.	110 x 220mm	М	-	-	-	-	-

Remarks:

А	Supported: the sensor detects the paper size.
М	Supported: the user specifies the paper size.
S	Supported: depends on a technician adjustment
-	Not supported

Paper Exit

1000-Sheet Booklet Finisher

MF: Main Frame, Prf: Proof, Clr: Clear, Shf: Shift, Stp: Staple, SS: Saddle Stitch, 2/3 P: 2/3 Holes Punch, 4 P: 4 Holes Punch, N4P: North Europe 4 Holes Punch

	C: /// 1)	145			1000	O-sheet	bookl	et finisher		
Paper	Size (W x L)	MF	Prf	Clr	Shf	Stp	SS	2/3 P	4 P	N4P
A3 W	12" x 18"	Υ	Υ	Υ	-	-	-	Y	Υ	Y
A3 SEF	297 x 420 mm	Υ	Υ	Υ	Υ	30	30	Y	Υ	Y
A4 SEF	210 x 297 mm	Υ	Υ	Υ	Υ	50	50	-	-	Y
A4 LEF	297 x 210 mm	Υ	Υ	Υ	Υ	50	50	Y	Υ	Y
A5 SEF	148 x 210 mm	Υ	Υ	Υ	Υ	-	-	-	-	Y
A5 LEF	210 x 148 mm	Υ	Υ	Υ	Υ	-	-	-	-	Υ
A6 SEF	105 x 148 mm	Υ	Υ	Υ	-	-	-	-	-	-
B4 SEF	257 x 364 mm	Υ	Υ	Υ	Υ	30	30	Y	Υ	Y
B5 SEF	182 x 257 mm	Υ	Υ	Υ	Υ	50	50	-	-	Y
B5 LEF	257 x 182 mm	Υ	Υ	Υ	Υ	50	50	Y	Υ	Y
B6 SEF	128 x 182 mm	Υ	Υ	Υ	-	-	-	-	-	Y
Ledger	11" x 1 <i>7</i> "	Υ	Υ	Υ	Υ	30	30	Y	Υ	Y
Letter SEF	8.5" x 11"	Υ	Υ	Υ	Υ	50	50	-	-	Y
Letter LEF	11" x 8.5"	Υ	Υ	Υ	Υ	50	-	Y	Υ	Y
Legal SEF	8.5" x 14"	Υ	Υ	Υ	Υ	30	30	-	-	Y
Government Legal SEF	8.25" x 14"	Υ	Y	Y	Y	30	30	Y	Y	Y
Half Letter SEF	5.5" x 8.5"	Υ	Υ	Υ	Υ	-	-	-	-	Y
Executive SEF	7.25" x 10.5"	Υ	Υ	Υ	Υ	50	-	-	-	Υ
Executive LEF	10.5" x 7.25"	Υ	Υ	Υ	Υ	50	-	Υ	Υ	Υ
F SEF	8" x 13"	Υ	Υ	Υ	Υ	30	-	-	-	Υ
Foolscap SEF	8.5" x 13"	Υ	Υ	Υ	Y	30	-	-	-	Υ
	8.25" x 13"	Υ	Υ	Υ	Y	30	-	-	-	Υ
Folio SEF	11" x 15"	Υ	Υ	Y	Y	30	-	Y	Υ	Y

D	S: (\\/ \)	MF			1000	O-sheet	bookl	et finisher		
Paper	Size (W x L)	IVIF	Prf	Clr	Shf	Stp	SS	2/3 P	4 P	N4P
	10" x 14"	Υ	Υ	Υ	Y	30	-	Y	-	Y
	8" x 10"	Υ	Υ	Υ	Υ	30	-	-	-	Υ
8K	267 x 390 mm	Υ	Υ	Υ	Υ	30	-	Y	Υ	Υ
16K SEF	195 x 267 mm	Υ	Υ	Υ	Υ	50	-	-	-	Υ
16K LEF	267 x 195 mm	Υ	Υ	Υ	Υ	50	-	Y	Υ	Υ
Custom		Υ	Υ	Υ	-	-	-	-	-	-
Com 10 Env.	4.125" x 9.5"	Υ	Υ	-	-	-	-	-	-	-
Monarch Env.	3.875" x 7.5"	Υ	Υ	-	-	-	-	-	-	-
C6 Env.	114 x 162 mm	Υ	Υ	Υ	-	-	-	-	-	-
C5 Env.	162 x 229 mm	Υ	Υ	Υ	-	-	-	-	-	-
DL Env.	110 x 220 mm	Υ	Υ	Υ	-	-	-	-	-	-

Remarks:

Y	Supported	
30	Output up to 30 sheets	
50	Output up to 50 sheets	
-	Not supported	

1000-Sheet Finisher and 500-Sheet Finisher

MF: Main Frame, Prf: Proof, Clr: Clear, Shf: Shift, Stp: Staple

Demos	Size	MF	10	00-sh	eet finis	her	500-sheet finisher			1-Bin	Shift
Paper	(W × L)	IVIE	Prf	Clr	Shf	Stp	Clr	Shf	Stp	I-DIII	Jilli
A3 W	12" x 18"	Υ	Υ	Υ	-	-	-	-	-	-	Y
A3 SEF	297 x 420 mm	Υ	Υ	Y	Y	30	Y	Y	30	Y	Y

	Size	1.45	10	00-sh	eet finis	her	500-	sheet fi	nisher	1.00	ol it.
Paper	(W x L)	MF	Prf	Clr	Shf	Stp	Clr	Shf	Stp	1-Bin	Shift
A4 SEF	210 x 297 mm	Υ	Y	Y	Y	50	Υ	Y	50	Y	Y
A4 LEF	297 x 210 mm	Y	Y	Y	Y	50	Υ	Y	50	Y	Y
A5 SEF	148 x 210 mm	Y	Y	Y	Y	-	Υ	Y	-	Y	Y
A5 LEF	210 x 148 mm	Υ	Y	Y	Y	-	Υ	Y	-	Y	Y
A6 SEF	105 x 148 mm	Υ	-	-	-	-	Y	-	-	-	Y
B4 SEF	257 x 364 mm	Y	Y	Y	Y	30	Y	Y	30	Y	Y
B5 SEF	182 x 257 mm	Υ	Y	Y	Y	50	Υ	Y	50	Y	Y
B5 LEF	257 x 182 mm	Υ	Y	Y	Y	50	Υ	Y	50	Y	Y
B6 SEF	128 x 182 mm	Y	Y	-	-	-	Υ	-	-	Y	Y
Ledger	11" x 17"	Υ	Υ	Y	Υ	30	Υ	Y	30	Υ	Υ
Letter SEF	8.5" x 11"	Υ	Υ	Y	Υ	50	Υ	Y	50	Y	Y
Letter LEF	11" x 8.5"	Υ	Υ	Y	Υ	50	Υ	Y	50	Y	Υ
Legal SEF	8.5" x 14"	Υ	Υ	Υ	Υ	30	Υ	Υ	30	Y	Y
Government Legal SEF	8.25" x 14"	Υ	Y	Y	Y	-	Y	Y	30	Y	Y
Half Letter SEF	5.5" x 8.5"	Υ	Y	Y	Y	-	Y	Y	-	Y	Y
Executive SEF	7.25" x 10.5"	Υ	Y	Y	Υ	50	Y	Y	50	Y	Y

1

Remarks:

Y	Supported
30	Output up to 30 sheets
50	Output up to 50 sheets
-	Not supported

Platen/ARDF Original Size Detection

Size	Platen	ARDF	Platen	ARDF
(width x length) [mm]	Inches	Inches	Metric	Metric
A3 (297 x 420) L	-	Y	γ*3	Y
B4 (257 x 364) L	-	-	γ*3	Y
A4 (210 x 297) L	Y*1	Y	γ*3	Y
A4 (297 x 210) S	Y*3	Y	γ*3	Y
B5 (182 x 257) L	-	-	γ*3	Y
B5 (257 x 182) S	-	-	γ*3	Y
A5 (148 x 210) L	-	-	_*1	Y
A5 (210 x 148) S	-	-	_*1	Y
B6 (128 x 182) L	-	-	-	-
B6 (182 x 128) S	-	-	-	-
11" x 17" (DLT)	Y	Y*2	-	Y*2
11" x 15"	-	Y*2	-	-
10" x 14"	-	Y	-	-
8.5" x 14" (LG)	Y	γ* ²	-	-
8.5" x 13" (F4)	-	γ* ²	Y*4	Y*4
8.25" x 13"	-	-	Y*4	Y*4
8" × 13"(F)	-	-	Y*4	Y*4

8.5" x 11" (LT)	γ*3	Y*2	Y*3	γ*2
11" × 8.5" (LT)	γ*3	Y*2	Y*3	γ*2
8" x 10"	-	γ*2	-	-
5.5" x 8.5" (HLT)	_*1	Y	-	-
8.5" x 5.5" (HLT)	_*1	Y	-	-
8K (267 x 390)	-	-	γ*3	γ*2
16K L (195 x 267)	-	-	γ*3	γ*2
16K S (267 x 195)	-	-	γ*3	γ*2
7.25" x 10.5" (Executive)	-	Y	-	-
10.5" x 7.25" (Executive)	-	γ*2	-	-

^{* 1:} Use SP4-303 to detect original sizes as A5 lengthwise/HLT when the message "Can-t detect original size" shows.

^{*2:} The machine can detect the paper size depending on the setting of SP6-016-1.

^{*3:} The machine can detect the paper size depending on the setting of SP4-305-1.

^{*4:} The machine can detect the paper size depending on the setting of SP5-126-1.

Software Accessories

The printer drivers and utility software are provided as following two CD-ROMs

- 1: Printer Drivers and Utilities CD-ROM
- 2: Scanner/PostScript® Drivers and Utilities CD-ROM.

An auto-run installer lets you to select the components you want to install.

Printer Drivers

Printer Language	Windows 95/98/ME	Windows NT4.0	Windows 2000, XP, Server 2003/Vista	MacOS8.6 to 9.x, MacOSX10.1 or later
PCL5c / PCL6	Yes	Yes	Yes	No
PS3 *2)	Yes	Yes	Yes	Yes
RPCS	Yes	Yes	Yes	No

U Note

- The PCL5c/6 and RPCS drivers are provided on the printer drivers CD-ROM
- The PS drivers are provided on the Scanner/PostScript® Drivers and Utilities CD-ROM.
- The printer drivers for Windows NT 4.0 are only for the Intel x86 platform. There is no Windows NT 4.0 printer driver for the PowerPC, Alpha, or MIPS platforms.
- The PS3 drivers are all genuine Adobe PS drivers, except for Windows 2000/XP/2003/Vista. Windows 2000 uses Microsoft PS. A PPD file for each operating system is provided with the driver.
- The PS3 driver for Macintosh supports Mac OS X 10.1 or later versions.

Scanner and LAN Fax drivers

Printer Language	Windows 95/98/ME	Windows NT4.0	Windows 2000, XP, Server 2003/Vista	MacOS8.6 to 9.x, MacOSX10.1 or later
Network TWAIN	Yes	Yes	Yes	No

LAN-FAX	Yes	Yes	Yes	No



- The Network TWAIN and LAN Fax drivers are provided on the scanner drivers CD-ROM.
- This software lets you fax documents directly form your PC. Address Book Editor and Cover Sheet Editor are to be installed as well. (These require the optional fax unit.)

Utility Software

Software	Description
Font Manager 2000 (Win9x/ME, 2000/XP/2003, NT4)	A font management utility with screen fonts for the printer This is provided on the printer drivers CD-ROM
Smart Device Monitor for Admin (Win 95/98/Me, NT4, 2000/XP/Server 2003/Vista)	A printer management utility for network administrators. NIB setup utilities are also available. This is provided on the printer drivers CD-ROM
DeskTopBinder – SmartDeviceMonitor for Client (Win 95/98/Me, NT4, 2000/XP/Server 2003/Vista)	A printer management utility for client users. A utility for peer-to-peer printing over a NetBEUI or TCP/IP network. A peer-to-peer print utility over a TCP/IP network. This provides the parallel printing and recovery printing features. This is provided on the printer drivers CD-ROM
Printer Utility for Mac (Mac)	A utility for peer-to-peer printing over a NetBEUI or TCP This software provides several convenient functions for printing from Macintosh clients. This is provided on the scanner drivers CD-ROM
DeskTopBinder Lite (Win9x/ME, 2000/XP/2003, NT4)	DeskTopBinder Lite itself can be used as personal document management software and can manage both image data converted from paper documents and application files saved in each client's PC. This is provided on the scanner drivers CD-ROM

Optional Equipment

ARDF (D366)

Paper Size/Weight:	Simplex	Size	A3 to A	5, DLT to HLT
		Weight	40 to 12	28 g/m ² (10 to 34 lb.)
	Duplex	Size	A3 to A5, DLT to HLT	
		Weight	52 to 105 g/m ² (14 to 28 lb.)	
Table Capacity:	50 sheets (80 g/m², 20 lb)			
Original Standard Position:	Rear left co	rner		
Separation:	Feed belt a	Feed belt and separation roller		
Original Transport:	Roller transport			
Original Feed Order:	From the top original			
	Сору	-		32 to 200 %
Supported Magnification Ratios:	Fax	Color		32.6 to 200 %
		Black & white		48.9 to 200 %
Power Source:	DC 24V, 5V from the scanner unit			
Power Consumption:	50 W or less			
Dimensions (W × D × H) :	550 mm x 491 mm x 120 mm (21.7" x 19.3" x 4.7")			
Weight:	10 kg (22 lb.)			

Paper Feed Unit (D387)

Paper Feed System:	FRR
Paper Height Detection:	5 steps (100%, 70%, 30%, 10% (Near end), and Empty)
Capacity:	550 sheets
Paper Weight:	80 g/m ² (21 lb.)

Paper Size:	A3 SEF to A5, DLT SEF to HLT
Power Source:	DC 24V, 5V (from the main frame)
Power Consumption:	55W
Dimensions (W x D x H):	580 mm x 620 mm x 120 mm (22.8" x 24.4" x 4.7")
Weight:	Less than 15 kg

Paper Feed Unit (D351)

Paper Feed System: FRR		
Paper Height Detection:	5 steps (100%, 70%, 30%, 10% (Near end), and Empty)	
Capacity:	500 sheets x 2 trays	
Paper Weight:	60 to 256 g/m² (16 to 68 lb.)	
Paper Size:	A3 SEF to A5, DLT SEF to HLT	
Power Source:	DC 24V, 5V (from the main frame)	
Power Consumption:	Less than 60 W (Max.)/ Less than 35 W (Ave,)	
Dimensions (W x D x H):	580 mm x 620 mm x 260 mm (22.8" x 24.4" x 10.2")	
Weight:	26 kg (57.3 lb.)	

LCT 2000-sheet (D352)

Paper Size:	A4 LEF/LT LEF
Paper Weight:	60 g/m² to 256 g/m² (16 lb. to 68 lb.)
Tray Capacity:	2,000 sheets (80 g/m², 20lb.)
Remaining Paper Detection:	5 steps (100%, 70%, 30%, 10%, Empty): Right Tray 4 steps (100%, 70%, 30%, Empty): Left Tray
Power Source:	DC 24 V, 5 V (from copier/printer)
Power Consumption:	55 W (Max.)/30 W (Ave.)

Weight:	26 kg (57.3 lb.)
Size (W x D x H):	580 mm x 620 mm x 260 mm (22.8" x 24.4" x 10.2")

LCT 1200-sheet (D353)

Paper Size:	A4 LEF/ LT LEF/ B5 LEF	
Paper Weight:	$60 \text{ g/m}^2 \text{ to } 216 \text{ g/m}^2 \text{ (}16 \text{ lb to } 57 \text{ lb.)}$	
Tray Capacity:	1,200 sheets (80 g/m², 20lb)	
Remaining Paper Detection:	5 steps (100%, 75%, 30%, 10%, End)	
Power Source:	24 Vdc, 5 Vdc (from copier/printer)	
Power Consumption:	55 W (Max)/ 25 W (Ave.)	
Weight:	14 kg (30.8 lb.)	
Size (W x D x H):	348 mm x 540 mm x 290 mm (13.7" x 21.3" x 11.4")	

1000-Sheet Booklet Finisher & Punch Unit (B793)

	No punch mode:
	A3/11" x 17" to A5/8.5" x 5.5" (LEF)
	Punch mode:
	2 holes: A3/11" x 17" to B6/5.5" x 8.5" (SEF) or A4/8.5" x 11" to A5/8.5" x 5.5" (LEF) 3 holes:
Print Paper Size:	A3, B4, 11" x 17" (SEF) or A4, B5, 8.5" x 11" (LEF)
'	4 holes (Europe):
	A3, B4, 11" x 17" (SEF) or A4, B5, 8.5" x 11" (LEF)
	4 holes (North Europe):
	A3/11" x 17" to B6/5.5" x 8.5" (SEF)
	Staple mode:
	A3/11" x 17" to B5/8.5" x 11"

Paper Weight:	No punch mode: 52 to 256 g/m² (14 to 68 lb.) (Shift tray) 52 to 105 g/m² (14 to 28 lb.) (Proof tray) Punch mode: 52 to 163 g/m² (14 to 43 lb.) Staple mode:		
	64 to 90 g/m ² (17 to 24 lb.) Label/Thick paper/OHP cannot be stapled		
Tray Capacity:	[Proof tray] 100 sheets: A4, 8.5" x 11" or less 50 sheets: B4, 8.5" x 14" or more [Shift tray] 1000 sheets: A4, 8.5" x 11" (LEF) or smaller 500 sheets: B4, 8.5" x 14" or larger		
Staple capacity:	Single size: 50 sheets: A4, 8.5" x 11" or smaller 30 sheets: B4, 8.5" x 14" or larger		
Staple position:	3 positions 1-staple: 2 positions (Top Left, Top Right) 2-staples: 1 positions		
Staple replenishment:	Cartridge (5000 staples)		
Power consumption:	60 W		
Dimensions (W x D x H):	535 mm x 600 mm x 930 mm (21.1" x 23.6" x 36.6")		
Weight	Without punch unit:	48 kg (105.8 lb.)	
Weight	With punch unit:	50 Kg (110.3 lb.)	

1000-Sheet Finisher (B408)

Upper Tray

Paper Size:	A3 to A6 11" x 17" to 5.5" x 8.5"	
Paper Weight:	60 to 157 g/m² (16 to 42 lb.)	
	250 sheets (A4 LEF/8.5" x 11" SEF or smaller)	
Paper Capacity:	50 sheets (A4, 8.5" x 11" or smaller)	
	30 sheets (B4, 8.5" x 14" or larger)	

Lower Tray

Paper Size:	No staple mode: A3 to B5, DLT to HLT Staple mode: A3, B4, A4, B5, DLT to LT							
Paper Weight:	No staple mode: 60 to Staple mode: 64 to 90							
Stapler Capacity:	30 sheets (A3, B4, DLT, LG) 50 sheets (A4, B5 LEF, LT)							
	No staple mode: 1,000 sheets (A4/LT or smaller: 80 g/m ² , 20 lb.) 500 sheets (A3, B4, DLT, LG: 80 g/m ² , 20 lb.) Staple mode: (80 g/m ² , 20 lb., number of sets)							
Paper Capacity:	Set Size	2 to 9	10 to 50	-				
	Size	2 10 9	10 to 30	31 to 50				
	A4/LT LEF B5 LEF	100	100 to 20	100 to 20				
	A4/LT SEF	100	50 to 10	50 to 10				

	A3, B4, DLT, LG	50	50 to 10	-		
Staple positions:	1 Staple: 2 positions (Front, Rear) 2 Staples: 2 positions (Upper, Left)					
Staple Replenishment:	Cartridge (5,000 staples/cartridge)					
Power Source:	DC 24 V, 5 V (from the copier/printer)					
Power Consumption:	50 W					
Weight:	25 kg (55.2 lbs)					
Dimensions (W x D x H):	527 x 520 x 790 mm (20.8" x 20.5" x 31.1")					

500-Sheet Finisher (D372)

Paper Size:	A3 to B6 (SEF)
Paper Weight:	52 to 128 g/m² (14 to 34 lb.)
Tray Capacity:	500 sheets: A4, LT or smaller 250 sheets: B4, LG or larger
Staple capacity:	30 sheets (A3, B4, DLT, LG) 50 sheets (A4, LT or smaller)
Staple position:	3 positions 1-staple: 2 positions (Top right-oblique, Top left-oblique) 2-staples: 1 positions (Left)
Staple replenishment:	Cartridge (5000 staples)

500-Sheet Finisher

Target Line Speed	77 mm/sec. to 205 mm/sec
Target CPM	35 cpm
	12"x18", A3 SEF to A6 SEF, DLT to HLT SEF
Face-down Output Size	Shift sizes: A3 SEF to B5 SEF
	A5, B6, A6 SEF labels possible

Paper Thickness	$52 \text{ g/m}^2 (45 \text{ K}) \text{ to } 157 \text{ g/m}^2 (135 \text{ K})$						
T apor Tillour	Up to 253 g/m ² (220K) without shift						
Stapling							
Stank Hainhtfor Stanling	50 sheets: A4, LT and smaller						
Stack Height for Stapling	30 sheets: B4, LG and larger						
Size	A3 SEF to B5 SEF (can be	mixed if same wi	dth)				
Stack Thickness	64g/m ² (45 K) to 157 g,	/m (135 K)					
Stapling Positions	Front/Oblique: 1, Front/I Rear/Oblique: 1, Rear/P		ions				
Output Tray Capacity							
Non-staple Mode	500 sheets: A4, LT and	smaller					
Staple Mode	250 sheets: B4, LG and larger Stack Size (Stapling)	Stacks	Size				
	2 to 9 Sheets	55 to 46	A 4 DC 17155				
	10 to 50 Sheets	45 to 10	A4, B5, LT LEF				
	2 to 9 Sheets	55 to 27	A4, B5, LT SEF				
	10 to 50 Sheets	25 to 8	A4, B3, L1 3EF				
	2 to 9 Sheets	55 to 27	A2 D4 DIT IC				
	10 to 30 Sheets	25 to 8	A3, B4, DLT, LG				
Stacking	Non-Stapling Mode	Vertical: 15 mm	n or less				
		Horizontal: 15	mm or less				
Jogging Precision							
2 to 30 Sheets	ets 2 mm						
31 to 50 Sheets	3 mm						
Dimensions (W x D x H) 396 x 551 x 276 mm (15.6 x 21.7 x 10.9 in.)							

Weight	12 kg (26.4 lb)
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Bridge Unit (D386)

	Standard sizes
	A6 SEF to A3, HLT to DLT
Paper Size:	Non-standard sizes
	Width: 90 to 305 mm
	Length: 148 to 600 mm
Paper Weight:	52 g/m ² to 256 g/m ² , 16 lb. to 68 lb.
Paper Capacity:	125 sheets (80 g/m ² , 20 lb.): B4 or larger 250 sheets (80 g/m ² , 20 lb.): A4 or smaller
Power Source:	DC 24 V, 5 V (form the copier/printer)
Dimensions (W x D x H):	415 mm x 412 mm x 111 mm (16.3" x 16.2" x 4.4")
Weight	5 kg (11 lb.)

Shift Tray (D388)

Paper Capacity:	250 sheet (A4/ 8 _{1/2} " x 11 _{1/2} " or smaller: 80g/m ² / 20 lbs) 125 sheet (B4 8 _{1/2} " x 11 _{1/2} " or larger: 80g/m ² / 20 lbs)
Paper Size:	Standard sizes A6 SEF to A3, HLT to DLT Non-standard sizes Width: 90 to 305 mm Length: 148 to 600 mm
Paper Weight:	52-256 g/m ² / 14 - 68 lbs
Power Consumption:	Max 10W (Power is supplied from the mainframe.)
Dimension (W x D x H):	423 mm x 468 mm x 114 mm (16.7" x 18.4" x 4.5")
Weight:	Approx. 2kg (4.4lbs)

1-bin Tray Unit (D414)

Paper Size:	Standard Size: A3 /DLT to A5/ HLT SEF
Paper Weight:	60 to 169 g/m ² , 16 to 45 lb.
Tray Capacity:	125 sheets (80 g/m², 20 lb., A4)
Power Source:	DC 24 V, 5 V (from the copier)
Power Consumption:	Less than 1 W
Weight:	1.7 kg
Size (W x D x H):	565 mm x 410 mm x 115 mm (22.2" x 16.1" x 4.5")

2. Appendix: Preventive Maintenance Tables

Maintenance Tables

Preventive Maintenance Items

Chart: A4 (LT)/5%

Mode: 3 copies / original (prints/job)

Ratio 30%

Environment: Normal temperature and humidity

Yield may change depending on circumstances and print conditions.

Symbol keys: C: Clean, R: Replace, L: Lubricant, I: Inspect

Mainframe

Item	120K	240K	360K	480K	600K	EM	Remarks
Scanner				,	,		
Reflector	С						Optics cloth
1st/2nd/3rd mirrors	С						Optics cloth
Front and Rear Rails	С						Dry cloth
Exposure Glass	С					С	Dry cloth; alcohol
ADF Exposure Glass	С					С	Dry cloth; alcohol
APS Sensor	С						Dry cloth
PCU	J						
Dev. Unit-K				R			
Drum Unit-K, C, M, Y	R						
Developer-K		R					

ltem	120K	240K	360K	480K	600K	EM	Remarks
Transfer	,	,					
Image transfer belt- cleaning unit		R					
Paper Transfer Roller Unit			R				
Toner Collection Bottle	R						
Fusing							
Heating Roller		R					
-Bearing		R					
-Insulating Bushing		R					
Fusing Belt		R					
Fusing Roller		R					
-Bearing		R/L					S552R
Pressure Roller		R					
-Bearing		R/L					S552R
Idle Gear						R/L	S552R
Tension Roller		R					
-Bushing		R					
Heating Roller Thermistor		С					
Pressure Roller Thermistor		С					
Lower Cover		С					
Stripper Plate		С					Alcohol
Entrance Guide Plate		С					Alcohol
Exit Guide Plate		С					Alcohol
Thermopile		С					Cotton swab with alcohol

Item	120K	240K	360K	480K	600K	EM	Remarks
Paper Path		ı					'
Registration Roller						С	Damp cloth
Registration Sensor						С	Dry cloth
Vertical Transport Roller						С	Damp cloth
Vertical Transport Sensor						С	Dry cloth
Paper Feed Sensor						С	Dry cloth
Pick-up Roller						С	Dry cloth
Feed Roller						С	Dry cloth
Separation Roller						С	Dry cloth
Fusing Entrance Sensor						С	Dry cloth
Fusing Exit Sensor						С	Dry cloth
Paper Dust Container	С					С	
Duplex Unit							
Inverter Roller						С	Damp cloth
Transport Roller						С	Damp cloth
Duplex Entrance Sensor						С	Dry cloth
Duplex Exit Sensor						С	Dry cloth
Miscellaneous	•						•
Dust Filter	R						
Dust Glass						С	
ID Sensor						С	Blower Brush

^{* 1:} Clean this thermistor only when it gets paper dust.

ARDF (D366)

ltem	120K	EM	Remarks
Sensors		С	Blower brush
Platen Sheet Cover		C Damp cloth; alcohol (Replace if required.)	
White Plate		С	Dry or damp cloth
Drive Gear		L	Grease G501
Transport Roller		С	Damp cloth; alcohol
Exit Roller		С	Damp cloth; alcohol
Inverter Roller		С	Damp cloth; alcohol
Idle Rollers		С	Damp cloth; alcohol

One-tray Paper Feed Unit (D387)

Item	EM	Remarks
Relay Roller	С	Damp cloth
Bottom Plate Pad	С	Damp cloth

Two-tray Paper Feed Unit (D351)

ltem	EM	Remarks		
Feed Roller	С	Dry cloth		
Separation Roller	С	Dry cloth		
Pick-up Roller	С	Dry cloth		
Paper Feed Sensor	С	Dry cloth		
Relay Sensor	С	Dry cloth		
Relay Roller	С	Damp cloth		
Bottom Plate Pad	С	Damp cloth		

1200-sheet LCT (D353)

ltem	EM	Remarks		
Feed Roller	С	Dry cloth		
Separation Roller	С	Dry cloth		
Pick-up Roller	С	Dry cloth		
Paper Feed Sensor	С	Dry cloth		
Relay Sensor	С	Dry cloth		
Relay Roller	С	Damp cloth		
Bottom Plate Pad	С	Damp cloth		

2000-sheet LCT (D352)

ltem	EM	Remarks		
Feed Roller	С	Dry cloth		
Separation Roller	С	Dry cloth		
Pick-up Roller	С	Dry cloth		
Paper Feed Sensor	С	Dry cloth		
Relay Sensor	С	Dry cloth		
Relay Roller	С	Damp cloth		
Bottom Plate Pad	С	Damp cloth		

1000-Sheet Booklet Finisher (B793)

Items	EM	Remarks
Rollers	С	Damp cloth
Discharge Brush	С	Dry cloth
Sensors	С	Blower brush

1000-Sheet Booklet Finisher Punch Kit (B807)

Items	EM	Remarks
Punch Chads	С	Discard chads.

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1000-Sheet Finisher (B408)

Items	EM	Remarks
Rollers	С	Damp cloth
Discharge Brush	С	Dry cloth
Sensors	С	Blower brush

1 Bin Tray (D414)

Items	EM	Remarks
Rollers	С	Damp cloth
Tray	С	Damp cloth
Sensor	С	Blower brush
Bearing	С	S552R

Bridge Unit (D386)

Items	EM	Remarks
Rollers	С	Damp cloth

Shift Tray (D388)

Items	EM	Remarks
Tray	С	Damp cloth

Others Yield Parts

The parts mentioned in these tables have a target yield. However, the total copy/print volume made by the machine will not reach the target yield within the machine's targeted lifetime if the machine is used under the target usage conditions (ACV, color ratio, P/J, and C/O). So, these parts are categorized not as PM parts but as yield parts (EM parts).

Mainframe

ltem	120K	240K	480K	600K	Remarks
Dev. Unit-C, M, Y			R		
Developer- C, M, Y		R			
ITB Unit				R	

ARDF

ltem	80K	120K	240K	Remarks
Pick-up Roller	R			Number of originals
Feed Belt	R			Number of originals
Separation Roller	R			Number of originals

3. Appendix: Service Call Conditions

SC Tables

Service Call Conditions

Summary

The 'SC Table' section shows the SC codes for controller errors and other errors. The latter (not controller errors) are put into four types. The type is determined by their reset procedures. The table shows the classification of the SC codes.

	Key	Definition	Reset Procedure
Controller errors	CTL	The error has occurred in the controller.	See "Troubleshooting Procedure" in the table.
	A	The error involves the fusing unit. The machine operation is disabled. The user cannot reset the error.	Turn the main switch off and on. Reset the SC (set SP5-810-1). Turn the main switch off and on.
	В	The error involves one or some specific units. The machine operates as usual, excluding the related units.	Turn the operation switch off and on.
Other errors	С	The error is logged. The SC-code history is updated. The machine operates as usual.	The SC will not show. Only the SC history is updated.
	D	The machine operation is disabled. You can reset the machine by turning the operation switch or main switch off and on. If the error occurs again, the same SC code is displayed.	Turn the operation switch or main power switch off and on.

After you turn the main power switch off, wait for one second or more before you turn the main power switch on (SC 672). All SCs are logged. The print log data (SP5-990-004) in SP mode can check the latest 10 SC codes detected and total counters when the SC code is detected.



• If the problem concerns electrical circuit boards, first disconnect then reconnect the connectors before you replace the PCBs.

• If the problem concerns a motor lock, first check the mechanical load before you replace motors or sensors.

SC Code Classification

The table shows the classification of the SC codes:

Class 1	Section	SC Code	Detailed section
1XX	Samuelin u	100 -	Scanner
177	Scanning	190 -	Unique for a specific model
		200 -	Polygon motor
		220 -	Synchronization control
2XX		230 -	FGATE signal related
244	Laser exposure	240 -	LD control
		280 -	Unique for a specific model
		290 -	Shutter
	Image development 1	300 -	Charge
3XX		330 -	Drum potential
344		350 -	Development
		380 -	Unique for a specific model
	Image development 2	400 -	Image transfer
		420 -	Paper separation
4XX		430 -	Cleaning
4^^		440 -	Around drum
		460 -	Unit
		480 -	Others
		500 -	Paper feed
5XX	Paper feed / Fusing	515 -	Duplex

Class 1	Section	SC Code	Detailed section
		520 -	Paper transport
		530 -	Fan motor
FWV	Paper feed / Fusing	540 -	Fusing
5XX		560 -	Others
		570 -	Unique for a specific model
		600 -	Electrical counters
		620 -	Mechanical counters
		630 -	Account control
6XX	Communication	640 -	CSS
		650 -	Network
		670 -	Internal data processing
		680 -	Unique for a specific model
		700 -	Original handling
7XX	Peripherals	720 -	Two-tray finisher
		740 -	Booklet finisher
		800 -	Error after ready condition
OVV	Controller	820 -	Diagnostics error
8XX		860 -	Hard disk
		880 -	Unique for a specific model
		900 -	Counter
9XX	Others	920 -	Memory
		990 -	Others

SC1xx: Scanning

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		Exposure lamp error
		The peak white level is less than 64/255 digits (8 bits) when scanning the shading plate.
		Exposure lamp defective
		Lamp stabilizer defective
		Exposure lamp connector defective
101	D	Standard white plate dirty
		Scanner mirror or scanner lens out of position or dirty
		Check and clean the scanner mirror(s) and scanner lens.
		2. Check and clean the shading plate.
		3. Replace the exposure lamp.
		4. Replace the lamp stabilizer.
		5. Replace the scanner mirror(s) or scanner lens.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		Scanner home position error 1
		The scanner home position sensor does not detect the "OFF" condition during operation.
		Scanner motor driver defective
		Scanner motor defective
120	D	Harness between SIO board and scanner motor disconnected
120	D	Scanner HP sensor defective
		Harness between SIO and HP sensor disconnected
		Check the cable connection between the SIO board and scanner motor.
		2. Check the cable connection between the SIO and HP sensor.
		3. Replace the scanner motor.
		4. Replace the HP sensor.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
	D	Scanner home position error 2
		The scanner home position sensor does not detect the "ON" condition during operation.
		Scanner motor driver defective
		Scanner motor defective
121		Harness between SIO board and scanner motor disconnected
121		Scanner HP sensor defective
		Harness between SIO and HP sensor disconnected
		Check the cable connection between the SIO board and scanner motor.
		2. Check the cable connection between the SIO and HP sensor.
		3. Replace the scanner motor.
		4. Replace the HP sensor.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
	D	Black level detection error
		The black level cannot be adjusted within the target value during the zero clamp.
141		Harness disconnected
		Defective SBU
		1. Check the cable connection
		2. Replace the SBU.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		White level detection error
		The white level cannot be adjusted within the target during auto gain control.
		Dirty exposure glass or optics section
142	D	SBU board defective
		Exposure lamp defective
		Lamp stabilizer defective
		Scanner motor defective

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		1. Clean the exposure glass, white plate, mirrors, and lens.
		2. Check if the exposure lamp is lit during initialization.
		3. Check the harness connection between SBU and BICU.
		4. Replace the exposure lamp.
		5. Replace the scanner motor.
		6. Replace the SBU board.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		SBU communication error
		The SBU connection cannot be detected at power on or recovery from the energy save mode.
		Defective SBU
144	D	Defective harness
		Defective detection port on the BICU
		1. Replace the harness.
		2. Replace the SBU.
		3. Replace the BICU.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
161	D	IPU error
		The error result of self-diagnostic by the ASIC on the BICU is detected.
		Defective BICU
001		Defective connection between BICU and SBU
		1. Check the connection between BICU and SBU.
		2. Replace the BICU.
		The machine detects an error during an access to the Ri.
002	D	Defective BICU board
		Replace the BICU board.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
	D	Copy Data Security Unit error
		The copy data security board is not detected when the copy data security function is set "ON" with the initial setting.
165		A device check error occurs when the copy data security function is set "ON" with the initial setting.
		 Incorrect installation of the copy data security board Defective copy data security board
		 Reinstall the copy data security board. Replace the copy data security board.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
195	D	Serial Number Mismatch
		Serial number stored in the memory does not have the correct code.
		NVRAM defective BICU replaced without original NVRAM
		Check the serial number with SP5-811-002. If the stored serial number is incorrect, contact your supervisor.

SC 2xx: Exposure

SC202 RTB 55

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
202	D	Polygon motor error 1: ON timeout
		The polygon mirror motor does not reach the targeted operating speed within the specified time after turning on or changing speed
		 Defective or disconnected harness to polygon motor driver board Defective polygon motor driver board Defective polygon motor.
		Replace the polygon motor. Replace the laser optics housing unit.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		3. Replace the harness.
		4. Replace the BICU.

SC203 RTB 55

2

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
	D	Polygon motor error 2: OFF timeout
203		The polygon mirror motor does leave the READY status within 3 seconds after the polygon motor switches off.
		 Disconnected or defective harness to polygon motor driver board Defective polygon motor driver board Defective polygon motor
		 Check or replace the harness. Replace the polygon motor.

SC204 RTB 55

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
	D	Polygon motor error 3: XSCRDY signal error
		The SCRDY_N signal goes HIGH (inactive) while the laser diode is firing.
		Disconnected or defective harness to polygon motor driver board
204		Defective polygon motor
		Defective polygon motor driver board
		1. Check or replace the harness.
		2. Replace the polygon motor.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
210	С	Laser synchronizing detection error: end position [K]
211	С	Laser synchronizing detection error: end position [Y]
212	С	Laser synchronizing detection error: end position [M]
213	С	Laser synchronizing detection error: end position [C]

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
-	-	The laser synchronizing detection signal for the end position of LDB [K], [Y], [M], [C] is not detected for one second after the LDB unit turned on when detecting the main scan magnification.
		Disconnected or defective harness to synchronizing detector for end position
		Defective synchronizing detector board
		Defective LD board or driver
		Defective BICU
		1. Replace the harness of the LD board.
		2. Replace the laser optics housing unit.
		3. Replace the BICU.

D	
D	Laser synchronizing detection error: start position [K]: LDO
D	Laser synchronizing detection error: start position [Y]: LDO
D	Laser synchronizing detection error: start position [C]: LD0
	The laser synchronizing detection signal for the start position of the LDB [K], [Y], [C] is not output for two seconds after LDB unit turns on while the polygon motor is rotating normally.
-	 Disconnected cable from the laser synchronizing detection unit or defective connection Defective laser synchronizing detector Defective LDB Defective BICU 1. Check the connectors. 2. Replace the laser-synchronizing detector. 3. Replace the LDB. 4. Replace the BICU.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
230	D	FGATE ON error: K

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		The PFGATE ON signal does not assert within 5 seconds after processing the image in normal job or MUSIC for start position [K].
		Defective ASIC (Lupus) Poor connection between controller and BICU. Defective BICU.
		Check the connection between the controller board and the BICU. Replace the BICU.
		3. Replace the controller board.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
	D	FGATE OFF error: K
231		 The PFGATE ON signal still asserts within 5 seconds after processing the image in normal job or MUSIC for end position [K]. The PFGATE ON signal still asserts when the next job starts.
		See SC 230 for troubleshooting details.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
232	D	FGATE ON error: Y
		The PFGATE ON signal does not assert within 5 seconds after processing the image in normal job or MUSIC for start position [Y].
		See SC 230 for troubleshooting details.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
233	D	FGATE OFF error: Y
		The PFGATE ON signal still asserts within 5 seconds after processing the image in normal job or MUSIC for end position [Y].
		The PFGATE ON signal still asserts when the next job starts.
		See SC 230 for troubleshooting details.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
234	D	FGATE ON error: M
		The PFGATE ON signal does not assert within 5 seconds after processing the image in normal job or MUSIC for start position [M].
		See SC 230 for troubleshooting details.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
	D	FGATE OFF error: M
235		 The PFGATE ON signal still asserts within 5 seconds after processing the image in normal job or MUSIC for end position [M]. The PFGATE ON signal still asserts when the next job starts.
		See SC 230 for troubleshooting details.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
236	D	FGATE ON error: C
		The PFGATE ON signal does not assert within 5 seconds after processing the image in normal job or MUSIC for start position [C].
		See SC 230 for troubleshooting details.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
237	D	FGATE OFF error: C
		The PFGATE ON signal still asserts within 5 seconds after processing the image in normal job or MUSIC for end position [C].
		The PFGATE ON signal still asserts when the next job starts.
		See SC 230 for troubleshooting details.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
240	С	LD error: K
241	С	LD error: Y

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
242	С	LD error: M
243	С	LD error: C
-	-	The BICU detects LDB error a few times consecutively when LDB unit turns on after LDB initialization.
		Worn-out LD Disconnected or broken harness of the LD
		Replace the harness of the LD. Replace the laser optics housing unit.
		3. Replace the BICU.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
	D	Line position adjustment (MUSIC) error
		Line position adjustment fails four consecutive times.
		Pattern sampling error (insufficient image density)
		Defective ID sensors for the line position adjustment
		Defective image transfer belt unit
		Defective PCU(s)
285		Defective laser optics housing unit
		 Check and reinstall the image transfer belt unit and PCUs.
		2. Check if each toner bottle has enough toner.
		3. Replace the ID sensor.
		4. Replace the image transfer belt unit.
		5. Replace the PCU(s).
		6. Replace the laser optics housing unit.

SC3xx: Image Processing – 1

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
300	D	AC charge output error [K]

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
301	D	AC charge output error [M]
302	D	AC charge output error [C]
303	D	AC charge output error [Y]
		The measured voltage is not proper when IOB measures the charge output for each color.
		Disconnected or broken high voltage cable
	-	Defective or not installed PCU
-		Defective high voltage power supply
		1. Check or replace the connectors.
		2. Replace the PCU for the affected color.
		3. Replace the high voltage power supply.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
360	D	TD sensor (Vt high) error 1: K
361	D	TD sensor (Vt high) error 1: M
362	D	TD sensor (Vt high) error 1: C
363	D	TD sensor (Vt high) error 1: Y
-	-	 The Vt value of the black, magenta, cyan, or yellow TD sensor exceeds the specified value (default: 4.7V) with SP3020-002 for twenty counts. The [Vt - Vtref] value of the black, magenta, cyan, or yellow TD sensor exceeds the specified value (default: 5.0V) with SP3020-001. Black, magenta, cyan, or yellow TD sensor disconnected Harness between TD sensor and PCU defective Defective TD sensor. Check the black, magenta, cyan, or yellow TD sensor connector and harness between the TD sensor and PCU for damage. Check the drawer connector. Replace the defective PCU.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
364	D	TD sensor (Vt low) error 2: K
365	D	TD sensor (Vt low) error 2: M
366	D	TD sensor (Vt low) error 2: C
367	D	TD sensor (Vt low) error 2: Y
		The Vt value of the black, magenta, cyan, or yellow TD sensor is below the specified value with SP3020-004 (default: 0.5V) for 10 counts.
-	-	 TD sensor harness disconnected, loose, defective A drawer connector disconnected, loose, defective TD sensor defective
		Check the black, magenta, cyan, or yellow TD sensor connector and harness between the TD sensor and PCU for damage. Check the drawer connector.
		3. Replace the defective PCU.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
372	D	TD sensor adjustment error: K
373	D	TD sensor adjustment error: M
374	D	TD sensor adjustment error: C
375	D	TD sensor adjustment error: Y
-		During TD sensor initialization, the output value of the black, magenta, cyan, or yellow TD sensor is not within the range of the specified value with SP3238-001 to -004 (default: 2.5V) ± 0.2V
	-	Heat seal not removed from a new developer pack TD harness sensor disconnected, loose or defective TD sensor defective Harness between TD sensor and drawer disconnected, defective Remove the heat seal from each PCU.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
380	С	Drum gear position sensor error: K
381	С	Drum gear position sensor error: M
382	С	Drum gear position sensor error: C
383	С	Drum gear position sensor error: Y
		The machine does not detect the drum position signal for 3 seconds at the drum phase adjustment.
		Dirty or defective drum gear position sensor
		Clean the drum gear position sensor.
		2. Check the harness connection.
		3. Replace the drum gear position sensor.
		4. Replace the PCU.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
396	D	Drum/Development motor error: K
397	D	Drum/Development motor error: M
398	D	Drum/Development motor error: C
399	D	Drum/Development motor error: Y
		The machine detects a High signal from the drum/development motor for 2 seconds after the drum/development motor turned on.
-	-	 Overload on the drum/development motor Defective drum/development motor Defective harness Shorted 24 V fuse on the PSU Defective interlock system 1. Check or replace the harness. 2. Replace the drum/development motor. 3. Replace the 24V fuse on the PSU.

SC4xx: Image Processing - 2

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
400	D	ID sensor adjustment error
		When the Vsg error counter reaches "3", the machine detects "SC400". The Vsg error counter counts "1" when the Vsg detected by ID sensor is more than the value (default: 4.5V) specified with SP3324-005 or less than the value (default: 3.5V) specified with SP3324-006.
		Dirty or defective ID sensor Defective ID sensor shutter
		 Check the harness of the ID sensor. Clean or replace the ID sensor. Note
		 After replacing the ID sensor, input the ID sensor correction coefficient with SP3362-013 to -018. For details, refer to "ID sensor board" in the Replacement and Adjustment section.
		1. Replace the IOB.
		2. Replace the image transfer belt unit.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
441	D	Image transfer unit motor error
		The motor LOCK signal is not detected for more than two seconds while the motor START signal is on.
		 Motor overload Defective image transfer unit motor
		Replace the image transfer belt unit. Replace the IOB.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
442	D	Image transfer belt contact motor error

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		The image transfer belt contact sensor does not detect the movement of actuator at the sensor while the polygon motor rotates.
		 Dirty image transfer belt contact sensor Defective image transfer belt contact motor Disconnected connector of image transfer belt contact sensor or motor
		Disconnected cable
		Replace the image transfer belt contact sensor. Replace the image transfer belt contact motor.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
	С	Image transfer unit error
443		The machine detects the encoder sensor error.
		Defective encoder sensor
		Image transfer unit installation error
		Defective image transfer unit motor
		Check if the image transfer unit is correctly set.
		2. Replace the image transfer unit motor.
		3. Replace the image transfer unit.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
	D	Paper transfer unit contact error
		The paper transfer unit contact sensor does not detect the movement of actuator at the sensor while the polygon motor rotates.
		Defective paper transfer unit contact sensor
452		Defective paper transfer unit contact motor
		Broken +24V fuse on PSU
		Defective IOB
		1. Check the connection between the paper transfer unit and PSU.
		2. Replace the paper transfer unit contact sensor.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		3. Replace the paper transfer unit contact motor.
		4. Replace the +24V fuse on the PSU.
		5. Replace the IOB.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
	D	Separation power pack output error
460		An interrupt checks the status of the power pack every 20 ms. This SC is issued if the BICU detects a short in the power pack 10 times at D(ac).
		 Damaged insulation on the high-voltage supply cable Damaged insulation around the high-voltage power supply.
		Replace the high-voltage supply cable.
		Replace the high-voltage power supply unit. Replace the IOB.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
	D	Toner transport motor error
		The LOCK signal is not detected for 2 seconds when the transport motor turns on.
		Toner transport motor overload
490		Disconnected or broken harness
		Defective toner transport motor
		Opened +24V fuse on the PSU
		Defective interlock switch
		1. Check or replace the harness.
		2. Replace the toner transport motor.
		3. Replace the +24V fuse on the PSU.
		4. Replace the interlock switch.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
491	D	High voltage power: Drum/ development bias output error

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		An error signal is detected for 0.2 seconds when charging the drum or development.
		High voltage leak
		Broken harness
		Defective drum unit or development unit
		Defective high voltage supply unit
		1. Check or replace the harness.
		2. Replace the drum unit or paper transfer unit.
		3. Replace the high voltage supply unit.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
	С	High voltage power: Image transfer/ paper transfer bias output error
492		An error signal is detected for 0.2 seconds when charging the separation, image transfer bet or paper transfer roller.
		 High voltage leak Broken harness Defective image transfer belt unit or paper transfer unit Defective high voltage supply unit
		 Check or replace the harness. Replace the image transfer belt unit or paper transfer unit. Replace the high voltage supply unit.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
498	С	Temperature and humidity sensor error 2
		• The thermistor output of the temperature sensor was not within the prescribed range (0.2V to 3.5V).
		• The thermistor output of the humidity sensor was not within the prescribed range (0.01V to 2.4V).
		Temperature and humidity sensor harness disconnected, loose, defective Temperature and humidity sensor defective
		Check the connector and harness.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		2. Replace the temperature/humidity sensor.

SC5xx: Paper Feed and Fusing

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
501	В	Paper Tray 1 error
502	В	Paper Tray 2 error
-	-	 When the tray lift motor rotates counterclockwise, (if the upper limit is not detected within 10 seconds), the machine asks the user to reset the tray. When the tray lift motor rotates clockwise, (if the upper limit is not detected within 1.5 seconds), the machine asks the user to reset the tray. If one of these conditions occurs three consecutive times, the SC is generated. Disconnected or defective paper lift sensor Disconnected or defective tray lift motor Defective bottom plate lift mechanism Too much paper in the tray Defective IOB 1. Check if the paper is not loaded too much. 2. Check if the bottom plate smoothly moves up and down manually. 3. Check and/or replace the tray lift motor/ paper lift sensor. 4. Replace the IOB.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
	В	Tray 3 error (Paper Feed Unit or LCT)
503-0		For the paper feed unit: • When the tray lift motor is turned on, the upper limit is not detected within 10 seconds
1		For the LCT: • SC 503-01 occurs if the upper or lower limit is not detected within 8 seconds when the tray lift motor is turned on to lift or lower the tray.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		For the paper feed unit:
		Defective tray lift motor or connector disconnection
		Defective lift sensor or connector disconnection
		For the LCT:
		Defective stack transport clutch or connector disconnection
		Defective tray motor or connector disconnection
		Defective end fence home position sensor or connector disconnection
		Defective upper limit sensor or connector disconnection
		Defective tray lift motor or connector disconnection
		Check the cable connections.
		2. Check and/or replace the defective component.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		Tray 3 error (Paper Feed Unit or LCT)
		This SC is generated if the following condition occurs 3 consecutive times.
		For the paper feed unit:
		When the tray lowers, the tray lift sensor does not go off within 1.5 sec.
		For the LCT:
503-0	В	 When the main switch is turned on or when the LCT is set, if the end fence is not in the home position (home position sensor ON), the tray lift motor stops.
		If the upper limit does not go off for 1.5 seconds even the tray lift motor turns on to lower the tray after the upper limit has been detected at power on.
2		For the paper feed unit:
		Defective tray lift motor or connector disconnection
		Defective lift sensor or connector disconnection
		For the LCT:
		Defective stack transport clutch or connector disconnection
		Defective tray motor or connector disconnection
		Defective end fence home position sensor or connector disconnection
		1. Check the cable connections.
		2. Check and/or replace the defective component.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
	В	Tray 4 error (Paper Feed Unit or LCT)
504-0		For the two-tray paper feed unit When the tray lift motor is turned on, the upper limit is not detected within 10 seconds. If this condition occurs three consecutive times, the SC is generated. For the LCT If the upper or lower limit is not detected within 8 seconds when the tray lift motor is turned on to lift up or lower the tray
		Defective tray lift motor or connector disconnection Defective lift sensor or connector disconnection Check the cable connections.
		2. Check and/or replace the defective component.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
	В	Tray 4 error (3 Tray Paper Feed Unit)
		This SC is generated if the following condition occurs 3 consecutive times. For the two-tray paper feed unit
		When the tray lowers, the tray lift sensor does not go off within 1.5 sec.
		For the LCT
504-0		 If the upper limit does not go off for 1.5 seconds even the tray lift motor turns on to lower the tray after the upper limit has been detected at power on.
		Defective tray lift motor or connector disconnection
		Defective lift sensor or connector disconnection
		1. Check the cable connections.
		2. Check and/or replace the defective component.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
505		5th tray lift malfunction (optional LCT)
-01	В	This SC is generated if the following condition occurs: • When the tray lift sensor of the LCT 1200-sheet does not go on after the tray lift motor has turned on to lift the paper tray.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		 When the tray lift sensor of the LCT 1200-sheet does not go off after the tray lift motor has turned on to lower the paper tray.
		When the tray lift sensor of the LCT 1200-sheet does not go on after the pick- up roller solenoid has turned on at power on.
		Tray lift motor defective or disconnected
		Tray lift sensor defective or disconnected
		1. Check the harness connections.
		2. Replace the tray lift motor.
		3. Replace the tray lift sensor.
	В	Both tray lift sensor and lower limit sensor are turned on at the same time when the main power is turned on or the right door is closed.
		Tray lift motor defective or disconnected
		Tray lift sensor defective or disconnected
-02		Lowe limit sensor defective or disconnected
		1. Check the harness connections.
		2. Replace the tray lift motor.
		3. Replace the tray lift sensor.
		4. Replace the lower limit sensor.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
	D	Fusing fan error
		The IOB does not receive the lock signal 10 seconds after turning on the fusing fan.
530		Defective fusing fan motor or connector disconnection Defective IOB
		Check the connector and/or replace the fusing fan motor.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
	D	Ventilation fan (at the left side of the machine) motor-front/rear error
531		The IOB does not receive the lock signal for 10 seconds after turning on the ventilation fan motor-front/rear.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		Defective ventilation fan motor-front or rear
		Defective IOB
		1. Replace the ventilation fan (at the left side of the machine) motor-front or rear.
		2. Replace the IOB.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
	D	IH coil fan error
		The machine does not detect the fan motor lock signal for 10 seconds while the IH coil fan turns on.
532		 Disconnected harness Overload on the IH coil fan motor Defective IH coil fan motor Defective IOB
		 Check or replace the harness. Replace the IH coil fan. Replace the IOB.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
	D	IH inverter fan error
		The machine does not detect the fan motor lock signal for 10 seconds while the IH inverter fan turns on.
533		 Disconnected harness Overload on the IH inverter fan motor Defective IH inverter fan motor Defective IOB
		 Check or replace the harness. Replace the IH inverter fan. Replace the IOB.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
	D	Second duct fan error
		The machine does not detect the fan motor lock signal for 10 seconds while the second duct fan turns on.
534		 Disconnected harness Overload on the second duct fan motor Defective second duct motor Defective IOB
		Check or replace the harness. Replace the second duct fan.
		3. Replace the IOB.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
	D	Paper exit fan error
		The machine does not detect the fan motor lock signal for 10 seconds while the paper exit fan turns on.
535		 Disconnected harness Overload on the paper exit fan motor Defective paper exit motor Defective IOB
		 Check or replace the harness. Replace the paper exit fan. Replace the IOB.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
536	D	Third duct fan error
		The motor lock signal error is detected for 10 seconds after the motor lock signal was first detected.
		Defective third duct fan motor
		Disconnected or defective harness

N	0.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
			Defective IOB
			1. Replace the third duct fan motor.
			2. Check or replace the harness.
			3. Replace the IOB.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
540	D	Fusing/Paper exit motor error
		The IOB does not receive the lock signal 2 seconds after turning on the fusing/paper exit motor.
		Motor overload Defective fusing/paper exit motor
		1. Check or replace the harness.
		Replace the fusing/paper exit motor.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
	A	Heating roller thermopile error
541		The temperature detected by the heating roller thermopile does not reach 0°C for 6 seconds.
		 Loose connection of the heating roller thermopile Defective heating roller thermopile Defective thermopile
		Check if the heating roller thermopile is firmly connected. Replace the heating roller thermopile.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		Heating roller warm-up error 1
542	A	 After the main switch is turned on or the cover is closed, the increment of the heating roller temperature per 5 seconds is 50°C or less. If this condition is detected five times consecutively, SC 542 is defined.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		• The temperature detected by the heating roller thermopile does not reach 75° C for 13 seconds after the heating lamp on.
		 The temperature detected by the heating roller thermopile does not reach the ready temperature (130°C) while 125 seconds after the heating lamp on.
		 The center temperature of the heating roller does not reach the ready temperature (130°C) for 30 seconds after the both edge temperature of the heating roller has reached the ready temperature (100°C).
		 Dirty or defective thermopile Defective thermistor Defective heating roller lamp
		 Check if the heating roller thermistor is firmly connected. Replace the thermistor.
		3. Check or replace the thermopile.
		4. Replace the heating roller fusing lamp.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
	A	Heating roller fusing lamp overheat 1 (software error)
		The temperature detected by the heating roller thermopile stays at 230°C for 1 second.
		Defective PSU
E 42		Defective IOB
543		Defective BICU
		Related SC code: SC 553
		1. Replace the PSU.
		2. Replace the IOB.
		3. Replace the BICU.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
544	А	Heating roller fusing lamp overheat 1 (hardware error)
		During stand-by mode or a print job, the temperature detected by the heating roller thermopile reaches 250 °C.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		Defective PSU
		Defective IOB
		Defective BICU
		Defective fusing control system
		Related SC code: SC 543
		1. Replace the PSU.
		2. Replace the IOB.
		3. Replace the BICU.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
545	A	Heating roller fusing lamp consecutive full power 1
		When the fusing unit is not running in the ready condition, the heating roller fusing lamp keeps on full power for 8 seconds.
		Broken heating roller fusing lamp
		Related SC code: SC 555
		Replace the heating roller fusing lamp. Replace the PSU.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
	D	Zero cross error
547		The zero cross signal is detected three times even though the heater relay is off when turning on the main power.
		 The zero cross signal is not detected for 2 seconds even though the heater relay is on after turning on the main power or closing the front door.
		The detection error occurs twice or more in the 11 zero cross signal detections. This error is defined when the detected zero cross signal is less than 45.
		Defective fusing lamp relay
		Defective fusing lamp relay circuit
		Unstable power supply
		1. Check the power supply source.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		2. Replace the PSU

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
	A	Heating roller thermistor error
551		The temperature detected by the heating roller thermistor does not reach 0°C for 6 seconds.
		• The heating roller thermistor detects -5° C for 150 seconds even the temperature/humidity sensor actually detects 5° C.
		Loose connection of the heating roller thermistor
		Defective heating roller thermistor
		Defective thermopile
		Check that the heating roller thermistor is firmly connected.
		2. Replace the heating roller thermistor.
		3. Replace the thermopile.

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No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
	A	Heating roller warm-up error 2
552		After the main switch is turned on or the door is closed, the temperature detected by the heating roller thermistor does not reach the ready temperature within 125 seconds during fusing unit warm-up.
		Heating roller fusing lamp broken
		1. Check if the heating roller thermistor is firmly connected.
		2. Replace the heating roller fusing lamp.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
	A	Heating roller fusing lamp overheat 2 (software error)
553		The temperature detected by the heating roller thermistor stays at 230°C or more for 1 second.
		Defective PSU
		Defective IOB

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No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		Defective BICU
		1. Replace the PSU.
		2. Replace the IOB.
		3. Replace the BICU.

No. Type Details (Symptom, Possible Cause, Troubleshooting Procedures)

Heating roller fusing lamp overheat 2 (hardware error)

The temperature detected by the heating roller thermistor reaches 250°C or more.

Defective PSU
Defective IOB
Defective BICU
Defective fusing control system

Replace the PSU.
Replace the BICU.

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No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
	A	Heating roller lamp consecutive full power 2
555		The heating roller-fusing lamp stays ON for 15 seconds or more while the fusing unit is in the ready condition.
		Broken heating roller fusing lamp
		Replace the heating roller fusing lamp.
		2. Replace the PSU.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
	С	Zero cross frequency error
557		When the zero cross signal is 66 or more and it is detected 10 times or more in 11 detections, the machine determines that input 60 Hz and SC557 occurs.
		Noise (High frequency)

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		Defective PSU
		1. Check the power supply source.
		2. Replace the PSU.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
559	A	Consecutive fusing jam
		The paper jam counter for the fusing unit reaches 3 times. The paper jam counter is cleared if the paper is fed correctly.
		This SC is activated only when SP1159-001 is set to "1" (default "0").
		Paper jam in the fusing unit.
		Remove the paper that is jammed in the fusing unit. Then make sure that the fusing unit is clean and has no obstacles in the paper feed path.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
561	A	Pressure roller thermistor error
		The temperature detected by the pressure roller thermistor does not reach 0 °C for 20 seconds.
		Loose connection of the pressure roller thermistor
		Defective thermopile
		Defective pressure roller thermistor
		Check if the pressure roller thermistor is firmly connected.
		2. Replace the thermopile.
		3. Replace the pressure roller thermistor.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
563	A	Pressure roller overheat (software error)
		The temperature detected by the pressure roller thermistor stays at 230°C or more for 1 second.
		Defective PSU
		Defective IOB

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		Defective BICU
		1. Replace the PSU.
		2. Replace the IOB.
		3. Replace the BICU.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
	A	Pressure roller overheat (hardware error)
		The temperature detected by the pressure roller thermistor detects 250°C or more.
		Defective PSU
		Defective IOB
564		Defective BICU
		Defective fusing control system
		1. Replace the thermistor.
		2. Replace the PSU.
		3. Replace the IOB.
		4. Replace the BICU.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
565	A	Pressure roller fusing lamp consecutive full power
		The pressure roller-fusing lamp stays ON for 120 seconds or more while the fusing unit is in the ready condition,.
		Broken pressure roller fusing lamp
		Replace the pressure roller fusing lamp.
		2. Replace the PSU.

SC6xx: Device Communication

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
610	D	Mechanical counter error: K

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
611	D	Mechanical counter error: FC
-	-	This SC is only for NA models. The machine detects the mechanical counter error when SP5987-001 is set to "1".
		Disconnected mechanical counter Defective mechanical counter
		Check or replace the mechanical counter.

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No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
	D	ARDF communication error
		After the ARDF is detected, the break signal occurs or communication timeout occurs.
		Incorrect installation of ARDF
		ARDF defective
620		BICU board defective
020		External noise
		Check the cable connection of the ARDF.
		2. Shut out the external noise.
		3. Replace the ARDF.
		4. Replace the BICU board.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
621	D	Finisher communication error
622	D	Paper tray unit communication error
	-	While the IOB communicates with an optional unit, an SC code is displayed if one of following conditions occurs.
		The IOB receives the break signal which is generated by the peripherals only just after the main switch is turned on.
-		 When the IOB does not receive an OK signal from a peripheral 100ms after sending a command to it. The IOB resends the command. The IOB does not receive an OK signal after sending the command 3 times.
		Cable problems

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		IOB problems
		BICU problems
		PSU problems in the machine
		Main board problems in the peripherals
		Check if the cables of peripherals are correctly connected.
		2. Replace the PSU if no power is supplied to peripherals.
		3. Replace the IOB or main board of peripherals.
		4. Replace the BICU.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
623	D	2nd Paper Bank communication error
		This SC is not issued for this machine. When a communication error signal between the 1st paper bank and 2nd paper bank is received.
		Loose or disconnected connector
		Check the connection between the main machine and paper feed unit.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
	CTL B	Counter device error 1
632		After 3 attempts to send a data frame to the optional counter device via the serial communication line, no ACK signal was received within 100 ms.
		Serial line between the optional counter device, the relay board and copier control board is disconnected or damaged
		Make sure that SP5113 is set to enable the optional counter device.
		Check the connection between the main machine and optional counter device.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
633	CTL B	Counter device error 2
		After communication is established, the controller receives the brake signal from the accounting device.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		 Serial line between the optional counter device, the relay board and copier control board is disconnected or damaged Make sure that SP5113 is set to enable the optional counter device.
		 Check if the setting of the SP5113 is correctly set. Check the connection between the main machine and optional counter device.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
	CTL B	Counter device error 3
634		A backup RAM error was returned by the counter device.
		Counter device control board defective
		Backup battery of counter device defective
		Replace the counter device.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
	CTL B	Counter device error 4
		A backup battery error was returned by the counter device.
635		Counter device control board defective
		Backup battery of counter device defective
		Replace the counter device.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
636	CTL	SD Card Error
	D	Expanded authentication module error
-01		There is no expanded authentication module in the machine. The SD card or the file of the expanded authentication module is broken. There is no DESS module in the machine.
		 No expanded authentication module Defective SD card

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		No DESS module
		Install the expanded authentication module.
		2. Install the SD card.
		3. Install the DESS module.
	D	Version error
-02		The version of the expanded authentication module is not correct.
-02		Incorrect module version
		Install the correct file of the expanded authentication module.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
	CTL D	BICU control data transfer abnormal
		A sampling of the control data sent from the BICU reveals an abnormality.
		Controller board defective
641		External noise
		BICU board defective
		Replace the controller board.
		2. Replace the BICU.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
650	CTL B	Communication error of the remote service modem (Embedded RCG-M)
	-	Authentication error
-001		The authentication for the Embedded RCG-M fails at a dial up connection.
		Incorrect SP settings
		Disconnected telephone line
		Disconnected modem board
		Check and set the correct user name (SP5816-156) and password (SP5816-157).

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
	-	Incorrect modem setting
00.4		Dial up fails due to the incorrect modem setting.
-004		Same as -001
		Check and set the correct AT command (SP5819-160).
	-	Communication line error
-005		The supplied voltage is not sufficient due to the defective communication line or defective connection.
		Same as -001
		Consult with the user's local telephone company.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
	CTL C	Incorrect dial up connection
		-001: Program parameter error
		-002: Program execution error
651		An unexpected error occurs when the modem (Embedded RCG-M) tries to call the center with a dial up connection.
		Caused by a software bug
		No action required because this SC does not interfere with operation of the machine.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
	D	EEPROM error
669		Retry of EEPROM communication fails three times after the machine has detected the EEPROM error.
		Caused by noise
		Turn the main power switch off and on.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
	CTL D	Engine start up error
470		The ready signal from the engine board is not detected.
670		Defective BICU.
		Replace the BICU.

	CTL D	Engine board mismatch error
		Engine board and controller mismatch detected.
		Wrong engine board installed.
671		Wrong controller board installed.
		Check the type of engine board and controller board.
		1. Replace the BICU.
		2. Replace the controller board.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
	CTL D	Controller-to-operation panel communication error at startup
		After powering on the machine, the communication circuit between the controller and the operation panel is not opened, or communication with controller is interrupted after a normal startup.
470		Controller stall
672		Controller board installed incorrectly
		Controller board defective
		Operation panel connector loose or defective
		1. Check the harness connection.
		2. Replace the controller board.

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	No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
6	581	D	RFID: Communication error Communication error occurs when the RFID starts to communicate with the RFID receptor.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		Retry of RFID communication fails three times after the machine has detected the RFID communication error.
		Defective RFID reader and writer
		Disconnected ASAP I/F
		No memory chip on the toner cartridge
		• Noise
		Replace the RFID controller board.
		2. Replace the toner cartridge.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		Memory chip at TD sensor: Communication error
		Retry of memory chip communication fails three times after the machine has detected the memory chip communication error.
		Damaged memory chip data
682	D	Disconnected inter face
		No memory chip on the development unit
		Noise
		1. Replace the PCU.
		2. Replace the BICU.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
	В	RFID: Unit check error
683		The machine gets RFID communication error even the toner cartridges have not been installed in the machine.
		Caused by noise
		Turn the main power switch off and on.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
687	D	Memory address command error

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		The BICU does not receive a memory address command from the controller 120 seconds after paper is in the position for registration.
		Loose connection
		Defective controller
		Defective BICU
		Check if the controller is firmly connected to the BICU.
		2. Replace the controller.
		3. Replace the BICU.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
	D	GAVD communication error
		The I2C bus device ID is not identified during initialization.
		A device-status error occurs during I2C bus communication.
		The I2C bus communication is not established due to an error other than a buffer shortage.
690		Loose connection
070		Defective BICU
		Defective LD controller board
		1. Turn the main switch off and on.
		2. Check the cable connection.
		3. Replace the laser optics-housing unit.
		4. Replace the BICU board.

SC7xx: Peripherals

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
	В	Finisher jogger motor error
721		The jogger fences move out of the home position but the HP sensor output does not change within the specified number of pulses.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		The 1st failure issues an original jam message, and the 2nd failure issues this SC code.
		Jogger HP sensor disconnected, defective
		Jogger motor disconnected, defective
		Jogger motor overloaded due to obstruction
		Finisher main board and jogger motor
		Check the connections and cables for the components mentioned above.
		2. Check for blockages in the jogger motor mechanism.
		3. Replace the jogger HP sensor and/or jogger motor.
		4. Replace the finisher main board.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		Stack feed-out motor error
	В	The stack feed-out HP sensor does not detect the home position of the stack feed-out belt 3000ms after the stack feed-out belt has moved to its home position.
		The stack feed-out HP sensor does not turn off 200 ms after the stack feed-out belt has moved from its home position.
723		The 1st detection failure causes a jam error, and the 2nd failure causes this SC code.
		Defective stack feed-out HP sensor
		Overload on the stack feed-out motor
		Defective stack feed-out motor
		Defective main board
		Disconnected or defective harness
		Check the connections and cables for the components mentioned above.
		Check for blockages in the stack feed-out motor mechanism.
		3. Replace the stack feed-out HP sensor and/or stack feed-out motor.
		4. Replace the finisher main board.

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No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
	В	Finisher exit guide plate motor error
725		After moving away from the guide plate position sensor, the exit guide is not detected at the home position within the prescribed time. The 1st detection failure issues a jam error, and the 2nd failure issues this SC code.
		Guide plate motor disconnected, defective
		Guide plate motor overloaded due to obstruction
		Guide plate position sensor disconnected, defective
		Check the connections and cables for the components mentioned above.
		Check for blockages in the guide plate motor mechanism.
		3. Replace the guide plate position sensor and/or guide plate motor
		4. Replace the finisher main board.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
	В	Finisher Tray 1 shift motor error
730		The shift roller HP sensor of the upper tray does not activate within the prescribed time after the shift tray starts to move toward or away from the home position. The 1st detection failure issues a jam error, and the 2nd failure issues this SC code.
		 Shift tray HP sensor of the upper tray disconnected, defective Shift tray motor of the upper tray is disconnected, defective Shift tray motor of the upper tray overloaded due to obstruction
		 Check the connections and cables for the components mentioned above. Check for blockages in shift motor mechanism. Replace the shift tray HP sensor and/or shift motor Replace the finisher main board.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
	В	Finisher corner stapler motor error
740		The 1st detection failure issues a jam error, and the 2nd failure issues this SC code.
7 40		For 1000-sheet (booklet) finisher
		The stapler motor does not switch off within the prescribed time after operating.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		The HP sensor of the staple unit does not detect the home position after the staple unit moves to its home position.
		The HP sensor of the staple unit detects the home position after the staple unit moves from its home position.
		Staple jam
		Motor overload
		Defective stapler motor
		Check the connections and cables for the components mentioned above.
		2. Replace the HP sensor and/or stapler motor
		3. Replace the finisher main board.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		Finisher stapler movement motor error
742	В	 For 1000-sheet (booklet) finisher The stapler HP sensor is not activated within the specified time after the stapler motor turned on. (first detection: jam error, consecutive twice detection SC code). Motor overload Loose connection of the stapler home position sensor Loose connection of the stapler movement motor Defective stapler home position sensor Defective stapler movement motor 1. Check the connection of the stapler movement motor. 2. Check the connection of the stapler home position sensor. 3. Replace the stapler home position sensor. 4. Replace the stapler movement motor.

Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
	1000-sheet booklet finisher: Stack feed motor error
В	 The stack feed HP sensor does not detect "ON" twice (once: jam error) for specified time after the stack feed motor has turned on.
	Туре

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		The stack feed HP sensor does not detect "OFF" twice (once: jam error) for specified time after the stack feed motor has turned on.
		Motor overload
		Loose connection of the stack feed motor
		Defective stack feed motor
		Check the connections and cables for the stack feed motor and HP sensor.
		2. Check for blockages in the stack feed motor mechanism.
		3. Replace the stack feed HP sensor and/or stack feed motor
		4. Replace the finisher main board.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
	В	1000-sheet (booklet) finisher: Tray lift motor error
750		 Motor overload Loose connection of the shift tray motor Defective shift tray motor
		 Check the connections to the shift tray motor. Replace the shift tray motor.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
	В	Finisher punch motor error
760		The punch HP sensor is not activated within the specified time after the punch motor turned on. The 1st detection failure issues a jam error, and the 2nd failure issues this SC code.
		 Punch HP sensor disconnected, defective Punch motor disconnected or defective Punch motor overload due to obstruction
		 Check the connections and cables for the punch motor and HP sensor. Check for blockages in the punch motor mechanism. Replace the punch HP sensor and/or punch motor Replace the finisher main board.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
761	В	Finisher folder plate motor error
		The folder plate moves but is not detected at the home position within the specified time. The 1st detection failure issues a jam error, and the 2nd failure issues this SC code.
		Folder plate HP sensor disconnected, defective
		 Folder plate motor disconnected, defective Folder plate motor overloaded due to obstruction.
		Check the connections and cables for the folder plate motor and HP sensor.
		Check for blockages in the folder plate motor mechanism.
		3. Replace the folder plate HP sensor and/or folder plate motor
		4. Replace the finisher main board.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
763	В	Punch movement motor error
		The punch unit moves but is not detected at the home position within the specified time. The 1st detection failure issues a jam error, and the 2nd failure issues this SC code.
		Motor harness disconnected, loose, defective Defective motor
		Check the connections to the punch movement motor. Defective punch movement motor

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
764	В	Paper position sensor slide motor error
		The paper position sensor moves but is not detected at the home position within the specified time. The 1 st detection failure issues a jam error, and the 2nd failure issues this SC code.
		Motor harness disconnected, loose, defective Defective motor
		Check the connections to the paper position sensor slide motor.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		2. Defective paper position sensor slide motor.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
	В	Paper position sensor slide motor error
765		The paper position sensor moves but is not detected at the home position within the specified time. The 1st detection failure issues a jam error, and the 2nd failure issues this SC code.
		Motor harness disconnected, loose, defective Defective motor
		Check the connections to the paper position sensor slide motor. Defective paper position sensor slide motor.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
766	В	Paper position sensor slide motor error
		The paper position sensor moves but is not detected at the home position within the specified time. The 1st detection failure issues a jam error, and the 2nd failure issues this SC code.
		Motor harness disconnected, loose, defective Defective motor
		Check the connections to the paper position sensor slide motor. Defective paper position sensor slide motor.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
770	В	Shift motor error
		The shift motor HP sensor does not detect any change for 1.86 seconds after the shift motor has turned on at power on or during its operation.
		Defective shift motor Defective shift motor HP sensor
		Check the connections to the shift motor and the shift motor HP sensor.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		Defective shift motor or the shift motor HP sensor.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
791	D	Bridge unit error
		The machine recognizes the finisher, but does not recognize the bridge unit.
		Defective connector Broken harness
		Check the connections between the bridge unit and the machine. Install a new bridge unit.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
	В	Finisher error
792		The machine does not recognize the finisher, but recognizes the bridge unit.
		Defective connector
		Defective harness
		Incorrect installation
		Check the connections between the finisher and the machine.
		2. Install a new finisher.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
798 -1	В	Upper limit switch error
		The upper limit switch is pushed due to tray lift error or some problems.
		Upper limit switch pulled up Defective upper limit switch
		Check the harness.
		Check for blockage around the upper limit switch.
		2. Replace the upper limit switch.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)	
798 -02	В	Finisher jogger motor error	
		The jogger fences move out of the home position but the HP sensor output does not change within the specified number of pulses.	
		The 1st failure issues an original jam message, and the 2nd failure issues this SC code.	
		Jogger HP sensor disconnected, defective	
		Jogger motor disconnected, defective	
		Jogger motor overloaded due to obstruction	
		Finisher main board and jogger motor	
		1. Check or replace the harness.	
		2. Check for blockages in the jogger motor mechanism.	
		3. Replace the jogger HP sensor.	
		4. Replace the jogger motor.	
		5. Replace the finisher main board.	

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)	
	В	Rear fence motor error	
		The rear jogger fence motor in the finisher is not operating.	
		Rear jogger motor drive is obstructed (jammed paper, paper scraps, etc.) The rear jogger fence motor harness loose or broken	
798			
		Rear jogger fence HP sensor dirty, loose, defective	
-03		Rear jogger fence motor defective	
		1. Check or replace the harness.	
		Check for blockages in the rear jogger motor drive mechanism.	
		3. Replace the rear jogger fence HP sensor.	
		4. Replace the rear jogger fence motor.	

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)	
798		Stack feed-out motor error	
-04	В	older reed out motor error	

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		The stack feed-out HP sensor does not detect the home position of the stack feed-out belt for a certain time after the stack feed-out belt has moved to its home position.
		The stack feed-out HP sensor does not turn off for a certain time after the stack feed-out belt has moved from its home position.
		The 1st detection failure causes a jam error, and the 2nd failure causes this SC code.
		Defective stack feed-out HP sensor
		Overload on the stack feed-out motor
		Defective stack feed-out motor
		Defective main board
		Disconnected or defective harness
		1. Check or replace the harness.
		2. Check for blockages in the stack feed-out mechanism.
		3. Replace the stack feed-out HP sensor.
		4. Replace the stack feed-out motor.
		5. Replace the main board.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)	
798 -05	В	Positioning roller arm motor error	
		The positioning roller HP sensor does not turn on or off for a certain time at power- on. The positioning roller HP sensor does not turn on or off for a certain time when the positioning roller returns to its home position from the lower position.	
		The 1st detection failure causes a jam error, and the 2nd failure causes this SC code.	
		 Disconnected or defective harness Overload on the positioning roller arm motor Defective positioning roller arm motor Defective positioning roller HP sensor 	
		 Check or replace the harness. Check for blockages in the positioning roller arm mechanism. Replace the positioning roller arm motor. Replace the positioning roller HP sensor. 	

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)	
	В	Finisher corner stapler motor error	
		The 1st detection failure issues a jam error, and the 2nd failure issues this SC code. For 500-sheet finisher	
		The stapler HP sensor does not detect "ON"/"OFF" signal even the stapler moves from the "OFF"/"ON" position for 0.6 seconds.	
798		The stapler HP sensor does not detect "ON" when a stapling job is commanded or the stapler moves.	
-06		Staple jam Motor overload	
		Defective stapler motor 1. Check the connections and cables for the components mentioned above.	
		Replace the HP sensor and/or stapler motor	
		3. Replace the finisher main board.	

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)	
		Finisher stapler movement motor error	
		For 500-sheet finisher	
	В	The stapler HP sensor does not detect "OFF" signal even the stapler moves from the "ON" position for 0.35 seconds.	
		• The stapler HP sensor does not detect "ON" signal even the stapler moves from the "OFF" position for 5.5 seconds.	
700		Motor overload	
798		Loose connection of the stapler home position sensor	
-07		Loose connection of the stapler movement motor	
		Defective stapler home position sensor	
		Defective stapler movement motor	
		Check the connection of the stapler movement motor.	
		2. Check the connection of the stapler home position sensor.	
		3. Replace the stapler home position sensor.	
		4. Replace the stapler movement motor.	

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
	В	500-sheet finisher: Tray lift motor error
798 -08		 Motor overload Loose connection of the shift tray motor Defective shift tray motor
		Check the connections to the tray lift motor. Replace the tray lift motor.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)	
	В	Stack pressure solenoid error	
		The stack pressure solenoid in the finisher is not operating.	
		Solenoid harness loose, broken	
		Solenoid obstructed	
798		Stack height sensor dirty, harness loose, broke	
-09		Solenoid defective	
		Stack height sensor defective	
		1. Check or replace the solenoid harness.	
		2. Check for blockages in the stack pressure mechanism.	
		1. Replace the stack height sensor.	

SC8xx: Overall System

No.	Туре	pe Details (Symptom, Possible Cause, Troubleshooting Procedures)	
	CTL D	Energy saving I/O sub-system error	
816		The energy saving I/O sub-system detects an error.	
010		Controller board defective	
		Replace the controller board.	

No.	Туре	Details (Symptom, Possible Cause	e, Troubleshooting Procedures)
	CTL C	Fatal kernel error	
819		Due to a control error, a RAM overflow occurred during system processing. One of the following messages was displayed on the operation panel.	
[0x5032]		HAIC-P2 error	System program defective Controller board defective
[0x5245]		vm_pageout: VM is full	
[0x5355]		L2 status time out	Optional board defective
[554C]		USB error	Replace controller firmware

No.	Type Details (Symptom, Possible Cause, Troubleshooting Procedures)	
820	CTL D	Self-diagnostics error: CPU [XXXX]: Detailed error code
[0612]		Cut-in in ASIC occurs.
		 Defective ASIC Defective devices in which ASIC detects cut-in.
		Replace the controller board.

No. Туре Details (Symptom, Possible Cause, Troubleshooting Procedures) CTL 833 Self-diagnostic error 8: Engine I/F ASIC С • ASIC (Mandolin) for system control could not be detected. After the PCI [OF30] configuration, the device ID for the ASIC could not be checked. [OF31] Replace the BICU. • ASIC (Mandolin) for system control could not be detected. After the PCI configuration, the device ID for the ASIC could not be checked. [OF41] Replace the BICU Could not initialize or read the bus connection. [50B1] • Check for loose connections at the mother board.

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No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)		
		Replace the mother board		
		Value of the SSCG register is incorrect.		
[50B2]		Check for loose connections at the mother board.		
		Replace the mother board		

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
	CTL B	IEEE 1394 interface error
		The 1394 interface is unusable.
851		Defective IEEE1394 Defective controller.
		1. Turn the main switch off and on.
		2. Replace the IEEE1394 interface board.
		3. Replace the controller.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)	
	CTL B	Wireless LAN card not detected	
853		The wireless LAN card is not detected before communication is established, though the wireless LAN board is detected.	
		Loose connection	
		Check the connection.	

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
	CTL B	Wireless LAN/Bluetooth card not detected
854		The wireless LAN/Bluetooth card is not detected after communication is established, but the wireless LAN board is detected.
		Loose connection
		Check the connection.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		Wireless LAN/Bluetooth card error
		An error is detected in the wireless LAN/Bluetooth card.
855	CTL	Loose connection
856	В	Defective wireless LAN/Bluetooth card
		1. Check the connection.
		2. Replace the wireless LAN/Bluetooth card.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)	
	CTL B	USB interface error	
		The USB interface cannot be used due to a driver error.	
857		Defective USB driver Loose connection	
		Check the connection.	
		2. Replace the controller board.	

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)				
	CTL C	HDD Encryption unit error 1				
		A serious error occurs when data is encrypted to update an encryption key with the HDD encryption unit.				
		[0]	Encryption key acquisition error: The controller fails to get a new encryption key.			
858			Defective controller board Replace the controller board.			
		[1]	Encryption key setting for HDD error: The controller fails to copy a new encryption key to the HDD.			
			Defective SATA chip on the controller board Replace the controller board.			
		[2]	NVRAM data encryption error 1:			

No.	Туре		Details (Symptom, Possible Cause, Troubleshooting Procedures)
	[30]		An error occurs while the NVRAM data is encrypted.
			Defective NVRAM on the controller board Replace the NVRAM.
		[30]	NVRAM data encryption error 2: An error occurs before the NVRAM data is encrypted.
			Defective controller board Replace the controller board.
		[30]	Other error: A serious error occurs while the data is encrypted.
		Same as SC991	

No.	Туре		Details (Symptom, Possible Cause, Troubleshooting Procedures)			
		HDD Encryption unit error 2				
			us error occurs when the HDD data is encrypted to update an encryption key e HDD encryption unit.			
			HDD check error: The HDD is not correctly installed.			
			No HDD installed			
		[8]	Unformatted HDD			
859	CTL C		The encryption key on the controller is different from the one on the HDD			
037			1. Install the HDD correctly.			
			1. Initialize the HDD.			
		[9]	Power failure during the data encryption:			
			The data encryption (NVRAM and HDD) has not been completed.			
			Power failure during the data encryption			
			1. Initialize the HDD.			
		[10]	Data read/write error:			
			The DMAC error is detected twice or more.			

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		• Same as SC863

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
	CTL B	HDD: Initialization error
		The controller detects that the hard disk fails.
860		HDD not initialized
		Defective HDD
		1. Reformat the HDD.
		2. Replace the HDD.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)	
		HDD: Reboot error	
		The HDD does not become ready within 30 seconds after the power is supplied to the HDD.	
861	CTL D	Loose connection Defective cables Defective HDD Defective controller 1. Check the connection between the HDD and controller. 2. Check and replace the cables.	
		3. Replace the HDD.4. Replace the controller.	

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	No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		CTL D	HDD: Read error
	863		The data stored in the HDD cannot be read correctly.
			Defective HDD
			Defective controller 1. Replace the HDD.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		2. Replace the controller.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
	CTL D	HDD: CRC error
864		While reading data from the HDD or storing data in the HDD, data transmission fails.
		Defective HDD
		Replace the HDD.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
	CTL D	HDD: Access error
865		An error is detected while operating the HDD.
		Defective HDD
		Replace the HDD.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
	CTL B	SD card authentication error
866		A correct license is not found in the SD card.
		SD-card data is corrupted.
		Store correct data in the SD card.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
	CTL D	SD card error
867		The SD card is ejected from the slot.
		1. Install the SD card.
		2. Turn the main switch off and on.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
868	CTL D	SD card access error • -13 to -3: File system error • Other number: Device error An error report is sent from the SD card reader. • An error is detected in the SD card.
		 For a file system error, format the SD card on your PC. For a device error, turn the mains switch off and on. Replace the SD card. Replace the controller.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
	CTL B	Address book error
		An error is detected in the data copied to the address book over a network.
870		 Defective software program Defective HDD Incorrect path to the server
		 Initialize the address book data (SP5-846-050). Initialize the user information (SP5-832-006).
		3. Replace the HDD.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
	CTL B	HDD mail data error
872		An error is detected in the HDD at machine initialization.
		Defective HDD
		Power failure during an access to the HDD
		1. Turn the main switch off and on.
		2. Initialize the HDD partition (SP5-832-007).
		3. Replace the HDD.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
	CTL B	HDD mail transfer error
		An error is detected in the HDD at machine initialization.
873		Defective HDD
		Power failure during an access to the HDD
		1. Initialize the HDD partition (SP5-832-008).
		2. Replace the HDD.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
874	CTL D	Delete All error 1: HDD
		An error is detected while all of the HDD or NVRAM are formatted physically by the Data Overwrite Security Unit (D377).
		 Data Overwrite Security Unit (SD card) not installed Defective HDD
		1. Install the Data Overwrite Security Unit (D377).
		2. Replace the HDD.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
875	CTL D	Delete All error 2: Data area
		An error is detected while all of the HDD or NVRAM are formatted logically by the Data Overwrite Security Unit (D377).
		The logical format for the HDD fails.
		Turn the main switch off/on and try the operation again

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
	CTL D	Log Data Error
876		An error was detected in the handling of the log data at power on or during machine operation. This can be caused by switching the machine off while it is operating.
	-001	Log Data Error 1

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		Damaged log data file in the HDD
		Initialize the HDD with SP5832-004.
		Log Data Error 2
	-002	An encryption module not installed
	002	 Disable the log encryption setting with SP9730-004 ("0" is off.) Install the DESS module.
		Log Data Error 3
	-003	Invalid log encryption key due to defective NVRAM data
	000	1. Initialize the HDD with SP5832-004.
		2. Disable the log encryption setting with SP9730-004 ("0" is off.)
	-004	Log Data Error 4
		Unusual log encryption function due to defective NVRAM data
		Initialize the HDD with SP5832-004.
		Log Data Error 5
	-005	Installed NVRAM or HDD which is used in another machine
		1. Reinstall the previous NVRAM or HDD.
		2. Initialize the HDD with SP5832-004.
		Log Data Error 99
	-099	Other than the above causes
		Ask your supervisor.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
877	CTL D	HDD Data Overwrite Security SD card error
		The 'all delete' function cannot be executed but the Data Overwrite Security Unit (D377) is installed and activated.
		Defective SD card (D377)

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		SD card (D377) not installed
		1. Replace the NVRAM and then install the new SD card (D377).
		2. Check and reinstall the SD card (D377).

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
	CTL D	TPM system authentication error
		The system firmware is not authenticated by TPM (security chip).
878		Incorrect updating for the system firmware
		Defective flash ROM on the controller board
		Replace the controller board.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
	CTL D	File format converter error
880		The file format converter does not respond.
		Defective file format converter
		Replace the file format converter.

SC9xx: Miscellaneous

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
	CTL D	Electric counter error
		Abnormal data in the counters.
900		Defective NVRAM
		Defective controller
		Check the connection between the NVRAM and controller.
		2. Replace the NVRAM.
		3. Replace the controller.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
910		External Controller Error 1
911		External Controller Error 2
912	CTL D	External Controller Error 3
913		External Controller Error 4
914		External Controller Error 5
-	-	The external controller alerted the machine about an error.
-	-	Please refer to the instructions for the external controller (application).

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
	CTL D	External Controller Error 6
919		While EAC (External Application Converter), the conversion module, was operating normally, the receipt of a power line interrupt signal from the FLUTE serial driver was detected, or BREAK signal from the other station was detected.
		Power outage at the EFI controller EFI controller was rebooted
		Connection to EFI controller loose

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
	CTL D	Printer application error
		An error is detected in the printer application program.
920		Defective software
920		Unexpected hardware resource (e.g., memory shortage)
		Software defective; switch off/on, or change the controller firmware if the problem is not solved
		2. Insufficient memory

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
921	CTL	Printer font error

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
	D	A necessary font is not found in the SD card.
		A necessary font is not found in the SD card.
		The SD card data is corrupted.
		Check that the SD card has the correct data.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)		
	CTL D	Software performance error		
		The software makes an unexpected operation.		
		Defective software		
		Defective controller		
990		Software error		
		1. Turn the main switch off and on.		
		2. Reinstall the controller and/or engine main firmware.		
		Note		
		See Note 1 at the end of the SC table.		

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)	
991	CTL C	Software continuity error	
		The software has attempted to perform an unexpected operation. However, unlike SC 990, the object of the error is continuity of the software.	
		Software program error Internal parameter incorrect, insufficient working memory.	
		This SC is not displayed on the LCD (logging only).	

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)	
992	0.71	Undefined error	
	CTL D	Defective software program	
		An error undetectable by any other SC code occurred	

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)	
994		Operation panel management records exceeded	
	CTL C	An error occurred because the number of records exceeded the limit for images managed in the service layer of the firmware. This can occur if there if there are too many application screens open on the operation panel.	
		No action required because this SC does not interfere with operation of the machine.	

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)	
995	D CPM setting error		
		Defective BICU NVRAM Replacement error	
	-001	 Install the previous NVRAM. Input the serial number with SP5811-004, and turn the main power switch off/on. 	
		Defective NVRAM Defective controller	
	-002	 Update the controller firmware. Install a new NVRAM, and turn off and on the main power switch after SC995-002 has occurred. 	
-003		Incorrect type controller installed Defective controller	
		Replace the controller with the correct type.	
	-004	Incorrect model controller installed.	
	-004	Replace the controller with the correct model.	

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)	
997	CTL B	Application function selection error The application selected by the operation panel key does not start or ends abnormally.	

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)	
		Software (including the software configuration) defective	
		An option required by the application (RAM, DIMM, board) is not installed	
		Nesting of the fax group addresses is too complicated	
	Check the devices necessary for the application program. If nece have not been installed, install them.		
	Check that application programs are correctly configured.		
		3. For a fax operation problem, simplify the nesting of the fax group addresses.	
		Take necessary countermeasures specific to the application program. If the logs can be displayed on the operation panel, see the logs.	

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)	
	CTL D	Application start error	
		No applications start within 60 seconds after the power is turned on.	
		Loose connection of RAM-DIMM, ROM-DIMM	
		Defective controller	
998		Software problem	
		1. Check the setting of SP5875-001. If the setting is set to "1 (OFF)", change it to "0 (OFF)".	
		2. Check if the RAM-DIMM and ROM-DIMM are correctly connected.	
		3. Reinstall the controller system firmware.	
		4. Replace the controller.	

Note 1

If a problem always occurs in a specific condition (for example. printer driver setting, image file), the problem may be caused by a software error. In this case, the following data and information needs to be sent back to your product specialist. Please understand that it may take some time to get a reply on how to solve the problem, because in some cases the design staff in Japan must analyze the data.

- Symptom / Possible Causes / Action taken
- Summary sheet (SP mode "Printer SP", SP1-004 [Print Summary])
- SMC All (SP5-990-001)
- SMC Logging (SP5-990-004)
- Printer driver settings used when the problem occurs

- All data displayed on the screen (SC code, error code, and program address where the problem is logged.)
- Image file which causes the problem, if possible

4. Appendix: Process Control Error Conditions

Process Control Error Conditions

Developer Initialization Result

SP-3-014-001 (Developer Initialization Result)

No.	Result	Description	Possible Causes/Action
1	Successfully completed	Developer initialization is successfully completed.	-
2	Forced termination	Developer initialization was forcibly terminated.	 A cover was opened or the main switch was turned off during the initialization. Do the developer initialization again when done in SP mode. Reinstall the engine main firmware if the result is the same. Turn the main switch off and on when done at unit replacement.
6	Vt error	Vt is more than 0.7V when Vcnt is 4.3V.	Make sure that the heat seal on the development unit is not removed. Defective TD sensor
7	Vcnt error 1	Vcnt is less than 4.7V when Vcnt is Vt target ±0.2V.	Defective TD sensor Vt target settings are not correct. Toner density error
8	Vcnt error 2	Vt is more than 0.7V when Vcnt is 4.3V and Vcnt is less than 4.7V when Vcnt is Vt target ±0.2V.	Make sure that the heat seal on the development unit is not removed. Defective TD sensor
9	Vcnt error 3	Vcnt is less than 4.7V.	Make sure that the heat seal on the development unit is not removed Defective TD sensor Wt target settings are not correct. Toner density error

• The machine starts developer initialization after you set "Enable" in SP3-902-005, 006, 007, or 008. Developer initialization automatically resumes when you open and close the front door or turn the main switch off and on if an error other than Error 8 occurs.

Process Control Self-Check Result

Displayed number shows results of each color sensor check.

00000000 = YYCCMMKK

SP3-012-001 to -010 (Process Control Self-check Result)

No.	Result	Description	Possible Causes/Action
11	Successfully completed	Process control self-check successfully completed.	Check the Vsg adjustment. See the "Vsg Adjustment Result" following this table.
41	Vt error	Vt maximum or minimum error is detected.	Defective development unit Vt maximum error and an image is faint: 1. Replace the toner supply pump unit. Vt maximum error and an image is O.K: 1. Replace the development unit. 2. Replace the IOB board. Vt minimum error: 1. Replace the development unit. 2. Replace the IOB board.
53	ID sensor coefficient (K5) detection error	Not enough data can be sampled.	 Solid image is not sufficient density: Retry the process control. Replace the ID sensors. Replace the IOB board. Solid image is O.K. Replace the ID sensors. Replace the IOB board. ID sensor is dirty: Clean the ID sensors. Retry the process control.

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No.	Result	Description	Possible Causes/Action
54	ID sensor coefficient (K5) maximum/ minimum error	When the K5 is more than the value of SP3-362-003 or less than the value of SP3-362-004, the error 54 is displayed.	 ID sensor pattern density is too high or low. ID sensor or shutter is defective. Same as 53
55	Gamma error: Maximum	Gamma is out of range. 5.0 < Gamma	 ID sensor pattern density is too high. Hardware defective. Same as 53
56	Gamma error: Minimum	Gamma is out of range. Gamma < 0.15	 ID sensor pattern density is too low. Hardware defective. Same as 53 Replace the toner supply pump unit.
57	Vk error: Maximum	Vk is out of range. 150 < Vk	 ID sensor pattern density is too low. Hardware defective. Same as 53
58	Vk error: Minimum	Vk is out of range. Vk < -150	 ID sensor pattern density is too high. Background dirty Hardware defective Same as 53
59	Sampling data error during gamma correction	Not enough data can be sampled during the gamma correction.	ID sensor pattern density is too high or low.Hardware defectiveSame as 53
99	Unexpected error	Process control fails.	Power Failure Check the power source.

Vsg Adjustment Result

SP3-325-001 to -010 (Vsg Adjustment Result)

No.	Result	Description	Possible Causes/Action
1	O.K	Vsg adjustment is correctly done.	-
2	ID sensor adjustment error	Vsg cannot be adjusted within 4.0 ±0.5V.	 Dirty ID sensor (toner, dust, or foreign material) Dirty transfer belt Scratched image transfer belt Defective ID sensor Poor connection Defective IOB Clean the ID sensor. Check the belt cleaning. Clean or replace the transfer belt. Replace the image transfer belt. Replace the ID sensor. Check the connection. Replace the IOB board.
3	ID sensor output error	ID sensor output is more than "Voffset Threshold" (SP3-32 4-004)	 Defective ID sensor Poor connection Defective IOB Replace the ID sensor. Check the connection. Replace the IOB board.
9	Vsg Adjustment error	Vsg adjustment has not been completed.	Other cases Retry SP3-321-010.

Line Position Adjustment Result

SP2-194-010 to -012 (Line Position Adjustment Result: M, C, Y)

This SP shows the number as a line position adjustment result on the LCD. It shows which color has an error (M, Y or C).

No.	Result	Description	Note
0	Not done	Line position adjustment has not been done.	-
1	Completed successfully	Line position adjustment has correctly been done,	-
2	Cannot detect patterns	ID sensors have not detected the patterns for line position adjustment.	See Note
3	Fewer lines on the pattern than the target	The patterns, which ID sensors have detected, are not enough for line position adjustment.	See Note
4	More lines on the pattern than the target	Not used in this machine.	-
5	Out of the adjustment range	ID sensors have correctly detected the patterns for line position adjustment, but a shift of patterns is out of adjustable range.	See Note
6-9	Not used	-	-

Note

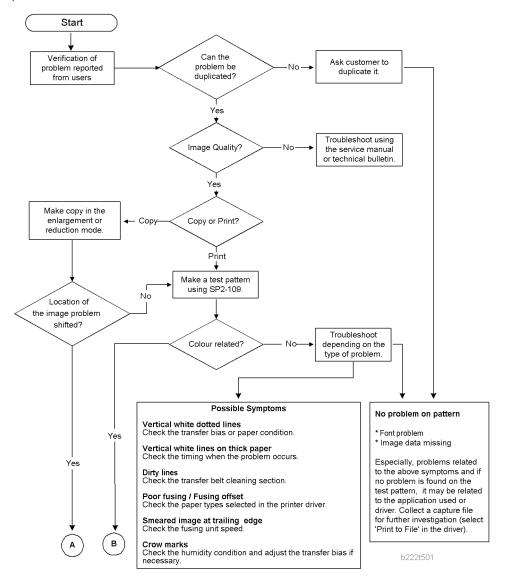
• For details, see the "Troubleshooting Guide - Line Position Adjustment" section.

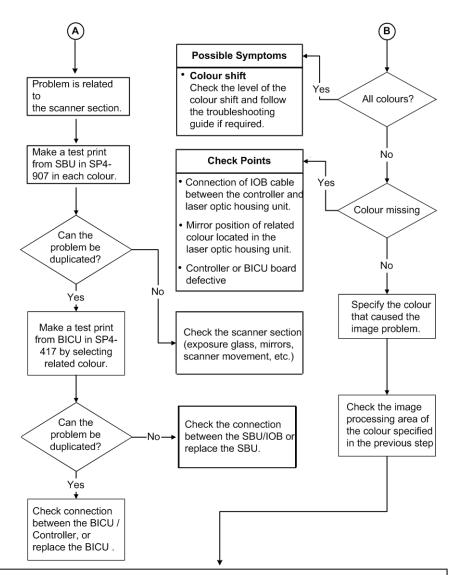
5. Appendix: Troubleshooting Guide

Troubleshooting Guide

Image Quality

The following work-flow shows the basic troubleshooting steps for the image quality problems on this product.





Considerable Symptoms

Toner blasting

Check which colour is blasting and adjust the toner limit or transfer bias.

Image density change

Check when the problem is reported and follow the necessary steps.

Dirty Background

Check in which condition the problem is reported, and follow the required procedure.

· Colour vertical bands/lines/dirty background

Check the OPC drum and/or development unit.

Colour shift

Check the level of the colour shift and follow the troubleshooting guide if required.

· Colour lines/bands/dirty background

When the PCU/development unit is close to its life end, the developer or the cleaning blade of the PCU wears out, causing vertical colour lines, bands, or dirty background. Check the related colour unit and replace it if necessary.

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Line Position Adjustment

When there are color registration errors on the output, do the line position adjustment as follows.



• Use A3/DLT size paper for this adjustment.

Test

- 1. Do SP2-111-003 (Mode c: rough adjustment).
- Use SP2-194-007 to check if the result of the line position adjustment is correct (0: Completed successfully, 1: Not completed). If the result is "1", refer to 'Countermeasure list for color registration errors'.
- 3. Do SP2-111-001 (Mode a: fine adjustment twice).
- 4. Use SP2-194-007 to check if the result of the line position adjustment is correct (0: Completed successfully, 1: Not completed). If the result is "1", refer to 'Countermeasure list for color registration errors'.
- 5. Put some A3/DLT paper on the by-pass tray.



- When you print a test pattern, use the by-pass tray to feed the paper.
- 6. Print out test pattern "7" with SP2-109-003.
- 7. Check the printed output with a loupe.
- 8. If there are no color registration errors on the output, the line position adjustment is correctly done. If not, refer to the countermeasure list for color registration errors.

Countermeasure list for color registration errors

After Executing SP2-111-003

- Result: "1" in SP2-194-007
- Result: "2" or "3" (Line pattern detection failure) in SP2-194-010, -011, -012

Test pattern check	Possible cause/Countermeasure
White image, Abnormal image, Low density	Defective laser optics housing unit shutter
	Defective image processing unit
	Low density of test pattern
	Defective BICU
	1. Replace the shutter motor.

Test pattern check	Possible cause/Countermeasure
	2. Replace the high voltage power supply unit.
	3. Do the forced process control (SP3-011-001) or supply some toner (SP3-015-xxx).
	4. Replace the BICU.
	Defective ID sensor shutter
Normal image, but with color registration errors	Defective ID sensor
	Defective BICU
	1. Replace the ID sensor shutter solenoid.
	2. Replace the ID sensor.
	3. Replace the BICU.

- Result: "1" in SP2-194-007
- One of results: "5" (Out of adjustable range) in SP2-194-010, -011, -012.

Test pattern check	Possible cause/Countermeasure
The main scan registrations of M, C, Y are shifted by more than ±15 mm from the main scan registration of K.	 Defective laser optics housing unit Defective BICU Replace the laser optics housing unit. Replace the BICU.
The sub scan registrations of M, C, Y are shifted by more than ±20 mm from the sub scan registration of K.	 Defective image transfer belt Defective drive units Defective BICU Replace the image transfer belt. Replace the drum motor. Replace the BICU.
The main scan registration is shifted by more than ±0.66 mm, but only at the central area of the image on the output.	 Defective ID sensor at center Deformed center area on the image transfer belt Defective BICU Replace the ID sensor. Replace the image transfer belt. Replace the BICU.

Test pattern check	Possible cause/Countermeasure
The skew for M, C, Y is more than ±0.75 mm from the main scan registration of K	 Defective PCU Defective laser optics housing unit Defective BICU Reinstall or replace the PCU. Replace the laser optics housing unit. Replace the BICU.
Others	 Skew correction upper limit error Defective BICU Defective laser optics housing unit Replace the BICU. Replace the laser optics housing unit.

• Result: "1" in SP2-194-007

• Result: "0" in SP2-194-010, -011, -012.

Test pattern check	Possible cause/Countermeasure
	Do SP2-111-001 or -002.

After Executing SP2-111-001

• Result: "1" in SP2-194-007

• Result: "2" or "3" (Line pattern detection failure) in SP2-194-010, -011, -012

Test pattern check	Possible cause/Countermeasure
White image, Abnormal image,	Defective laser optics housing unit shutter
Low density	Defective image processing unit
	Low density of test pattern
	Defective BICU
	1. Replace the shutter motor.
	2. Replace the high voltage power supply unit.
	3. Do the forced process control (SP3-011-001) or supply
	some toner (SP3-015-xxx).

Test pattern check	Possible cause/Countermeasure
	4. Replace the BICU.
Normal image, but with color	Defective ID sensor shutter
registration errors	Defective ID sensor
	Defective BICU
	1. Replace the ID sensor shutter solenoid.
	2. Replace the ID sensor.
	3. Replace the BICU.

- Result: "1" in SP2-194-007
- Result: "5" (Out of adjustable range) in SP2-194-010, -011, -012

Test pattern check	Possible cause/Countermeasure
Low image density on the output	• Low pattern density Do the forced process control (SP3-011-001) or supply some toner (SP3-015-xxx).
The main scan registrations of M, C, Y are shifted by more than ±1.4 mm from the main scan registration of K.	 No defective component Defective laser optics housing unit Defective BICU 1. Do SP2-111-003 again. 2. Replace the laser optics housing unit. 3. Replace the BICU.
The sub scan registrations of M, C, Y are shifted by more than ±1.4mm from the sub scan registration of K.	 No defective component Defective image transfer belt Defective drive units Defective BICU 1. Do SP2-111-003 again. 2. Replace the image transfer belt. 3. Replace the drum motor. 4. Replace the BICU.

Test pattern check	Possible cause/Countermeasure
The main scan registration is shifted by more than ±0.66 mm, but only at the central area of the image on the output.	 Defective ID sensor at center Deformed center area on the image transfer belt Defective BICU Replace the ID sensor. Replace the image transfer belt. Replace the BICU.
The skew for M, C, Y is more than ± 0.75 mm from the main scan registration of K. – at the end of the scan line?	 Defective PCU Defective laser optics housing unit Defective BICU Reinstall or replace the PCU. Replace the laser optics housing unit. Replace the BICU.
Others	 Skew correction upper limit error Defective BICU Defective laser optics housing unit Replace the BICU. Replace the laser optics housing unit.

• Result: "0" in SP2-194-007

• Result: No color registration errors in SP2-194-010, -011, -012

Test pattern check	Possible cause/Countermeasure
The main scan registration of K is shifted.	Abnormal SP setting value of main scan: K Adjust the value with SP2-101-001.
The main scan length of K is shifted.	Abnormal SP setting value of main scan length detection: K Adjust the value with SP2-185-001.

After Executing SP2-111-001

• Result: "0" in SP2-194-007

• Result: Color registration errors in SP2-194-010, -011, -012

Test pattern check	Possible cause/Countermeasure
Low image density on the output	Low pattern density Do the forced process control (SP3-011-001) or supply some toner (SP3-015-xxx).
The main scan registration is shifted, but only at the central area of the image on the output.	 Defective ID sensor at center Deformed center area on the image transfer belt Defective BICU Replace the ID sensor. Replace the image transfer belt. Replace the BICU.
The main scan registrations of M, C, Y are shifted.	 Defective laser optics housing unit Defective ID sensor Defective BICU Incorrect SP value Replace the laser optics housing unit. Replace the ID sensor. Replace the BICU. Adjust the value with SP2-182-004 to -021.
The sub scan registrations of M, C, Y are shifted.	 Defective image transfer belt Defective drive units Defective ID sensor Defective BICU Incorrect SP value Replace the image transfer belt. Replace the ID sensor. Replace the drum motor. Replace the BICU. Adjust the value with SP2-182-022 to -039.
The skew of M, C, Y is different.	 Defective PCU Defective laser optics housing unit Defective IOB Reinstall or replace the PCU.

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Test pattern check	Possible cause/Countermeasure			
	2. Replace the laser optics housing unit.			
	3. Replace the IOB.			
The sub scan lines are shifted. Shifted	Defective PCU			
lines appear cyclically.	Defective drive unit			
	Drum phase adjustment error			
	 Do SP1-902-001 (Drum phase adjustment); see Replacement and Adjustment – Drive Unit – Gear Unit for details. 			
	2. Reinstall or replace the PCU.			
	3. Check or replace the drive unit.			

6. Appendix: Jam Detection

Jam Detection

Paper Jam Display

SP7-507 shows the paper jam history.

CODE:011 SIZE:05h TOTAL:000034

DATE: Fri Feb 15 11:44:50 2006

- CODE: Indicates the jam code.
- SIZE: Indicates the paper Size Code.
- TOTAL: Indicates the total counter (SP7-502-001).
- DATE: indicates the date when the jam occurred.

Jam Codes and Display Codes

SP7-504 shows how many jams occurred at each location.

Jam Code SP	Display	Description	LCD Display
7504 3	Tray 1: ON	Paper is not fed from tray 1.	А
7504 4	Tray 2: ON	Paper is not fed from tray 2.	А
7504 5	Tray 3: ON	Paper is not fed from tray 3 (LCT).	Υ
7504 6	Tray 4: ON	Paper is not fed from tray 4.	Y
75047	LCT: ON	Paper is not fed from LCT.	U
7504 8	Bypass: ON	Paper is not fed from the by-pass tray.	Α
7504 9	Duplex: ON	Paper is jammed at the duplex unit.	Z
7504 10	-	-	-

Jam Code SP	Display	Description	LCD Display
7504 11	Vertical Transport 1: ON	Vertical transport sensor 1 does not detect paper from tray 1.	А
7504 12	Vertical Transport 2: ON	Vertical transport sensor 2 does not detect paper from tray 2.	А
7504 13	Bank Transport 1	Vertical transport sensor 1 or relay sensor does not detect paper from tray 3 (LCT).	Y
7504 15	-	-	-
7504 16	-	-	-
7504 17	Registration: ON	Registration sensor does not detect paper.	В
7504 18	Fusing Entrance: ON	Fusing entrance sensor does not detect paper.	В
7504 19	Fusing Exit: ON	Fusing exit sensor does not detect paper.	В
7504 20	Paper Exit: ON	Paper exit sensor does not detect paper.	С
7504 21	Relay Exit: ON	Tray exit sensor (bridge unit) does not detect paper.	D
7504 22	Relay Transport: ON	Relay sensor (bridge unit) does not detect paper.	D
7504 23	-	-	-
7504 24	Junction Gate Feed: ON	Junction gate jam sensor does not detect paper.	С
7504 25	Duplex Exit: ON	Duplex exit sensor does not detect paper.	Z
7504 26	Duplex Entrance: ON (In)	Duplex entrance sensor does not detect paper.	Z
7504 27	Duplex Entrance: ON (Out)	Duplex entrance sensor does not detect paper again after paper has passed this sensor.	Z
7504 28	-	-	-
7504 51	SEF Sensor 1	Vertical transport sensor 1 does not turn off.	А
7504 52	SEF Sensor 2	Vertical transport sensor 2 does not turn off.	Α
7504 53	Bank SEF Sensor 1	Vertical transport sensor or relay sensor 1 does not turn off.	Y

Jam Code SP	Display	Description	LCD Display
7504 54	Bank SEF Sensor 2	Vertical transport sensor 2 does not turn off.	Y
7504 55	-	-	-
7504 56	-	-	-
7504 57	Regist Sensor	Registration sensor does not turn off.	В
7504 58	LCT Sensor	LCT sensor does not turn off.	U
7504 59		-	-
7504 60	Exit Sensor	Paper exit sensor does not turn off.	С
7504 61	Relay Exit Sensor	Tray exit sensor (bridge unit) does not turn off.	D
7504 62	Relay Sensor	Relay sensor (bridge unit) does not turn off.	D
7504 63	-	-	-
7504 64	Junction Gate Feed: OFF	Junction gate jam sensor does not turn off.	С
7504 65	Duplex Exit Sensor	Duplex exit sensor does not turn off.	Z
7504 66	Duplex Entrance: OFF (In)	Duplex entrance sensor does not turn off.	Z
7504 67	Duplex Entrance: OFF (Out)	Duplex entrance sensor does not turn off after paper has passed this sensor.	Z
7504 68	-	-	-
7504 100	Finisher Entrance (B408)	Paper does not reach to the entrance sensor or stay at the entrance sensor.	R1-R2
7504 101	Finisher Shift Tray Exit (B408)	Paper does not reach to the lower tray exit sensor or stay at the lower tray exit sensor.	R1-R2
7504 102	Finisher Staple (B408)	Paper does not reach to the staple tray entrance sensor or stay at the staple tray entrance sensor.	R3-R5
7504 103 Finisher Exit (B408)		Lower tray exit sensor does not detect paper after the stack feed-out belt has fed paper. Lower tray exit sensor still detects paper after the stack feed-out belt has returned to the home position.	R3-R5

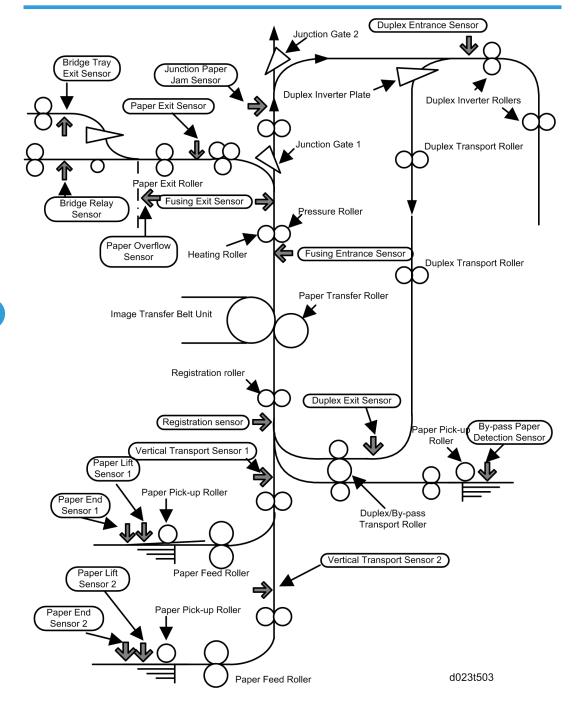
Jam Code SP	Display	Description	LCD Display
7504 104	-	-	-
7504 105	Finisher Tray Lift Motor (B408)	Stack height sensor does not detect paper after the lower tray has lifted up. Stack height sensor still detects paper after the lower tray has lifted down.	R1-R2
7504 106	Finisher Jogger Motor (B408)	Jogger fence HP sensor does not turn off after the jogger fence has moved from its home position. Jogger fence HP sensor does not turn on after the jogger fence has returned to its home position.	R3-R5
7504 107	Finisher Shift Motor (B408)	Shift roller HP sensor does not turn off after the shift roller has moved from its home position. Shift roller HP sensor does not turn on after the shift roller has returned to its home position.	R1-R2
7504 108	Finisher Staple Motor (B408)	Stapler HP sensor does not turn off after the stapler has moved from its home position. Stapler HP sensor does not turn on after the stapler has returned to its home position.	R3-R5
7504 109	Finisher Exit Motor (B408)	Stack feed-out belt HP sensor does not turn off after the stack feed-out belt has moved from its home position. Stack feed-out belt HP sensor does not turn on after the stack feed-out belt has returned to its home position.	R3-R5
7504 191	Finisher Entrance: EUP (B804/B805)	Paper does not reach the finisher entrance sensor or stays at the finisher entrance sensor.	R1-R4
7504 192	Finisher Proof Exit: EUP (B804/B805)	Paper does not reach the proof tray exit sensor or stays at the proof tray exit sensor.	R1-R4
7504 193	Finisher Shift Tray Exit: EUP (B804/B805)	Paper does not reach the upper tray exit sensor or stays at the upper tray exit sensor.	R1-R4

Jam Code SP	Display	Description	LCD Display	
7504 194	Finisher Stapler Exit: EUP (B804/B805)	Stapling tray paper sensor does not turn on after the finisher entrance sensor has turned on. Stapling tray paper sensor does not turn off after it has turned on.	R5-R7	
7504 195	Finisher Exit: EUP (B804/ B805)	Upper tray exit sensor does not turn on while the stack feed-out belt is turned on. Upper tray exit sensor does not turn off after the stack feed-out belt has returned to its home position.	R8-R12	
7504 196	-	-	-	
7504 197	-	-	-	
	Finisher Folder: EUP (B804 only)	Fold bottom fence HP sensor does not turn on after the fold roller motor has stopped.		
7504 198		Fold unit exit sensor does not turn on after the fold rollers have stopped.	R8-R12	
		Fold unit exit sensor does not turn off after the fold rollers have stopped.		
<i>75</i> 04 199	Finisher Tray Motor: EUP (B804/B805)	Upper tray limit sensor does not turn on after the upper tray has lifted up.	R1-R4	
7304 199		Upper tray limit sensor does not turn off after the upper tray has moved down.	K1-K4	
7504000	Finisher Jogger Motor:	Jogger fence HP sensor does not turn on/off after the jogger motor has turned on.	DO D10	
7504 200	EUP (B804/B805)	Stack feed out belt HP sensor does not turn on/off after the feed out belt motor has turned on.	R8-R12	
		Shift roller HP sensor does not turn on/off after the shift roller motor has turned on.		
7504 201	Finisher Shift Motor: EUP	Exit guide plate HP sensor does not turn on/off after the exit guide plate motor has turned on.	R1-R4	
	(B804/B805)	Stacking roller HP sensor does not turn on/off after the stacking sponge roller motor has turned on.		

Jam Code SP	Display	Description	LCD Display
7504 202	Finisher Staple Moving Motor: EUP (B804/ B805)	Corner stapler HP sensor does not turn on/off after the corner stapler movement motor has turned on. Stapler rotation HP sensor does not turn on/off after the corner stapler rotation motor has turned on.	R8-R12
7504 203	Finisher Staple Motor: EUP (B804/B805)	Corner stapler does not finish stapling after a specified time. Booklet stapler does not finish stapling after a specified time.	R8-R12
7504 204	Finisher Folder Motor: EUP (B804 only)	Fold plate HP sensor does not turn on/off after the fold plate motor has turned on. Clamp roller HP sensor does not turn on/off after the clamp roller retraction motor has turned on. Fold bottom fence HP sensor does not turn on/off after the fold unit bottom fence lift motor has turned on. Stack junction gate HP sensor does not turn on/off after the stack junction gate motor has turned on.	R8-R12
7504 205	-	-	-
7504 206	Finisher Punch Motor: EUP (B804/B805)	Punch encoder sensor does not turn on/off after the punch drive motor has turned on. Punch movement HP sensor does not turn on/off after the punch movement motor has turned on. Paper position slide HP sensor does not turn on/off after the paper position sensor slide motor has turned on.	R1-R4

Paper Size Code

Size Code	Paper Size	Size Code	Paper Size
05	A4 LEF	141	B4 SEF
06	A5 LEF	142	B5 SEF
14	B5 LEF	160	DLT SEF
38	LT LEF	164	LG SEF
44	HLT LEF	166	LT SEF
132	A3 SEF	172	HLT SEF
133	A4 SEF	255	Others
134	A5 SEF	-	-



7. Appendix: Electrical Component Defects

Electrical Component Defects

Sensors



• The CN numbers in the following table are the connector numbers on the IOB.

No.	Sensor Name/ Sensor Board Name	Activ e	CN	Condition	Symptom
				Open	"Open Cover" is displayed.
SW1	Right Door Open Switch	L	CN204/1	Shorted	"Open cover" cannot be detected.
				Open	"Open Cover" is displayed.
S9	Duplex Door	L	CN232/B9	Shorted	"Open cover" cannot be detected.
	ID Sensor: M	Α	CN211/	Open/	
	1D Sensor: IVI		7, 11	Shorted	
	ID Sensor: C	А	CN211/	Open/	SC400
	TD Selisor. C		8, 12	Shorted	30400
	ID Sensor: Y	A	CN211/	Open/	
S1	TO Selisor. 1		9, 13	Shorted	
31	ID Sensor: Front	A	CN211/1	Open/	SC258
	id Sensor. From		A CN211/1	Shorted	30230
	ID Sensor: Center and K	A	CN211/2	Open/	SC400 / SC258
	15 ochsor. Cenier dila K		CINZII/Z	Shorted	00400 / 00200
	ID Sensor: Rear	A	CN211/3	Open/	SC258
	15 ochsor. Redi		C14211/0	Shorted	00200

No.	Sensor Name/ Sensor Board Name	Activ e	CN	Condition	Symptom	
				Open	Jam A (Jam8, 17)	
S12	Registration Sensor	L	CN224/A2	Shorted	Jam A, B (Jam1)	
S28	Drum Gear Position Sensor-K	Н	CN222/A2	Open/ Shorted	SC380/SC396	
\$29	Drum Gear Position Sensor-M	Н	CN222/ A5	Open/ Shorted	SC381/SC397	
\$30	Drum Gear Position Sensor-C	Н	CN222/ A8	Open/ Shorted	SC382/SC398	
\$31	Drum Gear Position Sensor-Y	Н	CN222/ A11	Open/ Shorted	SC383/SC399	
S24	Toner End Sensor - K		CN207/A1 CN207/B9	Open	Toner end cannot be detected.	
S25	Toner End Sensor - Y		CN207/			
S26	Toner End Sensor - C	L	B12		Toner end is detected when	
S27	Toner End Sensor - M		CN207/ B15	Shorted	there is enough toner.	
S32	Image Transfer Belt Rotation Sensor	H/L	CN208/11	Open/ Shorted	SC443	
	Vertical Transport Sensor		0) 1000 / 17	Open	Jam A (Jam3, 11)	
S18	1	L	CN230/A7	Shorted	Jam A, B (Jam1)	
S21	Paper End	L	CN230/	Open	Paper end is not detected when there is no paper in the paper tray.	
S24	Sensor 1, 2		L	L	A10, B10	Shorted
\$20 \$23	Paper Lift Sensor 1, 2	Н	CN230/ A13, B13	Open/ Shorted	SC501, SC502	

No.	Sensor Name/ Sensor Board Name	Activ e	CN	Condition	Symptom
S21	Vertical Transport Sensor	L	CN1220 /P7	Open	Jam A (Jam4, 12)
321	2	L	CN230/B7	Shorted	Jam A, B (Jam1)
S14 S15	Tray 1 Paper Height Sensor 1, 2	L	CN224/ B2, B5	Open/ Shorted	Remaining paper volume on the LCD is wrong.
\$16 \$17	Tray 2 Paper Height Sensor 1, 2	L	CN224/ B10, B13	Open/ Shorted	Remaining paper volume on the LCD is wrong.
SW4	Tana 1 Cas Carisal	L	CN224/40	Open	Tray 1 is not detected when tray 1 is set.
3004	Tray 1 Set Switch	L	CN224/A9	Shorted	Tray 1 is detected when tray 1 is not set.
S11	By-pass Paper Size Sensor	L	CN232/ B16, B17, B19, B20	Open/ Shorted	Paper size error
SW2	By-pass Paper Detection	L	L CN232/ A15	Open	Paper on the by-pass tray is not detected when paper is set.
344.2	Sensor			Shorted	Paper on the by-pass tray is detected when paper is not set.
\$10	By-pass Paper Length	L	CN232/	Open	Papar siza arrar
310	Sensor	L	B12	Shorted	Paper size error
S8	Fusing Entrance Sensor	L	CN232/B6	Open	Jam C (Jam 18)
36	Tosing Emirance Sensor	L	CIN232/ BO	Shorted	Jam C (Jam 1)
S6	Duplex Entrance Sensor	L	CN1333 / A B	Open	Jam Z (Jam 26/27)
	Doblex Ellitatice Sensor	<u> </u>	CN232/A8	Shorted	Jam Z (Jam 1)
\$7	Duploy Evit Son	ı	CN232/	Open	Jam Z (Jam 25)
S7	Duplex Exit Sensor	L	A11	Shorted	Jam Z (Jam 1)

No.	Sensor Name/ Sensor Board Name	Activ e	CN	Condition	Symptom	
\$35	TD Sensor - K	А	CN227/A7	Open/ Shorted	SC372	
S36	TD Sensor - M	А	CN227/ A15	Open/ Shorted	SC373	
S37	TD Sensor - C	А	CN227/B7	Open/ Shorted	SC374	
S38	TD Sensor - Y	А	CN227/ B15	Open/ Shorted	SC375	
C.4	F . F . C		CN1004/10	Open	Jam C (Jam 19)	
S4	Fusing Exit Sensor	L	CN204/12	Shorted	Jam C (Jam 1)	
				Open	Waste toner near full indicated when it is not near full.	
\$13	Waste Toner Sensor	Н	CN224/A5	Shorted	Waste toner near full cannot be detected when the waste toner bottle is nearly full.	
SW4	Waste Toner Bottle Set			CN1224/A7	Open	Waste toner bottle is not detected when the waste toner bottle is set.
3 V V 4	W4 Switch	L	L CN224/A7	Shorted	Waste toner bottle is detected when the waste toner bottle is not set.	
SW6	Tray 2 Paper Size Switch	L	CN224/ A11, A12, A13, A15	Open/ Shorted	Paper size error	
S33	Temperature/ Humidity Sensor	А	CN231/ 25, 27	Open/ Shorted	SC498 Printed image has some problems such as rough	

No.	Sensor Name/ Sensor Board Name	Activ e	CN	Condition	Symptom
					image, dirty background, weak image or poor fusing.
S34	Thermopile	Α	CN209/16	Open/ Shorted	SC541
TH2	Thermistor - Heating Roller	А	CN212/22	Open/ Shorted	SC551
TH1	Thermistor - Pressure Roller	Α	CN212/18	Open/ Shorted	SC561
6.0	D 5. 14 C	L	CN1204/0	Open	Jam C (Jam 20)
S3	Paper Exit Sensor	L	CN204/9	Shorted	Jam C (Jam 1)
\$5				Open	Paper overflow message is not displayed when the paper overflow condition still remains.
33	Paper Overflow Sensor	L	CN204/15	Shorted	Paper overflow message is displayed when the paper overflow condition does not remain.
C 4 1	Original Width Sensor 1	А	CN313/14 SIO	Open/ Shorted	Original paper size cannot be detected.
S41	Original Width Sensor 2	Α	CN313/11 SIO	Open/ Shorted	Original paper size cannot be detected.
540	Original Length Sensor 1	Α	CN313/8 SIO	Open/ Shorted	Original paper size cannot be detected.
S42	Original Length Sensor 2	Α	CN313/5 SIO	Open/ Shorted	Original paper size cannot be detected.
\$43	Original Length Sensor 3	Α	CN313/2 SIO	Open/ Shorted	Original paper size cannot be detected.
S39	Scanner HP Sensor	Н	CN318/2	Open	SC120

No.	Sensor Name/ Sensor Board Name	Activ e	CN	Condition	Symptom
			SIO	Shorted	SC121
S40	Platen Cover Sensor	L	CN318/5 SIO	Open/ Shorted	Platen cover open cannot be detected.
S2	Junction Paper Jam Sensor	L	CN204/6	Open/ Shorted	Jam C (Jam 24/64)

Blown Fuse Conditions

Power Supply Unit

E	Rat	ing	Commenter with an Association and the security assistants
Fuse	11 <i>5</i> V	220V - 240V	Symptom when turning on the main switch
FU1	15A/125V	8A/250V	No response. (5V power to the PSU is not supplied.)
FU2	10A/125V	6.3A/250V	No response. (5V power to the BICU and controller is not supplied.)
FU3	2A/250V	1A/250V	5V power to the scanner heater and tray heater is not supplied.
FU4	1A/250V	1A/250V	5V power to the SIO and heater is not supplied.
FU5	5A/250V	5A/250V	5V power to the IOB not supplied.
FU6	2A/250V	2A/125V	5VS power to the BICU not supplied.
FU7	10A/125V	10A/125V	24VS power to the IOB not supplied.
FU8	10A/125V	10A/125V	24VS power to the IOB not supplied.
FU9	6.3A/125V	6.3A/125V	24V power to the IOB not supplied.
FU10	6.3A/125V	6.3A/125V	24V power to the SIO not supplied.
FU11	6.3A/125V	6.3A/125V	24V power to the BICU and MB not supplied.
FU12	6.3A/125V	6.3A/125V	24V power to the PFU or LCT not supplied.

E	Rating		Commenter with an Associate and the amortic assistant
Fuse	115V	220V - 240V	Symptom when turning on the main switch
FU13	6.3A/125V	6.3A/125V	24V power to the finisher not supplied.
FU14	5A/250V	5A/250V	5V power to the BICU not supplied.

IH Inverter

F	Rating			
Fuse	115V	220V - 240V	Symptom when turning on the main switch	
FU1	15A/125V	8A/250V	15V power to the IH coil unit is not supplied. SC689 occurs.	
FU2	115°C		No response	
FU3	115°C		No response	
FU4	1A/250V		15V power to the IH coil unit is not supplied. SC689 occurs.	

ACAUTION

• For continued protection against risk of fire, replace only with same type and rating of fuse.

8. Appendix: SP Mode Tables

System Service Mode

Service Mode Table

SP1-XXX (Feed)

1001	[Leading Edge Registration] Leading Edge Registration Adjustment (Tray Location, Paper Type, Color Mode), Paper Type -> Plain, Thick 1 or Thick 2					
1001	Adjusts the leading edge registration by changing the registration motor operation timing for each mode.					
002	Tray: Plain	*ENG				
003	Tray: Middle Thick	*ENG				
004	Tray: Thick 1	*ENG				
005	Tray: Thick 2	*ENG				
007	By-pass: Plain	*ENG				
008	By-pass: Middle Thick	*ENG				
009	By-pass: Thick 1	*ENG				
010	By-pass: Thick 2	*ENG	[-9 to 9 / 0.0 / 0.1 mm/step]			
011	By-pass: Thick 3	*ENG				
013	Duplex: Plain	*ENG				
014	Duplex: Middle Thick	*ENG				
015	Duplex: Thick 1	*ENG				
016	Tray: Thick 3	*ENG				
017	Tray: Plain:1200	*ENG				
018	Tray: Middle Thick:1200	*ENG				

019	Tray: Thick 1:1200	*ENG
020	By-pass: Plain: 1200	*ENG
021	By-pass: Middle Thick:1200	*ENG
022	By-pass: Thick 1:1200	*ENG
023	Duplex: Plain:1200	*ENG
024	Duplex: Middle Thick: 1200	*ENG
025	Duplex: Thick 1:1200	*ENG

	[Side to Side Reg.] Side-to-Side Registration Adjustment					
1002	Adjusts the side-to-side registration by changing the laser main scan start position for each mode.					
001	By-pass Table	*ENG				
002	Paper Tray 1	*ENG				
003	Paper Tray 2	*ENG				
004	Paper Tray 3	*ENG	[-4 to 4 / 0.0 / 0.1 mm/step]			
005	Paper Tray 4	*ENG				
006	Duplex	*ENG				
008	Large Capacity Tray	*ENG				

1003	[Paper Buckle] Paper Buckle Adjustment (Tray Location, Paper Type), Paper Type: N: Normal, TH: Thick			
1003	Adjusts the amount of paper buckle timing.	ckle at the registration roller by changing the paper feed		
002	Paper Tray 1: Plain	*ENG	[-9 to 5 / -2 / 1 mm/step]	
003	Tray 1: Middle Thick	*ENG	[-9 to 5 / -1 / 1 mm/step]	
004	Paper Tray 1: Thick 1	*ENG	[0 + 5 / 2 / 1 / +]	
007	Paper Tray2/3/4/5/LCT: Plain	*ENG	[-9 to 5 / -2 / 1 mm/step]	
008	Tray 2/3/4/5/LCT: Middle Thick	*ENG	[-9 to 5 / -1 / 1 mm/step]	

Paper Tray2/3/4/5/LCT: Thick 1	*ENG	[-9 to 5 / -2 / 1 mm/step]
By-pass: Plain	*ENG	[0 + 5 / 0 / 1 / +]
By-pass: Middle Thick	*ENG	[-9 to 5 / 0 / 1 mm/step]
By-pass: Thick 1	*ENG	[-9 to 5 / -2 / 1 mm/step]
Duplex: Plain	*ENG	[0, 5/0/1 /,]
Duplex: Middle Thick	*ENG	[-9 to 5 / 0 / 1 mm/step]
Duplex: Thick 1	*ENG	[-9 to 5 / -2 / 1 mm/step]
Paper Tray1: Plain: 1200	*ENG	
Tray1: Middle Thick: 1200	*ENG	
Tray 2/3/4/5LCT: Plain: 1200	*ENG	[0 + 5 / 0 / 1 / +]
Tray 2/3/4/5LCT: Mid: 1200	*ENG	[-9 to 5 / 0 / 1 mm/step]
By-pass: Plain: 1200	*ENG	
By-pass: Middle Thick: 1200	*ENG	
Duplex: Plain: 1200	*ENG	[0 + 5 / 0 / 1 / +]
Duplex: Middle Thick: 1200	*ENG	[-9 to 5 / 0 / 1 mm/step]
	By-pass: Plain By-pass: Middle Thick By-pass: Thick 1 Duplex: Plain Duplex: Middle Thick Duplex: Thick 1 Paper Tray 1: Plain: 1200 Tray 1: Middle Thick: 1200 Tray 2/3/4/5LCT: Plain: 1200 Tray 2/3/4/5LCT: Mid: 1200 By-pass: Plain: 1200 By-pass: Middle Thick: 1200 Duplex: Plain: 1200	By-pass: Plain *ENG By-pass: Middle Thick *ENG By-pass: Thick 1 *ENG Duplex: Plain *ENG Duplex: Middle Thick *ENG Duplex: Thick 1 *ENG Paper Tray 1: Plain: 1200 *ENG Tray 1: Middle Thick: 1200 *ENG Tray 2/3/4/5LCT: Plain: 1200 *ENG Tray 2/3/4/5LCT: Mid: 1200 *ENG By-pass: Plain: 1200 *ENG By-pass: Middle Thick: 1200 *ENG Duplex: Plain: 1200 *ENG

1007	[By-Pass Size Detection] By-Pass Size Detection Display				
	LG	*ENG	[0 or 1 / 0 / 1] 0: OFF, 1: ON		
001	Enables or disables the automatic paper size detection function of the by-pass tray. This SP determines what paper size the machine detects if the detected size is less than 8.5 O: OFF (Letter/SEF), 1: ON (Legal/SEF)				

1101	[Flicker Control]				
001	Flicker Control	*ENG	[0 or 1 / 0 / 1 /step] 0: Flicker Control: OFF 1: Flicker Control: ON		
Enables or disables the flicker control function.					

1103	[Fusing Idling] Fusing Idling Adjustment				
011	Idling Start Temp.	*ENG	[0 to 75 / 75 / 1 deg/step]		
011	Specifies the temperature for the fusing idling start.				
	Forced Idling Stop	*ENG	[0 to 1 / 0 / 1 /step]		
			0: OFF, 1: ON		
012	Enables or disables the fusing idling stop. If "1: ON" is selected and the temperature of the heating roller reaches the temeparture specified by SP1103-013, the machine stops the fusing idling.				
012	Forced Idling Stop Temp.	*ENG	[100 to 180 / 100 / 1 deg/step]		
013	Specifies the temperature for the fusing idling stop.				
014	Minimum Idling Time	*ENG	[0 to 10 / 0 / 1 sec/step]		
	Extra Idling Time (L)	*ENG	[0 to 60 / 0 / 1 sec/step]		
016	Specifies how long the extra idling operation is executed for each environment. Each environment is determined with SP1112-001 and 002.				
017	Extra Idling Time (H)	*ENG	[0. (0 (0 /1 /.]		
018	Extra Idling Time (M)	*ENG	[0 to 60 / 0 / 1 sec/step]		
010	Pressure TempThreshold	*ENG	[0 to 160 / 100 / 1 deg/step]		
019	Specifies the threshold temperature for the extra fusing idling.				
020	Control Switch Temp	*ENG	[0 to 25 / 25 / 1 deg/step]		

1104	[Idling Before Job]			
	Environment Threshold	[0 to 2 / 2 / 1 /step]		
Selects the environment threshold for the paper feed waiting. O: LL condition 1: LL/MM conditions 2: All conditions			raiting.	
002	Pressure Temp Threshold	*ENG	[0 to 160 / 150 / 1 /step]	
Specifies the threshold temperature for the paper feed waiting.			waiting.	

	The machine does not feed paper until the temperature of the pressure roller reaches this temperature if the machine is placed in the condition defiend by SP1104-001.			
003	Idling Time: BW	*ENG	[0, 10/0/1 /, 1	
004	Idling Time: FC	*ENG	[0 to 10 / 0 / 1 sec/step]	
005	Idling Time: MiddleThick: BW	*ENG	[0. 10 / 0 /1 / 3	
006	Idling Time: MiddleThick: FC	*ENG	[0 to 10 / 2 / 1 sec/step]	
003 to	Specities the idling time (waiting paper teed) tor each print mode and paper type			
007	Pressure Temp: Paper Feed	*ENG		
800	Pressure Temp: Paper Feed: MT: BW	*ENG	[0 to 130 / 50 / 1 deg/step]	
009	Pressure Temp: Paper Feed: MT: FC	*ENG		
007 to 009	Specities the threshold temperature of the pressure roller for the paper feed			
010	Fusing Upper Limit Tem	*ENG	[0 to 100 / 15 / 1 deg/step]	
010	Specifies the upper offset temperature to the fusing target temperature for the paper feed.			
011	Offset: Feed Start	*ENG	[0 to 100 / 25 / 1 deg/step]	
012	Offset: Feed Start: Middle Thick	*ENG	[0 to 100 / 10 / 1 deg/step]	
011 to 012	Specities the lower oftset temperature to the fusing target temperature for the paper feed			
031	Offset: Feed Start: F	*ENG	[0. 100 /15 /1 /.]	
033	Offset: Feed Start: Glossy	*ENG	[0 to 100 / 15 / 1 deg/step]	
031/				
	1bin: Paper Feed: Pressure Temp	*ENG	[0 to 100 / 85 / 1 deg/step]	
040	Specifies the threshold of the pressure roller for the paper feed to the 1 bin tray in 600 dpi mode.			
041	F : 1 bin: Paper Feed: Pressure Temp	*ENG	[0 to 100 / 75 / 1 deg/step]	

Specifies the threshold of the pressure roller for the paper feed to the 1bin tray in 1200 dpi mode.

1105	[Fusing Temperature] Fusing Temperature Adjustment		
	(Printing Mode, Roller Type, [Color], Simplex/Duplex)		
	Roller Type -> Center and Ends: Heating roller,		
Pressure -> Pressure roller			
	Paper Type -> Plain, Thin, Thick, OHP, Middle Thick, Special		
001	Fusing Ready Temp.	*ENG	[145 to 155 / 150 / 1 deg/step]
001	Specifies the heating roller target temp	erature for	the ready condition.
	Pressure Ready Temp	*ENG	[0 to 150 / 20 / 1 deg/step]
007	Sets the heating roller offset temperature at the end of the heating roller. This value is one of the thresholds to determine if the machine is at the heating roller target temperature during warm-up.		
010	010 Stand-By: Center * ENG		
011	Stand-By: End	* ENG	[140 to 170 / 160 / 1 deg/step]
	Stand-By: Pressure	* ENG	[105 to 135 / 125 / 1 deg/step]
Sets the pressure roller offset temperature. This value is one of the thresh the machine is at the heating roller target temperature during warm-up.			
013	Panel Off Mode: Center	* ENG	[100 to 150 / 130 / 1 deg /step]
014	Panel Off Mode: Ends	* ENG	[100 to 150 / 130 / 1 deg /step]
015	Panel Off Mode: Pressure	*ENG	[105 to 135 / 120 / 1 deg /step]
016	Low Power: Center	*ENG	[20, 100 / 40 / 1] / 1
017	Low Power: Ends	*ENG	[30 to 100 / 40 / 1 deg /step]
018	Low Power: Pressure	*ENG	[30 to 135 / 80 / 1 deg /step]
019	Off Mode: Center	*ENG	[0100/0/14/41
020	Off Mode: Ends	*ENG	[0 to 180 / 0 / 1 deg /step]
021	Off Mode: Pressure	*ENG	[0 to 170 / 0 / 1 deg /step]

030	Plain: FC: Simplex	*ENG	
031	Plain: FC: Simplex: Ends	*ENG	
032	Plain: FC: Duplex	*ENG	
033	Plain: FC: Duplex: Ends	*ENG	[120, 175 / 150 / 1] / 1
034	Plain: BW: Simplex	*ENG	[130 to 175 / 150 / 1 deg /step]
035	Plain: BW: Simplex: Ends	*ENG	
036	Plain: BW: Duplex	*ENG	
037	Plain: BW: Duplex: Ends	*ENG	
038	Thin: FC: Simplex	*ENG	
039	Thin: FC: Simplex: Ends	*ENG	
042	Thin: BW: Simplex	*ENG	[130 to 175 / 145 / 1 deg/step]
043	Thin: BW: Simplex: Ends	*ENG	
044	Thin: BW: Duplex	*ENG	
046	Thick 1: FC: Simplex	*ENG	
047	Thick 1: FC: Duplex: Ends	*ENG	
048	Thick 1: FC: Duplex	*ENG	
049	Thick 1: FC: Simplex: Ends	*ENG	[125 + 100 / 150 / 1 / +]
050	Thick 1: BW: Simplex	*ENG	[135 to 180 / 150 / 1 deg /step]
051	Thick 1: BW: Simplex: Ends	*ENG	
052	Thick 1: BW: Duplex	*ENG	
053	Thick 1: BW: Duplex: Ends	*ENG	
054	Thick 2: FC: Simplex	*ENG	[125+, 100 / 140 / 1 / 1
055	Thick 2: BW: Simplex	*ENG	[135 to 180 / 160 / 1 deg /step]
056	OHP: FC: Simplex	*ENG	[120+ 175 / 150 / 1 / 1
057	OHP: BW: Simplex	*ENG	[130 to 175 / 150 / 1 deg /step]
058	Special 1: FC: Simplex	*ENG	[130 to 175 / 150 / 1 deg/step]

082	Specifies the target temperature for target temperature in warm-up mod		mode after the machine has reached the
	Target Temp. After Ready	*ENG	[140 to 165 / 160 / 1 deg/step]
081	Special 3: BW: Duplex: Ends	*ENG	
080	Special 3: BW: Duplex	*ENG	
079	Special 3: BW: Simplex: Ends	*ENG	
078	Special 3: BW: Simplex	*ENG	
077	Special 3: FC: Duplex: Ends	*ENG	
076	Special 3: FC: Duplex	*ENG	
075	Special 3: FC: Simplex: Ends	*ENG	
074	Special 3: FC: Simplex	*ENG	
073	Special 2: BW: Duplex: Ends	*ENG	
072	Special 2: BW: Duplex	*ENG	
071	Special 2: BW: Simplex: Ends	*ENG	
070	Special 2: BW: Simplex	*ENG	
069	Special 2: FC: Duplex: Ends	*ENG	
068	Special 2: FC: Duplex	*ENG	
067	Special 2: FC: Simplex: Ends	*ENG	
066	Special 2: FC: Simplex	*ENG	
065	Special 1: BW: Duplex: Ends	*ENG	
064	Special 1: BW: Duplex	*ENG	
063	Special 1: BW: Simplex: Ends	*ENG	
062	Special 1: BW: Simplex	*ENG	
061	Special 1: FC: Duplex: Ends	*ENG	
060	Special 1: FC: Duplex	*ENG	
059	Special 1: FC: Simplex: Ends	*ENG	

	Recovery Target Temp.	*ENG	[140 to 160 / 155 / 1 deg /step]	
083	Specifies the target temperature for the print mode without printing/copying job after the machine's recovery.			
087	Thick 2: FC: Simplex: Ends	*ENG	[120 + 190 / 140 / 1 day / 44]	
088	Thick 2: BW: Simplex: Ends	*ENG	[130 to 180 / 160 / 1 deg/step]	
089	Thick 3: FC: Simplex	*ENG		
090	Thick 3: FC: Simplex: Ends	*ENG	[125 - 100 / 145 / 1 day / 44]	
091	Thick 3: BW: Simplex	*ENG	[135 to 180 / 165 / 1 deg/step]	
092	Thick 3: BW: Simplex: Ends	*ENG		
109	Middle Thick: FC: Simplex	*ENG		
110	Middle Thick: FC: Duplex	*ENG		
111	Middle Thick: BW: Simplex	*ENG		
112	Middle Thick: BW: Duplex	*ENG	[120, 175 / 1/0 / 1 / , 1	
113	Middle Thick: FC: Simplex: Ends	*ENG	[130 to 175 / 160 / 1 deg/step]	
114	Middle Thick: FC: Duplex: Ends	*ENG		
115	Middle Thick: BW: Simplex: Ends	*ENG		
116	Middle Thick: BW: Duplex: Ends	*ENG		
120	Plain2: FC: Simplex	*ENG		
121	Plain 2: FC: Simplex: Ends	*ENG		
122	Plain2: FC: Duplex	*ENG		
123	Plain 2: FC: Duplex: Ends	*ENG	[100 . 175 / 155 / 1]	
124	Plain2: BW: Simplex	*ENG	[130 to 175 / 155 / 1 deg/step]	
125	Plain2: BW: Simplex: Ends	*ENG		
126	Plain2: BW: Duplex	*ENG		
127	Plain2: BW: Duplex: Ends	*ENG		
128	F: Plain 1: FC : Simplex	*ENG	[120 to 160 / 135 / 1 deg/step]	

129	F: Plain 1: FC : Simplex: Ends	*ENG	
130	F: Plain 1: BW : Simplex	*ENG	
131	F: Plain 1: BW : Simplex: Ends	*ENG	
132	F: Plain2: FC: Simplex	*ENG	
133	F: Plain2: FC: Simplex: Ends	*ENG	[120 to 160 / 140 / 1 deg /step]
134	F: Plain2: BW: Simplex	*ENG	[12010 100 / 140 / 1 deg / siep]
135	F: Plain2: BW: Simplex: Ends	*ENG	
136	F: Middle Thick: FC: Simplex	*ENG	
137	F: Middle Thick: FC: Simplex: Ends	*ENG	[120 to 160 / 145 / 1 deg /step]
138	F: Middle Thick: BW: Simplex	*ENG	[12010 100 / 143 / 1 deg / siep]
139	F: Middle Thick: BW: Simplex: Ends	*ENG	
142	Glossy: Plain 1	*ENG	[120 to 160 / 135 / 1 deg/step]
143	Glossy: Plain 1 : Ends	*ENG	[12010 100 / 133 / 1 deg/ siep]
144	Glossy: Plain2	*ENG	[120 to 160 / 140 / 1 deg/step]
145	Glossy: Plain2: Ends	*ENG	[12010 100 / 140 / 1 deg/ siep]
146	Glossy: Middle Thick	*ENG	[120 to 160 / 145 / 1 deg/step]
147	Glossy: Middle Thick: Ends	*ENG	[120 to 100 / 143 / 1 deg/ step]
148	1 bin: Plain: Center	*ENG	[100 to 160 / 145 / 1 deg/step]
149	1 bin: Plain: Ends	*ENG	[100 to 100 / 143 / 1 deg/ step]
150	F: 1 bin: Plain: Center	*ENG	[100 to 160 / 130 / 1 deg/step]
151	F: 1 bin: Plain: Ends	*ENG	[100 10 100 / 100 / 1 deg/ siep]

1106	[Fusing Temperature Display] Fusing Temperature Display (Heating or Pressure)			
1100	Displays the current temperature of the heating and pressure rollers.			
001	Fusing: Center	-	[-20 to 250 / 0 / 1 deg/step]	

			The heating roller has two lamps. One heats the center of the heating roller and the other heats both ends of the heating roller.
002	Fusing: Ends	-	[-10 to 250 / 0 / 1 deg/step]
003	Pressure	-	The heating roller has two lamps. One heat s the center of the heating roller and the other heats both ends of the heating roller.

1108	[Forced Ready Setting]						
1106	Japan use only						
007	Time	*ENG	[22 to 60 / 22 / 0.1 sec/step]				

1109	[Fusing Nip Band Check]				
001	Execute	-	Executes the nip band measurement between fusing belt and pressure roller. If the nip band width is not 8 mm, and fusing is not good, replace the pressure roller or install a new fusing unit.		
000	Pre-Idling Time	*ENG	[0 to 120 / 0 / 1 sec/step]		
002	Specifies the fusing rotation time before executing SP1109-001.				
000	Stop Time	* ENG	[5 to 30 / 10 / 1 sec/step]		
003	Specifies the time for measuring the nip.				

1112	[Environmental Correction: Fusing]					
001	Temp.: Threshold: Low	*ENG	[10 to 23 / 17 / 1 deg/step]			
001	Specifies the threshold temperature for low temperature condition.					
000	Temp.: Threshold: High	*ENG [24 to 40 / 30 / 1 deg/step]				
Specifies the threshold temperature for high temperature condition.						
003	Low Temp. Correction	*ENG	[0 to 15 / 5 / 1 deg/step]			

	Specifies the temperature correction for the heating roller. When the low temperature condition (specified with SP1112-001) is detected, the value of this SP is added to the heating roller temperature.					
	High Temp. Correction	*ENG	[0 to 15 / 5 / 1 deg/step]			
004			ating roller. When the high temperature ected, the value of this SP is subtracted from			
005	Low Temp. Correction: Paper Feed	*ENG	[0 to 15 / 6.5 / 0.1 deg/step]			
006	High Temp. Correction: Paper Feed	*ENG	[0 to 15 / 5 / 1 deg/step]			

1113	[Stand-by Time]				
001	After Ready	*ENG	[0 to 60 / 20 / 1 sec/step]		
	After Recovery	*ENG	[0 to 60 / 10 / 1 sec/step]		
003	Specifies the time for keeping the target temperature after recovery (SP1105-083) with any jobs.				
004	After Job	*ENG	[0 to 60 / 10 / 1 sec/step]		
005	PressureTemp: After Ready	*ENG	[0 to 160 / 100 / 1 deg/step]		
006	Pressure Temp: After Job	*ENG	[0 10 100 / 100 / 1 deg/step]		
008	ON/OFF Time Switch	*ENG	[0 to 999 / 300 / 1 sec/step]		

1115	[Stand-by Idling]						
	Interval	*ENG		[1 to 240 / 60 / 1 min/step]			
001	Specifies the interval between i	n idling during stand-by mode. y mode prevents the roller deformation.					
002	Idling Time		*ENG	[1 to 60 / 2 / 0.1 sec/step]			
002	Specifies the length of each idling operation during stand-by mode.						
003	Idling Speed		*ENG	[0 to 1 / 0 / 1 mm/sec/step] 0: 77 mm/s, 1: 154 mm/s			

Selects the rotation speed of the fusing idling.

1116	[Ends Temp. Correction]						
	Center Temp. 1: 226-	ENG	[-10 to 10 / 5 / 1 deg/step]				
010	Specifies the temperature correction for the heating roller (center) when the paper width is 226 mm or more.						
	The start time of this SP can be adjusted with SP1116-018.						
	Ends Temp. 1: 226-	ENG	[-10 to 10 / 5 / 1 deg/step]				
011	Specifies the temperature correction mm or more. The start time of this SP can be adj		eating roller (ends) when the paper width is 226				
	Center Temp. 2: 226-	ENG	[-10 to 10 / 0 / 1 deg/step]				
012							
	Ends Temp. 2: 226-	ENG	[-10 to 10 / 0 / 1 deg/step]				
013	Specifies the temperature correction for the heating roller (ends) when the paper width is 226 mm or more.						
	The start time of this SP can be adj	usted with	SP1116-019.				
	Center Temp. 3: –226	ENG	[-10 to 10 / 5 / 1 deg/step]				
014	Specifies the temperature correction for the heating roller (center) when the paper width is less than 226 mm.						
	The start time of this SP can be adj	usted with	SP1116-020.				
	Ends Temp. 3: -226	ENG	[-10 to 10 / -5 / 1 deg/step]				
015	Specifies the temperature correction for the heating roller (ends) when the paper width is less than 226 mm.						
	The start time of this SP can be adj	usted with	SP1116-020.				
	Center Temp. 4: –226	ENG	[-10 to 10 / 0 / 1 deg/step]				
016	Specifies the temperature correction less than 226 mm.	on for the l	neating roller (center) when the paper width is				

	The start time of this SP can be adjusted with SP1116-021.					
	Ends Temp. 4: –226	ENG	[-10 to 1	0 / 0 / 1 deg/step]		
017	Specifies the temperature correction than 226 mm. The start time of this SP can be adj		· ·			
	Control Time 1: 226-	ENG	[0 to 250 / 60 / 1 sec/step]			
018	Specifies the start time of the temporal The temperature correction is addensed feeding the paper.					
	Control Time 2: 226-	ENG	[0 to 250) / 0 / 1 sec/step]		
019	Specifies the start time of the temperature correction is added feeding the paper.					
	Control Time 3: -226	ENG	[0 to 250) / 60 / 1 sec/step]		
	Specifies the start time of the temperature correction that is set with SP1116-014 and - The temperature correction is added when the time specified with this SP has passed at feeding the paper.					
020	The temperature correction is adde					
020	The temperature correction is adde		e time spe			
020	The temperature correction is adde feeding the paper.	ed when the	[0 to 250	cified with this SP has passed afte 0 / 0 / 1 sec/step] It is set with SP1116-016 and -01		
	The temperature correction is adde feeding the paper. Control Time 4: -226 Specifies the start time of the temperature correction is adde	ed when the	[0 to 250	cified with this SP has passed after O / 0 / 1 sec/step] It is set with SP1116-016 and -01 cified with this SP has passed after		
021	The temperature correction is adder feeding the paper. Control Time 4: -226 Specifies the start time of the temperature correction is adder feeding the paper.	ed when the	[0 to 250 rection that	cified with this SP has passed after 0 / 0 / 1 sec/step] It is set with SP1116-016 and -01		
021	The temperature correction is adder feeding the paper. Control Time 4: -226 Specifies the start time of the temperature correction is adder feeding the paper. M-Thick 1: Center Temp >=226	ed when the	[0 to 250 rection that the time spe	cified with this SP has passed after 0 / 0 / 1 sec/step] It is set with SP1116-016 and -01 cified with this SP has passed after [-10 to 10 / 0 / 1 deg/step]		
021	The temperature correction is adder feeding the paper. Control Time 4: -226 Specifies the start time of the temperature correction is adder feeding the paper. M-Thick 1: Center Temp >=226 M-Thick 1: Ends Temp. >=226	ed when the	[0 to 250 rrection that the time spending ENG ENG	cified with this SP has passed after O / 0 / 1 sec/step] It is set with SP1116-016 and -01 cified with this SP has passed after		
021 022 023 024	The temperature correction is adder feeding the paper. Control Time 4: -226 Specifies the start time of the temperature correction is adder feeding the paper. M-Thick 1: Center Temp >=226 M-Thick 2: Center Temp >=226	ed when the	[0 to 250 rection that the time specified ENG ENG ENG ENG	cified with this SP has passed after 0 / 0 / 1 sec/step] It is set with SP1116-016 and -01 cified with this SP has passed after [-10 to 10 / 0 / 1 deg/step]		
021 022 023 024 025	The temperature correction is adder feeding the paper. Control Time 4: -226 Specifies the start time of the temperature correction is adder feeding the paper. M-Thick 1: Center Temp >=226 M-Thick 1: Ends Temp. >=226 M-Thick 2: Center Temp >=226 M-Thick 2: Center Temp >=226	ed when the	[0 to 250 rection that the time specified ENG ENG ENG ENG ENG	cified with this SP has passed after 0 / 0 / 1 sec/step] It is set with SP1116-016 and -01 cified with this SP has passed after [-10 to 10 / 0 / 1 deg/step] - [-10 to 10 / 0 / 1 deg/step]		
021 022 023 024 025 026	The temperature correction is adder feeding the paper. Control Time 4: -226 Specifies the start time of the temperature correction is adder feeding the paper. M-Thick 1: Center Temp >=226 M-Thick 2: Center Temp >=226 M-Thick 2: Ends Temp. >=226 M-Thick 3: Center Temp >=226	ed when the	[0 to 250 rection that the time specified ENG	cified with this SP has passed after 0 / 0 / 1 sec/step] It is set with SP1116-016 and -01 cified with this SP has passed after - [-10 to 10 / 0 / 1 deg/step] - [-10 to 10 / 0 / 1 deg/step]		

030	Other 1: Center Temp >= 226	ENG	[-10 to 10 / 0 / 1 deg/step]
031	Other1: End Temp >=226	ENG	[-10 to 10 / 0 / 1 deg/step]
032	Other2: Center Temp >=226	ENG	[10 to 10 / 0 / 1 dog /stop]
033	Other2: End Temp >=226	ENG	[-10 to 10 / 0 / 1 deg/step]
034	Other3: Center Temp >=226	ENG	[-10 to 10 / 0 / 1 deg/step]
035	Other3: End Temp >=226	ENG	[-10 to 10 / -5 / 1 deg/step]
036	Other4: Center Temp >=226	ENG	[-10 to 10 / 0 / 1 deg/step]
037	Other4: End Temp >=226	ENG	[-101010/ 0 /1deg/step]

111 <i>7</i>	[Idling Time After Heater OFF]				
001	After Ready ENG [0 to 4 / 4 / 1 sec/step] DFU				
001	Specifies the idling time without the lamp on after reaching the ready temperature.				
	After Job End	[0 to 4 / 0 / 1 sec/step]			
002	Specifies the idling time without the lamp on after job end. This idling prevents the heating roller overheating after job end.				

1118	[Curl Temperature Correction]					
	Operation Pattern *ENG					
	Selects the execution mode for the curl correction [0 to 3 / 0 / 1]					
001						
	1: Plain 600 dpi					
	2: Plain 1200 dpi					
	3: Plain 600 dpi, 1200 dpi					
002	Humidity 1	*ENG	[0 to 100 / 65 / 1 %]			
003	Humidity 2	*ENG	[0 to 100 / 80 / 1 %]			
004	Pattern 1: MM: Fusing	*ENG	[-15 to 0 / -5 / 1 deg]			
005	Pattern 1: MM: Pressure	*ENG	[0 to 60 / 0 / 1 deg]			

006	Pattern 1: HM: Fusing	*ENG	[-15 to 0 / -5 / 1 deg]
007	Pattern 1: HM: Pressure	*ENG	[0 to 60 / 0 / 1 deg]
008	Pattern 2: MM: Fusing	*ENG	[-15 to 0 / -5 / 1 deg]
009	Pattern 2: MM: Pressure	*ENG	[0 to 60 / 0 / 1 deg]
010	Pattern 2: HM: Fusing	*ENG	[-15 to 0 / -5 / 1 deg]
011	Pattern 2: HM: Pressure	*ENG	[0 to 60 / 0 / 1 deg]

1119	[FF Duty Correction] DFU		
001	Plain: Center	*ENG	[0.1-100/40/19/]
002	Plain: Ends	*ENG	[0 to 100 / 60 / 1 %]
003	Thin: Center	*ENG	[0.1-100 / 50 / 19/]
004	Thin: Ends	*ENG	[0 to 100 / 50 / 1 %]
005	Middle Thick: Center	*ENG	
006	Middle Thick: Ends	*ENG	
007	Thick1: Center	*ENG	
008	Thick 1: Ends	*ENG	[0100 / 70 / 19/]
009	Thick2: Center	*ENG	[0 to 100 / 70 / 1 %]
010	Thick2: Ends	*ENG	
011	Thick3: Center	*ENG	
012	Thick3: Ends	*ENG	
013	OHP: Center	*ENG	
014	OHP: Ends	*ENG	
015	Special 1: Center	*ENG	[] [] [] [] [] [] [] [] [] []
016	Special 1: Ends	*ENG	[0 to 100 / 40 / 1 %]
017	Special 2: Center	*ENG	
018	Special 2: Ends	*ENG	

019	Special 3: Center		*ENG	
020	Special 3: Ends		*ENG	
021	Environmental Correction: Low		*ENG	[-100 to 100 / 10 / 1 %]
022	Environmental Correction: High	า	*ENG	
023	Initial Correction: Center		*ENG	[-100 to 100 / 0 / 1 %]
024	Initial Correction: Ends		*ENG	
025	Interval Initial Correction		*ENG	[0 to 60 / 0 / 1 sec]
[FF Limit Te	emp]			
026	Offset: Center	*ENG	[0 + 50 /	05 / 1
027	Offset: Ends	*ENG	[0 to 50 / 25 / 1 deg]	
[FF Start Ti	me]		,	
028	F Gate Timer: FC: Full	*ENG	[0 to 10000 / 2100 / 1mm/sec]	
029	F Gate Timer: FC: Half	*ENG	[0 to 10000 / 4000 / 1mm/sec]	
030	F Gate Timer: BW: Full	*ENG	[0 to 10000 / 0 / 1 mm/sec]	
031	F Gate Timer: BW Half	*ENG	[0 to 1000	0 / 500 / 1mm/sec]
[FF Correct	tion Time]			
032	Error Correction: Full	*ENG	[5000+-4	5000 / 0 / 1 mm /1
033	Error Correction: Half	*ENG	7 [-3000 to 3	5000 / 0 / 1 mm/sec]
034	1 bin: Plain: Center	*ENG	[0+- 100	/ 20 / 1 %]
035	1 bin: Plain: Ends	*ENG	[0 to 100 /	30 / 1 %]
		-		

1120	[Continues Print Mode Switch]		
	Paper Feed Condition	*ENG	[0 or 2 / 0 / 1]
001	Selects the paper feed timing. O: Productivity priority, 2: Fusing quality priory		

1159	[Fusing Jam Detection]
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1801	[Motor Speed Adj.] FA Low: 77 mm/s, High: 154 mm/s		
001	Registration:Plain:Low	*ENG	[-2 to 2 / -0.6 / 0.1 %/step]
002	Registration:Plain:High	*ENG	
003	Registration:Middle Thick:Low	*ENG	[-2 to 2 / -0.2 / 0.1 %/step]
005	Registration:Middle Thick:High	*ENG	
006	Registration:Thick 1:Low	*ENG	[-2 to 2 / -0.4 / 0.1 %/step]
800	Registration:Thick 2:Low	*ENG	[24.2/04/019//4]
009	Registration:Thick 3:Low	*ENG	[-2 to 2 / -0.4 / 0.1 %/step]
010	Duplex CW:Plain:Low	*ENG	
011	Duplex CW:Normal:High	*ENG	
012	Duplex CW:Middle Thick:Low	*ENG	
014	Duplex CW:Middle Thick:High	*ENG	
015	Duplex CW:Thick1:Low	*ENG	[44- 4 / 00 / 0.1 % / 44]
017	Duplex CW:Thick2:Low	*ENG	[-4 to 4 / 0.0 / 0.1 %/step]
018	Duplex CW:Thick3:Low	*ENG	
019	Duplex CCW:Normal:High	*ENG	
021	Duplex CCW:Middle Thick:high	*ENG	
022	Duplex CCW:Thick1:Low	*ENG	
024	Reverse CW:Normal:High	*ENG	
026	Reverse CW:Middle Thick:High	*ENG	[-4 to 4 / 0 / 0.1%/step]
027	Reverse CW:Thick1:Low	*ENG	

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029	Reverse CCW:Normal:High	*ENG	
031	Reverse CCW:Middle Thick:High	*ENG	
032	Reverse CCW:Thick1:Low	*ENG	
034	Feed:Plain:Low	*ENG	[-2 to 2 / -0.6 / 0.1 %/step]
035	Feed:Plain:High	*ENG	
036	Feed:Middle thick:Low	*ENG	[-2 to 2 / - 0.2 / 0.1 %/step]
038	Feed:Middle thick:High	*ENG	
039	Feed:Thick 1:Low	*ENG	
041	Feed:Thick 2:Low	*ENG	[-2 to 2 / - 0.4 / 0.1 %/step]
042	Feed:Thick 3:Low	*ENG	
043	Bridge Motor:Low	*ENG	[44. 4 / 0 / 0 1 9 / / 4]
045	Bridge Motor:High	*ENG	[-4 to 4 / 0 / 0.1 %/step]
047	Registration: 77: Thick 3	*ENG	[-4 to 4 / -0.4 / 0.05 %/step]
060	KOpcDevMot:High	*ENG	[4 4 / 0.7 / 0.01 9/ /]
062	KOpcDevMot:Low	*ENG	[-4 to 4 / - 0.7 / 0.01 %/step]
063	MOpcDevMot:High	*ENG	[-10 to 10 / 0 / 1 step/step]
065	MOpcDevMot:Low	*ENG	[-14 to 14 / 0 / 1 step/step]
066	COpcDevMot:High	*ENG	[-10 to 10 / 0 / 1 step/step]
068	COpcDevMot:Low	*ENG	[-14 to 14 / 0 / 1 step/step]
069	YOpcDevMot:High	*ENG	[-10 to 10 / 0 / 1 step/step]
071	YOpcDevMot:Low	*ENG	[-14 to 14 / 0 / 1 step/step]
072	Fusing: High	*ENG	[-4 to 4 / 0.3 / 0.01 %/step]
074	Fusing: Low	*ENG	[-4 to 4 / -0.6 / 0.01 %/step]
075	TransferMot:High	*ENG	[44- 4 / 02 / 001 9/ / 44-1]
077	TransferMot:Low	*ENG	[-4 to 4 / -0.3 / 0.01 %/step]
078	TonerMot	*ENG	[-30 to 30 / 10 / 5 %/step]
			<u> </u>

079	Fusing Exit Motor: 1200	*ENG	[-4 to 4 / -0.2 / 0.01 %/step]
100	Drum Adjust	*ENG	[0 or 1 / 1 / 1] 0: Off, 1: On
	Enables or disables the drum amplitude	adjustment	1.
101	154mm/s:M	*ENG	
102	154mm/s:C	*ENG	[-7 to 7 / 0 / 1 step/step]
103	154mm /s:Y	*ENG	
104	115mm/s:M	*ENG	
105	115mm /s:C	*ENG	[-9 to 9 / 0 / 1 step/step]
106	115mm /s:Y	*ENG	
107	77mm/s:M	*ENG	
108	77mm /s:C	*ENG	[-14 to 14 / 0 / 1 step/step]
109	77mm /s:Y	*ENG	

1901	[Recovery Temp. Ope. Time]		
004	-	*ENG	[0 to 60 / 10 / 1 sec/step] Not used

1902	[Amplitude Control]		
001	Execute	-	Execute drum phase adjustment.
002	Result	*ENG	[0 to 3 / 0 / 1] Displays the result of drum phase adjustment. 0: Successfully done 2: Sampling failure 3: Insufficient detection number
003	Auto Execution	*ENG	[0 or 1 / 1 / -] Turns the automatic drum phase adjustment on or off. 0: Off, 1: On

1903	[Drive Current Setting]		
001	Duplex Motor Clockwise	ENG	[0 or 1 / 0 / 1 /step] 0: Large Current, 1: Small Current
002	Duplex Motor Counterclockwise	ENG	[0 or 1 / 1 / 1 /step] 0: Large Current, 1: Small Current

1907	[Paper Feed Timing Adj.] DFU		
002	Feed Solenoid ON: Plain	*ENG	[-10 to 40 / 0 / 2.5 mm/step]
003	Feed Clutch OFF: Plain	*ENG	
004	Feed Clutch ON: Plain	*ENG	
005	Inverter Stop Position	*ENG	[-10 to 10 / 0 / 1 mm/step]
006	Reverse Stop Position	*ENG	
007	Re-Feed Stop Position	*ENG	
800	By-pass Solenoid OFF	*ENG	[0 to 40 / 0 / 1 mm/step]
009	By-pass Solenoid Re-ON	*ENG	[0 or 1 / 1 / 1]
010	By-pass Feed Clutch ON	*ENG	[-10 to 10 / 0 / 1 mm/step]
012	Feed Solenoid ON: Thick	*ENG	[-10 to 40 / 0 / 2.5 mm/step]
013	Feed Clutch OFF: Thick	*ENG	[10 to 10 / 0 / 1 /stord]
014	Feed Clutch ON: Thick	*ENG	[-10 to 10 / 0 / 1 mm/step]

1908	[LCT Feed Timing Adj.] DFU		
008	Feed Clutch ON: Plain	*ENG	
009	Feed Clutch ON: Thick	*ENG	
010	Bridge Junction Gate Sol-ON	*ENG	
011	Bridge Junction Gate Sol-OFF	*ENG	[-10 to 10 / 0 / 1 mm/step]
012	1 Bin Junction Gate Sol-ON	*ENG	
013	1 Bin Junction Gate Sol-OFF	*ENG	

1950	[Fan Cooling Time Set]		
1930	Adjust the rotation time for each fan motor after a job end.		
002	Fusing Exit Fan	*ENG	
006	Main Suction Fan	*ENG	
007	Paper Exit Fan	*ENG	
008	PSU Fan	*ENG	[0 to 60 / 0 / 1 sec/step]
011	Second Duct Fan	*ENG	
012	Third Duct Fan	*ENG	
013	Right-rear Suction Fan	*ENG	

SP2-XXX (Drum)

2005	[Charge DC: Correction] Charge Roller DC Voltage Correction (Paper Type, Process Speed, Color) Paper Type -> Plain, Thick 1, Thick 2		
	Adjusts the DC component of the charge roller bias in the various print modes. Charge bias (DC component) is automatically adjusted during process control; therefore, adjusting these settings does not effect while process control mode (SP3-041-1 Default: ON) is activated. When deactivating process control mode with SP3-041-1, the values in these SP modes are used for printing.		
001	Plain: Bk	*ENG	
002	Plain: M	*ENG	
003	Plain: C	*ENG	[0 to 1000 / 690 / 10 –V/step]
004	Plain: Y	*ENG	

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005	Thick 1: Bk	*ENG	
006	Thick 1: M	*ENG	
007	Thick 1: C	*ENG	
800	Thick 1: Y	*ENG	
009	Thick 2&FINE: Bk	*ENG	
010	Thick 2&FINE: M	*ENG	
011	Thick 2&FINE: C	*ENG	
012	Thick 2&FINE: Y	*ENG	
013	Plain	*ENG	[-100 to 100 / -24 / 1 -V/step]
014	Thick 1	*ENG	[-100 to 100 / 2 / 1 -V/step]
015	Thick 2&FINE	*ENG	[-100 to 100 / 2 / 1 -V/step]

	[Charge AC Voltage] Charge	Roller AC V	oltage Adjustment			
	(Paper Type, Process Speed, Color)					
2006	Paper Type -> Plain, Thick 1, 1	Paper Type -> Plain, Thick 1, Thick 2				
Adjusts the AC component of the charge roller bias in the various print modes. Charge bias (AC component) is adjusted by environment correction (SP2-007 SP2-011-xxx). These SPs are activated only when SP2-012-1 is set to "1: man			by environment correction (SP2-007-xxx to			
001	Plain: Bk	*ENG				
002	Plain: M	*ENG				
003	Plain: C	*ENG				
004	Plain: Y	*ENG				
005	Thick 1: Bk	*ENG	[0 to 3000 / 2100 / 10V/step]			
006	Thick 1: M	*ENG				
007	Thick 1: C	*ENG				
008	Thick 1: Y	*ENG				
009	Thick 2&FINE: Bk	*ENG				

2007	[Charge AC Current: LL] Charge Roller AC Current Adjustment for LL (Color)			
2007	Displays/sets the AC current target of the charge roller for LL environment (Low tempand Low humidity). DFU			
001	Environmental Target: Bk	*ENG		
002	Environmental Target: M	*ENG	[0.4-2000 / 1140 / 104 /]	
003	Environmental Target: C	*ENG	[0 to 3000 / 1140 / 10 ųA/step]	
004	Environmental Target: Y	*ENG		

2008	[Charge AC Current: ML] Charge Roller AC Current Adjustment for MM (Color)			
2000	Displays/sets the AC current target of the charge roller for ML environment (Meddle temperature and Low humidity). DFU			
001	Environmental Target: Bk	*ENG		
002	Environmental Target: M	*ENG	[0 to 2000 / 1150 / 10 u// /stan]	
003	Environmental Target: C	*ENG	[0 to 3000 / 1150 / 10 ųA/step]	
004	Environmental Target: Y	*ENG		

2009	[Charge AC Current: MM] Charge Roller AC Current Adjustment for MM (Color)			
2007	Displays/sets the AC current target of the charge roller for MM environment (Middle temperature and Middle humidity). DFU			
001	Environmental Target: Bk	*ENG		
002	Environmental Target: M	*ENG	[0 to 3000 / 1170 / 10 ųA/step]	
003	Environmental Target: C	*ENG		

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004 Environmental Target: Y

2010	[Charge AC Current: MH] Charg (Color)	e Roller A	AC Current Adjustment for MH	
	Displays/sets the AC current target of the charge roller for MH environment (Middle temperature and High humidity). DFU			
001	Environmental Target: Bk	*ENG		
002	Environmental Target: M	*ENG	[0.4-2000 / 1100 / 10 \ /]	
003	Environmental Target: C	*ENG	[0 to 3000 / 1180 / 10 ųA/step]	
004	Environmental Target: Y	*ENG		

2011	[Charge AC Current: HH] Charge (Color)	e Roller A	C Current Adjustment for HH	
	Displays/sets the AC current target of the charge roller for HH environment (High temperature and High humidity). DFU			
001	Environmental Target: Bk	*ENG		
002	Environmental Target: M	*ENG	[0.4-2000 / 1100 / 10 \ /]	
003	Environmental Target: C	*ENG	[0 to 3000 / 1180 / 10 ųA/step]	
004	Environmental Target: Y	*ENG		

2012	[Charge Output Control]		
001	AC Voltage	*ENG	Selects the AC voltage control type. [0 or 1 / 0 / 1 /step] 0: Process control 1: Manual control (AC voltages are decided with SP2006.)

2013	[Environmental Correction: PCU]		
001	Current Environmental: Display		Displays the environmental condition, which is measured in absolute humidity.
			[1 to 5 / - / 1 /step]

			1: LL (LL <= 4.3 g/m ³)
			2: ML (4.3 < ML <= 11.3 g/m ³)
			3: MM (11.3 < MM <= 18.0 g/m^3)
			4: MH (18.0 < MH <= 24.0 g/m ³)
			5: HH (24.0 g/m ³ < HH)
			Selects the environmental condition manually.
			[0 to $5/0/1$ /step]
002	Forced Setting	*ENG	0: The environmental condition is determined automatically.
			1: LL, 2: ML, 3: MM, 4: MH, 5: HH
003	Absolute Humidity: Threshold 1	*ENG	Changes the humidity threshold between LL and ML.
	,		[0 to 100 / 4.3 / 0.01 g/m ³ /step]
004	Absolute Humidity: Threshold 2	*ENG	Changes the humidity threshold between ML and MM.
	,		[0 to 100 / 11.3 / 0.01 g/m ³ /step]
005	Absolute Humidity: Threshold 3	*ENG	Changes the humidity threshold between MM and MH.
			[0 to 100 / 18.0 / 0.01 g/m ³ /step]
006	Absolute Humidity: Threshold 4	*ENG	Changes the humidity threshold between MH and HH.
	,		[0 to 100 / 24.0 / 0.01 g/m ³ /step]
007	6	*5.10	Displays the current temperature.
007	Current Temp.: Display	*ENG	[0 to 100 / - / 1 deg/step]
008	Current Relative Humidity: Display	*ENG	Displays the current relative humidity.
	Display		[0 to 100 / - / 1%RH/step]
009	Current Absolute Humidity:	*ENG	Displays the absolute humidity.
	Display		[0 to 100 / - / 0.01 g/m ³ /step]
010	Previous Environmental:	*ENIC	Displays the previous environmental condition, which is measured in absolute humidity.
010	Display	*ENG	[1 to 5 / - / 1 /step]
			1: LL, 2: ML, 3: MM, 4: MH, 5: HH

011	Previous Temp.: Display	*ENG	Displays the previous temperature. [0 to 100 / - / 1 deg/step]
012	Previous Relative Humidity: Display	*ENG	Displays the previous relative humidity. [O to 100 / - / 1%RH/step]
013	Previous Absolute Humidity: Display	*ENG	Displays the previous absolute humidity. [0 to 100 / - / 0.01 g/m ³ /step]

2014	[Charge AC Control: Setting] DFU				
2014	Specifies the charge AC control interval or thresholod for each condition.				
001	Exec Interval: Power ON	*ENG	[0.0000/500/1 /.]		
002	Exec Interval: Print	*ENG	[0 to 2000 / 500 / 1 page/step]		
003	Page Interval	*ENG	[0 to 500 / 10 / 5 page/step]		
004	Temperature	*ENG	[0 to 99 / 25 / 1 deg/step]		
005	Relative Humidity	*ENG	[0 to 99 / 50 / 1 %RH/step]		
006	Absolute Humidity	*ENG	[0 to 99 / 12 / 1 g/m ³ /step]		
007	Temp Threshold M	*ENG	[0 to 99 / 10 / 1 deg/step]		
800	RH Threshold M	*ENG	[0 to 99 / 50 / 1 %RH/step]		
009	AH Threshold M	*ENG	[0 to 99 / 6 / 1 g/m ³ /step]		
010	Temp Threshold S	*ENG	[0 to 20 / 1 / 0.1 deg/step]		
011	RH Threshold S	*ENG	[0 to 50 / 5 / 1 %RH/step]		
012	AH Threshold S	*ENG	[0 to 20 / 1 / 0.1 g/m ³ /step]		
013	Non-use Time	*ENG	[0 to 1440 / 360 / 10 min/step]		

2015	[Charge AC Control:Result]		
001	Bk	*ENG	[0 to 9 / 0 / 1 /step]
002	М	*ENG	0: Success
003	С	*ENG	Out of tolerance range Out of adjustable range

	[Color Registration Correction] FA			
2101	These values are the parameters for the automatic line position adjustment and are adjusted at the factory. However, you must input a value for SP2101-001 after replacing the laser optics housing unit. For details, see "Laser Optics Housing Unit" in the "Replacement and Adjustment" section. The value should be provided with the new laser optics housing unit.			
001	Main Dot: Bk	*ENG		
002	Main Dot: M	*ENG	[-512 to 511 / 0 / 1 dot/step]	
003	Main Dot: C	*ENG	[-312 10 311 / 0 / 1 doi/ siep]	
004	Main Dot: Y	*ENG		
005	Sub Line: Bk	*ENG		
006	Sub Line: M	*ENG	[16204 to 16202 / 0 / 1 line /stem]	
007	Sub Line: C	*ENG	[-16384 to 16383 / 0 / 1 line/step]	
008	Sub Line: Y	*ENG		

	•		
001	Main Mag.: High Speed: Bk	*ENG	
002	Main Mag.: Medium Speed: Bk	*ENG	
003	Main Mag.: Low Speed: Bk	*ENG	
004	Main Mag.: High Speed: M	*ENG	
005	Main Mag.: Medium Speed: M	*ENG	These are results of the main scan
006	Main Mag.: Low Speed: M	*ENG	length adjustment.
007	Main Mag.: High Speed: C	*ENG	[0 to 560 / 280 / 1 /step]
008	Main Mag.: Medium Speed: C	*ENG	
009	Main Mag.: Low Speed: C	*ENG	
			7

*ENG

*ENG

8

2102

010

011

[Magnification Adjustment] DFU

Main Mag.: High Speed: Y

Main Mag.: Medium Speed: Y

012	Main Mag.: Low Speed: Y	*ENG	
013	Offset: Mag Bk1-2	*ENG	
014	Offset: Mag M1-2	*ENG	[254 - 255 / 0 / 1
015	Offset: Mag C1-2	*ENG	[-256 to 255 / 0 / 1 sub-dot/step]
016	Offset: Mag Y1-2	*ENG	

2103	[Erase Margin Adjustment] (Area, Paper Size)		
	Adjusts the erase margin by deleting image data at the margins.		at the margins.
001	Lead Edge Width	*ENG	[0+00/42/01/+]
002	Trail. Edge Width	*ENG	[0 to 9.9 / 4.2 / 0.1 mm/step]
003	Left	*ENG	[0, 00 / 0 / 0] / 1
004	Right	*ENG	[0 to 9.9 / 2 / 0.1 mm/step]
005	Lead Edge Width: Thin	*ENG	[0 to 9.9 / 5 / 0.1 mm/step]
006	Duplex Trail. L Size	*ENG	[0 to 4 / 0 / 0.1 mm/step]
007	Duplex Trail. M Size	*ENG	[0 to 4 / 0 / 0.1 mm/step]
800	Duplex Trail. S Size	*ENG	[0 to 4 / 0 / 0.1 mm/step]
009	Duplex Left Edge	*ENG	[0.15/02/01/]
010	Duplex Right Edge	*ENG	[0 to 1.5 / 0.3 / 0.1 mm/step]
011	Duplex Trail. L Size:Thick	*ENG	[0 to 4 / 1 / 0.1 mm/step]
012	Duplex Trail. M Size:Thick	*ENG	[0 to 4 / 0.8 / 0.1 mm/step]
013	Duplex Trail. S Size:Thick	*ENG	[0 to 4 / 0.6 / 0.1 mm/step]
014	Duplex Left Edge:Thick	*ENG	[0 to 1.5 / 0.2 / 0.1 / to]
015	Duplex Right Edge:Thick	*ENG	[0 to 1.5 / 0.3 / 0.1 mm/step]

2105	[LD Power Adj.] (Process Speed, Color)
	Adjusts the LD power of each color for each process speed.
	Each LD power setting is decided by process control.

	High Speed: 154 mm/sec, M Low Speed: 77 mm/sec	liddle Speed	: 111 mm/sec,
001	High Speed: Bk	*ENG	
002	High Speed: M	*ENG	
003	High Speed: C	*ENG	
004	High Speed: Y	High Speed: Y *ENG	
005	Middle Speed: Bk	*ENG	[50 to 120 / 100 / 1%/step]
006	Middle Speed: M	*ENG	Decreasing a value makes lines thinner on the
007	Middle Speed: C	*ENG	output. Increasing a value makes lines thicker on the
008	Middle Speed: Y	*ENG	output.
009	Low Speed: Bk	*ENG	
010	Low Speed: M	*ENG	
011	Low Speed: C	*ENG	
012	Low Speed: Y	*ENG	

2106	[Polygon Rotation Time] Adjusts the time of the polygon motor rotation. DFU		
001	Warming-Up	*ENG	[0.4-40 / 10 / 1.4-4-4-4-4
002	Job End	*ENG	[0 to 60 / 10 / 1 sec/step]

2107	[Image Parameter]				
2107	DFU				
001	Image Gamma Flag	*ENG	[0 or 1 / 1 / 1 /stan]		
002	Shading Correction Flag	*ENG	[0 or 1 / 1 / 1 /step]		

2109	[Test Pattern]	
2109	Generates the test pattern using "COPY Window" tab in the LCD.	

	Pattern Selection -		[0 to 23 / 0 / 1/step]	
	0 None		11. Independent Pattern (1-dot)	
	1: Vertial Line (1dot)		12. Independent Pattern (2-dot)	
	2: Vertial Line (2dot)		13. Independent Pattern (4-dot)	
	3: Horizontal Line (1dot)		14. Triming Area	
003	4: Horizontal Line (2dot)		16: Tooth Check (Horizontal)	
000	5: Grid Vertical Line		17: Band (Horizontal)	
	6: Grid Horizontal Line		18: Band (Vertical)	
	7: Grid Pattern Small		19: Checker Flag Pattern	
	8: Grid Pattern Large		20: Grayscale (Vertical Margin)	
	9: Argyle Pattern Small		21: Grayscale (Horizontal Margin)	
	10: Argyle Pattern Large		23: Full Dot Pattern	
			Specifies the color for the test pattern.	
005	Color Selection	-	[1 to 4 / 1 / 1 / step]	
			1: All colors, 2: Magenta, 3: Yellow, 4: Cyan	
006	Density: Bk	-	Specifies the color density for the test pattern.	
007	Density: M	-	[0 to 15 / 15 / 1 /step]	
800	Density: C	-	0: Lightest density	
009	Density: Y	-	15: Darkest density	

2111	[Forced Line Position Adj.]		
001	Mode a	-	Executes the fine line position adjustment twice. If this SP is not completed (NG is displayed), do SP2111-003 first and then try this SP again.
002	Mode b	-	Executes the fine line position adjustment once. If this SP is not completed, do SP2111-003 first and then try this SP again.
003	Mode c	-	Executes the rough line position adjustment once. After doing this SP, make sure to execute SP2111-001 or -002. Otherwise, the line position adjustment is not perfectly done.

2112	[TM/ID Sensor Check] ID Sensor Check FA		
001	Execute	This SP is used to check the ID sensors at the factory. The results of this SP are displayed in SP2140 to SP2145.	

	[Skew Adjustment]				
2117	Specifies a skew adjustment value for the skew motor M, C or Y. These SPs must be used when a new laser optics housing unit is installed or when SC28 occurs. For details, see "Laser Optics Housing Unit" in the "Replacement and Adjustme section.				
001	Pulse: M	*ENG			
002	Pulse: C	*ENG	[-100 to 100 / 0 / 1 pulse/step]		
003	Pulse: Y	*ENG			

2118	[Skew Adjustment]		
001	Execute: M	*ENG	Changes the current skew adjustment values to the
002	Execute: C	*ENG	values specified with SP2117. These SPs must be used when a new laser optics
003	Execute: Y	*ENG	housing unit is installed or when SC285 occurs. For details, see "Laser Optics Housing Unit" in the "Replacement and Adjustment" section.

2119	[Skew Adjustment Display]				
2117	Displays the current skew adjustment value for each skew motor.				
001	М	*ENG			
002	С	*ENG	[-50 to 50 / 0 / 1 pulse/step]		
003	Υ	*ENG			

	2120	[Thick Paper Skew Adj] Not used				
Selects the skew adjustment for thick paper.				er.		
	001	On/Off	*ENG	[0 or 1 / 1 / 1 /step]		

0: Off, 1: On

[ID Sensor Check Result] DFU					
2140	Displays the results of the ID sensor check.				
2140	Bk, M, C, Y: ID sensors for the process control				
	Front, Center, Rear: ID sensors	Front, Center, Rear: ID sensors for the automatic line position adjustment			
001	Bk	*ENG			
002	М	*ENG			
003	С	*ENG			
004	Υ	*ENG	[0 to 1024 / 0 / 1/step]		
005	Front	*ENG			
006	Center	*ENG			
007	Rear	*ENG			

[ID Sensor Check Result: Ave.] DFU					
2141	Displays the average result values of the ID sensor check.				
	Bk, M, C, Y: ID sensors for the process control				
Front, Center, Rear: ID sensors for the automatic line position adjustment					
001	Bk	*ENG			
002	М	*ENG			
003	С	*ENG			
004	Υ	*ENG	[0 to 5.5 / 0 / 0.01V/step]		
005	Front	*ENG			
006	Center	*ENG			
007	Rear	*ENG			

2142	[ID Sensor Check Result] DFU
2142	Displays the maximum result values of the ID sensor check.

	Bk, M, C, Y: ID sensors for the	process contr	rol
	Front, Center, Rear: ID sensors	for the autom	natic line position adjustment
001	Maximum: Bk	*ENG	
002	Maximum: M	*ENG	
003	Maximum: C	*ENG	
004	Maximum: Y	*ENG	[0 to 5.5 / 0 / 0.01V/step]
005	Maximum: Front	*ENG	
006	Maximum: Center	*ENG	
007	Maximum: Rear	*ENG	

	[ID Sensor Check Result] DFU				
2143	Displays the minimum result values of the ID sensor check. Bk, M, C, Y: ID sensors for the process control				
	Front, Center, Rear: ID sensors	•			
001	Minimum: Bk	*ENG			
002	Minimum: M	*ENG			
003	Minimum: C	*ENG			
004	Minimum: Y	*ENG	[0 to 5.5 / 0 / 0.01V/step]		
005	Minimum: Front	*ENG			
006	Minimum: Center	*ENG			
007	Minimum: Rear	*ENG			

	001	[ID Sensor Check Result] DFU				
001	Displays the maximum result 2 values of the ID sensor check.					
	Bk, M, C, Y: ID sensors for the process control					
		Front, Center, Rear: ID sensors for the automatic line position adjustment				
	001	Maximum 2: Bk	*ENG			
	002	Maximum 2: M	*ENG	[0 to 5.5 / 0 / 0.01V/step]		

003	Maximum 2: C	*ENG
004	Maximum 2: Y	*ENG
005	Maximum 2: Front	*ENG
006	Maximum 2: Center	*ENG
007	Maximum 2: Rear	*ENG

	[ID Sensor Check Result] DFU				
2145	Displays the minimum result 2 values of the ID sensor check.				
	Bk, M, C, Y: ID sensors for the process control				
	Front, Center, Rear: ID sensors	for the autom	natic line position adjustment		
001	Minimum 2: Bk	*ENG			
002	Minimum 2: M	*ENG			
003	Minimum 2: C	*ENG			
004	Minimum 2: Y	*ENG	[0 to 5.5 / 0 / 0.01V/step]		
005	Minimum 2: Front	*ENG			
006	Minimum 2: Center	*ENG			
007	Minimum 2: Rear	*ENG			

	[Area Mag. Correction] LD Pulse Area Correction (Color, Area) FA				
2150	Adjusts the magnification for each area. The main scan (297 mm) is divided into 8 areas. Area 1 is at the front side of the machine (left side of the image) and area 8 is at the rear side of the machine (right side of the image).				
	Decreasing a value makes the image shift to the left side on the print.				
	Increasing a value makes the image shift to the right side on the print.				
	1 pulse = 1/16 dot				
027	Area0: Bk	*ENG	[-256 to 255 / 0 / 1 sub-dot/step]		
028	Area1: Bk	*ENG	Adjusts the area magnification for LD 1.		
029	Area2: Bk	*ENG	[-256 to 255 / 0 / 1 sub-dot/step]		

030	Area3: Bk	*ENG	
031	Area4: Bk	*ENG	
032	Area5: Bk	*ENG	
033	Area6: Bk	*ENG	
034	Area7: Bk	*ENG	
035	Area8: Bk	*ENG	
036	Area9: Bk	*ENG	
037	Area10: Bk	*ENG	
038	Areal 1: Bk	*ENG	Not used
039	Area 12: Bk	*ENG	
040	Area0: Bk	*ENG	
041	Area1: Bk	*ENG	
042	Area2: Bk	*ENG	
043	Area3: Bk	*ENG	
044	Area4: Bk	*ENG	Adjusts the area magnification for LD 2.
045	Area5: Bk	*ENG	[-256 to 255 / 0 / 1 sub-dot/step]
046	Area6: Bk	*ENG	
047	Area7: Bk	*ENG	
048	Area8: Bk	*ENG	
049	Area9: Bk	*ENG	
050	Area 10: Bk	*ENG	
051	Areal 1: Bk	*ENG	Not used
052	Area 12: Bk	*ENG	
079	Area0: M	*ENG	
080	Area1: M	*ENG	Adjusts the area magnification for LD 1. [-255 to 255 / 0 / 1 sub-dot/step]

081	Area2: M	*ENG	
082	Area3: M	*ENG	
083	Area4: M	*ENG	
084	Area5: M	*ENG	[-256 to 255 / 0 / 1 sub-dot/step]
085	Area6: M	*ENG	
086	Area7: M	*ENG	
087	Area8: M	*ENG	
088	Area9: M	*ENG	
089	Area10: M	*ENG	
090	Areal 1: M	*ENG	Not used
091	Area12: M	*ENG	
092	Area0: M	*ENG	
093	Areal: M	*ENG	
094	Area2: M	*ENG	
095	Area3: M	*ENG	
096	Area4: M	*ENG	Adjusts the area magnification for LD 2.
097	Area5: M	*ENG	[-256 to 255 / 0 / 1 sub-dot/step]
098	Area6: M	*ENG	
099	Area7: M	*ENG	
100	Area8: M	*ENG	
101	Area9: M	*ENG	
102	Area10: M	*ENG	
103	Areal 1: M	*ENG	Not used
104	Area12: M	*ENG	
131	Area0: C	*ENG	
132	Areal: C	*ENG	Adjusts the area magnification for LD 1.
			-

Area2: C	*ENG	
Area3: C	*ENG	
Area4: C	*ENG	
Area5: C	*ENG	[-256 to 255 / 0 / 1 sub-dot/step]
Area6: C	*ENG	
Area7: C	*ENG	
Area8: C	*ENG	
Area9: C	*ENG	
Area10: C	*ENG	
Areall: C	*ENG	Not used
Area12: C	*ENG	
Area0: C	*ENG	
Areal: C	*ENG	
Area2: C	*ENG	
Area3: C	*ENG	
Area4: C	*ENG	Adjusts the area magnification for LD 2.
Area5: C	*ENG	[-256 to 255 / 0 / 1 sub-dot/step]
Area6: C	*ENG	
Area7: C	*ENG	
Area8: C	*ENG	
Area9: C	*ENG	
Area10: C	*ENG	
Areall: C	*ENG	Not used
Area12: C	*ENG	
Area0: Y	*ENG	
Area1: Y	*ENG	Adjusts the area magnification for LD 1.
	Area3: C Area4: C Area5: C Area6: C Area7: C Area8: C Area10: C Area11: C Area12: C Area2: C Area2: C Area3: C Area5: C Area5: C Area5: C Area6: C Area7: C Area7: C Area7: C Area7: C Area7: C Area10: C Area7: C Area9: C Area9: C Area9: C Area10: C Area11: C Area11: C	Area3: C *ENG Area4: C *ENG Area5: C *ENG Area6: C *ENG Area7: C *ENG Area9: C *ENG Area10: C *ENG Area11: C *ENG Area12: C *ENG Area2: C *ENG Area2: C *ENG Area3: C *ENG Area11: C *ENG Area2: C *ENG Area2: C *ENG Area3: C *ENG Area4: C *ENG Area5: C *ENG Area6: C *ENG Area6: C *ENG Area7: C *ENG Area7: C *ENG Area7: C *ENG Area11: C *ENG Area11: C *ENG Area11: C *ENG

185	Area2: Y	*ENG	
186	Area3: Y	*ENG	
187	Area4: Y	*ENG	
188	Area5: Y	*ENG	[-256 to 255 / 0 / 1 sub-dot/step]
189	Area6: Y	*ENG	
190	Area7: Y	*ENG	
191	Area8: Y	*ENG	
192	Area9: Y	*ENG	
193	Area10: Y	*ENG	
194	Areal 1: Y	*ENG	Not used
195	Areal2: Y	*ENG	
196	Area0: Y	*ENG	
197	Areal: Y	*ENG	
198	Area2: Y	*ENG	
199	Area3: Y	*ENG	
200	Area4: Y	*ENG	Adjusts the area magnification for LD 2.
201	Area5: Y	*ENG	[-256 to 255 / 0 / 1 sub-dot/step]
202	Area6: Y	*ENG	
203	Area7: Y	*ENG	
204	Area8: Y	*ENG	
205	Area9: Y	*ENG	
206	Area10: Y	*ENG	Not used
207	Areal1:Y	*ENG	I NOI usea
208	Areal2: Y	*ENG	

|--|

Adjusts the area correction value for each LD power.

The main scan is divided into 16 areas. However, the image areas are limited from area 1 to area 14.

For BK and Magenta, area 1 is at the rear side of the machine (left side of the image) and area 14 is at the front side of the machine (right side of the image).

For Cyan and Yellow, area 1 is at the front side of the machine (right side of the image) and area 14 is at the rear side of the machine (left side of the image).

001	Area 0: Bk	*ENG	
002	Area 1: Bk	*ENG	
003	Area 2: Bk	*ENG	
004	Area 3: Bk	*ENG	
005	Area 4: Bk	*ENG	
006	Area 5: Bk	*ENG	
007	Area 6: Bk	*ENG	
008	Area 7: Bk	*ENG	This is for the synchronizing detection board. [50 to 150 / 100 / 1 %/step]
009	Area 8: Bk	*ENG	
010	Area 9: Bk	*ENG	
011	Area 10: Bk	*ENG	
012	Area 11: Bk	*ENG	
013	Area 12: Bk	*ENG	
014	Area 13: Bk	*ENG	
015	Area 14: Bk	*ENG	
016	Area 15: Bk	*ENG	This is out of the image area. [50 to 150 / 100 / 1 %/step]
033	Area 0: M	*ENG	This is for the synchronizing detection board.
034	Area 1: M	*ENG	
035	Area 2: M	*ENG	[50 to 150 / 100 / 1 %/step]
036	Area 3: M	*ENG	

037	Area 4: M	*ENG	
038	Area 5: M	*ENG	
039	Area 6: M	*ENG	
040	Area 7: M	*ENG	
041	Area 8: M	*ENG	
042	Area 9: M	*ENG	
043	Area 10: M	*ENG	
044	Area 11: M	*ENG	
045	Area 12: M	*ENG	
046	Area 13: M	*ENG	
047	Area 14: M	*ENG	
048	Area 15: M	*ENG	This is out of the image area.
040	71104 10.741	LINO	[50 to 150 / 100 / 1 %/step]
065	Area 0: C	*ENG	This is for the synchronizing detection board. [50 to 150 / 100 / 1 %/step]
066	Area 1: C	*ENG	
067	Area 2: C	*ENG	
068	Area 3: C	*ENG	
069	Area 4: C	*ENG	
070	Area 5: C	*ENG	
071	Area 6: C	*ENG	[50 to 150 / 100 / 1 %/step]
072	Area 7: C	*ENG	
073	Area 8: C	*ENG	
074	Area 9: C	*ENG	
075	Area 10: C	*ENG	
076	Area 11: C	*ENG	

077	Area 12: C	*ENG	
078	Area 13: C	*ENG	
079	Area 14: C	*ENG	
080	Area 15: C	*ENG	This is out of the image area. [50 to 150 / 100 / 1 %/step]
097	Area 0: Y	*ENG	This is for the synchronizing detection board. [50 to 150 / 100 / 1 %/step]
098	Area 1: Y	*ENG	
099	Area 2: Y	*ENG	
100	Area 3: Y	*ENG	
101	Area 4: Y	*ENG	
102	Area 5: Y	*ENG	
103	Area 6: Y	*ENG	
104	Area 7: Y	*ENG	[50 to 150 / 100 / 1 % / to 1
105	Area 8: Y	*ENG	[50 to 150 / 100 / 1 %/step]
106	Area 9: Y	*ENG	
107	Area 10: Y	*ENG	
108	Area 11: Y	*ENG	
109	Area 12: Y	*ENG	
110	Area 13: Y	*ENG	
111	Area 14: Y	*ENG	
112	Area 15: Y	*ENG	This is out of the image area.

2160	[Vertical Line Width] DFU			
Adjusts the width of the vertical line.				
	001	1 600dpi:Bk *ENG [10 to 15 / 15 / 1 /step]		[10 to 15 / 15 / 1 /step]

002	600dpi:Ma	*ENG
003	600dpi:Cy	*ENG
004	600dpi:Ye	*ENG
005	1200dpi:Bk	*ENG
006	1200dpi:Ma	*ENG
007	1200dpi:Cy	*ENG
008	1200dpi:Ye	*ENG

2180	[Line Position Adj. Setting Clea	
00	Color Regist.	-
002	2 Main Scan Length Detection	-
000	MUSIC Result	-
004	Area Magnification Correction	-

2181	[Line Position Adj. Result]				
	Displays the values for each correction.				
	 "Paper Int. Mag: Subdot" indicates the magnification correction value between two sheets of paper. 				
	"Mag.Cor. Subdot" indicates the magnification correction value.				
	"M. Scan Erro." indicates the shift correction value in the main scan direction.				
	"S. Scan Erro." Indicates the shift correction value in the sub scan direction.				
	"M. Cor.: Dot" indicates the dot correction value in the main scan direction.				
	• "M. Cor.: Subdot" indicates the sub dot correction value in the main scan direction.				
	Bk: Black, M: Magenta, C: Cyan, Y: Yellow				
001	Paper Int. Mag: Subdot: Bk	*ENG	[-32768 to 32767 / 0 / 1 pulse/step]		
002	Mag.Cor. Subdot: Bk	*ENG	[-32768 to 32767 / 0 / 1 pulse/step]		
003	Skew: M	*ENG			
004	Bent: M	*ENG	[-5000 to 5000 / 0 / 0.001 um/step]		

M. Scan Erro.: Left: M	*ENG	
M. Scan Erro.: Center: M	*ENG	
M. Scan Erro.: Right: M	*ENG	
S. Scan Erro.: Left: M	*ENG	
S. Scan Erro.: Center: M	*ENG	
S. Scan Erro.: Right: M	*ENG	
M. Cor.: Dot: M	*ENG	[-512 to 511 / 0 / 1 dot/step]
M. Cor.: Subdot: M	*ENG	[-15 to 15 / 0 / 1 pulse/step]
Paper Int. Mag: Subdot: M	*ENG	
Mag.Cor. Subdot: M	*ENG	[007/0 , 007/7 /0 /1
M. Left Mag.: Subdot: M	*ENG	[-32768 to 32767 / 0 / 1 pulse/step]
M. Right Mag.: Subdot: M	*ENG	
S. Cor.: 600 Line: M	*ENG	[-16384 to 16383 / 0 / 1 line/step]
S. Cor.: 600 Sub: M	*ENG	[-1 to 1 / 0 / 0.001 line/step]
S. Cor.: 1200 Line: M	*ENG	[-16384 to 16383 / 0 / 1 line/step]
S. Cor.: 1200 Sub: M	*ENG	[-1 to 1 / 0 / 0.001 line/step]
Skew: C	*ENG	
Bent: C	*ENG	
M. Scan Erro.: Left: C	*ENG	
M. Scan Erro.: Center: C	*ENG	[5000
M. Scan Erro.: Right: C	*ENG	[-5000 to 5000 / 0 / 0.001 um/step]
S. Scan Erro.: Left: C	*ENG	
S. Scan Erro.: Center: C	*ENG	
S. Scan Erro.: Right: C	*ENG	
M. Cor.: Dot: C	*ENG	[-512 to 511 / 0 / 1 dot/step]
M. Cor.: Subdot: C	*ENG	[-15 to 15 / 0 / 1 pulse/step]
	M. Scan Erro.: Center: M M. Scan Erro.: Right: M S. Scan Erro.: Left: M S. Scan Erro.: Center: M S. Scan Erro.: Right: M M. Cor.: Dot: M M. Cor.: Subdot: M Paper Int. Mag: Subdot: M Mag.Cor. Subdot: M M. Left Mag.: Subdot: M S. Cor.: 600 Line: M S. Cor.: 600 Sub: M S. Cor.: 1200 Line: M S. Cor.: 1200 Sub: M Skew: C Bent: C M. Scan Erro.: Left: C M. Scan Erro.: Center: C S. Scan Erro.: Center: C S. Scan Erro.: Center: C M. Cor.: Dot: C	M. Scan Erro.: Center: M *ENG M. Scan Erro.: Right: M *ENG S. Scan Erro.: Left: M *ENG S. Scan Erro.: Center: M *ENG S. Scan Erro.: Right: M *ENG S. Scan Erro.: Right: M *ENG M. Cor.: Dot: M *ENG M. Cor.: Subdot: M *ENG Mag.Cor. Subdot: M *ENG Mag.Cor. Subdot: M *ENG M. Left Mag.: Subdot: M *ENG M. Right Mag.: Subdot: M *ENG S. Cor.: 600 Line: M *ENG S. Cor.: 1200 Line: M *ENG S. Cor.: 1200 Sub: M *ENG M. Scan Erro.: Left: C *ENG M. Scan Erro.: Center: C *ENG S. Scan Erro.: Center: C *ENG S. Scan Erro.: Center: C *ENG S. Scan Erro.: Right: C *ENG S. Scan Erro.: Right: C *ENG M. Scan Erro.: Right: C *ENG S. Scan Erro.: Right: C *ENG

031	Paper Int. Mag: Subdot: C	*ENG	
032	Mag.Cor. Subdot: C	*ENG	[007/0, 007/7 / 0 /1
033	M. Left Mag.: Subdot: C	*ENG	[-32768 to 32767 / 0 / 1 pulse/step]
034	M. Right Mag.: Subdot: C	*ENG	
035	S. Cor.: 600 Line: C	*ENG	[-16384 to 16383 / 0 / 1 line/step]
036	S. Cor.: 600 Sub: C	*ENG	[-1 to 1 / 0 / 0.001 line/step]
037	S. Cor.: 1200 Line: C	*ENG	[-16384 to 16383 / 0 / 1 line/step]
038	S. Cor.: 1200 Sub: C	*ENG	[-1 to 1 / 0 / 0.001 line/step]
039	Skew: Y	*ENG	
040	Bent: Y	*ENG	
041	M. Scan Erro.: Left: Y	*ENG	
042	M. Scan Erro.: Center: Y	*ENG	[5000, 5000 / 0 / 0 00] / .]
043	M. Scan Erro.: Right: Y	*ENG	[-5000 to 5000 / 0 / 0.001 um/step]
044	S. Scan Erro.: Left: Y	*ENG	
045	S. Scan Erro.: Center: Y	*ENG	
046	S. Scan Erro.: Right: Y	*ENG	
047	M. Cor.: Dot: Y	*ENG	[-512 to 511 / 0 / 1 dot/step]
048	M. Cor.: Subdot: Y	*ENG	[-15 to 15 / 0 / 1 pulse/step]
049	Paper Int. Mag: Subdot: Y	*ENG	
050	Mag.Cor. Subdot: Y	*ENG	[22740 to 22747 / A / 1 and a / to 1
051	M. Left Mag.: Subdot: Y	*ENG	[-32768 to 32767 / 0 / 1 pulse/step]
052	M. Right Mag.: Subdot: Y	*ENG	
053	S. Cor.: 600 Line: Y	*ENG	[-16384 to 16383 / 0 / 1 line/step]
054	S. Cor.: 600 Sub: Y	*ENG	[-1 to 1 / 0 / 0.001 line/step]
055	S. Cor.: 1200 Line: Y	*ENG	[-16384 to 16383 / 0 / 1 line/step]
056	S. Cor.: 1200 Sub: Y	*ENG	[-1 to 1 / 0 / 0.001 line/step]
			-

	[Line Position Adj. Offset]				
2182	(Color) M. Scan: Main scan, S. Scan: Sub-scan				
	High: 154 mm/sec, Medium: 111 mm/sec, Low: 77 mm/sec				
001	M Magnification	*ENG	Adjusts the line position manually.		
002	C Magnification	*ENG	[-1 to 1 / 0 / 0.001%/step]		
			When line shifts are not corrected by the automatic line position adjustment, do this SP.		
003	Y Magnification	*ENG	Increasing a value reduces the image in the main scan direction.		
			Decreasing a value enlarges the image in the main scan direction.		
004	M. Scan: High: Dot: M	*ENG	[-512 to 511 / 0 / 1 dot/step]		
005	M. Scan: High: Subdot: M	*ENG	[-15 to 15 / 0 / 1 pulse/step]		
006	M. Scan: Medium: Dot: M	*ENG	[-512 to 511 / 0 / 1 dot/step]		
007	M. Scan: Medium: Subdot: M	*ENG	[-15 to 15 / 0 / 1 pulse/step]		
800	M. Scan: Low: Dot: M	*ENG	[-512 to 511 / 0 / 1 dot/step]		
009	M. Scan: Low: Subdot: M	*ENG	[-15 to 15 / 0 / 1 pulse/step]		
010	M. Scan: High: Dot: C	*ENG	[-512 to 511 / 0 / 1 dot/step]		
011	M. Scan: High: Subdot: C	*ENG	[-15 to 15 / 0 / 1 pulse/step]		
012	M. Scan: Medium: Dot: C	*ENG	[-512 to 511 / 0 / 1 dot/step]		
013	M. Scan: Medium: Subdot: C	*ENG	[-15 to 15 / 0 / 1 pulse/step]		
014	M. Scan: Low: Dot: C	*ENG	[-512 to 511 / 0 / 1 dot/step]		
015	M. Scan: Low: Subdot: C	*ENG	[-15 to 15 / 0 / 1 pulse/step]		
016	M. Scan: High: Dot: Y	*ENG	[-512 to 511 / 0 / 1 dot/step]		
017	M. Scan: High: Subdot: Y	*ENG	[-15 to 15 / 0 / 1 pulse/step]		
018	M. Scan: Medium: Dot: Y	*ENG	[-512 to 511 / 0 / 1 dot/step]		
019	M. Scan: Medium: Subdot: Y	*ENG	[-15 to 15 / 0 / 1 pulse/step]		
020	M. Scan: Low: Dot: Y	*ENG	[-512 to 511 / 0 / 1 dot/step]		

021	M. Scan: Low: Subdot: Y	*ENG	[-15 to 15 / 0 / 1 pulse/step]
022	S. Scan: High: Line: M	*ENG	[-16384 to 16383 / 0 / 1 line/step]
023	S. Scan: High: Subline: M	*ENG	[-1 to 1 / 0 / 0.001 /line]
024	S. Scan: Medium: Line: M	*ENG	[-16384 to 16383 / 0 / 1 line/step]
025	S. Scan: Medium: Subline: M	*ENG	[-1 to 1 / 0 / 0.001 /line]
026	S. Scan: Low: Line: M	*ENG	[-16384 to 16383 / 0 / 1 line/step]
027	S. Scan: Low: Subline: M	*ENG	Not used
028	S. Scan: High: Line: C	*ENG	[-16384 to 16383 / 0 / 1 line/step]
029	S. Scan: High: Subline: C	*ENG	[-1 to 1 / 0 / 0.001 /line]
030	S. Scan: Medium: Line: C	*ENG	[-16384 to 16383 / 0 / 1 line/step]
031	S. Scan: Medium: Subline: C	*ENG	[-1 to 1 / 0 / 0.001 /line]
032	S. Scan: Low: Line: C	*ENG	[-16384 to 16383 / 0 / 1 line/step]
033	S. Scan: Low: Subline: C	*ENG	Not used
034	S. Scan: High: Line: Y	*ENG	[-16384 to 16383 / 0 / 1 line/step]
035	S. Scan: High: Subline: Y	*ENG	[-1 to 1 / 0 / 0.001 /line]
036	S. Scan: Medium: Line: Y	*ENG	[-16384 to 16383 / 0 / 1 line/step]
037	S. Scan: Medium: Subline: Y	*ENG	[-1 to 1 / 0 / 0.001 /line]
038	S. Scan: Low: Line: Y	*ENG	[-16384 to 16383 / 0 / 1 line/step]
039	S. Scan: Low: Subline: Y	*ENG	Not used

2183	[Main Scan Length Detection] DFU		
001	Execute: High: Bk	-	
002	Execute: Medium: Bk	-	
003	Execute: Low: Bk	-	Executes the adjustment for the main scan length detection manually.
004	Execute: High: M	-	asission mansany.
005	Execute: Medium: M	-	

2184	[Main Scan Length Detection Target] DFU		
001	Execute: Bk	-	
002	Execute: M	-	Executes the target value for the main scan length
003	Execute: C	-	detection.
004	Execute: Y	-	

[Main Scan Length Detection Disp.] Displays/adjusts the target value for the main scan magnification correction of the line position adjustment. 2185 After replacing the laser optics housing unit, input the standard value for Bk provided with the new unit. For details, see "Laser Optics Housing Unit" in the "Replacement Adjustment" section. It is not necessary to input the values for the other colors; these are automatically adjusted after doing the line position adjustment. 001 Bk *ENG 002 Μ *ENG [0 to 266667 / **249449** / 1 sub-dot/step] 003 С *ENG Υ 004 *ENG

2186	[Main Scan Length Detection] DFU		
001	Selection	i *eng	[0 or 1 / 1 / 1/step] 0: OFF, 1: ON

	Enables or disables the main scan length detection for the laser.		
002	Paper Interval	*ENG	[0 to 999 / 1 / 1 sec/step]
	Adjusts the interval of the main scan length detection for the laser.		

2190	[Line Position Adj.]		
001	Paper Int. Mag.: Subdot: Bk	*ENG	
002	Paper Int. Mag.: Subdot: M	*ENG	DFU
003	Paper Int. Mag.: Subdot: C	*ENG	[0 or 1 / 1 / 1/step]
004	Paper Int. Mag.: Subdot: Y	*ENG	
005	M. Scan Mag.: Subdot: M	*ENG	DFU
006	M. Scan Mag.: Subdot: C	*ENG	[0 or 1 / 1 / 1/step]
007	M. Scan Mag.: Subdot: Y	*ENG	0: Disable correction 1: Enable correction
800	Area Mag.: Subdot: M	*ENG	
009	Area Mag.: Subdot: C	*ENG	DFU [0 or 1 / 1 / 1/step]
010	Area Mag.: Subdot: Y	*ENG	[0 01 1 / 1 / 1/30p]
011	S. Scan Cor. Setting	*ENG	DFU [0 or 1 / 0 / 1/step] 0: Adjusted with Bk 1: Adjusted in minimum shift among four colors

2191	[MUSIC Coefficient Setting] Line Position Adjustment: Coefficient Setting DFU ch 0: ID sensor at rear, ch 1: ID sensor at center, ch 2: ID sensor at front			
	di comor, di 2. 15 sensor di nom			
001	ch 0: Filter: Front: a1	*ENG	[-131071 to 131071 / 125869 / 1 bit/step]	
002	ch 0: Filter: Front: a2	*ENG	[-131071 to 131071 / -60488 / 1 bit/step]	
003	ch 0: Filter: Front: b0	*ENG	[-131071 to 131071 / 39 / 1 bit/step]	
004	ch 0: Filter: Front: b1	*ENG	[-131071 to 131071 / 77 / 1 bit/step]	

005	ch 0: Filter: Front: b2	*ENG	[-131071 to 131071 / 39 / 1 bit/step]
006	ch 0: Filter: Rear: a 1	*ENG	[-131071 to 131071 / 128596 / 1 bit/step]
007	ch 0: Filter: Rear: a2	*ENG	[-131071 to 131071 / -63398 / 1 bit/step]
008	ch 0: Filter: Rear: b0	*ENG	[-131071 to 131071 / 84 / 1 bit/step]
009	ch 0: Filter: Rear: b1	*ENG	[-131071 to 131071 / 168 / 1 bit/step]
010	ch 0: Filter: Rear: b2	*ENG	[-131071 to 131071 / 84 / 1 bit/step]
011	ch 1: Filter: Front: a1	*ENG	[-131071 to 131071 / 125869 / 1 bit/step]
012	ch 1: Filter: Front: a2	*ENG	[-131071 to 131071 / -60488 / 1 bit/step]
013	ch 1: Filter: Front: b0	*ENG	[-131071 to 131071 / 39 / 1 bit/step]
014	ch 1: Filter: Front: b1	*ENG	[-131071 to 131071 / 77 / 1 bit/step]
015	ch 1: Filter: Front: b2	*ENG	[-131071 to 131071 / 39 / 1 bit/step]
016	ch 1: Filter: Rear: a1	*ENG	[-131071 to 131071 / 128596 / 1 bit/step]
017	ch 1: Filter: Rear: a2	*ENG	[-131071 to 131071 / -63398 / 1 bit/step]
018	ch 1: Filter: Rear: b0	*ENG	[-131071 to 131071 / 84 / 1 bit/step]
019	ch 1: Filter: Rear: b1	*ENG	[-131071 to 131071 / 168 / 1 bit/step]
020	ch 1: Filter: Rear: b2	*ENG	[-131071 to 131071 / 84 / 1 bit/step]
021	ch 2: Filter: Front: a1	*ENG	[-131071 to 131071 / 125869 / 1 bit/step]
022	ch 2: Filter: Front: a2	*ENG	[-131071 to 131071 / -60488 / 1 bit/step]
023	ch 2: Filter: Front: b0	*ENG	[-131071 to 131071 / 39 / 1 bit/step]
024	ch 2: Filter: Front: b1	*ENG	[-131071 to 131071 / 77 / 1 bit/step]
025	ch 2: Filter: Front: b2	*ENG	[-131071 to 131071 / 39 / 1 bit/step]
026	ch 2: Filter: Rear: a1	*ENG	[-131071 to 131071 / 128596 / 1 bit/step]
027	ch 2: Filter: Rear: a2	*ENG	[-131071 to 131071 / -63398 / 1 bit/step]
028	ch 2: Filter: Rear: b0	*ENG	[-131071 to 131071 / 84 / 1 bit/step]
029	ch 2: Filter: Rear: b1	*ENG	[-131071 to 131071 / 168 / 1 bit/step]
030	ch 2: Filter: Rear: b2	*ENG	[-131071 to 131071 / 84 / 1 bit/step]

031 Q Format Selection *ENC	[0 to 3 / 3 / 1/step]
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2192	[MUSIC Threshold Setting] Line Position Adjustment: Threshold Setting DFU ch 0: ID sensor at rear, ch 1: ID sensor at center, ch 2: ID sensor at front		
001	ch 0: 1st	*ENG	
002	ch 0: 2nd	*ENG	
003	ch 0: 3rd	*ENG	
004	ch 0: 4th	*ENG	
005	ch 1: 1st	*ENG	
006	ch 1: 2nd	*ENG	[0.5, 0.7] 0. 701)//, 1
007	ch 1: 3rd	*ENG	[0.5 to 3 / 1.2 / 0.1 V/step]
008	ch 1: 4th	*ENG	
009	ch 2: 1st	*ENG	
010	ch 2: 2nd	*ENG	
011	ch 2: 3rd	*ENG	
012	ch 2: 4th	*ENG	

2193	[MUSIC Condition Set] Line Position Adjustment: Condition Setting				
001	Auto Execution	*ENG	[0 or 1 / 1 / 1] 0: OFF, 1: ON		
	Enables/disables the automatic line position adjustment				
	Page: Job End: BW+FC	*ENG	[0 to 999 / 500 / 1 page/step]		
002	Adjusts the threshold of the line position adjustment for BW and color printing mode after job end.				
000	Page: Job End: FC	*ENG	[0 to 999 / 200 / 1 page/step]		
003	Adjusts the threshold of the line position adjustment for color printing mode after job end.				
004	Page: Interrupt: BW+FC	*ENG	[0 to 999 / 200 / 1 page/step]		

	Adjusts the threshold of the line position adjustment for BW and color printing mode during job.			
005	Page: Interrupt: FC	*ENG	[0 to 999 / 200 / 1 page/step]	
005	Adjusts the threshold of the line	position a	djustment for color printing mode during jobs.	
	Page: Stand-By: BW	*ENG	[0 to 999 / 100 / 1 page/step]	
006	The line position adjustment is d	one when th	ljustment for BW printing mode in stand-by mode. ne number of outputs in BW printing mode reaches ndition of SP2-193-008 or SP2-193-009 is	
	Page: Stand-By: FC	*ENG	[0 to 999 / 100 / 1 page/step]	
Adjusts the threshold of the line position adjustment for BW printing mode in sta The line position adjustment is done when the number of outputs in color print reaches the value specified with this SP and the condition of SP2-193-008 or S is satisfied.			the number of outputs in color printing mode	
	Temp.	*ENG	[0 to 100 / 5 / 1deg/step]	
800	Adjust the temperature change threshold for the line position adjustment (Mode b: adjustment once). The timing for line position adjustment depends on the combinations of several conditions. Section Descriptions" section.			
	Time	*ENG	[1 to 1440 / 300 / 1 minute/step]	
009		•	on adjustment (Mode b: adjustment once). The s on the combinations of several conditions.	
	Magnification	*ENG	[0 to 1 / 0.1 / 0.01%/step]	
010	_		position adjustment. If the length of the main scan	
	Temp. 2	*ENG	[0 to 100 / 10 / 1deg/step]	
011	Adjust the temperature change threshold for the line position adjustment (Mode a: adjustment twice). The timing for line position adjustment depends on the combinations of several conditions.			
	Time 2	*ENG	[1 to 9999 / 600 / 1 minute/step]	
012	Adjust the time threshold for the line position adjustment (Mode a: adjustment twice). The timing for line position adjustment depends on the combinations of several conditions.			

	Page: Power ON:BW+FC *ENG [0 to 999 / 200 / 1 page/step]					
013	mode. The condition of the line posi difference and small condition differ	ition adjusti ence when SP and the	position adjustment for BW and color printing ment is determined for large condition the number of outputs in color printing mode condition of SP3-510-009 or SP3-510-010 ary to adjust this SP.			

2194	[MUSIC Execution Result] Line Position Adjustment: Execution Result		
001	Year	*ENG	[0 to 99 / 0 / 1 year/step]
002	Month	*ENG	[1 to 12 / 1 / 1 month/step]
003	Day	*ENG	[1 to 31 / 1 / 1 day/step]
004	Hour	*ENG	[0 to 23 / 0 / 1 hour/step]
005	Minute	*ENG	[0 to 59 / 0 / 1 minute/step]
006	Temperature	*ENG	[0 to 100 / 0 / 1 deg/step]
007	Execution Result	*ENG	[0 or 1 / 0 / 1 /step] 0: Completed successfully, 1: Failed
008	Number of Execution	*ENG	[0 to 999999 / 0 / 1 times/step]
009	Number of Failure	*ENG	[0 to 999999 / 0 / 1 times/step]
010	Error Result: M	*ENG	[0 to 9 / 0 / 1 /step]
011	Error Result: C	*ENG	0: Not done
012	Error Result: Y	*ENG	1: Completed successfully 2: Cannot detect patterns 3: Fewer lines on the pattern than the target 4: Not used 5: Out of the adjustment range 6 to 9: Not used

2197	[MUSIC Start Time]
219/	DFU

2198	[Music A/D Interval]		
ADC Trigger Counter			
001	ADC Trigger Counter	*ENG	[7.5 to 20 / 10 / 0.1 µs/step]

2199	[Music Error Time Setting]				
DFU DFU					
001	Error Detection Counter	*ENG	[0.5 to 4 / 2.5 / 0.1 sec /step]		

	[LD Power] LD Power Control				
2221	Adjusts the fixed LD power for each line speed and color.				
These SPs are activated only when SP3-041-002 is set to "0".					
	Plain: 154 mm/sec, Thick 1 ar	nd Thick 2&	Fine: 77 mm/sec		
001	Plain: Bk	*ENG			
002	Plain: M	*ENG			
003	Plain: C	*ENG			
004	Plain: Y	*ENG	[0 to 200 / 100 / 1%/step]		
009	Thick 2&FINE: Bk	*ENG	Increasing this value makes the image density darker.		
010	Thick 2&FINE: M	*ENG			
011	Thick 2&FINE: C	*ENG			
012	Thick 2&FINE: Y	*ENG			

		[Development DC Bias] Development DC Bias Adjustment			
, , ,		Adjusts the development bias.			
		Development bias is automatically adjusted during process control; therefore, adjusting these			
		settings has no effect while Process Control (SP3-041-001 Default: ON) is activated.			

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	After deactivating Process Control with SP3-041-001, the values in these SP modes are used for printing.			
	Plain: 154 mm/sec, Thick 1 ar	and Thick 2&Fine: 77 mm/sec		
001	Plain: Bk	*ENG		
002	Plain: M	*ENG		
003	Plain: C	*ENG		
004	Plain: Y	*ENG		
005	Thick 1: Bk	*ENG		
006	Thick 1: M	*ENG		
007	Thick 1: C	*ENG		
800	Thick 1: Y	*ENG	[0 to 800 / 550 / 10 –V/step]	
009	Thick 2: Bk	*ENG	[0 10 800 / 330 / 10 - v / step]	
010	Thick 2: M	*ENG		
011	Thick 2: C	*ENG		
012	Thick 2: Y	*ENG		
013	Fine: Bk	*ENG		
014	Fine: M	*ENG		
015	Fine: C	*ENG		
016	Fine: Y	*ENG		

2241	[Temperature/Humidity: Display]			
Displays the environment temperature and hu		and humidity.		
001	Temperature	-	[-1280 to 1270 / - / 0.1deg/step]	
002	Relative Humidity	-	[0 to 1000 / - / 0.1 %RH/step]	
003	Absolute Humidity	-	[0 to 100 / - / 0.01 g/m ³ /step]	

2302	[Environmental Correction: Transfer]		
2302	Environmental Correction: Image Transfer Belt Unit		

	Forced Setting	*ENG	[0 to 6 / 0 / 1 /step]			
	Sets the environment condition manually.					
	0: Automatic environment control					
002	1: LL (Low temperature/ Low humidity)					
332	2: ML (Middle temperature/ Low humidity)					
	3: MM (Middle temperature/ Middle hu	ımidity)				
	4: MH (Middle temperature/ High humi	dity)				
	5: HH (High temperature/ High humidity)					
003	Absolute Humidity: Threshold 1	*ENG	[0 to 100 / 4 / 0.01 g/m ³ /step]			
003	Adjusts the threshold value between LL and ML.					
004	Absolute Humidity: Threshold 2	*ENG	[0 to 100 / 8 / 0.01 g/m ³ /step]			
004	Adjusts the threshold value between ML and MM.					
005	Absolute Humidity: Threshold 3	*ENG	[0 to 100 / 16 / 0.01 g/m ³ /step]			
003	Adjusts the threshold value between MM and MH.					
006	Absolute Humidity: Threshold 4	*ENG	[0 to 100 / 24 / 0.01 g/m ³ /step]			
000	Adjusts the threshold value between MH and HH.					
007	Temp Threshold	*ENG	[-5 to 30 / 5 / 1 deg/step]			

2308	[Paper Size Correction]				
2306	Adjusts the threshold value for the paper size correction.				
001	Threshold 1	*ENG	[0 to 350 / 297 / 1 mm/step] Threshold 1 ≤ paper: Paper is detected as "S1" size.		
002	Threshold 2	*ENG	[0 to 350 / 257 / 1 mm/step] Threshold 2 ≤ paper ≤ Threshold 1: Paper is detected as "S2" size.		
003	Threshold 3	*ENG	[0 to 350 / 210 / 1 mm/step] Threshold 3 ≤ paper ≤ Threshold 2: Paper is detected as "S3" size.		

			[0 to 350 / 148 / 1 mm/step]
			Threshold 4 ≤ paper ≤ Threshold 3:
004	Threshold 4	*ENG	Paper is detected as "S4" size.
			Paper ≤ Threshold 4:
l			Paper is detected as "S5" size.

2311	[Non Image Area: Bias]				
001	Image Transfer	*ENG	Adjusts the bias of the image transfer belt between images. This value is added to the value of the image transfer belt bias. [10 to 250 / 100 / 5 %/step]		
002	Paper Transfer	*ENG	Adjusts the bias of the paper transfer roller between images. [0 to 130 / 5 / 1 $-\mu$ A/step]		

2326	[Transfer Roller CL: Bias] Transfer Roller Cleaning: Bias Adjustment					
001	Positive	*ENG	[0 to 2100 / 500 / 100 V /step]			
001	Adjusts the positive voltage o	Adjusts the positive voltage of the paper transfer roller for cleaning the paper transfer roller.				
002	Negative	*ENG	[10 to 400 / 300 / 10 %/step]			
002	Adjusts the negative current of the paper transfer roller for cleaning the paper transfer roller.					
	Positive	*ENG	[0 to 2100 / 2000 / 100 V/step]			
003	Adjusts the negative current limit of the paper transfer roller for cleaning the paper transfer roller.					
004	Negative	*ENG	[10 to 400 / 100 / 10 %/step]			

2351	[Common: BW: Bias] Image Transfer Belt: B/W: Bias Adjustment Plain: 154 mm/sec, Thick 1 and Thick 2&Fine: 77 mm/sec				
		[0 to 60 / 25 / 1 μA]			
001	Adjusts the current for the imag	belt in B/W mode for plain paper.			
002	Image Transfer: Thick 1	*ENG	[0 to 60 / 12 / 1 μA]		

Adjusts the current for the image transfer belt in B/W mode for thick 1 paper.

2357	[Common: FC: Bias] Image Transfer Belt: Full Color: Bias Adjustment				
2337	kFine: 77 mm/sec				
001	Image Transfer: Plain: Bk	*ENG	[0 to 60 / 22 / 1 µA]		
001	Adjusts the current for the imag	e transfer b	pelt for Black in full color mode for plain paper.		
002	Image Transfer:: Plain: M	*ENG	[0 to 60 / 22 / 1 μA]		
002	Adjusts the current for the image	e transfer b	elt for Magenta in full color mode for plain paper.		
003	Image Transfer: Plain: C	*ENG	[0 to 60 / 25 / 1 μA]		
003	Adjusts the current for the imag	e transfer b	pelt for Cyan in full color mode for plain paper.		
004	Image Transfer: Plain: Y	*ENG	[0 to 60 / 28 / 1 μA]		
004	Adjusts the current for the image transfer belt for Yellow in full color mode for plain paper.				
005	Image Transfer: Thick 1: Bk	*ENG	[0 to 60 / 11 / 1 μA]		
			pelt for Black in full color mode for thick 1 paper.		
006	Image Transfer: Thick 1: M	*ENG	[0 to 60 / 11 / 1 μA]		
000	Adjusts the current for the image	transfer be	elt for Magenta in full color mode for thick 1 paper.		
007	Image Transfer: Thick 1: C	*ENG	[0 to 60 / 12 / 1 μA]		
007	Adjusts the current for the image transfer belt for Cyan in full color mode for thick 1 paper.				
008	Image Transfer: Thick 1: Y	*ENG	[0 to 60 / 14 / 1 μA]		
008	Adjusts the current for the image transfer belt for Yellow in full color mode for thick 1 paper.				

2360	[Common: BW Environment Correction Table]				
001	Image Transfer: Plain	*ENG	[] +- 40 /1 /1 /]		
002	Image Transfer: Thick 1	*ENG	[1 to 60 / 1 / 1 /step]		
004	Image Transfer: Plain: Bk	*ENG	[1 to 60 / 13 / 1 /step]		
005	Image Transfer: Plain: M	*ENG			
006	Image Transfer: Plain: C	*ENG	[1 to 60 / 2 / 1 /step]		

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007	Image Transfer: Plain: Y	*ENG	
008	Image Transfer: Thick 1: Bk	*ENG	[1 to 60 / 31 / 1 /step]
009	Image Transfer: Thick 1: M	*ENG	
010	Image Transfer: Thick 1: C	*ENG	[1 to 60 / 2 / 1 /step]
011	Image Transfer: Thick 1: Y	*ENG	

	[Plain: Bias]				
2401	Adjusts the DC voltage of the discharge Plain: 154 mm/sec, 1200: 77 mm/s		r plain paper.		
001	Separation DC: Plain: 1st Side	*ENG	[0 to 4000 / 2000 / 10 –V/step]		
002	Separation DC: Plain: 2nd Side	*ENG	[0 to 4000 / 3000 / 10 –V/step]		
003	Separation DC: 1200: 1st Page	*ENG	[0 to 4000 / 2000 / 10 -V/step]		
004	Separation DC: 1200: 2nd side	*ENG	[0 to 4000 / 3000 / 10 –V/step]		

2403	Adjusts the current for the paper trans Plain: 154 mm/sec, 1200: 77 mm/s	paper transfer roller for plain paper in black-and-white mode. D: 77 mm/sec			
001	Paper Transfer: Plain: 1st Side	*ENG	[0.4- 250 / 22 / 1 / /]		
002	Paper Transfer: Plain: 2nd Side	*ENG	[0 to 250 / 22 / 1 –µA /step]		
003	Paper Transfer: 1200: 1st Side	*ENG	[0 to 250 / 7 / 1 –μA /step]		
004	Paper Transfer: 1200: 2nd side	*ENG	[0 to 250 / 12 / 1 –µA /step]		

[Plain: Bias: FC]			
2407	Adjusts the current for the paper transfer re Plain: 154 mm/sec, 1200: 77 mm/sec	oller for pla	ain paper in full color mode.
001	Paper Transfer: Plain: 1st Side	*ENG	[0 to 250 / 27 / 1 –µA /step]
002	Paper Transfer: Plain: 2nd Side	*ENG	[0 to 250 / 33 / 1 –µA /step]
003	Paper Transfer: 1200: 1st Side	*ENG	[0 to 250 / 10 / 1 –µA /step]

004 Paper Transfer: 1200: 2nd Side	*ENG	[0 to 250 / 12 / 1 -µA /step]	
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	[Plain: Paper Size Correction]							
2411	Adjusts the size correction coefficient for the paper transfer roller current for each paper SP2403 and SP2407 are multiplied by these SP values.							
	Plain: 154 mm/sec, 1200: 77 mm/sec							
001	Paper Transfer: Plain : 1st Side: S1	*ENG						
002	Paper Transfer: Plain: 2nd Side: S1	*ENG	[100 to 600 / 100 / 5%/step]					
003	Paper Transfer: 1200: 1st Side: S1	*ENG	S1 size≥297 mm (Paper width)					
004	Paper Transfer: 2nd side: 1200: S1	*ENG						
005	Paper Transfer: Plain: 1 st Side: S2	*ENG	[100 to 600 / 105 / 5%/step] 297 mm ≥ S2 size ≥ 275 mm (Paper width)					
006	Paper Transfer: Plain: 2nd Side: S2	*ENG	[100 to 600 / 120 / 5%/step] 297 mm ≥ S2 size ≥ 275 mm (Paper width)					
007	Paper Transfer: 1200: 1st Side: S2	*ENG	[100 to 600 / 120 / 5%/step] 297 mm ≥ S2 size ≥ 275 mm (Paper width)					
008	Paper Transfer: 2nd side: 1200: S2	*ENG	[100 to 600 / 150 / 5%/step]					
009	Paper Transfer: Plain: 1 st Side: S3	*ENG	[100 to 600 / 110 / 5%/step] 275 mm ≥ S3 size ≥ 210 mm (Paper width)					
010	Paper Transfer: Plain: 2nd Side: S3	*ENG	[100 to 600 / 140 / 5%/step]					
011	Paper Transfer: 1200: 1st Side: S3	*ENG	275 mm ≥ S3 size ≥ 210 mm (Paper width)					
012	Paper Transfer: 2nd side: 1200: S3	*ENG	[100 to 600 / 300 / 5%/step]					

013	Paper Transfer: Plain: 1 st Side: S4	*ENG	[100 to 600 / 115 / 5%/step] 210 mm ≥ S4 size ≥ 148 mm (Paper width)
014	Paper Transfer: Plain: 2nd Side: S4	*ENG	[100 to 600 / 160 / 5%/step] 210 mm ≥ S4 size ≥ 148 mm (Paper width)
015	Paper Transfer: 1200: 1st Side: S4	*ENG	[100 to 600 / 240 / 5%/step] 210 mm ≥ S4 size ≥ 148 mm (Paper width)
016	Paper Transfer: 2nd side: 1200: S44	*ENG	[100 to 600 / 340 / 5%/step]
017	Paper Transfer: Plain: 1 st Side: S5	*ENG	[100 to 600 / 120 / 5%/step] 148 mm ≥ S5 size (Paper width)
018	Paper Transfer: Plain: 2nd Side: S5	*ENG	[100 to 600 / 180 / 5%/step] 148 mm ≥ S5 size (Paper width)
019	Paper Transfer: 1200: 1st Side: S5	*ENG	[100 to 600 / 300 / 5%/step] 148 mm ≥ S5 size (Paper width)
020	Paper Transfer: 2nd side: 1200: S5	*ENG	[100 to 600 / 400 / 5%/step]

	[Plain: Leading Edge Correction] Plain Paper: Leading Edge Correction					
0.401	Adjusts the correction to the paper transfer roller current at the paper leading edge in each mode. SP2403 and SP2407 are multiplied by these SP values.					
2421	Plain: 154 mm/sec, 1200: 77	Plain: 154 mm/sec, 1200: 77 mm/sec				
	↓ Note					
	The paper leading edge area can be adjusted with SP2422.					
001	Paper Transfer: Plain: 1st Side	*ENG	[0 to 400 / 100 / 5%/step]			
002	Paper Transfer: Plain: 2nd Side	*ENG	[0 to 400 / 100 / 5%/step]			
003	Paper Transfer: 1200: 1st Side	*ENG	[0.1.400 / 100 / 59 /]			
004	Paper Transfer: 1200: 2nd side	*ENG	[0 to 400 / 100 / 5%/step]			

2421	Adjusts the correction to the discharge plate current at the paper leading edge in each mode. SP2401 is multiplied by these SPs values. Note The paper leading edge area can be adjusted with SP2422.				
005	Separation DC: Plain: 1st Side	*ENG	AS JOSEPH WITH ST Z 122.		
006	Separation DC: Plain: 2nd Side	*ENG			
007	Separation DC: 1200: 1st Page	*ENG	[0 to 400 / 100 / 5%/step]		
008	Separation DC: 1200: 2nd side	*ENG			

[Plain: Switch Timing: Lead. Edge]			
Adjusts the bias/voltage switch timing of the paper transfer roller/discharge plate paper leading edge between the erase margin area and the image area. Plain: 154 mm/sec, 1200: 77 mm/sec			
001	Paper Transfer: Plain: 1st Side	*ENG	
002	Paper Transfer: Plain: 2nd Side	*ENG	
003	Paper Transfer: 1200: 1st Side	*ENG	
004	Paper Transfer: 1200: 2nd side	*ENG	[0 to 50 / 0 / 2 mm /ston]
005	Separation DC: Plain: 1st Page	*ENG	[0 to 50 / 0 / 2 mm/step]
006	Separation DC: Plain: 2nd Page	*ENG	
007	Separation DC: 1200: 1st Page	*ENG	
008	Separation DC: 1200: 2nd side	*ENG	

	[Plain: Trailing Edge Correction] Plain Paper: Trailing Edge Correction		
2423	Adjusts the correction coefficient to the paper transfer roller current for the paper trailing edge in each mode. SP2403 and SP2407 are multiplied by these SP values.		
	Plain: 154 mm/sec, 1200: 77 mm/sec		

	Note			
	The paper trailing edge area can be adjusted with SP2424.			
001	Paper Transfer: Plain: 1st Side	*ENG		
002	Paper Transfer: Plain: 2nd Side	*ENG		
003	Paper Transfer: 1200: 1st Side	*ENG		
004	Paper Transfer: 1200: 2nd side	*ENG	[0.4-400/100/59//]	
005	Separation DC: Plain: 1st Page	*ENG	[0 to 400 / 100 / 5%/step]	
006	Separation DC: Plain: 2nd Page	*ENG		
007	Separation DC: 1200: 1st Page	*ENG		
008	Separation DC: 1200: 2nd side	*ENG		

	[Plain: Switch Timing: Trail. Edge]			
Adjusts the bias/voltage switch timing of the paper transfer roller/disc paper trailing edge between the erase margin area and the image are Plain: 154 mm/sec, 1200: 77 mm/sec				
001	Paper Transfer: Plain: 1st Side	*ENG		
002	Paper Transfer: Plain: 2nd Side	*ENG		
003	Paper Transfer: 1200: 1st Side	*ENG		
004	Paper Transfer: 1200: 2nd side	*ENG		
005	Separation DC: Plain: 1st Page	*ENG	[0 to 50 / 0 / 2 mm/step]	
006	Separation DC: Plain: 2nd Page	*ENG		
007	Separation DC: 1200: 1st Page	*ENG	-	
008	Separation DC: 1200: 2nd side	*ENG		

2430	[Plain: Environment Correction] DFU		
Plain: 154 mm/sec, 1200: 77 mm/sec			
001	Separation DC: Plain: 1st Page	*ENG	[1 to 60 / 26 / 1 /step]
002	Separation DC: Plain: 2nd Page	*ENG	[1 to 60 / 32 / 1 /step]

003	Paper Transfer: BW: 1st Side	*ENG	[1 to 60 / 1 / 1 /step]
004	Paper Transfer: BW: 2nd Side	*ENG	[1 to 60 / 11 / 1 /step]
005	Paper Transfer: FC: 1st Side	*ENG	[1 to 60 / 39 / 1 /step]
006	Paper Transfer: FC: 2nd Side	*ENG	[1 to 60 / 14 / 1 /step]
007	Separation DC: 1200: 1st Page	*ENG	[1 to 60 / 26 / 1 /step]
800	Separation DC: 1200: 2nd side	*ENG	[1 to 60 / 32 / 1 /step]
009	Paper Transfer: 1200: BW: 1st Side	*ENG	[] to 40 / 11 / 1 /stem]
010	Paper Transfer: 1200: BW: 2	*ENG	[1 to 60 / 11 / 1 /step]
011	Paper Transfer: 1200: FC: 1st Side	*ENG	[] to 40 / 40 / 1 /stem]
012	Paper Transfer: 1200: FC: 2	*ENG	[1 to 60 / 49 / 1 /step]

	[Thin: Bias]			
2451	Adjusts the DC voltage of the discharge plate for thin paper. Plain: 154 mm/sec, 1200: 77 mm/sec			
001	Separation DC: Plain: 1st Side	*ENG	[0 to 4000 / 2000 / 10 -V/	
003	Separation DC: 1200: 1st Page	*ENG	step]	

	[Thin: Bias: BW]			
2453	Adjusts the current for the paper transfer roller for thin paper in black-and-white mode. Plain: 154 mm/sec, 1200: 77 mm/sec			
001	Paper Transfer: Plain: 1st Side	*ENG	[0 to 250 / 22 / 1 -µA /step]	
003	Paper Transfer: 1200: 1st Side	*ENG	[0 to 250 / 11 / 1 -µA /step]	

	[Thin: Bias: FC]			
Adjusts the current for the paper transfer roller for thin paper in full color mode. Plain: 154 mm/sec, Fine: 77 mm/sec				
001	Paper Transfer: Plain: 1st Side	*ENG	[0 to 250 / 30 / 1 -µA /step]	
003	Paper Transfer: 1200: 1st Side	*ENG	[0 to 250 / 15 / 1 -µA /step]	

	[Thin: Paper Size Correction]		
2461	Adjusts the size correction coefficient for the paper transfer roller current for each paper siz SP2453 and SP2457 are multiplied by these SP values. Plain: 154 mm/sec, Fine: 77 mm/sec		
001	Paper Transfer: Plain: 1st Side: S1	*ENG	[100 to 600 / 100 / 5%/step] S1 size ≥ 297 mm (Paper width)
005	Paper Transfer: Plain: 1st Side: S2	*ENG	[100 to 600 / 120 / 5%/step] 297 mm ≥ S2 size ≥ 275 mm (Paper width)
009	Paper Transfer: Plain: 1st Side: S3	*ENG	[100 to 600 / 140 / 5%/step] 297 mm ≥ S2 size ≥ 275 mm (Paper width)
013	Paper Transfer: Plain: 1st Side: S4	*ENG	[100 to 600 / 160 / 5%/step] 297 mm ≥ S2 size ≥ 275 mm (Pape r width)
017	Paper Transfer: Plain: 1st Side: S5	*ENG	[100 to 600 / 180 / 5%/step]

	[Thin: Leading Edge Correction] Thin Paper: Leading Edge Correction			
0.471	Adjusts the correction to the paper transfer roller current at the paper leading edge in each mode. SP2453 and SP2457 are multiplied by these SP values.			
2471	Plain: 154 mm/sec, 1200: 77 mm/sec			
	 Note The paper leading edge area can be adjusted with SP2472. 			
001	Paper Transfer: Plain: 1st Side	*ENG		
003	Paper Transfer: 1200: 1st Side	*ENG	[0 to 400 / 100 / 5%/step]	
005	Separation DC: Plain: 1st Side	*ENG		
2471	Adjusts the correction to the discharge plate current at the paper leading edge in each SP2451 is multiplied by these SP values.			
24/ 1	Note			
	The paper leading edge area co	an be adjuste	ed with SP2472.	

007 Separation DC: 1200: 1st Side	*ENG	[0 to 400 / 100 / 5%/step]	
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	[Thin: Switch Timing: Lead. Edge]		
2472	Adjusts the bias/voltage switch timing of the paper transfer roller/discharge plate at the paper leading edge between the erase margin area and the image area. Plain: 154 mm/sec, 1200: 77 mm/sec		
001	Paper Transfer: Plain: 1st Side	*ENG	
003	Paper Transfer: 1200: 1st Side	*ENG	[0. 50 / 0 / 0 / 1
005	Separation DC: Plain: 1st Page	*ENG	[0 to 50 / 0 / 2 mm/step]
007	Separation DC: 1200: 1st Side	*ENG	

[Thin: Trailing Edge Correction] Thin Paper: Trailing Edge Correction				
2473	Adjusts the correction coefficient to the paper transfer roller current for the paper trailing edge in each mode. SP2453 and SP2457 are multiplied by these SP values.			
24/3	Plain: 154 mm/sec, 1200: 77 mm/sec Note The paper trailing edge area can be adjusted with SP2474.			
001	Paper Transfer: Plain: 1st Side	*ENG	[0 to 400 / 100 / 5%/step]	
003	Paper Transfer: 1200: 1st Side	*ENG	[0 to 400 / 100 / 5%/step]	
005	Separation DC: Plain: 1st Side	*ENG	[0 to 400 / 100 / 5%/step]	
007	Separation DC: 1200: 1st Page	*ENG	[0 to 400 / 100 / 5%/step]	

	[Thin: Switch Timing: Trail. Edge]		
2474	Adjusts the bias/voltage switch timing of the paper transfer roller/discharge plate at the paper trailing edge between the erase margin area and the image area. Plain: 154 mm/sec, 1200: 77 mm/sec		
001	Paper Transfer: Plain: 1st Side	*ENG	[0.1. 50 / 0 / 2 / 1]
003	Paper Transfer: 1200: 1st Side	*ENG	[0 to 50 / 0 / 2 mm/step]
005	Separation DC: Plain: 1st Side	*ENG	[0 to 50 / 0 / 1 mm/step]

007 Separation DC: 1200: 1st Page

2480	[Thin: Environment Correction] Plain: 154 mm/sec, 1200: 77 mm/sec		
001	Separation DC: Plain: 1st Side	*ENG	[1 to 60 / 26 / 1 /step]
003	Paper Transfer: Plain: BW: 1 st Side	*ENG	[1 to 60 / 11 / 1 / step]
005	Paper Transfer: Plain: FC: 1st Side	*ENG	[1 to 60 / 1 / 1 /step]
007	Separation DC: 1200: 1st Side	*ENG	[1 to 60 / 26 / 1 /step]
009	Paper Transfer: 1200: BW: 1st Side	*ENG	[1 to 60 / 11 / 1 /step]
011	Paper Transfer: 1200: FC: 1st Side	*ENG	[1 to 60 / 1 / 1 /step]

2481	[Glossy: Bias]		
001	Separation DC: Glossy: 1st Side	*ENG	[0 to 4000 / 2000 / 10 -V/step]
Adjusts the DC voltage of the discharge plate for glossy paper.		lossy paper.	

2482	[Glossy: Bias: BW]			
001	Paper Transfer: Glossy: 1st Side	*ENG	[0 to 250 / 12 / 1 –µA /step]	
001	Adjusts the current for the paper transfer roller for glossy paper in black-and-white mode			

2483	[Glossy: Bias: FC]		
001	Paper Transfer: Glossy: 1st Side	*ENG	[0 to 250 / 15 / 1 - µA / step]
001	Adjusts the current for the paper transfer roller for glossy paper in full color mode.		

2484	[Glossy: Paper Size Correction]		
001	Paper Transfer: Glossy: 1st Side: S1	*ENG	[100 to 600 / 100 / 5%/step]
005	Paper Transfer: Glossy: 1st Side: S2	*ENG	[100 to 600 / 120 / 5%/step]
009	Paper Transfer: Glossy: 1st Side: S3	*ENG	[100 to 600 / 140 / 5%/step]
013	Paper Transfer: Glossy: 1st Side: S4	*ENG	[100 to 600 / 160 / 5%/step]

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017	Paper Transfer: Glossy: 1st Side: S5	*ENG	[100 to 600 / 180 / 5%/step]

2485	[Glossy: Leading Edge Correction]		
001	Paper Transfer: Glossy: 1st Side	*EN G	[10 to 400 / 100 / 5%/step]
005	Separation DC: Glossy: 1st Page	*EN G	[10 to 400 / 100 / 5%/step]]

2486	[Glossy: Switch Timing: Lead. Edge]		
001	Paper Transfer: Glossy: 1st Side	*ENG	[0.4- 50 / 0 / 2 /]
005	Separation DC: Glossy: 1st Page	*ENG	[0 to 50 / 0 / 2 mm/step]

2487	[Glossy: Trailing Edge Correction]		
001	Paper Transfer: Glossy: 1st Side	*ENG	[0 to 400 / 100 / 5 %/step]
005	Separation DC: Glossy: 1st Page	*ENG	[0 10 400 / 100 / 3 %/ siep]

2488	[Glossy: Trailing Edge Correction]		
001	Paper Transfer: Glossy: 1st Side	*ENG	[0 to 50 / 0 / 2 mm/step]
005	Separation DC: Glossy: 1st Page	*ENG	[O IO 3O / U / 2 mm/siep]

2489	[Glossy: Environment Correction]		
001	Separation DC: Glossy: 1st Page	*ENG	[1 to 60 / 26 / 1 /step]
003	Paper Transfer: BW: 1st Side	*ENG	[1 to 60 / 11 / 1 /step]
005	Paper Transfer: BW: 2nd Side	*ENG	[1 to 60 / 1 / 1 /step]

	[Thick 1: Bias]			
2501	Adjusts the DC voltage of the discharge plate for thick 1 paper. Thick 1 and Thick 2&Fine: 77 mm/sec			
001	Separation DC: Thick 1: 1st Side	*ENG	[0 to 4000 / 1000 / 10 –V/ step]	

002 Separation DC: Thick 1: 2nd Side	*ENG	
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	[Thick 1: Bias: BW]			
2502	Adjusts the current for the paper transfer roller for thick 1 paper in black-and-white mode. Thick 1 and Thick 2&Fine: 77 mm/sec			
001	Paper Transfer: Thick 1: 1st Side	*ENG	[0 += 250 / 12 / 1	
002	Paper Transfer: Thick 1: 2nd Side	*ENG	[0 to 250 / 12 / 1 –µA /step]	

	[Thick 1: Bias: FC] Adjusts the current for the paper transfer roller for thick 1 paper in full color mode. Thick 1 and Thick 2&Fine: 77 mm/sec				
2507					
001	Paper Transfer: Thick 1: 1st Side	*ENG	[0.4-200 / 15 / 1 / /]		
002	Paper Transfer: Thick 1: 2nd Side	*ENG	[0 to 200 / 15 / 1 –µA /step]		

	[Thick 1: Paper Size Correction]				
2511	Adjusts the size correction coefficient for the paper transfer roller current for each paper size. SP2502 and SP2507 are multiplied by these SP values. Thick 1 and Thick 2&Fine: 77 mm/sec				
001	Paper Transfer: Thick 1: 1st Side: S1	*ENG	[100 to 600 / 100 / 5%/step]		
002	Paper Transfer: Thick 1: 2nd Side: S1	*ENG	S1 size ≥ 297 mm (Paper width)		
005	Paper Transfer: Thick 1: 1st Side: S2	*ENG	[100 to 600 / 105 / 5%/step] 297 mm ≥ S2 size ≥ 275 mm (Paper width)		
006	Paper Transfer: Thick 1: 2nd Side: S2	*ENG	[100 to 600 / 130 / 5%/step] 297 mm ≥ S2 size ≥ 275 mm (Paper width)		
009	Paper Transfer: Thick 1: 1st Side: S3	*ENG	[100 to 600 / 110 / 5%/step] 275 mm ≥ S3 size ≥ 210 mm (Paper width)		
010	Paper Transfer: Thick 1: 2nd Side: S3	*ENG	[100 to 600 / 160 / 5%/step]		

			275 mm ≥ S3 size ≥ 210 mm (Paper width)
013	Paper Transfer: Thick 1: 1st Side: S4	*ENG	[100 to 600 / 115 / 5%/step] 210 mm ≥ S4 size ≥ 148 mm (Paper width)
014	Paper Transfer: Thick 1: 2nd Side: S4	*ENG	[100 to 600 / 190 / 5%/step] 210 mm ≥ S4 size ≥ 148 mm (Paper width)
017	Paper Transfer: Thick 1: 1st Side: S5	*ENG	[100 to 600 / 120 / 5%/step] 148 mm ≥ S5 size (Paper width)
018	Paper Transfer: Thick 1: 2nd Side: S5	*ENG	[100 to 600 / 220 / 5%/step] 148 mm ≥ S5 size (Paper width)

	[Thick 1: Leading Edge Correction] Thick 1 Paper: Leading Edge Correction			
2521	Adjusts the correction to the paper transfer roller current at the paper leading edge in each mode. SP2502 and SP2507 are multiplied by these SP values.			
2521	Thick 1 and Thick 2&Fine: 77 mm/sec			
	↓ Note			
	The paper leading edge area can be adjusted with SP2522.			
001	Paper Transfer: Thick 1: 1st Side	*ENG	[0 to 400 / 100 / 5%/step]	
002	Paper Transfer: Thick 1: 2nd Side	*ENG	[0 to 400 / 100 / 3 %/ step]	
005	Separation DC: Thick 1: 1st Side	*ENG	[0 to 400 / 100 / 5%/step]	
006	Separation DC: Thick 1: 2nd Side	*ENG	[0 10 400 / 100 / 3 %/ step]	

		[Thick 1: Switch Timing: Lead. Edge]				
Adjusts the bias/ voltage switch timing of the paper transfer roller/ discharge plate paper leading edge between the erase margin area and the image area. Thick 1 and Thick 2&Fine: 77 mm/sec						
	001	Paper Transfer: Thick 1: 1st Side	*ENG	[0.45.50.40.42		
	002	Paper Transfer: Thick 1: 2nd Side	*ENG	[0 to 50 / 0 / 2 mm/step]		

005	Separation DC: Thick 1: 1st Side	*ENG	[0 to 50 / 0 / 2 mm/step]
006	Separation DC: Thick 1: 2nd Side	*ENG	

	[Thick 1: Trailing Edge Correction] Thick 1 Paper: Trailing Edge Correction				
0.500	Adjusts the correction coefficient to the paper transfer roller current for the paper trailing edge in each mode. SP2502 and SP2507 are multiplied by these SP values.				
2523	Thick 1 and Thick 2&Fine: 77 mm/sec				
	Note				
	The paper trailing edge area can be adjusted with SP2524.				
001	Paper Transfer: Thick 1: 1st Side	: 1st Side *ENG			
002	Paper Transfer: Thick 1: 2nd Side	sfer: Thick 1: 2nd Side *ENG [0 to 400 / 100 / 5%			
005	5 Paper Transfer: Thick 1: 1st Side *ENG				
006	Paper Transfer: Thick 1: 2nd Side	*ENG	[0 to 400 / 100 / 5%/step]		

	[Thick 1: Switch Timing: Trail. Edge]				
2524	Adjusts the bias/voltage switch timing of the paper transfer roller/discharge plate at the paper trailing edge between the erase margin area and the image area. Thick 1 and Thick 2&Fine: 77 mm/sec				
001	Paper Transfer: Thick 1: 1st Side	*ENG			
002	Paper Transfer: Thick 1: 2nd Side	*ENG	[0.4. 50 / 0. / 2 / 44]		
005	Paper Transfer: Thick 1: 1st Side	*ENG	[0 to 50 / 0 / 2 mm/step]		
006	Paper Transfer: Thick 1: 2nd Side	*ENG			

2530	[Thick 1: Environment Correction]		
001	Paper Transfer: Thick 1: 1st Side	*ENG	[1 to 40 / 22 / 1 /ston]
002	Paper Transfer: Thick 1: 2nd Side	*ENG	[1 to 60 / 22 / 1 /step]
003	Paper Transfer: BW: 1st Side	*ENG	[1. (0/11/1/]
004	Paper Transfer: BW: 2nd Side	*ENG	[1 to 60 / 11 / 1 /step]
005	Paper Transfer: FC: 1st Side	*ENG	[1 to 60 / 1 / 1 /step]

006 Paper Transfer: FC: 2nd Side *ENG [1 to 60 / 11 / 1	l /step]	
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2551	[Thick 2: Bias]		
Adjusts the DC voltage of the discharge plate for thick 2 paper.			
001	Separation DC: 1st Page	*ENG	[0 to 4000 / 1000 / 10 V//to all
002	Separation DC: 2nd Page	*ENG	[0 to 4000 / 1000 / 10 –V/step]

2553	[Thick 2: Bias: BW]		
Adjusts the current for the paper transfer roller for thick 2 paper in black-and-wh			
001	Paper Transfer: 1st Side	*ENG	[0 to 250 / 7 / 1 - µA / step]
002	Paper Transfer: 2nd Side	*ENG	[0 to 250 / 12 / 1 –µA /step]

2558	[Thick 2: Bias: FC]			
2556	Adjusts the current for the paper transfer roller for thick 2 paper in full color mode.			
001	Paper Transfer: 1st Side	*ENG	[0 to 250 / 16 / 1 –µA /step]	
002	Paper Transfer: 2nd Side	*ENG	[0 to 250 / 15 / 1 –μA /step]	

	[Thick 2: Paper Size Correction]			
Adjusts the size correction coefficient for the paper transfer roller current for each public SP2553 and SP2558 are multiplied by these SP values.				
001	Paper Transfer: 1st Side: S1	*ENG	[100 to 600 / 100 / 5%/step]	
002	Paper Transfer: 2nd Side: S1	*ENG	S1 size ≥ 297 mm (Paper width)	
003	Paper Transfer: 1st Side: S2	*ENG	[100 to 600 / 105 / 5%/step] 297 mm ≥ S2 size ≥ 275 mm (Paper width)	
004	Paper Transfer: 2nd Side: S2	*ENG	[100 to 600 / 160 / 5%/step] 297 mm ≥ S2 size ≥ 275 mm (Paper width)	
005	Paper Transfer: 1st Side: S3	*ENG	[100 to 600 / 110 / 5%/step] 275 mm ≥ S3 size ≥ 210 mm (Paper width)	
006	Paper Transfer: 2nd Side: S3	*ENG	[100 to 600 / 260 / 5%/step]	

			275 mm≥S3 size≥210 mm (Paper width)
007	Paper Transfer: 1st Side: S4	*ENG	[100 to 600 / 120 / 5%/step] 210 mm ≥ S4 size ≥ 148 mm (Paper width)
008	Paper Transfer: 2nd Side: S4	*ENG	[100 to 600 / 430 / 5%/step] 210 mm ≥ S4 size ≥ 148 mm (Paper width)
009	Paper Transfer: 1st Side: S5	*ENG	[100 to 600 / 140 / 5%/step] 148 mm ≥ S5 size (Paper width)
010	Paper Transfer: 2nd Side: S5	*ENG	[100 to 600 / 600 / 5%/step] 148 mm ≥ S5 size (Paper width)

	[Thick 2: Leading Edge Correction] Thick 2 Paper: Leading Edge Correction				
2571	Adjusts the correction to the paper transfer roller current at the paper leading edge in each mode. SP2553 and SP2558 are multiplied by these SP values.				
Note					
	The paper leading edge area can be adjusted with SP2572.				
001	Paper Transfer: 1st Side	*ENG	[0 to 400 / 100 / 5%/step]		
002	Paper Transfer: 2nd Side	*ENG	[0 10 400 / 100 / 3 % / siep]		
2571	Adjusts the correction to the discharge plate current at the paper leading edge in ed SP2551 is multiplied by these SP values.				
257 1	₩ Note				
	The paper leading edge area can be adjusted with SP2572.				
003	Separation DC: 1st Page	*ENG	[0 to 400 / 100 / 5%/step]		
004	Separation DC: 2nd Page	*ENG	[0 10 400 / 100 / 3/0/ siep]		

	[Thick 2: Switch Timing: Lead. Edge]				
2572	Adjusts the bias/voltage switch timing of the paper transfer roller/discharge plate at the paper leading edge between the erase margin area and the image area.				
001	Paper Transfer: 1st Side	*ENG			
002	Paper Transfer: 2nd Side	*ENG	[0 to 50 / 0 / 2mm/step]		

	[Thick 2: Trailing Edge Correction] Thick 2 Paper: Trailing Edge Correction			
2573	Adjusts the correction to the paper transfer roller current for the paper trailing edge in each mode. SP2553 and SP2558 are multiplied by these SP values.			
	 Note The paper trailing edge area can be adjusted with SP2574. 			
001	Paper Transfer: 1 st Side	*ENG	[0 to 400 / 100 / 5%/step]	
002	Paper Transfer: 2nd Side	*ENG	[0 10 400 / 100 / 3 %/ siep]	
003	Separation DC: 1st Page	*ENG	[0 to 400 / 100 / 5%/step]	
004	Separation DC: 2nd Page	*ENG	[0 to 400 / 100 / 5%/step]	

	[Thick 2: Trailing Edge Correction]			
2574		the bias/voltage switch timing of the paper transfer roller/discharge plate at the railing edge between the erase margin area and the image area.		
001	Paper Transfer: 1st Side	*ENG	[0 to 50 / 0 / 2 mm /ston]	
002	Paper Transfer: 2nd Side	*ENG	[0 to 50 / 0 / 2 mm/step]	
003	Separation DC: 1st Page	*ENG	[0 to 50 / 0 / 2 mm/step]	
004	Separation DC: 2nd Page	*ENG	[0 to 50 / 0 / 2 mm/step]	

2580	[Thick 2 Environment Correction]		
001	Separation DC: 1st Page	*ENG	[] to 60 / 22 /] /stop]
002	Separation DC: 2nd Page	*ENG	[1 to 60 / 22 / 1 /step]
003	Paper Transfer: BW: 1 st Side	*ENG	[040/11/1/]
004	Paper Transfer: BW: 2nd Side	*ENG	[0 to 60 / 11 / 1 /step]
005	Paper Transfer: FC: 1st Side	*ENG	[1 to 60 / 53 / 1 /step]
006	Paper Transfer: FC: 2nd Side	*ENG	[1 to 60 / 11 / 1 /step]

2601	[OHP: Bias]		
2001	Adjusts the DC voltage of the discharge plate for OHP.		re for OHP.
001	Separation DC	*ENG	[0 to 4000 / 1000 / 10 -V/step]

2603	[OHP: Bias: BW]	OHP: Bias: BW]		
2003	Adjusts the current for the paper transfer roller for OHP in black-and-white mode.		oller for OHP in black-and-white mode.	
001	Paper Transfer	*ENG	[0 to 250 / 12 / 1 –µA /step]	

2608	[OHP: Bias: FC]		
2006	Adjusts the current for the paper transfer roller for OHP in full color mode.		
001	Paper Transfer	*ENG	[0 to 250 / 15 / 1 –µA /step]

	[OHP: Paper Size Correction]		
Adjusts the size correction coefficient for the paper transfer roller current for SP2603 and SP2608 are multiplied by these SP values.			
001	Paper Transfer: S1	*ENG	[100 to 600 / 100 / 5%/step] S1 size ≥ 297 mm (Paper width)
002	Paper Transfer: S2	*ENG	[100 to 600 / 140 / 5%/step] 297 mm ≥ S2 size ≥ 275 mm (Paper width)
003	Paper Transfer: S3	*ENG	[100 to 600 / 200 / 5%/step] 275 mm ≥ S3 size ≥ 210 mm (Paper width)
004	Paper Transfer: S4	*ENG	[100 to 600 / 260 / 5%/step] 210 mm ≥ S4 size ≥ 148 mm (Paper width)
005	Paper Transfer: S5	*ENG	[100 to 600 / 330 / 5%/step] 148 mm ≥ S5 size (Paper width)

	[OHP: Leading Edge Correction] OHP: Leading Edge Correction
2621	Adjusts the correction to the paper transfer roller current at the paper leading edge in each mode. SP2603 and SP2608 are multiplied by these SP values.

Note

	[OHP: Switch Timing: Lead. Ed	ge]	
2622	Adjusts the bias/voltage switch timing of the paper transfer roller/discharge plate at the paper leading edge between the erase margin area and the image area.		
001	Paper Transfer	*ENG	[0 to 50 / 0 / 2 mm/step]
002	Separation DC	*ENG	

[OHP: Trailing Edge Correction] OHP: Trailing Edge Correction

Adjusts the correction to the paper transfer roller current for the paper trailing edge in each mode. SP2603 and SP2608 are multiplied by these SP values.

Note

The paper trailing edge area can be adjusted with SP2624.

Paper Transfer

*ENG [0 to 400 / 100 / 5%/step]

Oo2 Separation DC [0 to 400 / 100 / 5%/step]

	[OHP: Trailing Edge Correction	n]	
2624	Adjusts the bias/voltage switch timing of the paper transfer roller/discharge plate at the paper trailing edge between the erase margin area and the image area.		
001	Paper Transfer	*ENG	[-100 to 0 / 0 / 1 mm/step]
002	Separation DC	*ENG	[0 to 50 / 0 / 2 mm/step]

2630	[OHP: Environment Correction]
I	

001	Separation DC	*ENG	[1 to 60 / 22 / 1 /step]
002	Paper Transfer: BW	*ENG	[1 to 60 / 11 / 1 /step]
003	Paper Transfer: FC	*ENG	[1 to 60 / 1 / 1 /step]

2450	[Thick 3: Bias]		
Adjusts the DC voltage of the discharge plate for thick paper 3.			k paper 3.
001	Separation DC: 1st Page	*ENG	[0.1. 4000 / 1000 / 10. 1//]
002	Separation DC: 2nd Page	*ENG	[0 to 4000 / 1000 / 10 -V/step]

2651	[Thick 3: Bias: BW]			
2031	Adjusts the current for the paper transfer roller for thick paper 3 in black-and-white m			
001	Paper Transfer: 1st Side			
002	Paper Transfer: 2nd Side	*ENG	[0 to 250 / 12 / 1 –µA /step]	

2652	[Thick 3: Bias: FC]		
Adjusts the current for the paper transfer roller for		r roller for thic	ck paper 3 in full color mode.
001	Paper Transfer: Thick 3: 1st Side	*ENG	[0 to 250 / 11 / 1 -µA /step]
002	Paper Transfer: Thick 3: 2nd Side	*ENG	[0 to 250 / 15 / 1 –µA /step]

	[Thick 3: Paper Size Correction	ո]			
Adjusts the size correction coefficient for the paper transfer roller current for e SP2651 and SP2652 are multiplied by these SP values.					
001	Paper Transfer: Thick 3: 1st Side: S1	*ENG	[100 to 600 / 100 / 5%/step] S1 size ≥ 297 mm (Paper width)		
002	Paper Transfer: Thick 3: 1st Side: S2	*ENG	[100 to 600 / 100 / 5%/step] 297 mm ≥ S2 size ≥ 275 mm (Paper width)		
003	Paper Transfer: Thick 3: 1st Side: S3	*ENG	[100 to 600 / 100 / 5%/step] 275 mm ≥ S3 size ≥ 210 mm (Paper width)		

004	Paper Transfer: Thick 3: 1st Side: S4	*ENG	[100 to 600 / 160 / 5%/step] 210 mm ≥ S4 size ≥ 148 mm (Paper width)
005	Paper Transfer: Thick 3: 1st Side: S5	*ENG	[100 to 600 / 100 / 5%/step] 148 mm ≥ S5 size (Paper width)
006	Paper Transfer: Thick 3: 2nd Side: S1	*ENG	[100 to 600 / 260 / 5%/step] S1 size ≥ 297 mm (Paper width)
007	Paper Transfer: Thick 3: 2nd Side: S2	*ENG	[100 to 600 / 100 / 5%/step] 297 mm ≥ S2 size ≥ 275 mm (Paper width)
008	Paper Transfer: Thick 3: 2nd Side: S2	*ENG	[100 to 600 / 430 / 5%/step] 275 mm ≥ S3 size ≥ 210 mm (Paper width)
009	Paper Transfer: Thick 3: 2nd Side: S4	*ENG	[100 to 600 / 100 / 5%/step] 210 mm ≥ S4 size ≥ 148 mm (Paper width)
010	Paper Transfer: Thick 3: 2nd Side: S4	*ENG	[100 to 600 / 600 / 5%/step] 148 mm ≥ S5 size (Paper width)

	[Thick 3: Leading Edge Correction] Thick 3 Paper: Leading Edge Correction			
2654	Adjusts the correction to the paper transfer roller current at the paper leading edge in each mode. SP2651 and SP2652 are multiplied by these SP values.			
Note				
	The paper leading edge area can be adjusted with SP2655.			
001	Paper Transfer: Thick 3: 1st Side	*ENG	[0.45, 400, / 100, / 59/ /44-1]	
002	Separation DC: Thick 3: 1st Page	*ENG	[0 to 400 / 100 / 5%/step]	
	Adjusts the correction to the discharge plate current at the paper leading edge in each mode. SP2650 is multiplied by these SP values.			
2654	Note			
	The paper leading edge area can be adjusted with SP2655.			
003	 		[0 to 400 / 100 / 5%/step]	
004	Separation DC: Thick 3: 2nd Page	*ENG	[0 10 400 / 1 00 / 3 %/ siep]	

2655	[Thick 3: Switch Timing: Lead. Edge]
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	Adjusts the bias/voltage switch timing of the paper transfer roller/discharge plate at the paper leading edge between the erase margin area and the image area.			
001	Paper Transfer: 1st Side	*ENG		
002	Separation DC: 1st Page	*ENG	[0 to 50 / 0 / 2 mm/step]	
003	Paper Transfer: 2nd Side	*ENG		
004	Separation DC: 2nd Page	*ENG		

	[Thick 3: Trailing Edge Correction] Thick 3 Paper: Trailing Edge Correction			
2656	Adjusts the correction to the paper transfer roller current for the paper trailing edge in each mode. SP2651 and SP2652 are multiplied by these SP values.			
	 Note The paper trailing edge area can be adjusted with SP2657. 			
001	Paper Transfer: Thick 3: 1st Side	*ENG	[0 to 400 / 100 / 5%/step]	
002	Paper Transfer: Thick 3: 2nd Side	*ENG	[0 to 400 / 100 / 3 % / step]	
003	Separation DC: Thick 3: 1st Page	*ENG	[0 to 400 / 100 / 5%/step]	
004	Separation DC: Thick 3: 2st Page	*ENG	[0 to 400 / 100 / 5%/step]	

	[Thick 3: Trailing Edge Correction]				
2657	Adjusts the bias/voltage switch timing of the paper transfer roller/discharge plate at the paper trailing edge between the erase margin area and the image area.				
001	Paper Transfer: 1st Side	*ENG	:NG		
002	Paper Transfer: 2nd Side	*ENG	[0 to 50 / 0 / 2 mm/step]		
003	Separation DC: 1st Page	*ENG			
004	Separation DC: 2nd Page	*ENG	[0 to 50 / 0 / 2 mm/step]		

	[Thick 3: Environment Correction] Thick 3 Paper: MM Environment Coefficient Adjustment			
2660	Adjusts the environment coefficient for each mode. When the environment is detected as MM, SP2651 and SP2652 are multiplied by these SP values.			
001	Separation DC: 1st Page			

Separation DC: 2nd Page

002

*ENG

	[Special 1: Bias]				
2751	Adjusts the DC voltage of the discharge plate for special paper 1. Plain: 154 mm/sec, 1200: 77 mm/sec				
001	Separation DC: Plain: 1st Side				
002	Separation DC: Plain: 2nd Side *ENG [0 to 4000 / 3000 / 10 - V/step				
003	Paper Transfer: 1200: 1st Side	*ENG	[0 to 4000 / 2000 / 10 –V/step]		

	[Special 1: Bias: BW]			
2753	Adjusts the current for the paper transfer roller for special paper 1 in black-and-white mod Plain: 154 mm/sec, Fine: 1200mm/sec			
001	Paper Transfer: Plain: 1st Side	*ENG		
002	Paper Transfer: Plain: 2nd Side	*ENG	[0 to 200 / 22 / 1 –µA /step]	
003	Paper Transfer: 1200: 1st Side	*ENG		

[Special 1: Bias: FC]					
2757	Adjusts the current for the paper transfer roller for special paper 1 in full color mode. Plain: 154 mm/sec, Fine: 1200mm/sec				
001	Paper Transfer: Plain: 1st Side *ENG [0 to 200 / 30 / 1 –μA /step				
002	Paper Transfer: Plain: 2nd Side	*ENG	[0 to 200 / 33 / 1 –µA /step]		
003	Paper Transfer: 1200: 1st Side	*ENG	[0 to 250 / 15 / 1 –µA /step]		

	[Special 1: Paper Size Correction]			
2761	Adjusts the size correction coefficient for the paper transfer roller current for each paper si SP2753 and SP2757 are multiplied by these SP values.			
	Plain: 154 mm/sec, Fine: 77 mm/sec			
001	Paper Transfer: Plain: 1st Side: S1	*ENG	[100 to 600 / 100 / 5%/step]	
002	Paper Transfer: Plain: 2nd Side: S1	*ENG	S1 size ≥ 297 mm (Paper width)	
005	Paper Transfer: Plain: 1st Side: S2	*ENG	[100 to 600 / 120 / 5%/step]	
006	Paper Transfer: Plain: 2nd Side: S2	*ENG	297 mm ≥ S2 size ≥ 275 mm (Paper width)	
009	Paper Transfer: Plain: 1st Side: S3	*ENG	[100 to 600 / 140 / 5%/step]	
010	Paper Transfer: Plain: 2nd Side: S3	*ENG	275 mm ≥ S3 size ≥ 210 mm (Paper width)	
013	Paper Transfer: Plain: 1st Side: S4	*ENG	[100 to 600 / 160 / 5%/step]	
014	Paper Transfer: Plain: 2nd Side: S4	*ENG	210 mm ≥ S4 size ≥ 148 mm (Paper width)	
017	Paper Transfer: Plain: 1st Side: S5	*ENG	[100 to 600 / 180 / 5%/step]	
018	Paper Transfer: Plain: 2nd Side: S5	*ENG	148 mm ≥ S5 size (Paper width)	

	[Special 1: Leading Edge Correction] Special 1 Paper: Leading Edge Correction			
	Adjusts the correction to the paper transfer roller current at the paper leading edge in each mode. SP2753 and SP2757 are multiplied by these SP values.			
2771	Plain: 154 mm/sec, 1200: 77 mm/sec Note			
	The paper leading edge area can be adjusted with SP2772.			
001	Paper Transfer: Plain: 1 st Side			
002	Paper Transfer: Plain: 2nd Side	*ENG	[0 to 400 / 100 / 5%/step]	
003	Paper Transfer: 1200: 1st Side *ENG [0 to 400 / 100 / 5%/step]			
2771	Adjusts the correction to the discharge plate current at the paper leading edge in each mode. SP2751 is multiplied by these SP values.			

	Note		
	The paper leading edge area can be adjusted with SP2772.		
005	Separation DC: Plain: 1st Side	*ENG	[0.4-400 / 100 / 59/ /]
006	Separation DC: Plain: 2nd Side	*ENG	[0 to 400 / 100 / 5%/step]
007	Separation DC: 1200: 1st Side	*ENG	[0 to 400 / 100 / 5%/step]

	[Special 1: Switch Timing: Lead. Edge]			
2772	Adjusts the bias/ voltage switch timing of the paper transfer roller/ discharge plate at the paper leading edge between the erase margin area and the image area. Plain: 154 mm/sec, 1200: 77 mm/sec			
001	, .			
001	Paper Transfer: Plain: 1st Side	*ENG	[0 to 50 / 0 / 2 mm/step]	
002	Paper Transfer: Plain: 2nd Side	*ENG	[0 10 30 / 0 / 2 mm/ step]	
003	Paper Transfer: 1200: 1st Side	*ENG	[0 to 50 / 0 / 1 mm/step]	
005	Separation DC: Plain: 1st Side	*ENG		
006	Separation DC: Plain: 2nd Side	*ENG	[0 to 50 / 0 / 2 mm/step]	
007	Separation DC: 1200: 1st Side	*ENG		

	[Special 1: Trailing Edge Correction] Special 1 Paper: Trailing Edge Correction				
	Adjusts the correction to the paper transfer roller current for the paper trailing edge in each mode. SP2753 and SP2757 are multiplied by these SP values.				
2773	Plain: 154 mm/sec, 1200: 77 mm/sec				
	Note				
	The paper trailing edge area can be adjusted with SP2774.				
001	Paper Transfer: Plain: 1st Side	*ENG			
002	Paper Transfer: Plain: 2nd Side	*ENG			
003	Paper Transfer: 1200: 1st Side	*ENG	[0 to 400 / 100 / 5%/step]		
005	Separation DC: Plain: 1st Side	*ENG			
006	Separation DC: Plain: 2nd Side	*ENG			

1200: 1st Side *EN	G	
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	[Special 1: Switch Timing: Trail. Edge]		
2774	Adjusts the bias/voltage switch timing of the paper transfer roller/discharge plate at the paper trailing edge between the erase margin area and the image area.		
	Plain: 154 mm/sec, 1200: 77 mm/sec		
001	Paper Transfer: Plain: 1st Side	*ENG	
002	Paper Transfer: Plain: 2nd Side	*ENG	
003	Paper Transfer: 1200: 1st Side	*ENG	[0.4- 50 / 0 / 2 /-+]
005	Separation DC: Plain: 1st Side	*ENG	[0 to 50 / 0 / 2 mm/step]
006	Separation DC: Plain: 2nd Side	*ENG	
007	Separation DC: 1200: 1st Side	*ENG	

2780	[Special 1: Environment Correction] Plain: 154 mm/sec, 1200: 77 mm/sec	:	
001	Separation DC: Plain: 1st Side	*ENG	[1 to 60 / 26 / 1 /step]
002	Separation DC: Plain: 2nd Side	*ENG	[1 to 60 / 32 / 1 /step]
003	Paper Transfer: Plain: BW: 1st Side	*ENG	[1. (0/11/1/.]
004	Paper Transfer: Plain: BW:2nd Side	*ENG	[1 to 60 / 11 / 1 /step]
005	Paper Transfer: Plain: FC: 1st Side	*ENG	[1 to 60 / 1 / 1 /step]
006	Paper Transfer: Plain: FC:2nd Side	*ENG	[1 to 60 / 14 / 1 /step]
007	Separation DC: 1200: 1st Side	*ENG	[1 to 60 / 26 / 1 /step]
009	Paper Transfer: 1200: BW: 1st Side	*ENG	[1 to 60 / 11 / 1 /step]
011	Paper Transfer: 1200: FC: 1st Side	*ENG	[1 to 60 / 1 / 1 /step]

[Special 2: Bias]	
2801	Adjusts the DC voltage of the discharge plate for special paper 2.
	Plain: 154 mm/sec, 1200: 77 mm/sec

001	Separation DC: Plain: 1st Side	*ENG	[0 to 4000 / 2000 / 10 –V/step]
002	Separation DC: Plain: 2nd Side	*ENG	[0 to 4000 / 3000 / 10 –V/step]
003	Separation DC: 1200: 1st Side	*ENG	[0 to 4000 / 2000 / 10 –V/step]

	[Special 2: Bias: BW]		
2803	Adjusts the current for the paper transfer roller for special paper 2 in black-and-white mode. Plain: 154 mm/sec, 1200: 77 mm/sec		
001	Paper Transfer: Plain: 1st Side	*ENG	[0.1, 200 / 22 / 1
002	Paper Transfer: Plain: 2nd Side	*ENG	[0 to 200 / 22 / 1 -µA /step]
003	Separation DC: 1200: 1st Side	*ENG	[0 to 200 / 11 / 1 -µA /step]

	[Special 2: Bias: FC]		
2807	Adjusts the current for the paper transfer roller for special paper 2 in full color mode. Plain: 154 mm/sec, 1200: 77 mm/sec		
001	Paper Transfer: Plain: 1st Side	*ENG	[0 to 200 / 30 / 1 -µA /step]
002	Paper Transfer: Plain: 2nd Side	*ENG	[0 to 200 / 33 / 1 - µA / step]
003	Separation DC: 1200: 1st Side	*ENG	[0 to 200 / 15 / 1 -µA /step]

[Special 2: Paper Size Correction]			
2811	Adjusts the size correction coefficient for the paper transfer roller current for each paper size. SP2803 and SP2807 are multiplied by these SP values.		
	Plain: 154 mm/sec, 1200: 77 mm/sec	:	
001	Paper Transfer: Plain: 1st Side: S1	*ENG	[100 to 600 / 100 / 5%/step]
002	Paper Transfer: Plain: 2nd Side: S1	*ENG	S1 size≥297 mm (Paper width)
005	Paper Transfer: Plain: 1st Side: S2	*ENG	[100 to 600 / 120 / 5%/step] 297 mm ≥ S2 size ≥ 275 mm (Paper width)
006	Paper Transfer: Plain: 2nd Side: S2	*ENG	[100 to 600 / 120 / 5%/step]

			297 mm ≥ S2 size ≥ 275 mm (Paper width)
009	Paper Transfer: Plain: 1st Side: S3	*ENG	[100 to 600 / 140 / 5%/step] 275 mm ≥ S3 size ≥ 210 mm (Paper width)
010	Paper Transfer: Plain: 2nd Side: S3	*ENG	[100 to 600 / 140 / 5%/step] 275 mm ≥ S3 size ≥ 210 mm (Paper width)
013	Paper Transfer: Plain: 1st Side: S4	*ENG	[100 to 600 / 160 / 5%/step] 210 mm ≥ S4 size ≥ 148 mm (Paper width)
014	Paper Transfer: Plain: 2nd Side: S4	*ENG	[100 to 600 / 220 / 5%/step] 210 mm ≥ S4 size ≥ 148 mm (Paper width)
017	Paper Transfer: Plain: 1st Side: S5	*ENG	[100 to 600 / 180 / 5%/step] 148 mm ≥ S5 size (Paper width)
018	Paper Transfer: Plain: 2nd Side: S5	*ENG	[100 to 600 / 180 / 5%/step] 148 mm ≥ S5 size (Paper width)

	[Special 2: Leading Edge Correction] Special 2 Paper: Leading Edge Correction Adjusts the correction to the paper transfer roller current at the paper leading edge in each mode. SP2803 and SP2807 are multiplied by these SP values. Plain: 154 mm/sec, 1200: 77 mm/sec		
0001			
2821			
	₩ Note		
	The paper leading edge area can be adjusted with SP2822.		
001	Paper Transfer: Plain: 1st Side	*ENG	[0 to 400 / 100 / 5%/step]
002	Paper Transfer: Plain: 2nd Side	*ENG	[0 to 400 / 100 / 5%/step]
003	Paper Transfer: 1200: 1st Side	*ENG	[0 to 400 / 100 / 5%/step]
2821	Adjusts the correction to the discharge plate current at the paper leading edge in each mode. SP2801 is multiplied by these SP values.		

	Note		
	The paper leading edge area can	be adjusted v	with SP2822.
005	Separation DC: Plain: 1st Side	*ENG	
006	Separation DC: Plain: 2nd Side	*ENG	[0 to 400 / 100 / 5%/step]
007	Separation DC: 1200: 1st Side	*ENG	

	[Special 2: Switch Timing: Lead. Edge]		
2822	Adjusts the bias/voltage switch timing of the paper transfer roller/discharge plate at the paper leading edge between the erase margin area and the image area.		
	Plain: 154 mm/sec, 1200: 77 mm/sec		
001	Paper Transfer: Plain: 1st Side	*ENG	
002	Paper Transfer: Plain: 2nd Side	*ENG	
003	Paper Transfer: 1200: 1st Side	*ENG	[0.4- 50 / 0 / 2 /]
005	Separation DC: Plain: 1st Side	*ENG	[0 to 50 / 0 / 2 mm/step]
006	Separation DC: Plain: 2nd Side	*ENG	
007	Separation DC: 1200: 1st Side	*ENG	

	[Special 2: Trailing Edge Correction] Special 2 Paper: Trailing Edge Correction			
0000	Adjusts the correction to the paper transfer roller current for the paper trailing edge in each mode. SP2803 and SP2807 are multiplied by these SP values.			
2823 Plain: 154 mm/sec, 1200: 77 mm/sec				
	 Note The paper trailing edge area can be adjusted with SP2824. 			
001	Paper Transfer: Plain: 1st Side	*ENG	[0.to 400 / 100 / 5% /stem]	
002	Paper Transfer: Plain: 2nd Side	*ENG	[0 to 400 / 100 / 5%/step]	
003	Paper Transfer: 1200: 1st Side	*ENG		
005	Separation DC: Plain: 1st Side	*ENG	[0 to 400 / 100 / 5%/step]	
006	Separation DC: Plain: 2nd Side	*ENG		

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	[Special 2: Switch Timing: Trail. Edge]			
2824	Adjusts the bias/voltage switch timing of the paper transfer roller/discharge plate at the paper trailing edge between the erase margin area and the image area.			
	Plain: 154 mm/sec, 1200: 77 mm/sec			
001	Paper Transfer: Plain: 1st Side	*ENG	[0 to 50 / 0 / 2 mm /stan]	
002	Paper Transfer: Plain: 2nd Side	*ENG	[0 to 50 / 0 / 2 mm/step]	
003	Paper Transfer: 1200: 1st Side	*ENG		
005	Separation DC: Plain: 1st Side	*ENG	[0.4- 50 / 0 / 2 /]	
006	Separation DC: Plain: 2nd Side	*ENG	[0 to 50 / 0 / 2 mm/step]	
007	Separation DC: 1200: 1st Side	*ENG	-	

2830	[Special 2: Environment Correction] Plain: 154 mm/sec, 1200: 77 mm/sec	;	
001	Paper Transfer: Plain: 1st Side	*ENG	[1 to 60 / 26 / 1 /step]
002	Paper Transfer: Plain: 2nd Side	*ENG	[1 to 60 / 32 / 1 /step]
003	Paper Transfer: Plain: BW: 1st Side	*ENG	[1 to 60 / 1 / 1 /step]
004	Paper Transfer: Plain: BW:2nd Side	*ENG	[1 to 60 / 11 / 1 /step]
005	Paper Transfer: Plain: FC: 1st Side	*ENG	[1 to 60 / 1 / 1 /step]
006	Paper Transfer: Plain: FC:2nd Side	*ENG	[1 to 60 / 14 / 1 /step]
007	Paper Transfer: 1200: 1st Side	*ENG	[1 to 60 / 26 / 1 /step]
009	Paper Transfer: 1200: BW: 1st Side	*ENG	[1 to 60 / 11 / 1 /step]
011	Paper Transfer: 1200: FC: 1st Side	*ENG	[1 to 60 / 1 / 1 /step]

	[Special 3: Bias]
2851	Adjusts the DC voltage of the discharge plate for special paper 3.
	Plain: 154 mm/sec, 1200: 77 mm/sec

Separation DC: Plain: 1st Side

*ENG

[0 to 4000 / **2000** / 10 -V/step]

	[Special 3: Bias: BW]		
Adjusts the current for the paper transfer roller for special paper 3 in black-and-white Plain: 154 mm/sec, 1200: 77 mm/sec			
001	Paper Transfer: Plain: 1st Side	*ENG	[0+, 250 / 22 / 1 + + + / + + +]
002	Paper Transfer: Plain: 2nd Side	*ENG	[0 to 250 / 22 / 1 –µA /step]
003	Paper Transfer: 1200: 1st Side	*ENG	[0 to 250 / 11 / 1 -µA /step]

	[Special 3: Bias: FC]			
2857	Adjusts the current for the paper transfer roller for special paper 3 in full color mode. Plain: 154 mm/sec, 1200: 77 mm/sec			
001	Paper Transfer: Plain: 1st Side	*ENG	[0 to 250 / 30 / 1 -µA /step]	
002	Paper Transfer: Plain: 2nd Side	*ENG	[0 to 250 / 33 / 1 -µA /step]	
003	Paper Transfer: 1200: 1st Side	*ENG	[0 to 250 / 15 / 1 -µA /step]	

	[Special 3: Paper Size Correction]			
2861	Adjusts the size correction coefficient for the paper transfer roller current for each paper size. SP2852 and SP2857 are multiplied by these SP values.			
	Plain: 154 mm/sec			
001	Paper Transfer: Plain: 1st Side: S1	*ENG	[100 to 600 / 100 / 5%/step]	
002	Paper Transfer: Plain: 2nd Side: S1	*ENG	S1 size≥297 mm (Paper width)	
005	Paper Transfer: Plain: 1st Side: S2	*ENG	[100 to 600 / 120 / 5%/step] 297 mm ≥ S2 size ≥ 275 mm (Paper width)	
006	Paper Transfer: Plain: 2nd Side: S2	*ENG	[100 to 600 / 120 / 5%/step]	

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			297 mm ≥ S2 size ≥ 275 mm (Paper width)
009	Paper Transfer: Plain: 1st Side: S3	*ENG	[100 to 600 / 140 / 5%/step] 275 mm ≥ S3 size ≥ 210 mm (Paper width)
010	Paper Transfer: Plain: 2nd Side: S3	*ENG	[100 to 600 / 140 / 5%/step] 275 mm ≥ S3 size ≥ 210 mm (Paper width)
013	Paper Transfer: Plain: 1st Side: S4	*ENG	[100 to 600 / 160 / 5%/step] 210 mm ≥ S4 size ≥ 148 mm (Paper width)
014	Paper Transfer: Plain: 2nd Side: S4	*ENG	[100 to 600 / 160 / 5%/step] 210 mm ≥ S4 size ≥ 148 mm (Paper width)
017	Paper Transfer: Plain: 1st Side: S5	*ENG	[100 to 600 / 180 / 5%/step] 148 mm ≥ S5 size (Paper width)
018	Paper Transfer: Plain: 2nd Side: S5	*ENG	[100 to 600 / 180 / 5%/step] 148 mm ≥ S5 size (Paper width)

	[Special 3: Leading Edge Correction] Special 3 Paper: Leading Edge Correction				
0071	Adjusts the correction to the paper transfer roller current at the paper leading edge in each mode. SP2852 and SP2857 are multiplied by these SP values.				
28/1	Plain: 154 mm/sec, 1200: 77 mm/sec Note				
	The paper leading edge area can be adjusted with SP2872.				
001	Paper Transfer: Plain: 1st Side	*ENG	[0 to 400 / 100 / 5%/step]		
002	Paper Transfer: Plain: 2nd Side	*ENG	[0 10 400 / 100 / 3 %/ siep]		
003	Paper Transfer: 1200: 1st Side	*ENG	[0 to 400 / 100 / 5%/step]		
005-00	Adjusts the correction to the discharge plate current at the paper leading edge in each mode.				
8	SP2851 is multiplied by these SP values.				

	♣ Note			
	The paper leading edge area can be adjusted with SP2872.			
005	Separation DC: Plain: 1st Side	*ENG	[0. 400 / 100 / 59/ / . 1	
006	Separation DC: Plain: 2nd Side	*ENG	[0 to 400 / 100 / 5%/step]	
007	Separation DC: 1200: 1st Side	*ENG	[0 to 400 / 100 / 5%/step]	

	[Special 3: Switch Timing: Lead. Edge]				
Adjusts the bias/voltage switch timing of the paper transfer roller/discharge plate of paper leading edge between the erase margin area and the image area.					
	Plain: 154 mm/sec, 1200: 77 mm/sec				
001	Paper Transfer: Plain: 1 st Side	*ENG	[0 to 50 / 0 / 2 mm /stan]		
002	Paper Transfer: Plain: 2nd Side	*ENG	[0 to 50 / 0 / 2 mm/step]		
003	Paper Transfer: 1200: 1st Side	*ENG			
005	Separation DC: Plain: 1st Side	*ENG	[0 to 50 / 0 / 2 mm/step]		
006	Separation DC: Plain: 2nd Side	*ENG			
007	Separation DC: 1200: 1st Page	*ENG	[0 to 50 / 0 / 2 mm/step]		

	[Special 3: Trailing Edge Correction] Special 3 Paper: Trailing Edge Correction				
	Adjusts the correction to the paper transfer roller current for the paper trailing edge in each mode. SP2852 and SP2857 are multiplied by these SP values.				
2873	Plain: 154 mm/sec, 1200: 77 mm/sec				
	 The paper trailing edge area can be adjusted with SP2874. 				
001	Paper Transfer: Plain: 1st Side	er Transfer: Plain: 1st Side *ENG			
002	Paper Transfer: Plain: 2nd Side	*ENG	[0 to 400 / 100 / 5%/step]		
003	Paper Transfer: 1200: 1st Side	*ENG			
005	Separation DC: Plain: 1st Side	*ENG			
006	Separation DC: Plain: 2nd Side	*ENG			

	C: 1200: 1st Side	007	
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	[Special 3: Switch Timing: Trail. Edge]				
2874	Adjusts the bias/voltage switch timing of the paper transfer roller/discharge plate at the paper trailing edge between the erase margin area and the image area.				
	Plain: 154 mm/sec, 1200: 77 mm/sec				
001	Paper Transfer: Plain: 1st Side	*ENG			
002	Paper Transfer: Plain: 2nd Side	*ENG			
003	Paper Transfer: 1200: 1st Side	*ENG	[0 to 50 / 0 / 2 mm /stan]		
005	Separation DC: Plain: 1st Side	*ENG	[0 to 50 / 0 / 2 mm/step]		
006	Separation DC: Plain: 2nd Side	*ENG			
007	Separation DC: 1200: 1st Side	*ENG			

2880	[Special 3: Environment Correction] Plain: 154 mm/sec, 1200: 77 mm/sec			
001	Separation DC: Plain: 1st Side	*ENG	[1 to 60 / 26 / 1 /step]	
002	Separation DC: Plain: 2nd Side	*ENG	[1 to 60 / 32 / 1 /step]	
003	Paper Transfer: Plain: BW: 1st Side	*ENG	[1 to 60 / 11 / 1 /step]	
004	Paper Transfer: Plain: BW:2nd Side	*ENG		
005	Paper Transfer: Plain: FC: 1st Side	*ENG	[1 to 60 / 1 / 1 /step]	
006	Paper Transfer: Plain: FC:2nd Side	*ENG	[1 to 60 / 11 / 1 /step]	
007	Separation DC: 1200: 1st Side	*ENG	[1 to 60 / 26 / 1 /step]	
009	Paper Transfer: 1200: BW: 1st Side	*ENG	[1 to 60 / 11 / 1 /step]	
011	Paper Transfer: 1200: FC: 1st Side	*ENG	[1 to 60 / 1 / 1 /step]	

	[OPC Drum Brake Time]	
2901	Adjusts the time when the OPC drum motor reverses from normal rotation after job end. DFU	
	Plain: 154 mm/sec, Thick 1 and Thick 2&Fine: 77 mm/sec	

2902	[OPC Drum Reverse Time]		
Adjusts the time for how long the OPC drum m			motor reverses after job end. DFU
001	All: BW	*ENG	[0 to 200 / 30 / 10 msec/step]
002	All: FC	*ENG	[0 to 200 / 30 / 10 msec/step]

	[Image Transfer Roller Brake Time]			
2903	Adjusts the time when the image transfer belt motor reverses from normal rotation after job end. DFU			
	Plain: 154 mm/sec, Thick 1 and Thick 2&Fine: 77 mm/sec			
003	Plain	*ENG		
004	Thick 1	*ENG	[300 to 1500 / 500 / 10 msec/step]	
005	Thick 2 & FINE	*ENG		

2904	[OPC Drum Reverse Time]		
2904	Adjusts the time for how long th	ne image tran	sfer belt motor reverses after job end. DFU
003	All	*ENG	[0 to 200 / 30 / 10 msec/step]

2004	[Phase Angle]		
2906	DFU		
001	Y Drum	*ENG	
002	C Drum	*ENG	[0 250 / 0 / 1 1 / 1]
003	M Drum	*ENG	[0 to 359 / 0 / 1 deg/step]
004	K Drum	*ENG	
2906	[Amplitude Setting]		

	DFU		
006	Y Drum	*ENG	
007	C Drum		[0.1.100/00/01/02/100]
008	M Drum		[0 to 100 / 0.0 / 0.1 μm/step]
009	K Drum		

	[ACS Setting (FC to Bk)]			
2907	Adjusts the threshold for moving away the image transfer belt from the color PCUs. This moves the image transfer belt away from the color PCUs when the number of B/W image printouts reaches the number of sheets specified with this SP after consecutive full color imprintouts in the full color mode. If this SP is set to "0", the image transfer belt does not move away.		the color PCUs when the number of B/W image cified with this SP after consecutive full color image	
001	Continuous Bk Pages	*ENG	[0 to 10 / 0 / 1 sheet/step]	

2908	[Gain Adjust] Gain Adjustment of Image Transfer Belt Motor			
2900	DFU			
001	154 mm/sec	*ENG	[0 or 1 / 0 / 1/step]]	
003	115 mm/sec	*ENG	0: GAIN High (Low level)	
004	77 mm/sec	*ENG	1: GAIN Low (High level)	

	2909	[Motor Start Control]				
		Not used				
	001	On	ENG	[0 to 1 / 0 / 1 sheet/step] 0: normal, 1: synchro		

2910	[Motor Stop Control]				
2910	Not used				
001	On	ENG	[0 to 1 / 0 / 1 sheet/step] O: normal, 1: synchro		

2912	[Offset Amplitude Setting] DFU			
001	Y Drum	*ENG		
002	C Drum	*ENG	[0.4-100/00/01/41	
003	M Drum	*ENG	[0 to 100 / 0.0 / 0.1 µm/step]	
004	K Drum	*ENG		

2914	[Dust Shield Shutter Motor] Not used		
001	Stop Delay: Open	*ENG	DFU
002	Stop Delay: Close	*ENG [1 to 50 / 38 / 1 mser	[1 to 50 / 38 / 1 msec/step]
003	Open Execution	*ENG	Opens the shutter on the laser optics housing unit manually for test purposes.
004	Close Execution	*ENG	Closes the shutter on the laser optics housing unit manually for test purposes.
007	Presence	*ENG	[0 or 1 / 1 / 1 msec/step] 0: There is No (No motor) 1: There is Yes

2920	[Transfer Motor Control]			
	0: Encorder 1 :FG	*ENG	[0 or 1 / 0 / 1 /step]	
001	Selects the speed control mode for the ITB.			
	If SC443 occurs and machine does not recover, change this setting to "1".			
002	SC443 Count	*ENG	[0 to 3 / 0 / 1 /step]	

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Displays the number of the ITB encodre error. SC443 is displayed if this counter counts to "3".

	[SecondaryFB: Threshold] Paper Transfer Roller Feed-back: Threshold Adjustment			
2930	Adjusts the threshold between high resistance (division 1) and low resistance (division 2) at the paper transfer roller. This SP affects SP2931 to SP2939.			
001	Voltage	*ENG	[0 to 7000 / 6000 / 10 –V/step]	

2960	[Process Interval]			
001	Additional Time	*ENG	[0 to 10 / 0 / 1 sec/step]	
001	Adjusts the additional time for ending the machine's process.			

2970	[Cleaning After JOB]		
001	No Refresh	*ENG	[0 or 1 / 0 / 1 /step] 0: No cleaning, 1: Cleaning
002	Refresh	*ENG	[0 or 1 / 1 / 1 / step] 0: No cleaning, 1: Cleaning

2971	[T1 Non Image Area ON Timing] DFU				
001		*ENG	[-270 to 180 / 0 / 10 msec/step]		
001	Adjusts the timing for the non-image area bias of the image transfer roller.				

SP3-XXX (Process)

3011	[Process Cont. Manual Execution]			
001	Normal	-	Executes the normal process control manually (potential control). Check the result with SP3-325-001 and 3-012-001 after executing this SP.	
002	Density Adjustment	-	Executes the toner density adjustment manually.	

003	Pre-ACC	-	Executes the process control that is normally done before ACC. The type of process control is selected with SP3-041-004.
004	Full MUSIC	-	Executes the process control that is normally done at the same time as MUSIC. This SP does the MUSIC (line position adjustment) twice.
005	Normal MUSIC	-	Executes the process control that is normally done at the same time as MUSIC. This SP does the MUSIC (line position adjustment) once.

	[Process Cont. Check Result] Process Control Self-check Result					
	Displays the result of the latest process control self-check.					
3012	All colors are displayed. The results are displayed in the order "Y C M K"					
	e.g., 11 (Y) 99 (C) 11 (M) 11 successful.	e.g., 11 (Y) 99 (C) 11 (M) 11 (K): The self-check for Cyan failed but the others were successful.				
	See the "Error Condition Tables" in the Process Control Error section for details.					
001	History: Latest *ENG					
002	Result: Latest 1	lt: Latest 1 *ENG				
003	Result: Latest 2	*ENG				
004	Result: Latest 3	*ENG				
005	Result: Latest 4	*ENG	[1111 to 99999999 / - / 1/step]			
006	Result: Latest 5	*ENG	[111110 77777777 - / 1/siep]			
007	Result: Latest 6	*ENG				
008	Result: Latest 7					
009	Result: Latest 8	*ENG				
010	Result: Latest 9	9 *ENG				

3013	[T Sensor Initial Set: Execution] Developer Initialization Setting			
001	Execution: ALL	-	Executes the developer initialization for each color.	

002	Execution: COL	-
003	Execution: Bk	-
004	Execution: M	-
005	Execution: C	-
006	Execution: Y	-

3014	[T Sensor Initial Set Result: Display] Developer Initialization Result: Display					
	Display: YCMK	*ENG	[0 to 9999 / - / 1 /step] 1: Success 2 to 9: Failure			
001	Displays the developer initialization result. See section "Developer Initialization Result" in the "Appendix: Process Control Error Conditions" section for details on the meaning of each code.					
	All colors are displayed. Value	olors are displayed. Values are displayed in the order Y C M Bk.				
	e.g., 1 (Y) 2 (C) 1 (M) 1 (Bk): Initialization of Cyan failed but the others succeeded.					

3015	[Forced Toner Supply: Execute] Forced Toner Supply ([Color])			
001	Execution: ALL	-		
002	Execution: COL	-		
003	Execution: Bk	-	Executes the manual toner supply to the	
004	Execution: M	-	development unit.	
005	Execution: C	-		
006	Execution: Y	-		

3016	[Forced Toner Supply: Setting] Forced Toner Supply Setting ([Color])					
3010	Specifies the manual toner supply time for each color.					
001	Supply Time: Bk	*ENG				
002	Supply Time: M	*ENG	[0 to 30 / 4 / 1 sec/step]			
003	Supply Time: C	*ENG				

2020	[Vt Limit Error]							
3020	DFU							
001	Delta Vt Threshold	*ENG	[0 to 5 / 5 / 0.01 V/step]					
002	Upper Threshold	*ENG	[0 to 5 / 4.7 / 0.01 V/step]					
003	Threshold Number of Upper counter	*ENG	[0 to 99 / 20 / 1 time/step]					
004	Lower Threshold	*ENG	[0 to 5 / 0.5 / 0.01 V/step]					
005	Number of Lower counter	*ENG	[0 to 99 / 10 / 1 times/step]					
006	Upper Counter: Bk	*ENG						
007	Upper Counter: M	*ENG						
008	Upper Counter: C	*ENG						
009	Upper Counter: Y	*ENG	[0, 00 /0 /1: /, 1					
010	Lower Counter: Bk	*ENG	[0 to 99 / 0 / 1 times/step]					
011	Lower Counter: M	*ENG						
012	Lower Counter: C	*ENG						
013	Lower Counter: Y	*ENG						

3021	[TD Sensor Initial Set] Developer Initialization Setting					
3021	Specifies the developer agitation time for each color at the developer initialization. DFU					
001	Agitation Time: Bk	*ENG				
002	Agitation Time: M	*ENG	[0. 000 / 00 / 1 / .]			
003	Agitation Time: C	*ENG	[0 to 200 / 30 / 1 sec/step]			
004	Agitation Time: Y	*ENG				
005-008	Sets the execution flag of the	ets the execution flag of the developer initialization for each color.				
005	Execution Flag: Bk	*ENG	[0 or 1 / 0 / 1/step]			

006	Execution Flag: M	*ENG	0: Flag OFF, 1: Flag ON
007	Execution Flag: C	*ENG	This flag is cleared after executing TD sensor
008	Execution Flag: Y	*ENG	initialization.
009	Prohibition	*ENG	Enables or disables developer initialization. DFU [0 or 1 / 0 / 1/step] 0: Enable. 1: Disable
			0: Enable, 1: Disable

3022	[Toner Replenishment Mode] DFU					
3022	Specifies the toner supply time for each color in the toner supply mode.					
001	Number: Bk	*ENG	[0 to 30 / 8 / 1 sec/step]			
002	Number: M	*ENG				
003	Number: C	*ENG	[0 to 30 / 6 / 1 sec/step]			
004	Number: Y	*ENG				
005-008	Sets the execution flag for the toner supply mode for each color.					
005	Execution Flag: Bk	*ENG	[0 or 1 / 0 / 1/step]			
006	Execution Flag: M	*ENG	0: Flag OFF, 1: Flag ON			
007	Execution Flag: C	*ENG	This flag is cleared after executing TD sensor			
008	Execution Flag: Y	*ENG	initialization.			

3041	[Process Control Type]			
001	Voltage Control	*ENG	[0 or 1 / 1 / 1/step] Alphanumeric 0: FIXED (Use the fixed values for the charge DC bias and development DC bias set with SP2-005 and SP2-229.) 1: CONTROL	
	Enables or disables potential control.			
002	LD Power Control	*ENG	[0 or 1 / 1 / 1/step] Alphanumeric 0: FIXED (at the value in SP2221-xxx)	

			1: CONTROL (adjusted by process control)		
	Selects the LD power control mode.				
004	Pre-ACC	*ENG	[0 to 2 / 2 / 1/step] 0: Not Executed 1: Process Control 2: TC Control (TD Adjustment)		
	Selects the process control mode that is done before ACC.				

3043	[TD Adjustment Mode]					
	Repeat Number: Power ON	*ENG	[0 to 9 / 4 / 1 time/step]			
	Specifies the maximum number of repeats of the toner density adjustment at power on. O: Disabled, 1 to 3: Repeat number,					
001	4: Repeat three times (No consumption	mode)				
	5: Repeat three times (Toner is supplied consumed only when the toner density is	•	he toner density is too low, and toner is			
	6 to 9: Disabled					
	Repeat Number: Initialization	*ENG	[0 to 9 / 3 / 1 time/step]			
	Specifies the maximum number of repeats of the toner density adjustment at the developer initialization.					
002	0: Disabled, 1 to 3: Repeat number,					
	4: Repeat three times (No consumption mode)					
	5: Repeat three times (Toner is supplied only when the toner density is too low, and toner is consumed only when the toner density is too dark.)					
	6 to 9: Disabled					
	Repeat Number: Non-use	*ENG	[0 to 9 / 0 / 1 time/step]			
	Specifies the maximum number of repeats of the toner density adjustment in stand by mode.					
	0: Disabled, 1 to 3: Repeat number,					
003	4: Repeat three times (No consumption mode)					
	5: Repeat three times (Toner is supplied consumed only when the toner density is	•	he toner density is too low, and toner is			
	6 to 9: Disabled					

	Repeat Number: ACC	*ENG	[0 to 9 / 3 / 1 time/step]			
	Specifies the maximum number of repeats of the toner density adjustment at ACC.					
	0: Disabled, 1 to 3: Repeat number,					
004	4: Repeat three times (No consumption	mode)				
	5: Repeat three times (Toner is supplied consumed only when the toner density is	-	he toner density is too low, and tone			
	6 to 9: Disabled					
005	Repeat Number: Recovery	*ENG	[0 to 9 / 0 / 1 time/step]			
003	Not used					
	Repeat Number: Job End	*ENG	[0 to 9 / 4 / 1 time/step]			
	Specifies the maximum number of repea	ats of the ton	er density adjustment at job end.			
	0: Disabled, 1 to 3: Repeat number,					
006	4: Repeat three times (No consumption	mode)				
	5: Repeat three times (Toner is supplied only when the toner density is too low, and toner is consumed only when the toner density is too dark.)					
	6 to 9: Disabled					
	Repeat: Interrupt	*ENG	[0 to 9 / 0 / 1 time/step]			
007	Specifies the maximum number of repeats of the toner density adjustment during printing. DFU					
000	Toner Supply Coefficient	*ENG	[0 to 25.5 / 10 / 0.1 sec/step]			
800	Adjusts the time for the toner supply mode when a toner density is detected to be low.					
	Consumption pattern: Bk	*ENG	[0 to 255 / 5 / 1 time/step]			
009	Specifies the belt mark generating time for checking the black toner density when toner density is detected to be low at the toner density adjustment.					
	Consumption pattern: M	*ENG	[0 to 255 / 5 / 1 time/step]			
010	Specifies the belt mark generating time for checking the magenta toner density when tone density is detected to be low at the toner density adjustment.					
	Consumption pattern: C	*ENG	[0 to 255 / 5 / 1 time/step]			
011	Specifies the belt mark generating time for checking the cyan toner density when toner density is detected to be low at the toner density adjustment.					

Consumption pattern: Y	*ENG	[0 to 255 / 5 / 1 time/step]			
Specifies the belt mark generating time for checking the yellow toner density when toner density is detected to be low at the toner density adjustment.					
T1 Bias: Bk	*ENG	[0 to 80 / 20 / 1 µA/step]			
Adjusts the image transfer belt bias for B	black.				
T1 Bias: M	*ENG	[0 to 80 / 20 / 1 µA/step]			
Adjusts the image transfer belt bias for N	∕lagenta.				
T1 Bias: C	*ENG	[0 to 80 / 22 / 1 µA/step]			
Adjusts the image transfer belt bias for C	Cyan.				
T1 Bias: Y	*ENG	[0 to 80 / 30 / 1 µA/step]			
Adjusts the image transfer belt bias for Y	'ellow.				
Developer Mixing Time	*ENG	[0 to 250 / 10 / 1 sec/step]			
Specifies the developer mixing time at the toner density adjustment.					
Consumption Pattern: LD: DUTY: Bk	*ENG	[0 to 15 / 15 / 1 /step]			
Adjusts the LD duty for the toner consum	ption mode	at the toner density adjustment.			
In toner consumption mode, toner is discharged when the detected development gamma values (SP3611-001) exceed the target values (SP3611-005) by more than the specified thresholds (SP3239-009).					
Consumption Pattern: LD: DUTY: M	*ENG	[0 to 15 / 15 / 1 /step]			
Adjusts the LD duty for the toner consumption mode at the toner density adjustment.					
In toner consumption mode, toner is discharged when the detected development gamma values (SP3611-002) exceed the target values (SP3611-006) by more than the specified thresholds (SP3239-009).					
Consumption Pattern: LD: DUTY: C	*ENG	[0 to 15 / 15 / 1 /step]			
Adjusts the LD duty for the toner consumption mode at the toner density adjustment. In toner consumption mode, toner is discharged when the detected development gamma values (SP3611-003) exceed the target values (SP3611-007) by more than the specified thresholds (SP3239-009).					
Consumption Pattern: LD: DUTY: Y	*ENG	[0 to 15 / 15 / 1 /step]			
	Specifies the belt mark generating time of density is detected to be low at the tone of the state of the density is detected to be low at the tone of the state of the density is detected to be low at the tone of the state of the density is detected to be low at the tone of the state of the density is detected to be low at the tone of the state of the density is density of the state of the density is density of the state of the density is density of the state of the of	Specifies the belt mark generating time for checking density is detected to be low at the toner density and T1 Bias: Bk *ENG Adjusts the image transfer belt bias for Black. T1 Bias: M *ENG Adjusts the image transfer belt bias for Magenta. T1 Bias: C *ENG Adjusts the image transfer belt bias for Cyan. T1 Bias: Y *ENG Adjusts the image transfer belt bias for Yellow. Developer Mixing Time *ENG Specifies the developer mixing time at the toner der Consumption Pattern: LD: DUTY: Bk *ENG Adjusts the LD duty for the toner consumption mode In toner consumption mode, toner is discharged wh values (SP3611-001) exceed the target values (SP thresholds (SP3239-009). Consumption Pattern: LD: DUTY: M *ENG Adjusts the LD duty for the toner consumption mode In toner consumption mode, toner is discharged wh values (SP3611-002) exceed the target values (SP thresholds (SP3239-009). Consumption Pattern: LD: DUTY: C *ENG Adjusts the LD duty for the toner consumption mode In toner consumption mode, toner is discharged wh values (SP3611-002) exceed the target values (SP thresholds (SP3239-009). Consumption Pattern: LD: DUTY: C *ENG Adjusts the LD duty for the toner consumption mode In toner consumption mode, toner is discharged wh values (SP3611-003) exceed the target values (SP thresholds (SP3239-009).			

Adjusts the LD duty for the toner consumption mode at the toner density adjustment.

In toner consumption mode, toner is discharged when the detected development gamma

In toner consumption mode, toner is discharged when the detected development gamma values (SP3611-004) exceed the target values (SP3611-008) by more than the specified thresholds (SP3239-009).

3044	[Toner Supply Type] Toner Supply Type ([Color])				
3044	Selects the toner supply method type.				
001	Bk	*ENG	[0 to 3 / 2 / 1/step] Alphanumeric		
002	М	*ENG	0: FIXED (with the supply rates stored with SP 3401)		
003	С	*ENG	1: PID (Vtref_Fixed) 2: PID (Vtref_Control)		
004	Y	*ENG	3: Not used		

3045	[Toner End Detection: Set]			
3043	Enables/disables the toner alert display on the LCD.			
001	ON/OFF	*ENG	[0 or 1 / 0 / 1/step] 0: Detect, 1: Not Detect	

3101	[Toner End/Near End]				
3101	Displays the amount of each color toner. DFU				
001	Toner Replenishment: Bk	*ENG	[1 to 600 / 450 / 1 g/step]		
002	Toner Replenishment: M	*ENG			
003	Toner Replenishment: C	*ENG	[1 to 600 / 360 / 1 g/step]		
004	Toner Replenishment: Y	*ENG			
005-008	Displays the consumed amount of e	each color	toner.		
005	K Toner Consumption	*ENG			
006	M Toner Consumption	*ENG	[0.4-2000 / 0./0.001/]		
007	C Toner Consumption	*ENG	[0 to 3000 / 0 / 0.001 g/step]		
008	Y Toner Consumption	*ENG			

009-012	Displays the remaining amount of each color toner. These are calculated by the operating times of the toner supply pumps.				
009	K Toner Remaining	*ENG			
010	M Toner Remaining	*ENG	[50000		
011	C Toner Remaining	*ENG	[-50000 to 600 / 0 / 0.001 g/step]		
012	Y Toner Remaining	*ENG			
013-016	Adjusts the threshold of toner near end for each color. The toner near end message appears on the LCD when the remaining toner amount reaches this threshold. When one of these SPs (SP3-101-009 to 012 or -032 to -035) reaches this threshold, toner near end is detected.				
013	Near End Threshold: Bk	*ENG	[0 to 600 / 30 / 1 g/step]		
014	Near End Threshold: M	*ENG			
015	Near End Threshold: C	*ENG	[0 to 600 / 25 / 1 g/step]		
016	Near End Threshold: Y	*ENG			
017-020	DFU				
017	Cartridge Error Threshold: Bk	*ENG			
018	Cartridge Error Threshold: M	*ENG	[50000 to 0 / 50000 / 1 m /ston]		
019	Cartridge Error Threshold: C	*ENG	[-50000 to 0 / -50000 / 1 g/step]		
020	Cartridge Error Threshold: Y	*ENG			
	Delta Vt Threshold	*ENG	[0 to 5 / 0.5 / 0.01 V/step]		
021	This SP is the threshold for toner end. Delta Vt: Vt-Vtref				
	When both this SP and SP3-101-0	26 occur o	at same time, toner end is determined.		
022-025	Displays the total delta Vt (Vt-Vtref) value for each color. These are calculated by pixel counting.				
022	Delta Vt Sum: Bk	*ENG			
023	Delta Vt Sum: M	*ENG	[0 to 655 / 0 / 0.01 V/step]		
024	Delta Vt Sum: C	*ENG	[0 10 000 / 0 / 0.01 V/siep]		
025	Delta Vt Sum: Y	*ENG			

026	Delta Vt Sum Threshold	*ENG	[0 to 255 / 10 / 1 V/step]
027	Gamma Threshold: Coefficient	*ENG	Not used
028-031	Displays the consumed toner amo	ount calculate	ed with the pixel count for each color.
028	Pixel: Consumption: Bk	*ENG	
029	Pixel: Consumption: M	*ENG	[0.4-2000 / 0./0.001/]
030	Pixel: Consumption: C	*ENG	[0 to 3000 / 0 / 0.001 g/step]
031	Pixel: Consumption: Y	*ENG	
032-035	Displays the remaining toner amo	ount for each	color, using pixel count.
032	Pixel: Remaining : Bk	*ENG	
033	Pixel: Remaining : M	*ENG	[50000 +- 400 / 0 / 0 001 / - +]
034	Pixel: Remaining : C	*ENG	[-50000 to 600 / 0 / 0.001 g/step]
035	Pixel: Remaining : Y	*ENG	
036-039	Adjusts the threshold of toner end	for each co	lor.
036	End Threshold: Bk	*ENG	
037	End Threshold: M	*ENG	Not used
038	End Threshold: C	*ENG	TNOI usea
039	End Threshold: Y	*ENG	
040-043	Displays the pixel M/A for each	color.	
040	Pixel M/A: Bk	*ENG	
041	Pixel M/A: M	*ENG	[0+-1/04/0001/2/1
042	Pixel M/A: C	*ENG	[0 to 1 / 0.4 / 0.001 mg/cm ² /step]
043	Pixel M/A: Y	*ENG	
044	Delta Vt Threshold Before Near End	*ENG	Adjusts the delta Vt (Vt – Vtref) of toner end before toner near end is detected. [0 to 5 / 0.5 / 0.01 V/step]
045	Delta Vt Sum Threshold Before Near End	*ENG	Adjusts the total delta Vt (Vt – Vtref) of toner end before toner near end is detected.

	[Toner End Recovery]			
3102	Adjusts the number of times toner supply is attempted for each color when the TD sensor continues to detect toner end during toner recovery.			
001	Repeat: Bk	*ENG		
002	Repeat: M	*ENG	[14-20 / 5 / 15 /]	
003	Repeat: C	*ENG	[1 to 20 / 5 / 1 time/step]	
004	Repeat: Y	*ENG		

2121	[TE Count m: Display]				
3131	Display the number of toner end detections for each color.				
001	Bk	*ENG			
002	М	*ENG	[0, 00 / 0 / 1 / 1		
003	С	*ENG	[0 to 99 / 0 / 1 time/step]		
004	Υ	*ENG			

3201	[TD Sensor: Vt Display]				
3201	Display the current voltage of the TD sensor for each color.				
001	Current: Bk	*ENG			
002	Current: M	*ENG	[0.4-5.5./0.01.//]		
003	Current: C	*ENG	[0 to 5.5 / 0.01 / 0.01 V/step]		
004	Current: Y	*ENG			

	[Vt Shift: Display/Set]				
3211	Adjusts the Vt correction value for each line speed.				
	Thick 1 and Thick 2&Fine: 77 mm/	sec			
001	Thick 1 Shift: Bk	*ENG			
002	Thick 1 Shift: M	*ENG			
003	Thick 1 Shift: C	*ENG			
004	Thick 1 Shift: Y	*ENG	[0 to 5 / 0 44 / 0 01 V /stan]		
005	Thick 2 & FINE Shift: Bk	*ENG	[0 to 5 / 0.46 / 0.01 V/step]		
006	Thick 2 & FINE Shift: M	*ENG			
007	Thick 2 & FINE Shift: C	*ENG			
008	Thick 2 & FINE Shift: Y	*ENG			

2221	[Vtcnt: Display/Set]				
3221	Displays or adjusts the current Vtcnt value for each color.				
001	Current: Bk	*ENG			
002	Current: M	*ENG	[24-5/204/001V/4]		
003	Current: C	*ENG	[2 to 5 / 3.86 / 0.01 V/step]		
004	Current: Y	*ENG			
005-00	Displays or adjusts the Vtcnt value for each color at developer initialization. DFU				
005	Initial: Bk	*ENG			
006	Initial: M	*ENG	[2 to 5 / 3.86 / 0.01 V/step]		
007	Initial: C	*ENG	[2 10 3 / 3.00 / 0.01 v /siep]		
008	Initial: Y	*ENG			

3222	[Vtref: Display/Set]	
3222	Displays or adjusts the current Vtref value for each color.	

001	Current: Bk	*ENG	
002	Current: M	*ENG	[0.5.5./2./0.01.V/]
003	Current: C	*ENG	[0 to 5.5 / 3 / 0.01 V/step]
004	Current: Y	*ENG	
005-00	Displays or adjusts the Vtref va	lue for eac	h color at developer initialization. DFU
005	Initial: Bk	*ENG	
006	Initial: M	*ENG	[05.5./3./0.01.V/1
007	Initial: C	*ENG	[0 to 5.5 / 3 / 0.01 V/step]
800	Initial: Y	*ENG	
009-01	Displays and adjusts Vtref correction by pixel coverage for each color. DFU		
009	Pixel Correction: Bk	*ENG	
010	Pixel Correction: M	*ENG	[-5 to 5.5 / 0 / 0.01 V/step]
011	Pixel Correction: C	*ENG	[-3 10 3.3 / 0 / 0.01
012	Pixel Correction: Y	*ENG	

2002	[Vtref Upper Lower: Set] DFU				
3223	Adjusts the lower or upper limit value of Vtref for each color.				
001	Lower: Bk	*ENG			
002	Lower: M	*ENG	[0.4-5/2/0.01\//.4]		
003	Lower: C	*ENG	[0 to 5 / 2 / 0.01 V/step]		
004	Lower: Y	*ENG			
005	Upper: Bk	*ENG			
006	Upper: M	*ENG	[0 to 5 / 4 / 0.01 V/step]		
007	Upper: C	*ENG	[O IO 3 / 4 / O.OT V/ siep]		
008	Upper: Y	*ENG			

009	Initial TC	*ENG	Adjusts the initial toner concentration. [1 to 15 / 7 / 0.1 wt%/step]
010	Upper: TC	*ENG	Adjusts the upper limit of the toner concentration. [1 to 15 / 9.5 / 0.1 wt%/step]
011	Lower: TC	*ENG	Adjusts the lower limit of the toner concentration. [1 to 15 / 4 / 0.1 wt%/step]
012	Upper Sensitivity	*ENG	Adjusts the upper limit of the TD sensor sensitivity. [0.2 to 0.5 / 0.44 / 0.001 V/wt% /step]
013	Lower Sensitivity	*ENG	Adjusts the lower limit of the TD sensor sensitivity. [0.2 to 0.5 / 0.209 / 0.001 V/wt% / step]
014	Toner Density Between H and M	*ENG	[1 to 10 / 3.5 / 0.1 wt%/step]
015	Toner Density Between M and L	*ENG	[1 to 10 / 3.5 / 0.1 wt%/step]

3224	[Vtref Correction: Pixel] DFU				
3224	Adjusts the coefficient of Vtref correction for each coverage and color.				
001	Low Coverage Coefficient: Bk	*ENG			
002	Low Coverage Coefficient: M	*ENG	[0, 5/1/01/,]		
003	Low Coverage Coefficient: C	*ENG	[0 to 5 / 1 / 0.1 /step]		
004	Low Coverage Coefficient: Y	*ENG			
005	High Coverage Coefficient: Bk	*ENG	[0 to 5 / 1 / 0.01 V/step]		
006	High Coverage Coefficient: M	*ENG			
007	High Coverage Coefficient: C	*ENG	[0 to 5 / 0.5 / 0.01 V/step]		
800	High Coverage Coefficient: Y	*ENG			
009	Low Coverage: Threshold	*ENG	Adjusts the threshold of the low coverage. [0 to 20 / 3 / 0.1 %/step]		

2021	[Toner Supply: Setting]				
3231	Adjusts the coefficient of the toner supply time for each color. DFU				
001	Conversion Coefficient:Bk	*ENG	[0.5 to 9.99 / 1.66 / 0.01 /step]		
002	Conversion Coefficient: M	*ENG	[0.5 to 9.99 / 1.66 / 0.01 /step]		
003	Conversion Coefficient: C	*ENG	[0.5 to 9.99 / 1.6 / 0.01 /step]		
004	Conversion Coefficient: Y	*ENG	[0.5 to 9.99 / 1.66 / 0.01 /step]		

3232	[Toner Supply Coefficient: Setting] DFU		
001	Vt Proportion: Bk	*ENG	
002	Vt Proportion: M	*ENG	[0.1. 0.550 / 50 / 1 /.1]
003	Vt Proportion: C	*ENG	[0 to 2550 / 50 / 1 /step]
004	Vt Proportion: Y	*ENG	
005	Pixel Proportion: Bk	*ENG	
006	Pixel Proportion: M	*ENG	[0 to 2.55 / 0.47 / 0.01 /stan]
007	Pixel Proportion: C	*ENG	[0 to 2.55 / 0.47 / 0.01 /step]
008	Pixel Proportion: Y	*ENG	
009	Vt Integral Control: Bk	*ENG	[0 to 2550 / 500 / 1 /step]

010	Vt Integral Control: M	*ENG	
011	Vt Integral Control: C	*ENG	
012	Vt Integral Control: Y	*ENG	
013	Vt Sum Times: Bk	*ENG	
014	Vt Sum Times: M	*ENG	[14-255/20/15/]
015	Vt Sum Times: C	*ENG	[1 to 255 / 20 / 1 time/step]
016	Vt Sum Times: Y	*ENG	

3233	[Pixel Proportion Coefficient 2: Setting] DFU		
001	Correction Coefficient: 1	*ENG	[0 to 2.55 / 1 / 0.01 /step]
002	Correction Coefficient: 2	*ENG	[0 to 2.55 / 0.5 / 0.01 /step]
003	Correction Coefficient: 3	*ENG	[0 to 2.55 / 0 / 0.01 /step]
004	Correction Coefficient: 4	*ENG	[0 to 2.55 / 0.25 / 0.01 /step]
005	Correction Coefficient: 5	*ENG	[0 to 2.55 / 0.5 / 0.01 /step]

3234	[Pixel Proportion Coefficient 3: Setting] DFU		
001	Correction Value 1	*ENG	[-0.1 to 0 / - 0.01 / 0.01 /step]
002	Correction Value 2	*ENG	[0 to 0.1 / 0.01 / 0.01 /step]

3235	[Toner Supply Coefficient: Display] DFU		
001	Pixel Proportion 2: Bk	*ENG	
002	Pixel Proportion 2: M	*ENG	[0 2.55 / 1 / 0.01 /]
003	Pixel Proportion 2: C	*ENG	[0 to 2.55 / 1 / 0.01 /step]
004	Pixel Proportion 2: Y	*ENG	
005	Pixel Proportion 3: Bk	*ENG	
006	Pixel Proportion 3: M	*ENG	[0.7 to 1.3 / 1 / 0.01 /step]
007	Pixel Proportion 3: C	*ENG	

2024	[Toner Supply Consumption: Display] DFU		
3236	Displays the toner amount of the latest toner supply for each color.		
001	Latest: Bk	*ENG	
002	Latest: M	*ENG	[0.4-40000 / 0 / 0.1 / / 4]
003	Latest: C	*ENG	[0 to 40000 / 0 / 0.1 mg/step]
004	Latest: Y	*ENG	

3237	[Developer Mixing Setting]		
323/	Displays the toner amount of th	ne latest tor	ner supply for each color. DFU
001	Mixing Time	*ENG	[0 to 200 / 5 / 1 sec/step]

3238	[Vt Target: Setting]		
3230	Displays the Vt target value at a	developer i	nitialization. DFU
001	Bk	*ENG	
002	М	*ENG	[0+5/25/0017//]
003	С	*ENG	[0 to 5 / 2.5 / 0.01 V/step]
004	Υ	*ENG	

3239	[Vtref Correction: Setting]		
3239	Adjusts the parameter for Vtre	ef correction (at the process control.
001	(+)Consumption: Bk	*ENG	[0 to 1 / 0.1 / 0.01 V/step]

222		*5.10	
002	(+)Consumption: M	*ENG	
003	(+)Consumption: C	*ENG	
004	(+)Consumption: Y	*ENG	
005	(-)Consumption: Bk	*ENG	
006	(-)Consumption: M	*ENG	
007	(-)Consumption: C	*ENG	
008	(-)Consumption: Y	*ENG	
009-012	Threshold for development go	amma rank.	
009	P Rank 1 Threshold	*ENG	[0 to 2 / 0.2 / 0.1 /step]
010	P Rank 2 Threshold	*ENG	[0 to 2 / 0.1 / 0.1 /step]
011	P Rank 3 Threshold	*ENG	[-2 to 0 / -0.1 / 0.1 /step]
012	P Rank 4 Threshold	*ENG	[-2 to 0 / -0.2 / 0.1 /step]
013-014	Threshold for image density r	ank on the im	nage transfer belt.
013	T Rank 1 Threshold	*ENG	[-1 to 0 / -0.2 / 0.01 V/step]
014	T Rank 2 Threshold	*ENG	[0 to 1 / 0.2 / 0.01 V/step]

3241	[Background Potential Set	ring]	
001	Coefficient: Bk	*ENG	These are parameters for calculating the charge
002	Coefficient: M	*ENG	bias referring to the development bias at process control.
003	Coefficient: C	*ENG	[-1000 to 1000 / 0 / 1 /step]
004	Coefficient: Y	*ENG	DC charge bias = Development bias x (1 + 0.001 x these vales) + SP3-241-005 to -008
005	Offset: Bk	*ENG	These are additional values for calculating the
006	Offset: M	*ENG	charge bias referring to the development bias at process control.
007	Offset: C	*ENG	[0 to 255 / 140 / 1 V/step]
008	Offset: Y	*ENG	DC charge bias = Development bias x (1 + 0.001 x SP3-241-001 to -004) + these values

20.40	[LD Power Setting]		
3242	Adjusts the coefficient for L	D power cor	ntrol value at the process control.
001	Coefficient: Bk	*ENG	
002	Coefficient: M	*ENG	[1000 += 1000 / 41 / 1 / +1
003	Coefficient: C	*ENG	[-1000 to 1000 / 61 / 1 /step]
004	Coefficient: Y	*ENG	
005	Offset: Bk	*ENG	
006	Offset: M	*ENG	[-1000 to 1000 / 79 / 1 /step]
007	Offset: C	*ENG	[-1000 to 1000 / / 7 / 1 / step]
008	Offset: Y	*ENG	

3251	[Coverage]		
3231	These (-001 to -016) are coeffi	cients for S	P3-222-009 to -012.
001	Latest: Bk	*ENG	
002	Latest: M	*ENG	Displays the latest coverage for each color.
003	Latest: C	*ENG	[0 to 9999 / 0 / 1 cm ² /step]
004	Latest: Y	*ENG	
005-008	Displays the average coverage "Average S" is defined when the specified with SP3251-017.		olor for the Vtref correction. If developed pages does not reach the number
005	Average S: Bk	*ENG	
006	Average S: M	*ENG	[0100 / 5 / 0.01 % /]
007	Average S: C	*ENG	[0 to 100 / 5 / 0.01 %/step]
008	Average S: Y	*ENG	
009-012	Displays the average coverage "Average M" is defined when the specified with SP3251-018.		olor for the Vtref correction. Of developed pages does not reach the number

009	Average M: Bk	*ENG	
010	Average M: M	*ENG	[0. 100 / 5 / 0.01 9/ / . 1
011	Average M: C	*ENG	[0 to 100 / 5 / 0.01 %/step]
012	Average M: Y	*ENG	
	Displays the average coverage	of each co	lor for the Vtref correction.
013-016	"Average L" is defined when the specified with SP3-251-019.	number of	f developed pages does not reach the number
013	Average L: Bk	*ENG	
014	Average L: M	*ENG	[0100 / 5 / 0.01 9/ /]
015	Average L: C	*ENG	[0 to 100 / 5 / 0.01 %/step]
016	Average L: Y	*ENG	
017-019	Adjusts the threshold for SP3-25	1-005 to	-016.
017	Total Page Setting: S	*ENG	[1 to 100 / 10 / 1 sheet/step]
018	Total Page Setting: M	*ENG	[1 to 500 / 10 / 1 sheet/step]
019	Total Page Setting: L	*ENG	[1 to 999 / 50 / 1 sheet/step]
020-022	Adjusts the threshold for SP3-25	1-024 to	-027.
020	Total Page Setting: S2	*ENG	[1 to 100 / 20 / 1 sheet/step]
021	Total Page Setting: M2	*ENG	[1 to 500 / 10 / 1 sheet/step]
022	Total Page Setting: L2	*ENG	[1 to 999 / 50 / 1 sheet/step]
024-027	Displays the latest coverage rati	io for each	color.
024	Latest Coverage: Bk	*ENG	
025	Latest Coverage: M	*ENG	[0100 / /0.019//]
026	Latest Coverage: C	*ENG	[0 to 100 / - / 0.01 %/step]
027	Latest Coverage: Y	*ENG	
000	Displays the threshold of whether	er to perfor	m developer agitating or not.
028	DevMix Threshold	*ENG	[0 to 100 / 20 / 1 %/step]

0011	[ID Sensor Detection Value: \	ofset]	
3311	Displays the ID sensor (regula	ar) offset volt	age for Vsg adjustments.
001	Voffset reg: Bk	*ENG	[0 to 5 / 0 / 0.01 V/step]
002	Voffset reg: M	*ENG	
003	Voffset reg: C	*ENG	[0 to 5.5 / 0 / 0.01 V/step]
004	Voffset reg: Y	*ENG	
005-007	Displays the ID sensor (diffusi	on) offset vo	Itage for Vsg adjustments.
005	Voffset dif: M	*ENG	
006	Voffset dif: C	*ENG	[0 to 5.5 / 0 / 0.01 V/step]
007	Voffset dif: Y	*ENG	
008-010	Displays the ID sensor offset	voltage for V	sg adjustments.
008	Voffset TM (Front)	*ENG	
009	Voffset TM (Center)	*ENG	[0 to 5.5 / 0 / 0.01 V/step]
010	Voffset TM (Rear)	*ENG	

3321	[Vsg Adjustment: Execution]		
010	P/TM Sensor All	-	Execute the ID sensor initialization setting for all sensors

3322	[Vsg Adjustment Result: Vsg]		
3322	Displays the result value of the	Vsg adjustme	ent for each sensor.
001	Vsg reg: Bk	*ENG	
002	Vsg reg: M	*ENG	
003	Vsg reg: C	*ENG	[
004	Vsg reg: Y	*ENG	[0 to 5.5 / 0 / 0.01 V/step]
005	Vsg dif: M	*ENG	-
006	Vsg dif: C	*ENG	

007	Vsg dif: Y	*ENG
008	Vsg TM (Front)	*ENG
009	Vsg TM (Center)	*ENG
010	Vsg TM (Rear)	*ENG

3323	[Vsg Adjustment Result: Ifsg] DFU		
001	Ifsg: Bk	*ENG	
002	Ifsg: M	*ENG	[0 50 / 0 / 0.1 4 / 1]
003	Ifsg: C	*ENG	[0 to 50 / 0 / 0.1 mA/step]
004	Ifsg: Y	*ENG	
005	Ifsg TM (Front)	*ENG	
006	Ifsg TM (Center)	*ENG	[0 to 50 / 0 / 0.1 mA/step]
007	Ifsg TM (Rear)	*ENG	

3324	[Vsg Adjustment: Set] DFU		
003	Vofset Error Counter	*ENG	[0 to 99 / 0 / 0.1 time/step]
004	Vofset Threshold	*ENG	[0 to 5 / 1 / 0.01 V/step]
005	Vsg Upper Threshold	*ENG	[0 to 5 / 4.5 / 0.01 V/step]
006	Vsg Lower Threshold	*ENG	[0 to 5 / 3.5 / 0.01 V/step]

	[Vsg Adjustment Result]				
Displays the result of the Vsg adjustment. The displayed numbers mean the result of each sensor (sensor for Front, sensor for Cyan, sensor for Center, sensor for Magenta, sensor for Yellow and sensor			•		
001	Latest	*ENG	[111111 to 999999 / 999999 / 1 /step]		
002	Latest 1	*ENG	9: Unexpected error		
003	Latest 2	*ENG	3: Offset voltage error 2: Vsg adjustment value error		
004	Latest 3	*ENG	1: O.K		

3361	[ID Sensor Sensitivity: Display] Not Used		
001	K2K (Latest)	*ENG	
002	K5K (Latest)	*ENG	
003	K2M (Latest)	*ENG	
004	K5M (Latest)	*ENG	[0+5 / /0.0001 /+1
005	K2C (Latest)	*ENG	[0 to 5 / - / 0.0001 /step]
006	K5C (Latest)	*ENG	
007	K2Y (Latest)	*ENG	
008	K5Y (Latest)	*ENG	

3362	[ID Sensor Sensitivity: Setting] DFU		
001	K2: Upper	*ENG	[0 to 1 / 0.32 / 0.01 /step]
002	K2: Lower	*ENG	[0 to 1 / 0.22 / 0.01 /step]
003	K5: Upper	*ENG	[0 to 10 / 5 / 0.01 /step]
004	K5: Lower	*ENG	[0 to 1 / 0.5 / 0.01 /step]
005	Kn: Lower	*ENG	[0 to 1 / 0.1 / 0.01 /step]
006	Kn: Upper	*ENG	[0 to 1 / 1 / 0.01 /step]
007	K5 Edit Point	*ENG	[0 to 1 / 0.15 / 0.01 /step]
008	K5 Target Voltage	*ENG	[0 to 5 / 1.63 / 0.01 V/step]
009	K5 Approximate Method	*ENG	[0 to 1 / 1 / 1 /step]

			0:Linear, 1: Curve
010	K2: Upper/Lower Limit Coefficient 1	*ENG	[0 to 1 / 0 / 0.01 /step]
011	K2: Upper Limit Correction	*ENG	[-0.2 to 0.4 / 0.07 / 0.01 /step]
012	K2: Lower Limit Correction	*ENG	[-0.2 to 0.4 / -0.07 / 0.01 /step]
013	Diffusion Correction: M	*ENG	
014	Diffusion Correction: C	*ENG	[0.75 to 1.35 / 1 / 0.01 /step]
015	Diffusion Correction: Y	*ENG	
016	K2: Check: M	*ENG	
017	K2: Check: C	*ENG	[0 to 1 / 0.25 / 0.001 /step]
018	K2: Check: Y	*ENG	

3363	[ID Pattern Timing Setting] DFU		
001	Scan YCMBk	*ENG	Adjusts the detection timing for the process control pattern. [-500 to 500 / 13.7 / 1 mm/step]
002	Paper Transfer Release Start Time	*ENG	Adjusts the timing when the paper transfer unit is kept away from the image transfer belt. [0 to 2500 / 0 / 1 msec/step]
003	Delay Time	*ENG	Adjusts the processing timing for the process control pattern. [0 to 2500 / 880 / 1 msec/step]
004	MUSIC Delay Time	*ENG	Adjusts the processing timing for the pattern that is used for the line position adjustment. [-2500 to 2500 / 300 / 1 msec/step]

3371	[M/A Calculation] DFU		
001	Correction Coefficient: Bk	*ENG	[0.5 to 2.0 / 1 / 0.01 /step]
002	Correction Coefficient: M	*ENG	[0.5 to 2.0 / 0.95 / 0.01 /step]
003	Correction Coefficient: C	*ENG	[0.5 to 2.0 / 1 / 0.01 /step]

2.401	[Fixed Supply Mode]			
3401	Adjusts the toner supply rate in	oner supply mode.		
001	Fixed Rate: Bk	*ENG		
002	Fixed Rate: M	*ENG	[0 to 100 / 5 / 1 %/step]	
003	Fixed Rate: C	*ENG	These SPs are used only when SP3-044 is set to "1".	
004	Fixed Rate: Y	*ENG		

3411	[Toner Supply Rate: Display]			
3411	Displays the current toner supply rate.			
001	Latest: Bk	*ENG		
002	Latest: M	*ENG	[0100 / /1.9/ /]	
003	Latest: C	*ENG	[0 to 100 / - / 1 %/step]	
004	Latest: Y	*ENG		

3421	[Toner Supply Range]		
001	Upper Limit: Bk	*ENG	
002	Upper Limit: M	*ENG	Adjusts the toner supply rate during printing.
003	Upper Limit: C	*ENG	[0 to 100 / 100 / 1%/step]
004	Upper Limit: Y	*ENG	
005	Minimum Supply Time: Bk	*ENG	
006	Minimum Supply Time: M	*ENG	Adjusts the minimum toner supply time.
007	Minimum Supply Time: C	*ENG	[0 to 1000 / 0 / 1 msec/step]
008	Minimum Supply Time: Y	*ENG	

3451	[Toner Supply Carry Over: Display] DFU
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001	Bk	*ENG	
002	М	*ENG	[0.1.10000 / 0./1/]
003	С	*ENG	[0 to 10000 / 0 / 1 msec/step]
004	Υ	*ENG	

3452	[Toner Supply Carry Over: Setting] DFU		
001	Maximum: Bk	*ENG	
002	Maximum: M	*ENG	[010000 / 1000 / 1 / 1]
003	Maximum: C	*ENG	[0 to 10000 / 1000 / 1 msec/step]
004	Maximum: Y	*ENG	

2501	[Process Control Target M/A]		
Adjusts the target M/A.			
001	Maximum M/A: Bk	*ENG	
002	Maximum M/A: M	*ENG	[0] /0.444 /0.001/
003	Maximum M/A: C	*ENG	[0 to 1 / 0.444 / 0.001 mg/cm ² /step]
004	Maximum M/A: Y	*ENG	

2510	[Image Quality Adj. Counter: Display]			
3510	Displays the total page counter for each adjustment mode.			
001	Potential Control: BW	*ENG		
002	Potential Control: FC	*ENG		
003	Power ON: BW	*ENG		
004	Power ON: FC	*ENG	[0 to 2000 / 0 / 1 page/step]	
005	MUSIC: BW	*ENG		
006	MUSIC: FC	*ENG		
007	Vsg Adj.	*ENG		

008	Charge AC Control	*ENG	
009	MUSIC: Power ON: BW	*ENG	
010	MUSIC: Power ON: FC	*ENG	

3511	[Execution Interval: Setting]		
3311	Adjusts the threshold for each adjustm	ent mode.	
001	Job End: Potential Control: BW	*ENG	[0 to 2000 / 250 / 1 page/step]
002	Job End: Potential Control: FC	*ENG	[0 to 2000 / 100 / 1 page/step]
003	Interrupt: Potential Control: BW	*ENG	[0 to 2000 / 500 / 1 page/step]
004	Interrupt: Potential Control: FC	*ENG	[0 to 2000 / 200 / 1 page/step]
005	Initial: Potential Control: BW	*ENG	[0 to 2000 / 250 / 1 page/step]
006	Initial: Potential Control: FC	*ENG	[0 to 2000 / 100 / 1 page/step]
007	Vsg Adj. Counter	*ENG	[0 to 2000 / 0 / 1 page/step]
008	Charge AC Control Counter	*ENG	[0 to 2000 / 0 / 1 page/step]
019	Environmental Correction	*ENG	[0 or 1 / 1 / 1 /step]
020	Gamma Correction	*ENG	0: Not Correct (OFF),
021	Non-use Time Correction	*ENG	1: Correct (ON)
022	Correction Coefficient 1: JE: BW	*ENG	[0 to 1 / 0.2 / 0.01 page/step]
023	Correction Coefficient 2: JE: BW	*ENG	[0 to 1 / 1 / 0.01/step]
024	Correction Coefficient 1: JE: FC	*ENG	[0 to 1 / 0.5 / 0.01/step]
025	Correction Coefficient 2: JE: FC	*ENG	[0 to 1 / 1 / 0.01/step]
026	Correction Coefficient 1: Interrupt: BW	*ENG	[0 to 1 / 0.1 / 0.01/step]
027	Correction Coefficient 2: Interrupt: BW	*ENG	[0 to 1 / 1 / 0.01/step]
028	Correction Coefficient 1: Interrupt: FC	*ENG	[0 to 1 / 0.25 / 0.01/step]

029	Correction Coefficient 2: Interrupt: FC	*ENG	[0 to 1 / 1 / 0.01/step]
030	Max. Number Correction Threshold	*ENG	[0 to 99 / 5 / 1/step]
031	Max. Number Correction Counter	*ENG	[0 to 255 / 0 / 1/step]

3512	[Image Quality Adj.: Interval]			
3312	Adjusts the timing for execution	cution of process control and line position adjustment.		
001	During Job	*ENG	[0 to 100 / 30 / 1 page/step]	
002	During Stand-by	*ENG	[0 to 100 / 10 / 1 minute/step]	

	[PCU Motor Stop Time: Bk]		
Displays the last time that the PCU motors stopped.			stopped.
	These are used for process control execution timing.		
001	Year	*ENG	[0 to 99 / 0 / 1/step]
002	Month	*ENG	[1 to 12 / 1 / 1/step]
003	Date	*ENG	[1 to 31 / 1 / 1/step]
004	Hour	*ENG	[0 to 23 / 0 / 1/step]
005	Minute	*ENG	[0 to 59 / 0 / 1/step]

	[Environmental Display: Job En	d]		
3514	Displays the environmental conditions for the last job. These are used for process control execution timing.			
001	Temperature	*ENG	[-1280 to 1270 / - / 0.1°C/step]	
002	Relative Humidity	*ENG	[0 to 1000 / - / 0.1%RH/step]	
003	Absolute Humidity	*ENG	[0 to 1000 / - / 0.1 g/cm ³ /step]	

3515	[Execution Interval: Display]	
3313	Displays the current interval for process control execution.	

	When the machine calculates the timing for process control, it uses a number of conditions. These are the results after considering all the conditions.		
001	Job End: Potential Control: BW	*ENG	[0 to 2000 / 500 / 1 page/step]
002	Job End: Potential Control: FC	*ENG	[0 to 2000 / 200 / 1 page/step]
003	Interrupt: Potential Control: BW	*ENG	[0 to 2000 / 500 / 1 page/step]
004	Interrupt: Potential Control: FC	*ENG	[0 to 2000 / 200 / 1 page/step]

	[Refresh Mode] DFU		
3516	While making prints with low coverage, the developer is agitated with less toner consump and the toner carrier attraction tends to increase. This may cause low image density or p transfer (white dots). To prevent this, the coagulated toner or overcharged toner has to consumed by performing the refresh mode.		
001	Dev. Motor Rotation: Display: Bk	*ENG	
002	Dev. Motor Rotation: Display: M	*ENG	[0. 1000 / 0 / 0 1 / . 1
003	Dev. Motor Rotation: Display: C	*ENG	[0 to 1000 / 0 / 0.1 m/step]
004	Dev. Motor Rotation: Display: Y	*ENG	
005	Rotation Threshold	*ENG	[0 to 1000 / 1 / 1 m/step]
006	Pixel Coverage Sum: Bk	*ENG	
007	Pixel Coverage Sum: M	*ENG	
008	Pixel Coverage Sum: C	*ENG	
009	Pixel Coverage Sum: Y	*ENG	[0. (5525 / 0 / 1 2 / . 1
010	Required Area: Bk	*ENG	[0 to 65535 / 0 / 1 cm ² /step]
011	Required Area: M	*ENG	
012	Required Area: C	*ENG	
013	Required Area: Y	*ENG	
014	Refresh Threshold: Bk	*ENG	
015	Refresh Threshold: M	*ENG	[0 to 255 / 14 / 1 cm ² /m/step]
016	Refresh Threshold: C	*ENG	

017	Refresh Threshold: Y	*ENG	
018	Pattern Generation Number: Bk	*ENG	
019	Pattern Generation Number: M	*ENG	
020	Pattern Generation Number: C	*ENG	[0 to 255 / 0 / 1 time/step]
021	Pattern Generation Number: Y	*ENG	
022	Pattern Generation Number: Upper limit	*ENG	
023	Toner Consumption Pattern Area	*ENG	[10 to 2550 / 300 / 10 cm ² / step]
024	Supply Coefficient	*ENG	[0 to 2.55 / 1 / 0.01/step]
025	Job End Area Coefficient	*ENG	[0.1 to 25.5 / 1 / 0.1/step]
026	Job End Vb Coefficient	*ENG	[0 to 100 / 40 / 1%/step]
027	Job End Length	*ENG	[0 to 56 / 12 / 1 mm/step]
028	Job End Supply	*ENG	[0 to 1 / 0.45 / 0.001 mg/cm ² / step]

	[Blade damage prevention mo	de]	
3517	Adjusts the threshold temperature for preventing the cleaning blade in the transfer belt cleaning unit from being damaged. If the temperature is above this value, toner is applied to the transfer belt at set intervals during the job to prevent the blade from flipping over.		
001	Execution Temp. Threshold	*ENG	[0 to 50 / 40 / 1 °C/step]

3518	[Image Quality Adj. Execution Flag] DFU		
001	Toner End Recovery: Bk	*ENG	
002	Toner End Recovery: M	*ENG	
003	Toner End Recovery: C	*ENG	[0 or 1 / 0 / 1/step]
004	Toner End Recovery: Y	*ENG	0: OFF. 1: ON
005	Vsg Adj.	*ENG	
006	Developer Mixing	*ENG	

007	Process Control	*ENG	[0 to 2 / 0 / 1/step] 0: OFF. 1: ON (once), 2: ON (twice)
008	MUSIC	*ENG	[0 to 2 / 0 / 1/step] 0: OFF. 1: ON (once), 2: ON (twice)
009	OPC Drive Control	*ENG	
010	Charge AC Control	*ENG	[0 or 1 / 0 / 1/step] 0: OFF, 1: ON
011	Blade Damage Prevention	*ENG	

3519	[Toner End Prohibition Setting]			
3319	Enables or disables each adjustment at toner near end.			
001	Process Control	*ENG	[0 or 1 / 1 / 1/step]	
002	MUSIC	*ENG	0: Permit (adjustment is done even toner near end condition)	
003	TC Adj.	*ENG	1: Forbid (adjustment is not done at toner near end condition)	

2520	[ITB Idling Number]				
3520	Specifies the number of the ITB idling	rotation for	r each condition.		
001	Temperature: H	*ENG			
002	Temperature: M	*ENG	[0 - 2 / 0 / 1		
003	Temperature: L	*ENG	[0 or 3 / 0 / 1 revolution/step]		
004	Temperature: L: Power ON	*ENG			

		[Temperature Threshold]			
		Specifies the threshold temperature for each condition. These settings affect the conditions of SP3-520.			
t1:		t1: Threshold between L (low temp.) and M (medium temp.)			
		t2: Threshold between M (medium temp.) and H (high temps)			

001	Threshold: t2	*ENG	[20 or 30 / 25 / 1 deg/step]
002	Threshold: t1	*ENG	[0 or 15 / 15 / 1 deg/step]

	[Initial Process Control Setting]				
	Adjusts the threshold for the process control at power on.				
3522		changed by more than the values of these SPs what the previous operation, the process control at po			
002	Non-use Time Setting	*ENG		[0 to 1440 / 360 / 1 minute/step]	
003	Temperature Range	*EN	1G	[0 to 99 / 10 / 1°C/step]	
004	Relative Humidity Range	*ENG		[0 to 99 / 50 / 1 %RH/step]	
005	Absolute Humidity Range	*ENG		[0 to 99 / 6 / 1 g/m ³ /step]	
	[Rapi_timer]	mer]			
100	[Time Setting]	*ENG	*ENG [0 to 255 / 30 / 1 sec/step]		
	Adjusts the time-out time for the Rapi timer.				

	[Non-use Time Process Control Setting]				
0.501	Adjusts the threshold for the process control at stand-by.				
3531	When the current condition has changed by more than the values of these SPs when compared with the conditions at the previous operation, the process control at stand-by is executed.				
001	Non-use Time Setting	*ENG	[0 to 1440 / 360 / 1 minute/step]		
002	Temperature Range	*ENG	[0 to 99 / 10 / 1 ° C/step]		
003	Relative Humidity Range	*ENG	[0 to 99 / 50 / 1 %RH/step]		
004	Absolute Humidity Range	*ENG	[0 to 99 / 6 / 1 g/m ³ /step]		
005	Maximum Execution Number	*ENG	Adjusts the maximum execution time for the process control at stand-by. [0 to 99 / 10 / 1 time/step]		

|--|

target development gamma. [O or 1 / 1 / -] O: Not Correct, 1: Correct O14 K (Max Correction) *ENG				
each color. 10 to 5 / - / 0.01 mg/cm²/kV /step	001	Bk (Current)	*ENG	
Send	002	M (Current)	*ENG	. ,
Second Processing Second Pro	003	C (Current)	*ENG	
2006 M (Target Display) *ENG [0 to 5 / 0.85 / 0.01 mg/cm²/kV /step]	004	Y (Current)	*ENG	
006 M (Target Display) *ENG [0 to 5 / 0.85 / 0.01 mg/cm²/kV /step] 007 C (Target Display) *ENG [0 to 5 / 0.8 / 0.01 mg/cm²/kV /step] 008 Y (Target Display) *ENG [0 to 5 / 0.77 / 0.01 mg/cm²/kV /step] 009 Bk (Standard Target Set) *ENG Displays the standard target development gamma for each color. 010 M (Standard Target Set) *ENG [0 to 5 / 0.9 / 0.01 mg/cm²/kV /step] 011 C (Standard Target Set) *ENG [0 to 5 / 0.85 / 0.01 mg/cm²/kV /step] 012 Y (Standard Target Set) *ENG Turns on or off the environmental correction for target development gamma. 013 Environmental Correction *ENG Turns on or off the environmental correction for target development gamma. 014 K (Max Correction) *ENG Adjusts the maximum correction value for each color. These SPs are effective only when the setting of SP3-611-013 is set to "1". 015 M (Max Correction) *ENG 016 C (Max Correction) *ENG 017 Y (Max Correction) *ENG 018 K (Max Abs Hum) *ENG	005	Bk (Target Display)	*ENG	
Turns on or off the environmental correction *ENG O to 5 / 0.77 / 0.01 mg/cm²/kV / step	006	M (Target Display)	*ENG	
Displays the standard target development gamma for each color. [0 to 5 / 0.9 / 0.01 mg/cm²/kV / step] O10 M (Standard Target Set) *ENG O11 C (Standard Target Set) *ENG O12 Y (Standard Target Set) *ENG Environmental Correction *ENG O13 Environmental Correction *ENG O14 K (Max Correction) *ENG O15 M (Max Correction) *ENG O16 C (Max Correction) *ENG O17 Y (Max Correction) *ENG O18 K (Max Abs Hum) *ENG Displays the standard target development gamma for each color. [0 to 5 / 0.9 / 0.01 mg/cm²/kV / step] Turns on or off the environmental correction for target development gamma. [0 or 1 / 1 / -] 0: Not Correct, 1: Correct Adjusts the maximum correction value for each color. These SPs are effective only when the setting of SP3-611-013 is set to "1". [0 to 5 / 0.1 / 0.01 mg/cm2/kv/step]	007	C (Target Display)	*ENG	[0 to 5 / 0.8 / 0.01 mg/cm ² /kV /step]
*ENG gamma for each color. [0 to 5 / 0.9 / 0.01 mg/cm²/kV /step]	008	Y (Target Display)	*ENG	[0 to 5 / 0.77 / 0.01 mg/cm ² /kV /step]
011 C (Standard Target Set) *ENG [0 to 5 / 0.85 / 0.01 mg/cm²/kV /step] 012 Y (Standard Target Set) *ENG 013 Environmental Correction *ENG 014 K (Max Correction) *ENG 015 M (Max Correction) *ENG 016 C (Max Correction) *ENG 017 Y (Max Correction) *ENG 018 K (Max Abs Hum) *ENG *ENG 019 to 5 / 0.85 / 0.01 mg/cm²/kV /step] Turns on or off the environmental correction for target development gamma. [0 or 1 / 1 / -] 0: Not Correct, 1: Correct Adjusts the maximum correction value for each color. These SPs are effective only when the setting of SP3-611-013 is set to "1". [0 to 5 / 0.1 / 0.01 mg/cm²/kV /step]	009	Bk (Standard Target Set)	*ENG	gamma for each color.
012 Y (Standard Target Set) *ENG 013 Environmental Correction *ENG Turns on or off the environmental correction for target development gamma. [0 or 1 / 1 / -] 0: Not Correct, 1: Correct 014 K (Max Correction) *ENG 015 M (Max Correction) *ENG 016 C (Max Correction) *ENG 017 Y (Max Correction) *ENG 018 K (Max Abs Hum) *ENG	010	M (Standard Target Set)	*ENG	
Turns on or off the environmental correction for target development gamma. [O or 1 / 1 / -] O: Not Correct, 1: Correct O14 K (Max Correction) *ENG	011	C (Standard Target Set)	*ENG	[0 to 5 / 0.85 / 0.01 mg/cm ² /kV /step]
target development gamma. [O or 1 / 1 / -] O: Not Correct, 1: Correct O14 K (Max Correction) *ENG	012	Y (Standard Target Set)	*ENG	
Adjusts the maximum correction value for each color. These SPs are effective only when the setting of SP3-611-013 is set to "1". O17 Y (Max Correction) *ENG O18 K (Max Abs Hum) *ENG Adjusts the maximum correction value for each color. These SPs are effective only when the setting of SP3-611-013 is set to "1". [O to 5 / 0.1 / 0.01 mg/cm2/kv/step]	013	Environmental Correction	*ENG	[0 or 1 / 1 / -]
015 M (Max Correction) *ENG 016 C (Max Correction) *ENG 017 Y (Max Correction) *ENG 018 K (Max Abs Hum) *ENG *ENG color. These SPs are effective only when the setting of SP3-611-013 is set to "1". [0 to 5 / 0.1 / 0.01 mg/cm2/kv/step] *ENG	014	K (Max Correction)	*ENG	
016 C (Max Correction) *ENG 017 Y (Max Correction) *ENG 018 K (Max Abs Hum) *ENG setting of SP3-611-013 is set to "1". [0 to 5 / 0.1 / 0.01 mg/cm2/kv/step]	015	M (Max Correction)	*ENG	1
017 Y (Max Correction) *ENG 018 K (Max Abs Hum) *ENG	016	C (Max Correction)	*ENG	
	017	Y (Max Correction)	*ENG	[U to 5 / U.1 / U.U I mg/cm2/kv/step]
	018	K (Max Abs Hum)	*ENG	Adina de la constitución de la c
019 M (Max Abs Hum) *ENG for each color. These SPs are effective only when	019	M (Max Abs Hum)	*ENG	Adjusts the maximum humidity correction value for each color. These SPs are effective only when
020 C (Max Abs Hum) *ENG the setting of SP3-611-013 is set to "1". [1 to 99 / 15 / 1 g/m3/step]	020	C (Max Abs Hum)	*ENG	
021 Y (Max Abs Hum) *ENG [1 10 99 / 13 / 1 g/ m3 / siep]	021	Y (Max Abs Hum)	*ENG	[1 10 77 / 1 3 / 1 g/1113/siep]

3612	[Vk Display]		
3012	Displays Vk for each color.		
001	Bk	*ENG	
002	М	*ENG	[200+200//14/41
003	С	*ENG	[-300 to 300 / - / 1 V/step]
004	Υ	*ENG	

3621	[Development DC Control: Display] Plain: 154 mm/sec, Thick 1 and Thick 2&Fine: 77 mm/sec				
3021	Displays the development DC bias adjusted with the process control for each line speed and color.				
001	Plain: Bk	*ENG			
002	Plain: M	*ENG			
003	Plain: C	*ENG			
004	Plain: Y	*ENG	[0700 / FFO / 1. V/]		
009	Thick 2 & FINE: Bk	*ENG	[0 to 700 / 550 / 1 -V/step]		
010	Thick 2 & FINE: M	*ENG			
011	Thick 2 & FINE: C	*ENG			
012	Thick 2 & FINE: Y	*ENG			

[Charge DC Control: Display] Plain: 154 mm/sec, Thick 1 and Thick 2&Fine: 77 mm/sec					
0001	Displays the charge DC voltage adjusted with the process control for each line speed and color.				
001	Plain: Bk	*ENG			
002	Plain: M	*ENG			
003	Plain: C	*ENG	[0 to 2000 / 690 / 1 -V/step]		
004	Plain: Y	*ENG			

3641	[Charge AC Control: Display] Plain: 154 mm/sec			
	Displays the charge AC voltage adjusted with the process control for each color.			
001	Plain: Bk	*ENG		
002	Plain: M	*ENG	[0. 2 /175 /001]//.]	
003	Plain: C	*ENG	[0 to 3 / 1.75 / 0.01 kV/step]	
004	Plain: Y	*ENG		

3651	[LD Power Control: Display] Plain: 154 mm/sec, Thick 2 & FINE: 77 mm/sec				
	Displays the LD power adjusted for each environment.				
001	Plain: Bk	*ENG			
002	Plain: M	*ENG			
003	Plain: C	*ENG			
004	Plain: Y	*ENG	[0.4-200 / 100 / 1.9/ /]		
009	Thick 2 & FINE: Bk	*ENG	[0 to 200 / 100 / 1 %/step]		
010	Thick 2 & FINE: M	*ENG			
011	Thick 2 & FINE: C	*ENG			
012	Thick 2 & FINE: Y	*ENG			

	[HST Concentration Control: Set]
3710	TD Sensor: Toner Concentration Control Setting
	Selects the toner concentration control method by HST memory, which is in the TD sensor.

001	Control Method: Selection	*ENG	[0 or 1 / 1 / -]
			0: Not Use, 1: Use

3711	[HST Concentration Control: Bk]		
3/11	Displays the factory settings of the	e black PC	U.
001	Vcnt	*ENG	[0 to 5 / 4 / 0.1 V/step]
002	Vt	*ENG	[0 to 5 / 2.5 / 0.1 V/step]
003	Sensitivity: HL	*ENG	[1.22 to 3.77 / 2.1 / 0.01 V/step]
004	Sensitivity: HM	*ENG	[0. 0.55 / 1.05 /0.01 V/.]
005	Sensitivity: ML	*ENG	[0 to 2.55 / 1.05 / 0.01 V/step]
006	Set Detection	*ENG	[0 to 5 / 1 / 0.1 V/step]
007	Without Developer	*ENG	[0 to 5 / 1.2 / 0.1 V/step]
800	With Developer	*ENG	[0 to 5 / 1.3 / 0.1 V/step]
009	Serial Number 1	*ENG	[0.4-255 / /1.1//.4]
010	Serial Number 2	*ENG	[0 to 255 / - / 1 V/step]
011	Adjustment: Vt	*ENG	[0 to 5 / 3 / 0.1 V/step]
012	Adjustment: Vtref	*ENG	[0 to 5 / 3 / 0.1 V/step]
013	Adjustment: Vtcnt	*ENG	[0 to 5 / 4 / 0.01 V/step]
014	Adjustment: Gamma	*ENG	[0 to 2.55 / 0 / 0.01 mg/cm ² /kV /step]
015	Adjustment: Vcnt Result	*ENG	[0 to 9 / 9 / 1 /step]

3712	[HST Concentration Control: M	1]	
3/12	Displays the factory settings of	the magenta PCU.	
001	Vcnt	*ENG	[0 to 5 / 4 / 0.1 V/step]
002	Vt	*ENG	[0 to 5 / 2.5 / 0.1 V/step]
003	Sensitivity: HL	*ENG	[1.22 to 3.77 / 2.1 / 0.01 V/step]
004	Sensitivity: HM	*ENG	[0 to 2.55 / 1.05 / 0.01 V/step]

005	Sensitivity: ML	*ENG	
006	Set Detection	*ENG	[0 to 5 / 1 / 0.1 V/step]
007	Without Developer	*ENG	[0 to 5 / 1.2 / 0.1 V/step]
008	With Developer	*ENG	[0 to 5 / 1.3 / 0.1 V/step]
009	Serial Number 1	*ENG	[0.4- 0.55 / /1.V/.4]
010	Serial Number 2	*ENG	[0 to 255 / - / 1 V/step]
011	Adjustment: Vt	*ENG	[0 to 5 / 3 / 0.1 V/step]
012	Adjustment: Vtref	*ENG	[0 to 5 / 3 / 0.1 V/step]
013	Adjustment: Vtcnt	*ENG	[0 to 5 / 4 / 0.01 V/step]
014	Adjustment: Gamma	*ENG	[0 to 2.55 / 0 / 0.01 mg/cm ² /kV /step]
015	Adjustment: Vcnt Result	*ENG	[0 to 9 / 9 / 1 /step]

2712	[HST Concentration Control: C]		
3713	Displays the factory settings of the	e cyan PCl	J.
001	Vcnt	*ENG	[0 to 5 / 4 / 0.1 V/step]
002	Vt	*ENG	[0 to 5 / 2.5 / 0.1 V/step]
003	Sensitivity: HL	*ENG	[1.22 to 3.77 / 2.1 / 0.01 V/step]
004	Sensitivity: HM	*ENG	[0 2.55 / 1.05 / 0.01 \/ /]
005	Sensitivity: ML	*ENG	[0 to 2.55 / 1.05 / 0.01 V/step]
006	Set Detection	*ENG	[0 to 5 / 1 / 0.1 V/step]
007	Without Developer	*ENG	[0 to 5 / 1.2 / 0.1 V/step]
800	With Developer	*ENG	[0 to 5 / 1.3 / 0.1 V/step]
009	Serial Number 1	*ENG	[0.4- 0.55 / /1 \//.41
010	Serial Number 2	*ENG	[0 to 255 / - / 1 V/step]
011	Adjustment: Vt	*ENG	[0 to 5 / 3 / 0.1 V/step]
012	Adjustment: Vtref	*ENG	[0 to 5 / 3 / 0.1 V/step]

013	Adjustment: Vtcnt	*ENG	[0 to 5 / 4 / 0.01 V/step]
014	Adjustment: Gamma	*ENG	[0 to 2.55 / 0 / 0.01 mg/cm ² /kV /step]
015	Adjustment: Vcnt Result	*ENG	[0 to 9 / 9 / 1 /step]

071.4	[HST Concentration Control: Y]		
3714	Displays the factory settings of the	e yellow PO	CU.
001	Vcnt	*ENG	[0 to 5 / 4 / 0.1 V/step]
002	Vt	*ENG	[0 to 5 / 2.5 / 0.1 V/step]
003	Sensitivity: HL	*ENG	[1.22 to 3.77 / 2.1 / 0.01 V/step]
004	Sensitivity: HM	*ENG	[0. 0.55 /1.05 /0.01 //]
005	Sensitivity: ML	*ENG	[0 to 2.55 / 1.05 / 0.01 V/step]
006	Set Detection	*ENG	[0 to 5 / 1 / 0.1 V/step]
007	Without Developer	*ENG	[0 to 5 / 1.2 / 0.1 V/step]
008	With Developer	*ENG	[0 to 5 / 1.3 / 0.1 V/step]
009	Serial Number 1	*ENG	[0, 055 / /1 // ,]
010	Serial Number 2	*ENG	[0 to 255 / - / 1 V/step]
011	Adjustment: Vt	*ENG	[0 to 5 / 3 / 0.1 V/step]
012	Adjustment: Vtref	*ENG	[0 to 5 / 3 / 0.1 V/step]
013	Adjustment: Vtcnt	*ENG	[0 to 5 / 4 / 0.01 V/step]
014	Adjustment: Gamma	*ENG	[0 to 2.55 / 0 / 0.01 mg/cm ² /kV /step]
015	Adjustment: Vcnt Result	*ENG	[0 to 9 / 9 / 1 /step]

3800	[Toner Collection Bottle Full Detec	ction]	
3600	Displays/ adjusts the toner collect	tion bottle (detection settings. These SPs are used for NRS.
001	Condition	*CTL	[0 to 4 / 0 / 1 /step]
002	Detection Times	*CTL	[0 to 50 / - / 1 /step]
003	Print Page After Near Full	*CTL	[0 to 1000 / 0 / 1 sheet/step]

004	Pixel Count After Near Full	*CTL	[0 to 200000 / - / 1 cm ² /step]	
005	Pixel Count After Replacement	*CTL	Displays the pixel counter after replacement of toner collection bottle. [0 to 200000 / - / 1 cm²/step]	
008	Coefficient	*ENG	[0.5 to 1.5 / 1 / 0.1 /step]	
011	Notice Setting	*ENG	Enables or disables the calling for @Remote. [0 or 1 / 1 / -] 0: Enable @Remote calling 1: Disable @Remote calling	
• • •	NOTE:			
	If the toner collection bottle has been replac		ed before the machine detects used toner near cannot detect toner collection bottle near full.	
	Day Threshold: Toner			
	Collection bottle:NF	*ENG	[1 to 30 / 5 / 1 day/step]	
012	Collection bottle:NF Sets the threshold days for the ne	ar-full displo	[1 to 30 / 5 / 1 day/step] ay. The near-full of the toner collection bottle is has detected the actuator in the toner collection	
012	Collection bottle:NF Sets the threshold days for the ne displayed after the toner collection	ar-full displo	ay. The near-full of the toner collection bottle is	

3900	[Toner Collection Bottle Full De	tle Full Detection]		
3900	Turns toner collection bottle full detection on or off.		on or off.	
001	ON/OFF Setting	*ENG	[0 or 1 / 1 / -] 0: OFF, 1: ON	

3901	[New PCU Detection]				
3901	Turns new PCU detection on or off.				
001	ON/OFF Setting	*ENG	[0 or 1 / 1 / -]		

		0: OFF, 1: ON
- 1		

	[Manual New Unit Set]				
3902	Turns the new unit detection flag for each PM unit on or off. The use of these counters is explained in the PM section and in the relevant parts of section 3 (Replacement and Adjustment).				
001	Development Unit: Bk	*ENG			
002	Development Unit: Y	*ENG	[0 or 1 / 0 / -]		
003	Development Unit: C	*ENG	0: OFF, 1: ON		
004	Development Unit: M	*ENG			
005	Developer: Bk	*ENG			
006	Developer: Y	*ENG	[0 or 1 / 0 / -]		
007	Developer: C	*ENG	0: OFF, 1: ON		
008	Developer: M	*ENG			
009	PCU: Bk	*ENG			
010	PCU: Y	*ENG	[0 or 1 / 0 / -]		
011	PCU: M	*ENG	0: OFF, 1: ON		
012	PCU: C	*ENG			
013	Image Transfer Unit	*ENG	[0 or 1 / 0 / -]		
014	Fusing Unit	*ENG	0: OFF, 1: ON		
015	Cleaning Unit	*ENG	Do not use 3902-013 if you only change the cleaning unit.		
016	Paper Transfer Unit	*ENG	3902-015: This is for the image transfer belt		
017	Toner Collection Bottle	*ENG	cleaning unit.		

SP4-XXX (Scanner)

4008	[Sub Scan Magnification Adjustment]
	Adjusts the sub-scan magnification by changing the scanner motor speed.

	[Leading Edge Registration Adjustment]			
Adjusts the leading edge registration by changing the scanning start timing in t direction.			hanging the scanning start timing in the sub-scan	
001		*ENG	[-2.0 to 2.0 / 0 / 0.1 mm/step] FA	

	[Side-to-Side registration Adjustment]			
4011	Adjusts the side-to-side registration by changing the scanning start timing in the main sc direction.			
001	-	*ENG	[-2.5 to 2.5 / 0 / 0.1 mm/step] FA	

	[Scanner Erase Margin: Scale] Scanner: Erase Margin: Scale				
4012	Sets the blank margin at each side for erasing the original shadow caused by the gap between the original and the scale.				
001	Book: Leading Edge	- *ENG			
002	Book: Trailing Edge		[0 to 3.0 / 0 / 0.1 mm/step] FA		
003	Book: Left		[0 to 5.0 / 0 / 0.1 mm/step] FA		
004	Book: Right				
005	ADF: Leading Edge	*ENG			
007	ADF: Right		[0 to 3.0 / 0 / 0.1 mm/step] FA		
008	ADF: Left				

	[Scanner Free Run]			
Performs the scanner free run with the exposure lamp on or off in the		osure lamp on or off in the following mode.		
	Full color mode / Full Size / A3 or DLT			
001	Lamp: ON	*ENG	[0 or 1 / 0 / -]	
002	Lamp: OFF	EING	0: OFF, 1: ON	

4014	[Scan]	[Scan]				
Execute the scanner free fun with each mode.		mode.				
00	HP Detection Enable	-	Scanner free run with HP sensor check.			
002	HP Detection Disable	_	Scanner free run without HP sensor check.			

4020	[Dust Check]		
001	Detection: ON/OFF	*ENG	Turns the ADF scan glass dust check on/off. [0 or 1 / 0 / 1 /step] 0: OFF, 1: ON
002	Dust Detect: Level	*ENG	Selects the detect level. [0 to 8 / 4 / 1 / step] 0: lowest detection level 8: highest detection level
003	Correction Level	*ENG	Selects the level of the sub scan line correction when using the ARDF. [0 to 4 / 0 / 1 /step] 0: Off 1: Weakest 2: Weak 3: Strong 4: Strongest

	[APS Operation Check]				
Displays a code that represents the original size detected by the original sens Check Table".)		inal size detected by the original sensors. (See "Input			
001	APS Operation Check	-	-		

4303	[APS Min Size (A5/HLT/16K)]		
4303	en the outputs from the original sensors are all OFF.		
001	APS Min. Size (A5/HLT/	*ENG	[0 to 2 / 0 / 1 /step]
001	16K)	LINO	0: No Original

	1: A5-Lengthwise (16K SEF if 4305 is set to 3)
	2: A5-Sideways (16K LEF if 4305 is set to 3)

4305	[8K/16K Detection]	*ENG	[0 to 3 / 0 / 1 /step] 0: Normal Detection (the machine detects A4/LT size as A4 or LT, depending on the paper size setting) 1: A4-Sideways LT-Lengthwise 2: LT-Sideways A4-Lengthwise 3: 8K 16K
001	This program enables the machine to automatically recognize the 8K/16K size.		

	[Scanner Erase Margin]	*ENG		
4400	Set the Mask for Original. These SPs set the area to be masked			
001	Book: Leading Edge			
002	Book: Trailing Edge	[0 to 3.0 / 0 / 0.1 mm/step]		
003	Book: Left			
004	Book: Right			
005	ADF: Leading Edge			
007	ADF: Right			
008	ADF: Left			

4417	[IPU Test Pattern]					
	Selects the IPU test pattern.					
		[0 to 24 / 0 / 1/step]	13: Grid pattern CMYK			
		0: Scanned image	14: Color patch CMYK			
001	Selection 2: Gradation main sc	1: Gradation main scan A	15: Gray pattern (1)			
001		2: Gradation main scan B	16: Gray pattern (2)			
		3: Gradation main scan C	17: Gray Pattern (3)			
		4: Gradation main scan D	18: Shading pattern			

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5: Gradation sub scan (1)	
6: Grid pattern	19: Thin line pattern
7: Slant grid pattern	20: Scanned + Grid pattern
8: Gradation RGBCMYK	21: Scanned + Gray scale
9: UCR pattern	22: Scanned + Color patch
10: Color patch 16 (1)	23: Scanned + Slant Grid C
11: Color patch 16 (2)	24: Scanned + Slant Grid D
12: Color patch 64	

4429	[Illegal Copy Output]		
001	Сору		
002	Scanner	*ENG	[0 to 3 / 3 / 1 /step]
003	Fax		

4440	[Saturation Adjustment]		
4440	Adjusts the level of saturation for copying.		
001	Saturation Adj. 1	*ENG	[0 to 5 / 3 / 1 /step] 0: High, 1: Lowest, 2: Lower 3: Default, 4: Higher, 5: Highest

4450	[Scan Image Path Selection]		
001	Black Subtraction ON/OFF	[0 or 1 / 1 / -] 0: OFF, 1: ON	
001	Uses or does not use the black reduction image path.		
000	SH ON/OFF [0 or 1 / 0 / 1 /step] 0: ON, 1: OFF		
002	Uses or does not use the shading image path.		

	[Digital AE Set] DFU		
4460	Specifies the level of deleting the background in the ADS mode. You can adjust its level for each scanning method (platen, ADF).		
001	Lower Limit	*ENG	[0 to 1023 / 364 / 4 digit/step]

4501	[ACC Target Density]			
4501	Selects the ACC result.			
001	Copy: Bk: Text	*ENG		
002	Copy: C: Text	*ENG		
003	Copy: M: Text	*ENG		
004	Copy: Y: Text	*ENG	[0 to 10 / 5 / 1 /step]	
005	Copy: Bk: Photo	*ENG	10: Darkest density	
006	Copy: C: Photo	*ENG		
007	Copy: M: Photo	*ENG		
008	Copy: Y: Photo	*ENG		

4505	[ACC Offset: Light]			
4505	Adjusts the offset correction for light areas of the ACC pattern.			
001	Self Machine: Bk	*ENG		
002	Self Machine: C	*ENG	[-128 to 127 / 0 / 1 /step]	
003	Self Machine: M	*ENG	[-12010127 / 0 / 1 / siep]	
004	Self Machine: Y	*ENG		
005	Other Machine: Bk	*ENG		
006	Other Machine: C	*ENG	Reserved	
007	Other Machine: M	*ENG	reserved	
800	Other Machine: Y	*ENG		

	4506	[ACC Offset: Dark]			
		Adjusts the offset correction for dark areas of the ACC pattern.			
	001	Self Machine: Bk	*ENG	[-128 to 127 / 0 / 1 /step]	

002	Self Machine: C	*ENG	
003	Self Machine: M	*ENG	
004	Self Machine: Y	*ENG	
005	Other Machine: Bk	*ENG	
006	Other Machine: C	*ENG	Reserved
007	Other Machine: M	*ENG	reservea
008	Other Machine: Y	*ENG	

	[Printer Vector Correction]						
4540	This SP corrects the printer coverage of 12 hues (RY, YR, YG, etc. x 4 Colors [R, G, B, Option]) for a total of 48 parameters.						
001-004	RY Phase: Option/R/G/B						
005-008	YR Phase: Option/R/G/B						
009-012	YG Phase: Option/R/G/B						
013-016	GY Phase: Option/R/G/B	*ENG					
017-020	GC Phase: Option/R/G/B						
021-024	CG Phase: Option/R/G/B		Specifies the printer vector correction value. [0 to 255 / 0 / 1 /step]				
025-028	CB Phase: Option/R/G/B						
029-032	BC Phase: Option/R/G/B						
033-036	BM Phase: Option/R/G/B						
037-040	MB Phase: Option/R/G/B						
041-044	MR Phase: Option/R/G/B						
045-048	RM Phase: Option/R/G/B						

4550	[Scanner Application: text/Printing] DFU	
4551	[Scanner Application: text] DFU	
4552 [Scanner Application: text (Drop Out Coor)] DFU		

4553	[Scanner Application: text-Photo] DFU	[Scanner Application: text-Photo] DFU				
4554	[Scanner Application: Photo] DFU					
4565	[Scanner Application: GrayScale] DFU					
4570	[Scanner Application: Color: Text/Photo	DFU				
4571	[Scanner Application: Color: Glossy Phot	o] DFU				
4572	[Scanner Application: AutoColor] DFU					
-005	MTF: 0 (Off), 1-15 (Strong) *ENG [0 to 15 / 8 / 1 /step] 0: MTF Off					
-003	Sets the MTF level (Modulation Transfer Function) designed to improve image contrast. Set higher for stronger effect, lower for weaker effect.					
004	Smoothing: 0 (x1), 1-7 (Strong)	*ENG	[0 to 7 / 4 / 1 /step]			
-006	Use to remove "jaggies" if they appear. Set higher for smoother images.					
007	Brightness: 1–255	*ENG	[1 to 255 / 128 / 1 /step]			
-007	Set higher for darker, set lower for lighter.					
-008	Contrast: 1–255	*ENG	[1 to 255 / 128 / 1 /step]			
-008	Set higher for more contrast, set lower for less contrast.					
	Independent Dot Erase (0), 1-7 (Strong)		*ENG	[0 to 7 / 0 / 1 /step]		
-009	Sets the erasure level of Irregular Dots. Set higher for stronger effect, lower for weaker effect. O: Not activated					

4580	[FAX Application: Text/Chart] DFU					
4582	[FAX Application: Text/Photo] DFU					
4583	[FAX Application: Photo] DFU					
-005	MTF: 0 (Off), 1-15 (Strong)	*ENG	[0 to 15 / 8 / 1 /step] 0: MTF Off			
003	Sets the MTF level (Modulation Transfer Function) designed to improve image contrast. Set higher for stronger effect, lower for weaker effect.					
-006	Smoothing: 0 (x1), 1-7 (Strong) *ENG [0 to 7 / 4 / 1 /step]					

	Use to remove "jaggies" if they appear. Set higher for smoother images.					
007	Brightness: 1–255	*ENG	[1 to 255 / 128 / 1 /step]			
-007	Set higher for darker, set lower	for lighter.				
000	Contrast: 1–255	*ENG	[1 to 255 / 128 / 1 /step]			
-008	Set higher for more contrast, set lower for less contrast.					
	Independent Dot Erase (0), 1-7	(Strong)		*ENG	[0 to 7 / 0 / 1 /step]	
-009	Selects the contrast level for B/W the Text mode. Sets the erasure level of Irregular Dots. Set higher for stronger effect, lower for weaker effect. O: Not activated					
	Texture Erase: 0	*ENG	[0 to 2 / 0 / 1 /step]			
-010	Sets the erasure level of textures. Set higher for stronger effect, lower for weaker effect. This SP (suffix "-010") only exists in SP4580, 4582 and 4583. O: Not activated					

4581	[FAX Application: Text] DFU						
4584	[FAX Application: Original 1] DFU						
4585	[FAX Application: Original 2] [FU					
-005	, ,, , , , , , , , , , , , , , , , , , ,			*EN(G	_	15 / 8 / 1 /step] TF Off
000	Sets the MTF level (Modulation Transfer Function) designed to improve image contrast. Set higher for stronger effect, lower for weaker effect.					prove image contrast. Set	
007	Smoothing: 0 (x1), 1-7 (Strong)			*ENG	3	[0 to	7 / 4 / 1 /step]
-006	Use to remove "jaggies" if they appear. Set higher for smoother images.						
007	Brightness: 1–255	*ENG	[1 1	to 255	/ 12	8 /	l /step]
-007	Set higher for darker, set lower for lighter.						
000	Contrast: 1–255	*ENG [1 to 255 / 128 / 1 /step]					
-008	Set higher for more contrast, set lower for less contrast.						
-009	Independent Dot Erase (0), 1-7 (Strong) *ENG [0 to 7 / 0 / 1 / step			[0 to 7 / 0 / 1 /step]			

Selects the contrast level for B/W the Text mode. Sets the erasure level of Irregular Dots. Set higher for stronger effect, lower for weaker effect.

O: Not activated

4600	[SBU Version Display]		
001	SBU_ID	-	[0 to 0xFF / - / 1 /step] Displays the ID of the SBU.
002	GASBU-N_ID	-	[0 to 0xFF / - / 1 /step]
003	VSP5100_ID	-	[0 to 0xFF / - / 1 /step]

4602	[Scanner Memory Access]				
001	Scanner Memory Access	-	Enables the read and write check for the SBU registers.		
002	Address Set	-	Not used		
003	Data Set	-	INOI usea		

4603	[AGC Execution]		
001	HP Detection Enable	-	Executes the AGC.
002	HP Detection Disable	-	DFU

4604	[FGATE Open/Close] DFU		
001	-	-	Opens or closes the FGATE signal. This SP automatically returns to the default status (close) after exiting this SP. [0 or 1 / 0 / 1/step] 0: OFF, 1: ON

4609	[Gray Balance Set: R]		
00	Book Read	-	[-512 to 511 / -46 / 1 digit/step]
002	P. DF Read	-	[-512 to 511 / -46 / 1 digit/step]

4610	[Gray Balance Set: G]		
001	Book Read	-	[-512 to 511 / -20 / 1 digit/step]
002	DF Read	-	[-512 to 511 / -20 / 1 digit/step]

4611	[Gray Balance Set: B]		
001	Book Read	-	[-512 to 511 / -28 / 1 digit/step]
002	DF Read	-	[-512 to 511 / -28 / 1 digit/step]

4623	[Black Level Fine Adj. Display] RE: Red Even signal, RO: Red Odd signal		
001	Latest: RE Color	Displays the black offset value (rough adjustment) for the even red signal in the CCD circuit board (color printing speed). [0 to 16383 / 0 / 1 digit/step]	
002	Latest: RO Color	Displays the black offset value (rough adjustment) for the odd red signal in the CCD circuit board (color printing speed). [0 to 16383 / 0 / 1 digit/step]	

4624	[Black Level Fine Adj. Display] GE: Green Even signal, GO: Green Odd signal		
001	Latest: GE Color	Displays the black offset value (rough adjustment for the even green signal in the CCD circuit board (color printing speed). [0 to 16383 / 0 / 1 digit/step]	
002	Latest: GO Color	Displays the black offset value (rough adjustment for the odd green signal in the CCD circuit board (color printing speed). [0 to 16383 / 0 / 1 digit/step]	

4625	[Black Level Fine Adj. Display]		
4025	BE: Blue Even signal, BO: Blue Odd signal		

4628	[Gain Adjustment] Gain Adjustment: Analog			
4020	Displays the gain value of the amplifiers on the controller for Red.			
001	Latest: R Color	-	[0 to 7 / 0 / 1 digit/step]	

4629	[Gain Adjustment] Gain Adjustment: Analog				
4029	Displays the gain value of the amplifiers on the controller for Green.				
001	Latest: G Color	-	[0 to 7 / 0 / 1 digit/step]		

4630	[Gain Adjustment] Gain Adjustment: Analog			
4030	Displays the gain value of the amplifiers on the controller for Blue.			
001	Latest: B Color	-	[0 to 7 / 0 / 1 digit/step]	

4631	[Gain Adjustment] Gain Adjustment: Digital				
4031	Displays the gain value of the amplifiers on the controller for RE or RO.				
001	Latest: RE Color	-	[0 to 1002 / 0 / 1 digit/store]		
002	Latest: RO Color	-	[0 to 1023 / 0 / 1 digit/step]		

	4632	[Gain Adjustment] Gain Adjustment: Digital			
		Displays the gain value of the amplifiers on the controller for GE or GO.			
	001	Latest: GE Color	-	[0 to 1023 / 0 / 1 digit/step]	
	002	Latest: GO Color	-		

1622)	[Gain Adjustment] Gain Adjustment: Digital				
4633		Displays the gain value of the amplifiers on the controller for BE or BO.				
(001	Latest: BE Color	-	[0 to 1000 / 0 / 1 distriction]		
(002	Latest: BO Color	-	[0 to 1023 / 0 / 1 digit/step]		

4645	[Scan Adj. Time Out Error]		
001	White Offset Correction	-	[0 to 65535 / 0 / 1 digit/step]
002	Black Offset Correction	-	[0 to 03333 / 0 / 1 digit/ step]

4647	[Read Hard Error]				
4047	Displays the result of the SBU connection check.				
001	Power-ON	-	[0 to 35535 / 0 / 1 digit /step] 0: OK, Other: SBU connection check failure If the SBU connection check fails, SC144 occurs.		

4654	[Black Level Fine Adj. Displa RE: Red Even signal, RO: Re	•-	lr.
001	Last Correct Value: RE Color	*ENG	Displays the black offset value (rough adjustment) for the even red signal in the CCD circuit board (color printing speed). [0 to 16383 / 0 / 1 digit/step]
002	Last Correct Value: RO Color	*ENG	Displays the black offset value (rough adjustment) for the odd red signal in the CCD circuit board (color printing speed). [0 to 16383 / 0 / 1 digit/step]

4655	[Black Level Fine Adj. Display]				
4000	GE: Green Even signal, GO: Green Odd signal				
001	Last Correct Value: GE Color	*ENG	Displays the black offset value (rough adjustment) for the even green signal in the CCD circuit board (color printing speed).		

			[0 to 16383 / 0 / 1 digit/step]
002	Last Correct Value: GO Color	*ENG	Displays the black offset value (rough adjustment) for the odd green signal in the CCD circuit board (color printing speed). [0 to 16383 / 0 / 1 digit/step]

4656	[Black Level Fine Adj. Display] BE: Blue Even signal, BO: Blue Odd signal			
001	Last Correct Value: BE Color	*ENG	Displays the black offset value (rough adjustment) for the even blue signal in the CCD circuit board (color printing speed). [0 to 16383 / 0 / 1 digit/step]	
002	Last Correct Value: BO Color	*ENG	Displays the black offset value (rough adjustment) for the odd blue signal in the CCD circuit board (color printing speed). [0 to 16383 / 0 / 1 digit/step]	

	4658	[Gain Adjustment]				
Displays the previous gain value of the am			amplifiers o	on the controller for Red.		
	001	Last Correct Value: R Color	*ENG	[0 to 7 / 0 / 1 digit/step]		

	4659	[Gain Adjustment]				
Displays the previous gain value of the amplifiers on the controller for Green.				on the controller for Green.		
	001	Last Correct Value: G Color	*ENG	[0 to 7 / 0 / 1 digit/step]		

	4660	[Gain Adjustment]				
Displays the previous gain value of the amplifiers on the controller for Blue.				on the controller for Blue.		
	001	Last Correct Value: B Color	*ENG	[0 to 7 / 0 / 1 digit/step]		

	4661	[Gain Adjustment]		
4661 RE: Red Even signal, RO: Red Odd signal				
	001	01 Last Correct Value: RE Color *ENG [0 to 1023 / 0 / 1 digit/step]		[0 to 1023 / 0 / 1 digit/step]

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4662	[Gain Adjustment]				
4002	GE: Green Even signal, GO: Green C	dd signal			
001	Last Correct Value: GE Color	*ENG	[0 to 1023 / 0 / 1 digit/step]		
002	Last Correct Value: GO Color	*ENG			

4663	[Gain Adjustment]		
BE: Blue Even signal, BO: Blue Odd signal			
001	Last Correct Value: BE Color	*ENG	[0 to 1023 / 0 / 1 digit/step]
002	Last Correct Value: BO Color	*ENG	

4673	[Black Level Fine Adj. Display] RE: Red Even signal, RO: Red Odd signal			
001	Factory Setting: RE Color	*ENG	Displays the factory setting values of the black level adjustment for the even red signal in the CCD circuit board (color printing speed) [0 to 16383 / 0 / 1 digit/step]	
002	Factory Setting: RO Color	*ENG	Displays the factory setting values of the black level adjustment (rough adjustment) for the odd red signal in the CCD circuit board (color printing speed). [0 to 16383 / 0 / 1 digit/step]	

4674	[Black Level Fine Adj. Display] GE: Green Even signal, GO: Green Odd signal				
001	Factory Setting: GE Color	*ENG	Displays the factory setting values of the black level adjustment (rough adjustment) for the even green signal in the CCD circuit board (color printing speed). [0 to 16383 / 0 / 1 digit/step]		
002	Factory Setting: GO Color	*ENG	Displays the factory setting values of the black level adjustment (rough adjustment) for the odd green		

4675	[Black Level Fine Adj. Display] BE: Blue Even signal, BO: Blue Odd signal			
001	Factory Setting: BE Color *ENG		Displays the factory setting values of the black level adjustment (rough adjustment) for the even blue signal in the CCD circuit board (color printing speed). [0 to 16383 / 0 / 1 digit/step]	
002	Factory Setting: BO Color	*ENG	Displays the factory setting values of the black level adjustment (rough adjustment) for the odd blue signal in the CCD circuit board (color printing speed). [0 to 16383 / 0 / 1 digit/step]	

4677	[Gain Adjustment]				
4077	Displays the factory setting values of the gain adjustment for Red.				
001	Factory Setting: R Color	*ENG	[0 to 7 / 0 / 1 digit/step]		

4678	[Gain Adjustment]				
	Displays the factory setting values of the gain adjustment for Green.				
001	Factory Setting: G Color	*ENG	[0 to 7 / 0 / 1 digit/step]		

4679	[Gain Adjustment]			
40/9	Displays the factory setting values of the gain adjustment for Blue.			
001	Factory Setting: BE Color	*ENG	[0 to 7 / 0 / 1 digit/step]	

4680	[Gain Adjustment]				
4000	Displays the gain value of the ampl	e controller for Red.			
001	Factory Setting: RE Color	*ENG	[0 to 1023 / 0 / 1 digit/step]		

	*ENG	Factory Setting: RO Color	002	
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4681	[Gain Adjustment]		
Displays the gain value of the amplifiers on the controller for Gre			e controller for Green.
001	Factory Setting: GE Color		
002	Factory Setting: GO Color	*ENG	[0 to 1023 / 0 / 1 digit/step]

	4682	[Gain Adjustment]				
4082		Displays the gain value of the amplifiers on the controller for Blue.				
	001	Factory Setting: BE Color				
	002	Factory Setting: BO Color	*ENG	[0 to 1023 / 0 / 1 digit/step]		

	[DF: Density Adjustment]			
4688	Adjusts the white shading parameter when scanning an image with the ARDF.			
	Adjusts the density level if the ID of outputs made in the DF and Platen mode is different.			
001	-	*ENG	[50 to 150 / 104 / 1%/ step]	

4690	[White Level Peak Read]				
4090	Displays the peak level of the white level scanning.				
001	RE	-	[0 to 1000 / 0 / 1 digit/storn]		
002	RO	-	[0 to 1023 / 0 / 1 digit/step]		

4691	[White Level Peak Read]			
4071	Displays the peak level of the v	vhite leve	el scanning.	
001	GE	-	[0 to 1023 / 0 / 1 digit/step]	
002	GO	-		

4692	[White Level Peak Read]
4092	Displays the peak level of the white level scanning.

4693	[Black Level Peak Read]				
4073	Displays the peak level of the black level scanning.				
001	RE	-	[0 to 1000 / 0 / 1 digit/storn]		
002	RO	-	[0 to 1023 / 0 / 1 digit/step]		

4694	[Black Level Peak Read]				
4074	Displays the peak level of the black level scanning.				
001	GE	-	[0 to 1000 / 0 / 1 divit/tout]		
002	GO	-	[0 to 1023 / 0 / 1 digit/step]		

4695	[Black Level Peak Read]				
4073	Displays the peak level of the black level scanning.				
001	BE	-	[0 to 1023 / 0 / 1 digit/step]		
002	ВО	-	[0 10 1023 / 0 / 1 aigii/ siep]		

4802	[DF Shading FreeRun]		
001	Lamp ON		Executes the scanner free run of shading movement
002	Lamp OFF	-	with exposure lamp on or off. Press "OFF" to stop this free run. Otherwise, the free run lasts.

4803	[Home Position Adjustment]		
001	-	-	[-1 to 1 / 0 / 0.1 mm/step]

4804	[Home Position]		
001	-	-	Executes the scanner HP detection.

4806	[Carriage Save]		
001	-	-	Moves the carriage from the scanner home position. Dust may fall through the DF exposure glass. Therefore, do this SP when you transport the machine a long distance.

4807	[SBU Test Pattern Change]		
			[0 to 255 / 0 / 1 /step]
			1: Grid pattern
001	-	-	2: Gradation main scan
			3: Gradation sub scan
			4 to 250: Default (Scanning Image)

4808	[Factory Setting Input]		
002	Execution Flag	-	[0 to 255 / 0 / 1 /step]

	[ACC Data Display]				
4902	This SP outputs the final data read at the end of ACC execution.				
.,,,,	A zero is returned if there was an error reading the data.				
	[0 to 255 / 0 / 1 /step]				
001	R DATA1	*ENG	Photo C Patch Level 1 (8-bit)		
002	G DATA1	*ENG	Photo M Patch Level 1 (8-bit)		
003	B DATA1	*ENG	Photo Y Patch Level 1 (8-bit)		
004	R DATA2	*ENG	Photo C Patch Level 17 (8-bit)		
005	G DATA2	*ENG	Photo M Patch Level 17(8-bit)		
006	B DATA2	*ENG	Photo Y Patch Level 17 (8-bit)		

4904	[Scanner IPU Board Test]		
001	Test 1	_	BitO: TAURUS register
001	16311	-	Bit1: ORION register

			Bit2: LUPUS register
			Bit3 to 11: Not used
			Bit12: Ri20
			Bit13 to 15: Not used
			0: OK, 1: Error
Performs a write and read check of the ASICs on the BICU k		ASICs on the BICU board and displays the result.	
			BitO: Image path from SBU to TAURUS
			Bit 1: Image path from TAURUS to ORION
			Bit2: Image path from ORION to TAURUS
			Bit3: Image path from TAURUS to LUPUS
	Test2	-	Bit4 to 11: Not used
002			Bit 12: Image path from LUPUS to Ri20
			Bit 13: Image path from Ri20 to GAVD
			Bit14 and 15: Not used
			0: OK, 1: Error
	Performs an image path check on the BICU board and displays the result.		

4905	[Dither Selection] DFU			
	Changes the parameters for error diffusion.			
001	Dither Selection	*ENG	[0 to 255 / 0 / 1 /step] DFU	

	4918	[Manual Gamma Adj.]		
		Adjusts the offset data of the printer gamma for yellow in Photo mode.		
	009	Change	-	Enter the manual gamma adjustment screen (-001 to 008).

4954	[Standard Chart Scan: Clear Setting]		
001	Execution		Execute the scanning of the A4 chart.
002	Clear Setting	*ENG	Clear the data of the scanned A4 chart.
004	Rewrite Target		Overwrite the standard data.

	[IPU Image Path Selection]				
4991	Selects the image path.				
	Enter the number to be selected using the 10-key pad.				
	RGB Frame Memory	*ENG	[0 to 11 / 2 / 1 /step]		
	0: Scanner input RGB images				
001	1: Scanner I/F RGB images				
	2: RGB images done by Shading correction (Shading ON, Black offset ON)				
	3: Shading data				
	4 to 11: Not used				

4993	[High Light Correction]		
001	Sensitivity Selection	*ENG	Selects the Highlight correction level. [0 to 9 / 4 / 1 / step] 0: weakest sensitivity 9: strongest sensitivity
002	Range Selection	*ENG	Selects the range level of Highlight correction. [0 to 9 / 4 / 1 / step] 0: weakest skew correction, 9: strongest skew correction

4994	[Text/Photo Detection Level Adj.]		
4774	Selects the definition level between Text and Photo for high compression PDF.		
001	PDF Sensitivity Level text/	*ENG	[0 to 2 / 1 / 1 /step] 0: Text priority
	photo		1: Normal 2: Photo priority

SP5-XXX (Mode)

5024	[mm/inch Display Selection]
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	Display units (mm or inch) for custom paper sizes.		
001	0:mm 1:inch	*CTL	O: mm (Europe/Asia) 1: inch (USA)

	[Accounting Counter]			
5045	Selects the counting method. NOTE: The counting method can be changed only once, regardless of whether the counter value is negative or positive.			
001	Counter Method	*CTL	[0 or 1 / 0 / -] 0: Developments 1: Prints	

5047	[Paper Display]		
5047	Turns on or off the printed paper display on the LCD.		y on the LCD.
001	-	*CTL	[0 or 1 / 0 / -] 0: OFF, 1: ON

5055	[Display IP Address]			
3033	Display or does not display the IP address on the LCD.			
001		*CTL	[0 or 1 / 0 / -]	
001	-	CIL	0: OFF 1: ON	

5056	[Coverage Counter Display]		
3030	Display or does not display the coverage counter on the LCD.		

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001	-	*CTL	[0 or 1 / 0 / -] 0: Not display, 1: Display
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5061	[Toner Remaining Icon Display]		
3001	Display or does not display the remaining toner display icon on the LCD.		ng toner display icon on the LCD.
001	-	*CTL	[0 or 1 / 0 / -]
			0: Not display, 1: Display

50/0	[Part Replacement Alert Display]				
5062	Display or does not display the PM part yield on the LCD.				
001	K Drum Unit	*CTL			
002	M Drum Unit	*CTL			
003	C Drum Unit	*CTL			
004	Y Drum Unit	*CTL			
005	K Dev Unit	*CTL			
006	M Dev Unit	*CTL			
007	C Dev Unit	*CTL			
008	Y Dev Unit	*CTL			
009	K Developer	*CTL	[0 or 1 / 1 / -] 0: Not display, 1: Display		
010	M Developer	*CTL	o. Prof. display, P. Display		
011	C Developer	*CTL			
012	Y Developer	*CTL			
013	ITB Unit	*CTL			
014	Belt Cleaning Unit	*CTL			
015	Fusing Unit	*CTL			
016	PTR Unit	*CTL			
017	Waster Toner Bottle	*CTL			

	[Parts PM System Setting]		
5067	Selects the service maintenance or user maintenance for each PM parts.		
	If the user service is selected, PM alart is displayed on the LCD.		
001	PCU:Bk	*CTL	
002	PCU:M	*CTL	[0, 0, 1, 1] [1, 1]]
003	PCU:C	*CTL	[0: Service] or [1: User]
004	PCU:Y	*CTL	
005	Dev Unit:Bk	*CTL	
006	Dev Unit:M	*CTL	[0, 0,
007	Dev Unit:C	*CTL	[0: Service] or [1: User]
800	Dev Unit:Y	*CTL	
009	Developer:Bk	*CTL	
010	Developer:M	*CTL	[0: Service] or [1: User]
011	Developer:C	*CTL	[O: Service] or [1: Oser]
012	Developer:Y	*CTL	
013	Int Trans Unit	*CTL	[0: Service] or [1: User]
014	Belt Cleaning Unit	*CTL	[0: Service] or [1: User]
015	Fusing Unit	*CTL	[0: Service] or [1: User]
016	Transfer Roller	*CTL	[0: Service] or [1: User]
017	WasteToner Bottle	*CTL	[0: Service] or [1: User]

5104	[A3/DLT Double Count] SSP
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	Specifies whether the counter is double clicked for A3/DLT size prints. When you have to change this SP, ask your supervisor.		
51041	Double Count	*CTL	[0 to 2 / 0 / 1 /step] 0: NO (Normal count) 1: YES (Double count) 2: YES except By-pass (Normal count for unknown size)

5104*	A3/DLT Double Count (SSP)
	Specifies whether the counter is doubled for A3/DLT. "Yes" counts except from the bypass tray. When "Yes" is selected, A3 and DLT paper are counted twice, that is A4 x2 and LT x2 respectively.

5112	[Non-Std. Paper Sel.] Non-Standard Paper Selection	
	Determines whether a non-standard paper size can be input for the universal cassette trays (Tray 2, and Optional paper tray unit trays 1 and 2) [0 or 1/0/-]	
001	0: OFF	
	1: ON, If "1" is selected, the customer will be able to input a non-standard paper size using the UP mode.	

5113	[Optional Counter Type]		
001	Default Optional Counter Type	*CTL	This program specifies the counter type. O: None, 1: Key card (RK 3, 4) 2: Key card (down), 3: Prepaid card 4: Coin rack, 5: MF key card 8: Key counter + Vendor 9: Bar-code Printer
002	External Optional Counter Type	*CTL	This program specifies the external counter type. 0: None 1: Expansion Device 1 2: Expansion Device 2 3: Expansion Device 3

5114	[Optional Counter I/F]		
001	MF Key Card Extension	*CTL	[0: Not installed/ 1: Installed (scanning accounting)]
5118	[Disable Copying]	*CTL	[0: Not disabled/ 1: Disabled]
001	This program disables copying		
5120	[Mode Clear Opt. Counter Removal]	*CTL	[0: Yes (removed)/ 1: Standby (installed but not used)/ 2: No (not removed)]
001	This program updates the information on the optional counter. When you install or remove an optional counter, check the settings.		
5121	[Counter Up Timing]	*CTL	[0: Feed/ 1: Exit]
001	This program specifies when the counter goes up. The settings refer to "paper feed" and "paper exit" respectively.		
5126	[F Size Original Setting]	*ENC	[0 to 2 / 0 / 1 /step] 0: 8 1/2" x 13" (Foolscap) 1: 8 1/4" x 13" (Folio) 2: 8" x 13" (F)
001	Selects F size original setting.	ı	
5127	[APS Mode]	*CTL	. [0: Not disabled/ 1: Disabled]
001	This program disables the APS.		
5128	[Code Mode With Key/Card Option] *CTL -		
001	DFU		
5131	[Paper Size Type Selection]		*ENG [0: JP (Japan)/ 1: NA / 2: EU]
001	The program selects a paper size system from the following alternatives: the AB system (0), the LT system (1), and the AF system (2).		

5148	Size Detection Off	*CTL	[0: OFF / 1: ON] 0: OFF (Detecte) 1: ON (Not Detecte)
001	Enables or disables the automatic paper size detection for the by-pass tray.		

5150	[By-Pass Length Setting]	*CTL	[0: OFF/ 1: ON]
001	Determines whether the transfer sheet for Normally the paper length for sub scar mm, but this can be extended with this	ning pape	r from the by-pass tray is limited to 600

5162	[App. Switch Method]	*CTL	[0: Soft Key Set/ 1: Hard Key Set]
001	This program specifies the switch that selects an application program.		

	[Fax Printing Mode at Optional]				
5167	Enables or disables the automatic print out without an accounting device. This SP is when the receiving fax is accounted by an external accounting device.				
001	Fax Printing Mode at Optional Counter Off	*CTL	[0 or 1 / 0 / -] 0: Automatic printing 1: No automatic printing		

	[CE Login]			
5169	If you will change the printer bit switches, you must 'log in' to service mode with this SI you go into the printer SP mode.		you must 'log in' to service mode with this SP before	
001	CE Login	*CTL	[0 or 1 / 0 / -] 0: Disabled 1: Enabled	

5181		[Size Adjust]			
	3101	Adjusts the paper size for each tray.			
	001	TRAY 1	*ENG	[0 to 3 / 0 (EU/ASIA), 1 (NA) / 1 /step] 0: A4 LEF, 1: LT LEF, 2: B5 LEF, 3: A5 LEF	

002	TRAY 2: 1	*ENG	[0 or 1 / 0 (EU/ASIA), 1 (NA) / -] 0: A4 LEF, 1: LT LEF
003	TRAY 2: 2	*ENG	[0 or 1 / 0 (EU/ASIA), 1 (NA) / -] 0: A3, 1: DLT
004	TRAY 2: 3	*ENG	[0 or 1 / 0 (EU/ASIA), 1 (NA) / -] 0: B4, 1: LG
005	TRAY 2: 4	*ENG	[0 or 1 / 0 (EU/ASIA), 1 (NA) / -] 0: B5 LEF, 1: Exe LEF
006	TRAY 3/T-LCT: 1	*ENG	[0 or 1 / 0 (EU/ASIA), 1 (NA) / -] 0: A4 LEF, 1: LT LEF
007	TRAY 3: 2	*ENG	[0 or 1 / 0 (EU/ASIA), 1 (NA) / -] 0: A3, 1: DLT
008	TRAY 3: 3	*ENG	[0 or 1 / 0 (EU/ASIA), 1 (NA) / -] 0: B4, 1: LG
009	TRAY 3: 4	*ENG	[0 or 1 / 0 (EU/ASIA), 1 (NA) / -] 0: B5 LEF, 1: Exe LEF
010	TRAY 4: 1	*ENG	[0 or 1 / 0 (EU/ASIA), 1 (NA) / -] 0: A4 LEF, 1: LT LEF
011	TRAY 4: 2	*ENG	[0 or 1 / 0 (EU/ASIA), 1 (NA) / -] 0: A3, 1: DLT
012	TRAY 4: 3	*ENG	[0 or 1 / 0 (EU/ASIA), 1 (NA) / -] 0: B4, 1: LG
013	TRAY 4: 4	*ENG	[0 or 1 / 0 (EU/ASIA), 1 (NA) / -] 0: B5 LEF, 1: Exe LEF
018	LCT	*ENG	[0 to 2 / 0 (EU/ASIA), 1 (NA) / -] 0: A4LEF, 1: LTLEF, 2: B5LEF

5186	[RK 4]	
3100	Enables or disables the prevention for RK4 (accounting device) disconnection.	

	If the RK4 is disconnected for 10 seconds when this SP is set to "1 (Enable)", the machine automatically jams a sheet of paper and stops.		
001	-	*ENG	[0 or 1 / 0 / 1/step] 0: Disable 1: Enable

5100	[Copy NV Version]				
Displays the version number of the NVRAM on the controller board.			AM on the controller board.		
001	-	-	-		

5191	[Mode Set] DFU		
001	-	*CTL	[0 or 1 / 1 / -] 0: Off, 1: On
Enables or disables the STR (Suspend to RAM) mode.		RAM) mode.	

5193	[External Controller Info. Settings]			
Sets the external controller type. This setting is appropriately adjusted if an exte is installed in the machine.				
	[0 to 10 / 0 / 1/step]			
001	0: No external controller installed			
1: EFI controller				
	2: Ratio controller			
	3: Egret controller			
	4 to 10: Reserved			

5195	[Limitless SW] DFU		
001	-	*CTL	[0 or 1 / 1 / -] 0: Productivity priority 1: Tray priority
	Selects the paper feed mode.		

Tray priority:

Productivity priority:

This changes the feeding tray after the paper in the tray where the machine has been feeding paper has been run out of.

This changes the feeding tray as soon as the machine detects the priority tray even the paper

This SP is activated only when a customer selects the "Auto Paper Selsct".

5196	[90 degree rotation (copy)] Not used		
001	-	*CTL	-

5199	[Paper Exit After Staple End.]		
001	*CTL [0 or 1 / 0 / -] 0: OFF, 1: ON		
	Enables or disables the paper feeding out from the finisher without stapling. • If this setting is "1: ON", paper is fed out without stapling at the maximum number of the finisher stapling when the machine gets a multiple printing job (over maximum number).		
	 If this setting is "0: OFF", paper is fed out with stapling at the maximum number of the finisher stapling when the machine gets a multiple printing job (over maximum number). 		

5212	[Page Numbering]	*CTL	
	This program adjusts the position A "- value" moves the page number positions to the right ed	mber po	e second side page numbers. positions to the left edge. A "+ value" moves the page
003	Duplex Printout Right/Left Position		[-10 to 10 / 0 / 1 mm/step]
004	Duplex Printout High/Low Position		[-10 to 10 / 0 / 1 mm/step]

	[Set Time]
	Adjusts the RTC (real time clock) time setting for the local time zone.
5302	Examples: For Japan (+9 GMT), enter 540 (9 hours x 60 min.)
	DOM: +540 (Tokyo)
	NA: -300 (New York)

	EU: + 60 (Paris)		
	CH: +480 (Peking)		
	TW: +480 (Taipei)		
	AS: +480 (Hong Kong)		
002	Time Difference	*CTL#	[-1440 to 1440 / Area / 1 min./step]

5307	[Summer Time]			
001	Setting -	[0 to 1 / NA, EU, ASIA / 1 /step] 0: Disabled 1: Enabled NA and EUR: 1, ASIA: 0		
001	Enables or disables the summer time mode. Note Make sure that both SP5-307-3 and -4 are correctly set. Otherwise, this SP is not activated even if this SP is set to "1".			
003	Rule Set (Start) - Specifies the start setting for the summer time mode. There are 8 digits in this SP. For months 1 to 9, the "0" cannot be input in the first digit, so the eight-digit setting for -2 or -3 becomes a seven-digit setting. 1st and 2nd digits: The month. [1 to 12] 3rd digit: The week of the month. [1 to 5] 4th digit: The day of the week. [0 to 6 = Sunday to Saturday] 5th and 6th digits: The hour. [00 to 23] 7th digit: The length of the advanced time. [0 to 9 / 1 hour /step] 8th digit: The length of the advanced time. [0 to 5 / 10 minutes /step] • The digits are counted from the left. • Make sure that SP5-307-1 is set to "1".			
	For example: 3500010 (EU default) The timer is advanced by 1 hour at am 0:00 on the 5th Sunday in March.			
004	Rule Set (End) - Specifies the end setting for the sur	mmer time mode.		

There are 8 digits in this SP.

1st and 2nd digits: The month. [1 to 12]

3rd digit: The week of the month. [0 to 5]

4th digit: The day of the week. [0 to 7 = Sunday to Saturday]

5th and 6th digits: The hour. [00 to 23]

The 7th and 8 digits must be set to "00".

- The digits are counted from the left.
- Make sure that SP5-307-1 is set to "1".

5401	[Access Control]				
3401	When installing the SDK application, SAS (VAS) adjusts the following settings. DFU				
	Default Document ACL	*CTL			
	Whenever a new login user is added to the address book in external certification mode (for Windows, LDAP, RDH), the default document ACL is updated according to this SP setting.				
103	[0 to 3 / 0 / 1]				
	0: View 1: Edit				
	2: Edit/Delete 3: Full control				
	Note: This SP setting is ignored on a machine that is not using document server.				
	- 1 (-1-1-1)		Ţ		
	Extend Certification Detail	*CTL	Bit 0: Log-out without an IC card		
162			0: Not allowed (default)		
			1: Allowed		
	Selects the log out type for the extend authentication device.				
200	SDK1 Unique ID	*CTL			
201	SDK1 Certification Method	*CTL			
210	SDK2 Unique ID	*CTL	"SDK" is the "Software Development Kit". This data can be converted from SAS (VAS) when		
211	SDK2 Certification Method	*CTL	installed or uninstalled. (DFU)		
220	SDK3 Unique ID	*CTL			

221	SDK3 Certification Method	*CTL	
230	SDK certification device	*CTL	
	Detail Option	*CTL	-
	Enalbes or disables the log out confirmation option.		
	Bit 0: Log out confirmation option		
240	O: Enable (default), 1: Disable		
240	Selects the automatic log out time.		
	Bit 1 and 2: Automatic log out timer reduction		
	00: 60 seconds (default), 01: 10 seconds,		
	10: 20 seconds, 11: 30	seconds	

5404	[User Code Counter Clear]		
001	UCodeCtrClr		Clears all counters for users.

5411	[LDAP Certification]		
004	Easy Certification	*CTL	Determines whether easy LDAP certification is done. [0 or 1 / 1 / -] 1: On, 0: Off
005	Password Null Not Permit	*CTL	This SP is referenced only when SP5411-4 is set to "1" (On). [0 or 1 / 0 / -] 0: Password NULL not permitted. 1: Password NULL permitted.

5413	[Lockout Setting]		
001	Lockout On/Off	*CTL	Switches on/off the lock on the local address book account. [0 or 1 / 0 / -] 0: Off, 1: On
002	Lockout Threshold	*CTL	Sets a limit on the frequency of lockouts for account lockouts.

			[1 to 10 / 5 / 1/step]
			Determines whether the system waits the prescribed time for input of a correct user ID and password after an account lockout has occurred.
003	Cancellation On/Off	*CTL	[0 or 1 / 0 / -]
			0: Off (no wait time, lockout not cancelled)
			1: On (system waits, cancels lockout if correct user ID and password are entered.
004	Cancellation Time	*CTL	Determines the length of time that the system waits for correct input of the user ID and password after a lockout has occurred. This setting is used only if SP5413-3 is set to "1" (on).
			[1 to 999 / 60 / 1 min./step]
005	Counter Clear Time	*CTL	Not Used

5414	[Access Mitigation]		
001	Mitigation On/Off	*CTL	Switches on/off masking of continuously used IDs and passwords that are identical. [0 or 1 / 0 / -] 0: Off, 1: On
002	Mitigation Time	*CTL	Sets the length of time for excluding continuous access for identical user IDs and passwords. [0 to 60 / 15 / 1 min./step]

5415	[Password Attack]		
001	Permissible Number	*CTL	Sets the number of attempts to attack the system with random passwords to gain illegal access to the system. [0 to 100 / 30 / 1 attempt/step]
002	Detect Time	*CTL	Sets the time limit to stop a password attack once such an attack has been detected. [1 to 10 / 5 / 1 sec./step]

5416	[Access Information]
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001	Access User Max Number	*CTL	Limits the number of users used by the access exclusion and password attack detection functions. [50 to 200 / 200 / 1 users/step]
002	Access Password Max Number	*CTL	Limits the number of passwords used by the access exclusion and password attack detection functions. [50 to 200 / 200 / 1 password/step]
003	Monitor Interval	*CTL	Sets the processing time interval for referencing user ID and password information. [1 to 10 / 3 / 1 sec./step]

5417	[Access Attack]		
001	Access Permissible Number	*CTL	Sets a limit on access attempts when an excessive number of attempts are detected for MFP features. [0 to 500 / 100 / 1/step]
002	Attack Detect Time	*CTL	Sets the length of time for monitoring the frequency of access to MFP features. [10 to 30 / 10 / 1 sec./step]
003	Productivity Fall Wait	*CTL	Sets the wait time to slow down the speed of certification when an excessive number of access attempts have been detected. [0 to 9 / 3 / 1 sec./step]
004	Attack Max Number	*CTL	Sets a limit on the number of requests received for certification in order to slow down the certification speed when an excessive number of access attempts have been detected. [50 to 200 / 200 / 1 attempt/step]

	[User Authentication]		
5420	These settings should be done with the System Administrator. Note: These functions are enabled only after the user access feature has been enabled.		
001	Сору	*CTL	Determines whether certification is required before a user can use the copy applications. [O or 1 / 0 / 1]

		0: On, 1: Off		
Color Security Setting	*CTL	-		
Enables or disables the color copy limitation for each copy mode when the user authentication is "ON".				
0: Enable (default), 1: Disable				
BitO: B/W mode				
Bit1: Mono color mode				
Bit2: Two colors mode				
Bit3: Full color mode				
Bit4: Automatic color mode				
Bit5 to 7: Reserved				
Document Server	*CTL	Determines whether certification is required before a user can use the document server. [0 or 1 / 0 / 1] 0: On, 1: Off		
Fax	*CTL	Determines whether certification is required before a user can use the fax application. [0 or 1 / 0 / 1] 0: On, 1: Off		
Scanner	*CTL	Determines whether certification is required before a user can use the scan applications. [0 or 1 / 0 / 1] 0: On, 1: Off		
Printer	*CTL	Determines whether certification is required before a user can use the printer applications. [0 or 1 / 0 / 1] 0: On, 1: Off		
SDK1		[0 or 1 / 0 / 1] 0: ON. 1: OFF		
SDK2	*CTL	Determines whether certification is required before		
SDK3		a user can use the SDK application.		
	Enables or disables the color authentication is "ON". O: Enable (default), 1: Disable BitO: B/W mode Bit1: Mono color mode Bit3: Full color mode Bit4: Automatic color mode Bit5 to 7: Reserved Document Server Fax Scanner Printer SDK1 SDK2	Enables or disables the color copy lime authentication is "ON". O: Enable (default), 1: Disable Bit0: B/W mode Bit1: Mono color mode Bit2: Two colors mode Bit3: Full color mode Bit4: Automatic color mode Bit5 to 7: Reserved Document Server *CTL Fax *CTL Printer *CTL SDK1 SDK2 *CTL		

	These SP codes determine how the authentication failures are displayed.		
001	System Log Disp	*CTL	Determines whether an error code appears in the system log after a user authentication failure occurs. [0 or 1 / 0 / 1] 0: Off, 1: On
002	Panel Disp	*CTL	Determines whether an error code appears on the operation panel after a user authentication failure occurs. [0 or 1 / 1 / 1] 1: On, 0: Off

5490	[MF Key Card (Japan only)]		
001	-	*CTL	Sets up operation of the machine with a keycard. [0 or 1 / 0 / 1] 0: Disabled. Cancels operation without a user code. 1: Enabled. Allows operation without a user code.

5501	[PM Alarm]	*CTL	-	
001 PM Alarm Level		[0 to 9999 / 0 / 1 /step] 0: Alarm off		
		1 to 99 ≥ PM c	99: Alarm goes off when Value (1 to 9999) x 1000 ounter	
	Original Count Alarm	[0 or 1	/1/-]	
002		0: No d	alarm sounds	
			m sounds after the number of originals passing 1 the ARDF ≥ 10,000	

5504	[Jam Alarm]	*CTL	-
001	Sets the alarm to sound for the [0 to 3 / 3 / 1 /step] 0: Zero (Off) 1: Low (2.5K jams)	e specifie	d jam level (document misfeeds are not included).

	[Error Alarm]			
Sets the error alarm level.				
5505	The error alarm counter counts "1" when any SC is detected. However, the error alarm counter decreases by "1" when an SC is not detected during a set number of copied shee (for example, default 1500 sheets).			
The error alarm occurs when the SC error alarm counter reaches "5".				
001	-	*CTL	[0 to 255 / C2a ; 35 , C2b ; 45 / 100 copies / step]	

5507	[Supply Alarm]	*CTL	-		
001	Paper Supply Alarm	0: Off , 1:	On, DFU		
002	Staple Supply Alarm	0: Off, 1:	0: Off, 1: On		
003	Toner Supply Alarm	0: Off, 1:	On, DFU		
080	Toner Call Timing	Changes the timing of the "Toner Supply Call" via the @Remote, when the following conditions occur. O: At replacement (default)			
		1: At nea	r end		
128	Interval :Others	[250 to 10000 / 1000 / 1 /step] DFU			
132	Interval :A3				
133	Interval :A4				
134	Interval :A5				
141	Interval :B4				
142	Interval :B5				
160	Interval :DLT				
164	Interval :LG				
166	Interval :LT	1			

172 Interval :HLT

5508*	[CC Call]	*CTL	-
001*	Jam Remains		0: Disable, 1: Enable
001	Enables/disables initiating	a call for	an unattended paper jam.
002*	Continuous Jams		0: Disable, 1: Enable
002	Enables/disables initiating	a call for	consecutive paper jams.
003*	Continuous Door Open		0: Disable, 1: Enable
003	Enables/disables initiating a call wh		en the front door remains open.
	Jam Detection: Time Length		[3 to 30 / 10 / 1 minute /step]
011*	Sets the time a jam must remain before it becomes an "unattended paper jam". This setting is enabled only when SP5508-004 is set to "1".		
	Jam Detection: Continuous	Count	[2 to 10 / 5 / 1 /step]
012*	Sets the number of consecutive paper only when SP5508-004 is set to "1".		jams required to initiate a call. This setting is enabled
	Door Open: Time Length		[3 to 30 / 10 / 1 /step]
013*	Sets the length of time the door remains open before the machine initiates a call. This setting is enabled only when SP5-508-004 is set to "1".		

	[SC/Alarm Setting]	*CTL	-	
5515	,			can be set to issue an SC call when is not issued when an SC error
001	SC Call			
002	Service Parts Near End Call		[0 or 1 / 1 / -]	
003	Service Parts End Call		1: On	
004	User Call			
006	Communication Test Call			[0 or 1 / 1 / -] 0: Off

007	Machine Information Notice	
008	Alarm Notice	
009	Non Genuine Toner Alarm	1: On
010	Supply Automatic Ordering Call	
011	Supply Management Report Call	
012	Jam/Door Open Call	

5516	[Individual PM Part Alarm Call]	*CTL	-
001	Disable/ Enable Setting	[0 or 1 /	or disables the PM part alarm call. 1 / -] and, 1: Send

5610	[Base Gamma Control Point: Command]		
004	Factory Setting	-	-
004	Recalls the factory settings.		
Restore		-	
005	Overwrites the current values onto the factory settings.		factory settings.
004	Restore	-	-
006	Recalls the previous settings.		

5611	[Toner Color in 2C]		
001	B-C	*ENG	[0 to 128 / 100 / 1 /step] 128: Darkest density
	Adjusts the Cyan correct	correction value of the blue signal in two-color mode.	
002	B-M *ENG		[0 to 128 / 100 / 1 /step] 128: Darkest density
	Adjusts the Magenta correction value of the blue signal in two-color mode.		
003	G-C	*ENG	[0 to 128 / 100 / 1 /step]

			128: Darkest density
	Adjusts the Cyan correction value of the blue signal in two-color mode.		
004	G-Y	*ENG	[0 to 128 / 100 / 1 /step] 128: Darkest density
	Adjusts the Yellow correction	on value of	the blue signal in two-color mode.
005	R-M	*ENG	[0 to 128 / 100 / 1 /step] 128: Darkest density
Adjusts the Magenta correction val		ction value	of the blue signal in two-color mode.
006	R-Y	*ENG	[0 to 128 / 100 / 1 /step] 128: Darkest density
	Adjusts the Yellow correction value of the blue signal in two-color mode.		

5618	[Color Mode Display Selection]		
001	-	*CTL	[0 or 1 / 1 / -] 0: ACS, Colour, Black & White, Two Colour, Single colour 1: ACD, Full Colour, Black & White
	Selects the color selection of	display on	the LCD.



- Memory Clear (SP5-801)
- The following tables list the items that are cleared. The serial number information, meter charge setting and meter charge counters (SP8-581, 582, 583, 584, and 586) are not cleared.

5801	[Memory Clear]	
001	All Clear	Resets all correction data for process control and all software counters, and returns all modes and adjustments to their default values.
002	Engine	Clears the engine settings.
003	SCS	Initializes default system settings, SCS (System Control Service) settings, operation display coordinates, and ROM update information.

004	IMH Memory Clr	Initializes the IMH settings.	
005	MCS	Initializes the MCS settings.	
006	Copier application	Initializes all copier application settings.	
007	Fax application	Initializes the fax reset time, job login ID, all TX/RX settings, local storage file numbers, and off-hook timer.	
008	Printer application	The following service settings: Bit switches Gamma settings (User & Service) Toner Limit The following user settings: Tray Priority Menu Protect System Setting except for setting of Energy Saver I/F Setup (I/O Buffer and I/O Timeout) PCL Menu	
009	Scanner application	Initializes the scanner defaults for the scanner and all the scanner SP modes.	
010	Web Service	Deletes the network file application management files and thumbnails, and initializes the job login ID.	
011	NCS	All setting of Network Setup (User Menu) (NCS: Network Control Service)	
012	R-Fax	Initializes the job login ID, SmartDeviceMonitor for Admin, job history, and local storage file numbers.	
014	Clear DCS Settings	Initializes the DCS (Delivery Control Service) settings.	
015	Clear UCS Settings	Initializes the UCS (User Information Control Service) settings.	
016	MIRS Setting	Initializes the MIRS (Machine Information Report Service) settings.	
017	CCS	Initializes the CCS (Certification and Charge-control Service) settings.	

018	SRM Memory Check	Initializes the SRM (System Resource Manager) settings.
019	LCS	Initializes the LCS settings.
020	Web Uapli	Initializes the web user application settings.
021	ECS	Initializes the ECS settings.

	[Free Run]		
	Performs a free run on the co	pier eng	ine.
5802	The machine starts free run in the same condition as the sequence of A4/LT, A3 or A4 SEF printing from the 1st or 2nd tray. Therefore, the correct paper should be loaded in the 1st tray or 2nd tray, but paper is not fed.		
The main switch has to be turned off and on after using the free		off and on after using the free run mode for a test.	
001	TRAY1: A4LEF: FC	-	
002	TRAY2: A3: FC	-	-
003	TRAY2: A4SEF: FC	-	

5803	[Input Check]	-	See "Input Check Table" in this section.
5804	[Output Check]	-	See "Output Check Table" in this section.

5805	[Anti-Condensation Heater]		
002	0:OFF / 1:ON	*ENG	[0 or 1 / 0 / -]

	[SC Reset]		
5810	Resets a type A service call condition. Note		
	Turn the main switch off	and on a	after resetting the SC code.
001	Fusing SC Reset	-	-

5811	[Machine Serial] Machine Serial Number Display		
002	Display		Displays the machine serial number.

OO4 Set:BICU Inputs the machine serial number.

5812	[Service Tel. No. Setting]		
001	Service	*CTL	-
	Sets the telephone number for a service representative. This number is printed on the Counter List, which can be printed with the user's "Counter" menu. This can be up to 20 characters (both numbers and alphabetic characters can be input).		
002	Facsimile	*CTL	-
	Sets the fax or telephone number for a service representative. This number is printed on the Counter List. This can be up to 20 characters (both numbers and alphabetic characters can be input).		
003	Supply	*CTL	-
	Use this to input the telephone number of your supplier for consumables. Enter the number and press #.		
004	Operation	*CTL	-
	Use this to input the telephone number of your sales agency. Enter the number and press #.		

5816	[Remote Service]	*CTL	-
	I/F Setting		
	Selects the remote service set	ting.	
001	[0 to 2 / 2 / 1 /step]		
001	O: Remote service off		
	1: CSS remote service on		
	2: @Remote service on		
	CE Call		
	Performs the CE Call at the start or end of the service.		
002	[0 or 1 / 0 / 1 /step]		
	0: Start of the service		
	1: End of the service		

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	NOTE: This SP is activated only when SP 5816-001 is set to "2".			
	Function Flag			
003	Enables or disables the remote service function. [0 to 1 / 0 / 1 / step] 0: Disabled 1: Enabled			
	SSL Disable			
007	Controls if RCG (Remote Communication Gate) confirmation is done by SSL during an RCG send for the @Remote over a network interface. [0 or 1 / 0 / 1 /step] 0: Yes. SSL not used. 1: No. SSL used.			
	RCG Connect Timeout			
008	Sets the length of time (seconds) for the time-out when the RCG (Remote Communication Gate) connects during a call via the @Remote network. [1 to 90 / 30 / 1 second / step]			
	RCG Write Timeout			
009	Sets the length of time (seconds) for the time-out when sent data is written to the RCG during a call over the @Remote network. [1 to 100 / 60 / 1 second / step]			
	RCG Read Timeout			
010	Sets the length of time (seconds) for the timeout when sent data is written from the RCG during a call over the @Remote network. [1 to 100 / 60 / 1 second / step]			
	Port 80 Enable -			
011	Controls if permission is given to get access to the SOAP method over Port 80 on the @Remote network. [0 or 1 / 0 / -]			
	0: No. Access denied 1: Yes. Access granted.			

	RFU Timing		
	Selects the timing for the rema	ote firmware updating.	
013	[0 or 1 / 1 / -]		
	0: Any status of a target mach	nine	
	1: Sleep or panel off mode o	nly	
	RCG – C Registed		
021	This SP displays the RCG-N in	nstallation end flag.	
021	0: Installation not completed		
	1: Installation completed		
	RCG – C Registed Detail		
	This SP displays the RCG dev	ice installation status.	
022	0: RCG device not registered		
	1: RCG device registered		
	2: Device registered		
	Connect Type (N/M)		
	This SP displays and selects the RCG-N connection method.		
023	[0 or 1 / 0 / 1 /step		
	0: Internet connection		
	1: Dial-up connection		
061	Cert. Expire Timing DFU	Proximity of the expiration of the certification.	
062	Use Proxy	This SP setting determines if the proxy server is used when the machine communicates with the service center.	
	Proxy Host		
	This SP sets the address of the proxy server used for communication between the RCG device and the gateway. Use this SP to set up or display the customer proxy server address.		
063	The address is necessary to set up the embedded RCG-N.		
	◆ Note		
	The address display is limited to 128 characters. Characters beyond the 128 character are ignored.		
	This address is customer information and is not printed in the SMC report.		

	Proxy	Port Number			
	This SP sets the port number of the proxy server used for communication between the				
064		dded RCG-N and the gateway. This setting is necessary to set up the embedded			
	₩ N				
	•	This port number is customer information and is not printed in the SMC report.			
	Proxy	User Name			
	This S	P sets the HTTP proxy certification user name.			
065	U N	ote			
		The length of the name is limited to 31 characters. Any character beyond the 31st character is ignored.			
	•	This name is customer information and is not printed in the SMC report.			
	Proxy	Password			
	This SP sets the HTTP proxy certification password.				
066	U Note				
	 The length of the password is limited to 31 characters. Any character beyond the 31st character is ignored. 				
	•	This name is customer information and is not printed in the SMC report.			
	CERT: Up State				
	Displo	ays the status of the certification update.			
	0	The certification used by RCG-N is set correctly.			
	1	The certification request (setAuthKey) for update has been received from the GW URL and certification is presently being updated.			
067	2	The certification update is completed and the GW URL is being notified of the successful update.			
	3	The certification update failed, and the GW URL is being notified of the failed update.			
	The period of the certification has expired and new request for an update is b sent to the GW URL.				
	11	A rescue update for certification has been issued and a rescue certification setting is in progress for the rescue GW connection.			

12	The rescue certification setting is completed and the GW URL is being notified of the certification update request.		
13	The notification of the request for certification update has completed successfully, and the system is waiting for the certification update request from the rescue GW URL.		
14		certification request has been received from the rescue GW tification is being stored.	
15	The certification has been stored, and the GW URL is being notified of the successful completion of this event.		
16	The storing of the certif	fication has failed, and the GW URL is being notified of the	
17	The certification update request has been received from the GW URL, the GW UR was notified of the results of the update after it was completed, but an certification error has been received, and the rescue certification is being recorded.		
18	The rescue certification of No. 17 has been recorded, and the GW URL is being notified of the failure of the certification update.		
CERT: Error			
Displays a number code that describes the reason for the request for update of the certification.			
0	Normal. There is no request for certification update in progress.		
1	Request for certification update in progress. The current certification has expired.		
2	An SSL error notification has been issued. Issued after the certification has expired		
3	Notification of shift from a common authentication to an individual certification.		
4	Notification of a common certification without ID2.		
5	Notification that no certification was issued.		
6	Notification that GW URL does not exist.		
CERT: Up ID		The ID of the request for certification.	
Firmv	vare Up Status	Displays the status of the firmware update.	
Firm Up User Check		This SP setting determines if the operator can confirm the previous version of the firmware before the firmware update execution. If the option to confirm the previous version is	
	13 14 15 16 17 18 CERT Displocertifi 0 1 2 3 4 5 6 CERT Firmw	The notification of the and the system is waiting URL. The notification of the controller, and the certification has been completion of this event. The storing of the certification updat was notified of the residence of the failure of this event. The certification updat was notified of the failure of t	

		selected, a notification is sent to the system manager and the firmware update is done with the firmware files from the URL.	
086	Firmware Size	Allows the service technician to confirm the size of the firmware data files during the firmware update execution.	
087	CERT: Macro Version	Displays the macro version of the @Remote certification.	
088	CERT: PAC Version	Displays the PAC version of the @Remote certification.	
089	CERT: ID2 Code	Displays ID2 for the @Remote certification. Spaces are displayed as underscores (_). Asteriskes (* * * *) indicate that no @Remote certification exists.	
090	CERT: Subject	Displays the common name of the NRS certification subject. CN = the following 17 bytes. Spaces are displayed as underscores (_). Asterisks (****) indicate that no DESS exists.	
091	CERT: Serial Number Displays serial number for the @Remote certification. Asterisks (****) indicate that no DESS exists.		
092	Displays the common name of the issuer of the @Remo CERT: Issuer certification. CN = the following 30 bytes. Asteriskes (* * indicate that no DESS exists.		
093	CERT: Valid Start Displays the start time of the period for which the current @Remote certification is enabled.		
094	CERT: Valid End	Displays the end time of the period for which the current @Remote certification is enabled.	
	Selection Country		
150	Select the country where embedded RCG-M is installed in the machine. After selecting the country, you must also set the following SP codes for embedded RCG-M: • SP5816-153 • SP5816-154 • SP5816-161 O: Japan, 1: USA, 2: Canada, 3: UK, 4: Germany, 5: France, 6: Italy,		
	7: Netherlands, 8: Belgium, 9		
151	Line Type Authentication Judg	gment	
	Press [Execute].		

Setting this SP classifies the telephone line where embedded RCG-M is connected as either dial-up (pulse dial) or push (DTMF tone) type, so embedded RCG-M can automatically distinguish the number that connects to the outside line.

- The current progress, success, or failure of this execution can be displayed with SP5816-152.
- If the execution succeeded, SP5816-153 will display the result for confirmation and SP5816-154 will display the telephone number for the connection to the outside line.

Line Type Judgment Result

Displays a number to show the result of the execution of SP5816 151. Here is a list of what the numbers mean.

- 0: Success
- 1: In progress (no result yet). Please wait.
- 2: Line abnormal
- 152 3: Cannot detect dial tone automatically
 - 4: Line is disconnected
 - 5: Insufficient electrical power supply
 - 6: Line classification not supported
 - 7: Error because fax transmission in progress ioctl() occurred.
 - 8: Other error occurred
 - 9: Line classification still in progress. Please wait.

Selection Dial/Push

This SP displays the classification (tone or pulse) of the telephone line to the access point for embedded RCG-M. The number displayed (0 or 1) is the result of the execution of SP5816-151. However, this setting can also be changed manually.

[0 or 1 / 0 / 1 /step]

- 153 0: Tone Dialing Phone
 - 1: Pulse Dialing Phone

Inside Japan "2" may also be displayed:

- 0: Tone Dialing Phone
- 1: Pulse Dialing Phone 10PPS
- 2: Pulse Dialing Phone 20PPS
- 154 Outside Line/Outgoing Number

	The SP sets the number that switches to PSTN for the outside connection for embedded RCG-M in a system that employs a PBX (internal line).
	 If the execution of SP5816-151 has succeeded and embedded RCG-M has connected to the external line, this SP display is completely blank.
	 If embedded RCG-M has connected to an internal line, then the number of the connection to the external line is displayed.
	 If embedded RCG-M has connected to an external line, a comma is displayed with the number. The comma is inserted for a 2 sec. pause.
	• The number setting for the external line can be entered manually (including commas).
	Dial Up User Name
156	Use this SP to set a user name for access to remote dial up. Follow these rules when setting a user name:
100	Name length: Up to 32 characters
	 Spaces and # allowed but the entire entry must be enclosed by double quotation marks (").
	Dial Up Password
157	Use this SP to set a password for access to remote dial up. Follow these rules when setting a user name:
	Name length: Up to 32 characters
	 Spaces and # allowed but the entire entry must be enclosed by double quotation marks (").
	Local Phone Number
161	Use this SP to set the telephone number of the line where embedded RCG-M is connected. This number is transmitted to and used by the Call Center to return calls.
	Limit: 24 numbers (numbers only)
	Connection Timing Adjustment: Incoming
162	When the Call Center calls out to an embedded RCG-M modem, it sends a repeating ID tone (*#1#). This SP sets the time the line remains open to send these ID tones after the number of the embedded RCG-M modem is dialed up and connected.
	[0 to 24 / 1 / 1 /step]
	The actual amount of time is this setting x 2 sec. For example, if you set "2" the line will remain open for 4 sec.
163	Access Point

	This is the number of the dial-up access point for RCG-M. If no setting is done for this SP code, then a preset value (determined by the country selected) is used.				
	Default: 0				
	Allowed: Up to 16 alphanum	neric chai	acters		
164	Line Connecting				
	This SP sets the connection conditions for the customer. This setting dedicates the line to RCG-M only, or sets the line for sharing between RCG-M and a fax unit.				
	[0 to 1 / 0 / 1 /step]				
	0: Sharing Fax				
	1: No Sharing Fax				
	U Note				
	If this setting is changed,	, the copi	er must be cycled off and on.		
	 SP5816 187 determines whether the off-hook button can be used to interrupt a RCOM transmission in progress to open the line for fax transaction. 				
173	Modem Serial Number This SP displays the serial number registered for the RCG - M.				
	Retransmission Limit	1			
174	Normally, it is best to allow unlimited time for certification and ID2 update requests, and for the notification that the certification has been completed. However, RCG -M generates charges based on transmission time for the customer, so a limit is placed upon the time allowed for these transactions.				
	If these transactions cannot be completed within the allowed time, do this SP to cancel the time restriction.				
	FAX TX Priority	-			
187	This SP determines whether pushing the off-hook button will interrupt a RCG-M transmission in progress to open the line for fax transaction. This SP can be used only if SP5816 164 is set to "0".				
	[0 or 1/0/-]				
	0: Disable, 1: Enable				
200	Manual Polling	-	Executes the manual polling.		
201	Regist: Status				
201	Displays a number that indicates the status of the @Remote service device.				

	0: Neither the registered device by the external nor embedded RCG device is set.			
	1: The embedded RCG device is being set. Only Box registration is completed. In this status, this unit cannot answer a polling request from the external RCG.			
	2. The embedded RCG device is set. In this status, the external RCG unit cannot answer a polling request.			
	3. The registered device by the external RCG is being set. In this status the embedded RCG device cannot be set.			
	4 The registered module by the external RCG has not started.			
202	Letter Number Allows entry of the number of the request needed for the embedded RCG.			
203	Confirm Execute	Executes the inquiry request to the @Remote GW URL.		
204	Confirm Result			
	Displays a number that indicc	ates the result of the inquiry executed with SP5816 203.		
	0: Succeeded			
	1: Inquiry number error			
	2: Registration in progress			
	3: Proxy error (proxy enabled)			
	4: Proxy error (proxy disabled)			
	5: Proxy error (Illegal user name or password)			
	6: Communication error			
	7: Certification update error			
	8: Other error			
	9: Inquiry executing			
	Confirm Place			
205	Displays the result of the notification sent to the device from the GW URL in answer to the inquiry request. Displayed only when the result is registered at the GW URL.			
206	Register Execute Executes "Embedded RCG Registration".			
	Register Result			
	Displays a number that indicates the registration result.			
207	0: Succeeded			
	2: Registration in progress			
	3: Proxy error (proxy enabled)			

- 4: Proxy error (proxy disabled)
- 5: Proxy error (Illegal user name or password)
- 6: Communication error
- 7: Certification update error
- 8: Other error
- 9: Registration executing

Error Code

Displays a number that describes the error code that was issued when either SP5816-204 or SP5816-207 was executed.

	Cause	Code	Meaning
	Illegal Modem Parameter	-11001	Chat parameter error
		-11002	Chat execution error
		-11003	Unexpected error
	Operation Error, Incorrect Setting	-12002	Inquiry, registration attempted without acquiring device status.
208		-12003	Attempted registration without execution of an inquiry and no previous registration.
		-12004	Attempted setting with illegal entries for certification and ID2.
	Error Caused by Response from GW URL	-2385	Attempted dial up overseas without the correct international prefix for the telephone number.
		-2387	Not supported at the Service Center
		-2389	Database out of service
		-2390	Program out of service
		-2391	Two registrations for same device
		-2392	Parameter error
		-2393	Basil not managed
		-2394	Device not managed
		-2395	Box ID for Basil is illegal

		-2396	Device ID for Basil is illegal
		-2397	Incorrect ID2 format
		-2398	Incorrect request number format
209	@Remote Setting Clear	Releases the machine from its embedded RCG setup.	
250	CommLog Print	Prints the communication log.	

5821	[Remote Service Address]		
002	RCG IP Address	*CTL	Sets the IP address of the RCG (Remote Communication Gate) destination for call processing at the remote service center.

	[NV-RAM Data Upload]		
5824	Uploads the UP and SP mode data (except for counters and the serial number) from the NVRAM to an SD card. For details, see the "NVRAM Data Upload/Download" in the "System Maintenance Reference" of the Field Service Manual.		
001	NV-RAM Data Upload	#	-

	[NV-RAM Data Download]			
5825	Downloads the UP and SP mode data from an SD card to the NVRAM. For details, see the "NVRAM Data Upload/Download" in the "System Maintenance Reference" of the Field Service Manual.			
001	NV-RAM Download	#	-	

5828	[Network Setting]	*CTL	-	
		Enables or disables 1284 Compatibility.		
050	1284 Compatibility (Centro)	[0 or 1 / 1 / 1 / step]		
		0: Disabled, 1: Enabled		
	ECP (Centro)	Enables o	r disables ECP Compatibility.	
052		[0 or 1 /	1 / 1 / step]	
		0: Disabled, 1: Enabled		

		 Note This SP is activated only when SP5-828-50 is set
		to "1".
		Enables/disables Job Spooling.
065	Job Spooling	[0 or 1 / 0 / 1 / step]
		0: Disabled, 1: Enabled
		Treatment of the job when a spooled job exists at power
066	Job Spooling Clear: Start Time	on.
		0: ON (Data is cleared)
		1: OFF (Automatically printed)
		Validates or invalidates the job spooling function for each protocol.
		0: Validates
	Job Spooling (Protocol)	1: Invalidates
		bitO: LPR
		bit 1 : FTP
069		bit2: IPP
		bit3: SMB
		bit4: BMLinkS
		bit5: DIPRINT
		bitó: sftp
		bit7: (Reserved)
	TELNET (0: OFF 1: ON)	Enables or disables the Telnet protocol.
090		[0 or 1 / 1 / –]
		0: Disable, 1: Enable
	Web (0: OFF 1: ON)	Enables or disables the Web operation.
091		[0 or 1 / 1 / -]
		0: Disable, 1: Enable
145		This is the IPv6 local address link referenced on the
	Active IPv6 Link Local Address	Ethernet or wireless LAN (802.11b) in the format:
		"Link Local Address" + "Prefix Length"

		The IPv6 address consists of a total 128 bits configured in 8 blocks of 16 bits each.
147	Active IPv6 Stateless Address 1	These SPs are the IPv6 status addresses (1 to 5)
149	Active IPv6 Stateless Address 2	referenced on the Ethernet or wireless LAN (802.11b)
151	Active IPv6 Stateless Address 3	in the format: "Status Address" + "Prefix Length"
153	Active IPv6 Stateless Address 4	The IPv6 address consists of a total 128 bits configured
155	Active IPv6 Stateless Address 5	in 8 blocks of 16 bits each.
156	IPvó Manual Address	This SP is the IPv6 manually set address referenced on the Ethernet or wireless LAN (802.11b) in the format: "Manual Set Address" + "Prefix Length" The IPv6 address consists of a total 128 bits configured in 8 blocks of 16 bits each.
158	IPv6 Gateway Address	This SP is the IPv6 gateway address referenced on the Ethernet or wireless LAN (802.11b). The IPv6 address consists of a total 128 bits configured in 8 blocks of 16 bits each.
161	IPv6 Stateless Auto Setting	Enables or disables the automatic setting for IPv6 stateless. [O or 1 / 1 / 1 /step] O: Disable, 1: Enable
236	Web Item visible	Displays or does not display the Web system items. [0 x 0000 to 0 x ffff / 0 x ffff] 0: Not displayed, 1: Displayed bit0: Net RICOH bit1: Consumable Supplier bit2-15: Reserved (all)
237	Web shopping link visible	Displays or does not display the link to Net RICOH on the top page and link page of the web system. [0 to 1 / 1 / 1] 0: Not display, 1:Display
238	Web supplies Link visible	Displays or does not display the link to Consumable Supplier on the top page and link page of the web system.

		[0 to 1 / 1 / 1]
		0: Not display, 1:Display
239	Web Link1 Name	This SP confirms or changes the URL1 name on the link page of the web system. The maximum characters for the URL name are 31 characters.
240	Web URL	This SP confirms or changes the link to URL1 on the link page of the web system. The maximum characters for the URL are 127 characters.
241	Web visible	Displays or does not display the link to URL1 on the top page of the web system. [0 to 1 / 1 / 1] 0: Not display, 1:Display
242	Web Link2 Name	Same as "-239"
243	Web Link2 URL	Same as "-240"
244	Web Link2 visible	Same as "-241"

5832	[HDD] HDD Initialization	*CTL	-
001	HDD Formatting (ALL)		
002	HDD Formatting (IMH)		
003	HDD Formatting (Thumbnail)		
004	HDD Formatting (Job Log)		
005	HDD Formatting (Printer Fonts)		Initializes the hard disk. Use this SP mode only if there is a hard disk error.
006	HDD Formatting (User Info)		
007	Mail RX Data		,
008	Mail TX Data		
009	9 HDD Formatting (Data for a Design)		
010	HDD Formatting (Log)		
011	HDD Formatting (Ridoc I/F)		

5836	[Capture Settings]	*CTL	-
	Capture Function (0:Off 1:O	n)	0: Disable, 1: Enable
001	With this function disabled, th displayed, or selected.	With this function disabled, the settings related to the capture feature cannot be initialized displayed, or selected.	
002	Panel Setting		0: Displayed, 1: Not displayed
002	Displays or does not display	the capture	function buttons.
	5836-71 to 5836-78, Copie	er and Print	er Document Reduction
	The following 6 SP modes set document management serve		t reduction for stored documents sent to the LB.
	Enabled only when optional	MLB (Medi	a Link Board) is installed.
071	Reduction for Copy Color		0: 1to-1, 1: 1/2, 2: 1/3 , 3: 1/4
072	Reduction for Copy B&W Tex	x t	0: 1to-1 , 1: 1/2, 2: 1/3, 3: 1/4, 6: 2/3
073	Reduction for Copy B&W Ot	her	0: 1to-1 , 1: 1/2, 2: 1/3, 3: 1/4, 6: 2/3
074	Reduction for Printer Color		0: 1to-1, 1: 1/2, 2: 1/3 , 3: 1/4
075	Reduction for Printer B&W		0: 1to-1 , 1: 1/2, 2: 1/3, 3: 1/4, 6: 2/3
076	Reduction for Printer B&W HQ		0: 1to-1, 1: 1/2, 2: 1/3, 3: 1/4
077	Reduction for Printer Color 1200		1: 1/2, 3: 1/4, 4: 1/6 , 5: 1/8 (2: skipped), 6: 2/3
078	Reduction for Printer B&W 12	200	1: 1/2, 3: 1/4, 4: 1/6, 5: 1/8 (2: skipped), 6: 2/3
	5836-81 to 5836-86, Store	d documen	t format
	The following 6 SP modes set document management serve		efault format for stored documents sent to the LB.
	Enabled only when optional MLB (Media Link Board) is installed.		a Link Board) is installed.
			0: JFIF/JPEG, 1: TIFF/MMR,
081	Format for Copy Color		2: TIFF/MH, 3: TIFF/MR
	1,7 ====		Note
			This SP is not used in this model.
082	Format for Copy B&W Text		O: JFIF/JPEG, 1: TIFF/MMR,

			2: TIFF/MH, 3: TIFF/MR
083	Format Copy B&W Other		O: JFIF/JPEG, 1: TIFF/MMR, 2: TIFF/MH, 3: TIFF/MR
084	Format for Printer Color		O: JFIF/JPEG, 1: TIFF/MMR, 2: TIFF/MH, 3: TIFF/MR Note • This SP is not used in this model.
085	Format for Printer B&W		0: JFIF/JPEG, 1: TIFF/MMR, 2: TIFF/MH, 3: TIFF/MR
086	Format for Printer B&W HQ		O: JFIF/JPEG, 1: TIFF/MMR, 2: TIFF/MH, 3: TIFF/MR
	Default for JPEG		[5 to 95 / 50 / 1 /step]
091	Sets the JPEG format default for documer the MLB with JPEG selected as the format Enabled only when optional MLB (Medic		
101	Primary sry IP address Sets the IP of		address for the primary capture server. This is djusted by the remote system.
102	Primary srv scheme This is basi		cally adjusted by the remote system.
103	Primary srv port number	This is basic	cally adjusted by the remote system.
104	Primary srv URL path	This is basic	cally adjusted by the remote system.
111	Secondary srv IP address		address for the secondary capture server. This is djusted by the remote system.
112	Secondary srv scheme	This is basic	cally adjusted by the remote system.
113	Secondary srv port number	This is basic	cally adjusted by the remote system.
114	Secondary srv URL path	This is basically adjusted by the remote system.	
120	Default Reso Rate Switch	This is basic	cally adjusted by the remote system.
	Reso: Copy (Color)	[0 to 3 / 2	/ 1/step]
121	Selects the resolution for color copy mode. This is basically adjusted by the remote syste 0: 600dpi/ 1: 300dpi/ 2: 150dpi/ 3: 75dpi		

122	Reso: Copy (Mono)	[0 to 5 / 3 / 1/step]		
	Selects the resolution for BW copy mode. This is basically adjusted by the remote system. 0: 600dpi/ 1: 400dpi/ 2: 300dpi/ 3: 200dpi/ 4: 150dpi/ 5: 100dpi			
123	Reso: Print (Color)	This is basically adjusted by the remote system. [0 to 3 / 2 / 1/step]		
	Selects the resolution for color print mode. This is basically adjusted by the remote system. 0: 600dpi/ 1: 300dpi/ 2: 150dpi/ 3: 75dpi			
124	Reso: Print (Color)	This is basically adjusted by the remote system. [0 to 5 / 3 / 1/step]		
	Selects the resolution for BW print mode. This is basically adjusted by the remote system. 0: 600dpi/ 1: 400dpi/ 2: 300dpi/ 3: 200dpi/ 4: 150dpi/ 5: 100dpi			

5840	[IEEE 802.11]			
	Channel Max	*CTL	[1 to 11 or 13 / 11 or 13 / 1 /step] Europe/Asia: 1 to 13 NA/ Asia: 1 to 11	
006	The number of channels avail	able var nge for e	available for data transmission via the wireless LAN. ies according to location. The default settings are set each area. Adjust the upper 4 bits to set the maximum	
	Channel Min	*CTL	[1 to 11 or 13 / 1 / 1 /step] Europe: 1 to 13 NA/ Asia: 1 to 11	
007	Sets the minimum number of channels available for data transmission via the wireless LAN. The number of channels available varies according to location. The default settings are set for the minimum end of the range for each area. Adjust the lower 4 bits to set the minimum number of channels. DFU ••• Note			
	Do not change the setting	g.		

			[0 x 00 to 0 x FF / 0 x FF to Auto / -]
			0 x FF to Auto [Default]
			0 x 11 – 55M Fix
			0 x 10 – 48M Fix
			0 x 0F – 36M Fix
			0 x 0E – 18M Fix
			0 x 0D – 12M Fix
008	Transmission Speed	*CTL	0 x OB – 9M Fix
			0 x 0A – 6M Fix
			0 x 07 – 11M Fix
			0 x 05 – 5.5M Fix
			0 x 08 – 1 M Fix
			0 x 13 – 0 x FE (reserved)
			0 x 12 – 72M (reserved)
			0 x 09 – 22M (reserved)
	WEP key Select		Selects the WEP key.
			[00 to 11 / 00 / 1 binary]
			00: Key #1
011		*CTL	01: Key #2 (Reserved)
			10: Key #3 (Reserved)
			11: Key #4 (Reserved)
			,
	Fragment Thresh	*CTL	Adjusts the fragment threshold for the IEEE802.11 card.
042			[256 to 2346 / 2346 / 1]
	Ü		This SP is displayed only when the IEEE802.11
			card is installed.
			Determines whether the CTS self function is turned
043			on or off.
	1g CTS to Self	*CTL	[0 to 1 / 1 / 1] 0: Off, 1: On
			This SP is displayed only when the IEEE802.11
			card is installed.
044	11a Slot Time	*CTL	Selects the slot time for IEEE802.11.
044	11g Slot Time	CIL	[0 to 1 / 0 / 1] 0: 20 µm, 1: 9 µm

			Selects the debug level for WPA authentication application.	
045	WPA Debug Lvl	*CTL	[1 to 3 / 3 / 1] 1: Info, 2: warning, 3: error	
			This SP is displayed only when the IEEE802.11 card is installed.	

5841	[Supply Name Setting]		
001	Toner Name Setting: Black		
002	Toner Name Setting: Cyan		
003	Toner Name Setting: Yellow		
004	Toner Name Setting: Magenta	*CTL	Specifies supply names. These appear on the
007	OrgStamp		screen when the user presses the Inquiry button in the user tools screen.
011	Staple Std 1		
012	Staple Std2		
013	Staple Std3		
014	Staple Std4		

5842	[GWWS Analysis Mode] DFU		
001	Setting 1	*CTL	Default: 00000000 – do not change Netfiles: Jobs to be printed from the document server using a PC and the DeskTopBinder software
002	Setting 2	*CTL	Adjusts the debug program modesetting. Bit7: 5682 mmseg-log setting O: Date/Hour/Minute/Second 1: Minute/Second/Msec. O to 6: Not used

5844	[USB]		
001	Transfer Rate	*CTL	0x01: Full speed 0x04: Auto Change

	Adjusts the USB transfer rate.			
002	Vendor ID	*CTL	Displays the vendor ID. DFU	
003	Product ID	*CTL	Displays the product ID. DFU	
004	Device Release Number	*CTL	Displays the development release version number. DFU	

E0.4E	[Delivery Server Setting]	*CTL	-		
5845	Provides items for delivery server settings.				
001	FTP Port No.	[0 to 65535 / 3670 / 1 /step]		
001	Sets the FTP port number used	d when	image files to the Scan Router Server.		
	IP Address (Primary)	R	lange: 000.000.000.000 to 255.255.255.255		
002	Use this SP to set the Scan Roube referenced by the initial sy		ver address. The IP address under the transfer tab can etting.		
	Delivery Error Display Time	[0 to 999 / 300 / 1 second /step]		
006	Use this setting to determine the length of time the prompt message is displayed when a test error occurs during document transfer with the NetFile application and an external device.				
	IP Address (Secondary)	R	lange: 000.000.000.000 to 255.255.255.255		
008	Specifies the IP address assigned to the computer designated to function as the secondary delivery server of Scan Router. This SP allows only the setting of the IP address without reference to the DNS setting.				
	Delivery Server Model	[0 to 4/0/1/step]		
009	Allows changing the model of 0: Unknown 1: SG1 Provided 2: SG1 Package 3: SG2 Provided 4: SG2 Package	f the de	delivery server registered by the I/O device.		
	Delivery Svr Capability	[0 to 255 / 0 / 1 /step]		
010	Changes the capability of the	registe	ered that the I/O device registered.		

D. 7. 1. 0					
Bit7 = 1 Comment information exits					
Bit6 = 1 Direct specification of mail address possible					
Bit5 = 1 Mail RX confirmation setting possible					
Bit4 = 1 Address book automatic update function exists					
Bit3 = 1 Fax RX delivery function exists					
Bit2 = 1 Sender password function exists					
Bit 1 = 1 Function to link MK-1 user and Sender exists					
BitO = 1 Sender specification required (if set to 1, Bit6 is set to "0")					
Delivery Svr Capability (Ext) [0 to 255 / 0 / 1 /step]					
Changes the capability of the registered that the I/O device registered.					
Bit7 = 1 Address book usage limitation (Limitation for each authorized user) Bit6 = 1 RDH authorization link Bit5 to 0: Not used					
Server Scheme (Primary) DFU					
This is used for the scan router program.					
Server Port Number (Primary) DFU					
This is used for the scan router program.					
Server URL Path (Primary) DFU					
This is used for the scan router program.					
Server Scheme (Secondary) DFU					
This is used for the scan router program.					
Server Port Number (Secondary) DFU					
This is used for the scan router program.					
Server URL Path (Secondary) DFU					
This is used for the scan router program.					
Rapid Sending Control					
	Bit5 = 1 Mail RX confirmation setting possible Bit4 = 1 Address book automatic update function exists Bit3 = 1 Fax RX delivery function exists Bit2 = 1 Sender password function exists Bit1 = 1 Function to link MK-1 user and Sender exists Bit0 = 1 Sender specification required (if set to 1, Bit6 is set to "0") Delivery Svr Capability (Ext) [0 to 255 / 0 / 1 / step] Changes the capability of the registered that the I/O device registered. Bit7 = 1 Address book usage limitation (Limitation for each authorized usit6 = 1 RDH authorization link Bit5 to 0: Not used Server Scheme (Primary) DFU This is used for the scan router program. Server Port Number (Primary) DFU This is used for the scan router program. Server URL Path (Primary) DFU This is used for the scan router program. Server Port Number (Secondary) DFU This is used for the scan router program. Server URL Path (Secondary) DFU This is used for the scan router program. Server URL Path (Secondary) DFU This is used for the scan router program.				

5846	[UCS Settings]	*CTL	-		
	Machine ID (For Delivery Ser	ver)	er) Displays ID		
Displays the unique device ID in use by the delivery server directly displayed and cannot be changed. This ID is created from the EUI. The ID is displayed as either 6-byle or 8-byte binary.			om the NIC MAC or IEEE 1394		
	Machine ID Clear (For Delivery Server)			Clears ID	
002	Clears the unique ID of the device used as the name in the file transfer directory. Exe this SP if the connection of the device to the delivery server is unstable. After clearing ID, the ID will be established again automatically by cycling the machine off and on				
	Maximum Entries	[2	2000 to	20000/	2000 / 1 /step]
003	Changes the maximum number of entries that UCS can handle. If a value smaller than the present value is set, the UCS managed data is cleared, and the				
	data (excluding user code information) is displayed.				
	Delivery Server Retry Timer			[0 to 255 / 0 / 1 /step]	
006	Sets the interval for retry attempts when the delivery server fails to acquire the delivery server address book.				
	Delivery Server Retry Times				[0 to 255 / 0 / 1 /step]
007	Sets the number of retry attempts when the delivery server fails to acquire the delivery server address book.				
008	Delivery Server Maximum Entries		[2000 to 50000 / 2000 / 1/ step]		
008	Sets the maximum number account entries of the delivery server user information managed by UCS.				
010	LDAP Search Timeout			[1 to 255	/ 60 / 1 /step]
010	Sets the length of the timeout for the search of the LDAP server.				
020	WSD Maximum Entries [5 to 250 / 250 / 1 /step]			/ 250 / 1 /step]	

	Sets the maximum entries for the address book of the WSD (WS-scanner).				
0.10	Addr Book Migration (USB => HDD)				
040	Not used in this machine.				
	Fill Addr Acl Info.				
	that previously had no HDD. installed, the system automat onto the new HDD. However by the system administrator of	nediately after installation of an HDD unit in a basic machine. The first time the machine is powered on with the new HDD ically takes the address book from the NVRAM and writes it r, the new address book on the HDD can be accessed only at this stage. Executing this SP by the service technician grants full address book access to all users.			
	Procedure				
041	1. Turn the machine off.				
	2. Install the new HDD.				
	3. Turn the machine on.				
	4. The address book and its initial data are created on the HDD automatically.				
	5. However, at this point the administrator or key operato	address book can be accessed by only the system r.			
	6. Enter the SP mode and do can access the address book	SP5846 041. After this SP executes successfully, any user			
		Displays the slot number where an address book data is in.			
		[0 to 30 / - /1]			
		0: Unconfirmed			
043	Addr Book Media	1: SD Slot 1			
		2: SD Slot 2			
		4: USB Flash ROM			
		20: HDD			
		30: Nothing			
047	Initialize Local Addr Book	Clears the local address book information, including the user code.			
048	Initialize Delivery Addr Book	,			
049	Initialize LDAP Addr Book Clears the LDAP address book information, except the user code.				

050	Initialize All Addr Book	Clears all directory information managed by UCS, including all user codes.			
051	Backup All Addr Book	Uploads all directory information to the SD card.			
052	Restore All Addr Book	Downloads all directory information from the SD card.			
		Deletes the address book data from the SD card in the service slot.			
		Deletes only the files that were uploaded from this machine.			
		This feature does not work if the card is write-protected.			
053	Clear Backup Info	Note			
		After you do this SP, go out of the SP mode, and then turn the power off.			
		Do not remove the SD card until the Power LED stops flashing.			
	Search Option				
	This SP uses bit switches to set up the fuzzy search options for the UCS local address book.				
	Bit: Meaning				
	0: Checks both upper/lower case characters				
060	1: Japan Only				
	2: Japan Only				
	3: Japan Only				
	4 to 7: Not Used				
	Complexity Option 1				
		ons for password entry to access the local address book. password entry to upper case and sets the length of the			
062	[0 to 32 / 0 / 1 /step]				
	♦ Note				
	This SP does not normally require adjustment.				
	This SP is enabled only after the system administrator has set up a group password				
	policy to control access to the address book.				
063	Complexity Option 2 DFU				
064	Complexity Option 3 DFU				

065	Complexity Option 4 DFU	
091	FTP Auth Port Setting	Specifies the FTP port for getting a distribution server address book that is used in the identification mode. [0 to 65535 / 3671 / 1 /step]
094	Encryption Stat	Shows the status of the encryption function for the address book data.

	[Rep Resolution Reduction]	*CTL	-			
	5847 1 through 5847 8 changes the default settings of image data transferred externally by the Net File page reference function.					
5847	[0 to 5 / 2 / 1 /step]					
	5847 21 sets the default for JPEG in	nage quo	ality of image files handled by NetFile.			
	"Net files" are jobs to be printed from DeskTopBinder software.	m the do	cument server using a PC and the			
001	Rate for Copy Color		0: 1x			
002	Rate for Copy B&W Text		1: 1/2x			
003	Rate for Copy B&W Other		2: 1/3x			
			3: 1/4x			
004			4: 1/6x			
005	Rate for Printer B&W		5: 1/8x			
			0: 1x			
			1: 1/2x			
006	Rate for Printer Color 1200dpi		2: 1/3x			
000	kale for riffiler Color 1200api		3: 1/4x			
			4: 1/6x			
			5: 1/8x			
			0: 1x			
			1: 1/2x			
007	Pate for Printer R&W/ 1200ds:		2: 1/3x			
007	Rate for Printer B&W 1200dpi		3: 1/4x			
			4: 1/6x			
			5: 1/8x			

	Network Quality Default for JPEG	
Sets the default value for the quality of JPEG images sent as NetFile pages. The is available only with the MLB (Media Link Board) option installed.		
[5 to 95 / 50 / 1 /step]		

	[Web Service]	*CTL	-			
5848	5848 2 sets the 4-bit switch assignment of the set on access and delivery from the set of the set o	he access control setting. Setting of 0001 has Router.				
	5848 100 sets the maximum size allowed for downloaded images. The default is equal to 1 gigabyte.					
		0000:	No access control			
002	Access Ctrl: Repository (only Lower 4 bits)	0001:	Denies access to DeskTop Binder.			
	·	0010:	No writing control			
003	Access Control: Doc. Svr. Print (Lower 4 bits)					
004	Access Control: User Directory (only Lower 4 bits)					
007	Access Ctrl: Comm. Log Fax (Lower 4 bits)	Switche	es access control on and off.			
009	Access Ctrl: Job Ctrl (Lower 4 bits)	0000: No access control				
011	Access Ctrl: Device management (Lower 4 bits)	- 0001: Denies access to DeskTop Binder.				
021	Access Ctrl: Delivery (Lower 4 bits)					
022	Access Ctrl: uAdministration (Lower 4bits)					
099	Repository: Download Image Setting	DFU				
100	Repository: Download Image Max. Size	machin	es the max size of the image data that the e can download. D24 / 1024 / 1 MB /step]			
210	Setting: LogType: Job1	NIA				

211	Setting: LogType: Job2
212	Setting: LogType: Access
213	Setting: Primary Srv
214	Setting: Secondary Srv
215	Setting: Start Time
216	Setting: Interval Time
217	Setting: Timing

5849	[Installation Date]	*CTL	-
5849 1	Display	The "Counter Clear Day" has been changed "Installation Date" or "Inst. Date".	
5849 2	Switch to Print		lo Print)
003	Total Counter	-	

5850	[Address Book Function]	*CTL	-	
Replacement of Circuit Classification Japan Only				
003	The machine is sold ready to use with a G3 line. This SP allows you to switch all at once to convert to G4 after you add a G4 line. Conversely, if for some reason the G4 line becomes unusable, you can easily switch back to G3.			

	[Bluetooth Mode]
Sets the operation mode for the Bluetooth Unit. Press either key.	
	[O:Public] [1: Private]

5853

Use this SP to download the fixed stamp data stored in the firmware of the ROM and copy it to the HDD. This SP can be executed as many times as required. This SP must be executed after replacing or formatting the hard disks.



• This SP can be executed only with the hard disks installed.

	[Remote ROM Update]			
5856	Allows the technician to upgrade the firmware using a local port (IEEE1284) when updating the remote ROM.			
002	Local Port	*CTL	[0 to 1 / 0 / 1/step] 0: Disable 1: Enable	

5857	[Save Debug Log]	*CTL	-	
	On/Off (1:ON 0:OFF)	0: OFF, 1: ON		
Switches the debug log feature on and off. The debug log feature is switched on.			The debug log cannot be captured until this	
Target (2: HDD 3: SD) 2: HDD, 3: SD Card Selects the storage device to save debug logs information when the conditions set v SP5-858 are satisfied. [2 to 3 / 2 / 1 / step]			3: SD Card	
			gs information when the conditions set with	
	Save to HDD			
005	Saves the debug log of the input SC number in memory to the HDD. A unique file name is generated to avoid overwriting existing file names on the SD Up to 4MB can be copied to an SD Card. 4 MB segments can be copied one by each SD Card.			
00/	Save to SD Card			
006	Saves the debug log of the input SC number in memory to the SD card.			
009				
010	Copy HDD to SD Card (Latest 4 MB Any Key)			
011	Erase HDD Debug Data			

012	Erase SD Card Debug Data	
013	013 Free Space on SD Card	
014	Copy SD to SD (Latest 4 MB)	
015	Copy SD to SD (Latest 4 MB Any Key)	
016	Make HDD Debug	
017	Make SD Debug	

	[Debug Save When]	*CTL	-	
5858	These SPs select the content of the debugging information to be saved to the destinated selected by SP5857-002. SP5858-3 stores one SC specified by number. Refer to Section 4 for a list of SC error			
001	Engine SC Error	Turns on/off the debug save for SC codes generated by copier engine errors. [0 or 1 / 0 / 1 / step] 0: OFF, 1: ON		
002	Controller SC Error	Turns on/off the debug save for SC codes ge GW controller errors. [0 or 1 / 0 / 1 / step] 0: OFF, 1: ON		
003	Any SC Error	[0 to 65535 / 0 / 1 /step] Turns on/off the debug save for jam errors. [0 or 1 / 0 / 1 / step] 0: OFF, 1: ON		
004	Jam			

5859	[Debug Save Key No.]	*CTL	-
001	Key 1		
002	Key 2	These SPs allow you to set up to 10 keys for log files for functions that use common memory on the controller bo	
003	Key 3		
004	Key 4	-	

5860	[SMTP/POP3/IMAP4]	*CTL	-		
020	Partial Mail Receive Timeout	tial Mail Receive Timeout		[1 to 168 / 72 / hour/step]	
		Sets the amount of time to wait before saving a mail that breaks up during reception. The received mail is discarded if the remaining portion of the mail is not received during this prescribed time.			
021	MDN Response RFC2298 Con	npliance		[0 to 1 / 1 / -]	
	Determines whether RFC2298 compliance is switched on for MDN reply mail. 0: No 1: Yes			ed on for MDN reply mail.	
022	SMTP Auth. From Field Replace	ment		[0 to 1 / 0 / -]	
	Determines whether the FROM item of the mail header is switched to the validated account after the SMTP server is validated. O: No. "From" item not switched. 1: Yes. "From item switched.			er is switched to the validated account	
025	SMTP Auth. Direct Setting			[0 or 1 / 0 / -]	
	Selects the authentication method for SMPT. Bit switch: Bit 0: LOGIN				
	Bit 1: PLAIN				
	Bit 2: CRAM MD5				
	Bit 3: DIGEST MD5				
	Bit 4 to 7: Not used				

	Note					
	This SP is activated only when SMTP authorization is enabled by UP mode.					
			Selects the MIME header type of an E-mail sent by S/MIME.			
001	S/MIVE: MIME Header Setting	-	[0 to 2 / 0 / 1]			
026			0: Microsoft Outlook Express standard			
			1: Internet Draft standard			
			2: RFC standard			

5866	[E-mail Alert] Not Used		
001	Report Validity	*CTL	Enables or disables the e-mail alert. [0 or 1 / 0 / -] 0: Enable, 1: Disable
005	Add Date Field	*CTL	Adds or does not add the date field to the header of the alert mail. [0 or 1 / 0 / -] 0: Not added, 1: Added

5870	[Common Key Info Writing]		
001	Writing	*CTL	Writes to flash ROM the common proof for validating the device for @Remote specifications.
003	Initializing	*CTL	Initializes the data area of the common proof for validating.

5873	[SD Card Appli Mo	[SD Card Appli Move]		
001	This SP copies the application programs from the original SD co SD card slot 3 to an SD card in SD card slot 1 or 2 (slot 1 has a priority to be copied).			
002	Undo Exec	This SP copies back the application programs from an SD card in SD Card Slot 3 to the original SD card in SD card slot 1 or 2 (slot 1 has the priority to be copied). Use this menu when you have mistakenly copied some programs by using "Move Exec" (SP5873-1).		

5875	[SC Auto Reboot]				
			Enables or disables the automatic reboot function when an SC error occurs. [0 or $1/0/-$]		
001	Reboot Setting	*CTL	O: The machine reboots automatically when the machine issues an SC error and logs the SC error code. If the same SC occurs again, the machine does not reboot.		
			The machine does not reboot when an SC error occurs. The reboot is not executed for Type A or C SC codes.		
002	Reboot Type	*CTL	Selects the reboot method for SC. [0 or 1 / 0 / -] 0: Manual reboot, 1: Automatic reboot		

5878	[Option Setup]		
001	Data Overwrite Security	-	Enables the Data Overwrite Security unit. Press "EXECUTE" on the operation panel. Then turn the machine off and on.
002	HDD Encryption	-	Installs the HDD Encryption unit.

5881	[Fixed Phrase Block Erasing]		
001	-	-	Deletes the fixed phrase.

5885	[WIM Settings] Web Image Monitor Settings			
	Close or disclose the functions of web image monitor.			
	Document Server ACC Ctrl		0: OFF, 1: ON	
		*CTL	Bit Meaning	
			0: Forbid all document server access (1)	
020			1: Forbid user mode access (1)	
			2: Forbid print function (1)	
			3: Forbid fax TX (1)	
			4: Forbid scan sending (1)	

			5: Forbid downloading (1)
			6: Forbid delete (1)
			7: Reserved
			Selects the display type for the document box list.
050	Document Server List Def. Style	*CTL	[0 to 2 / 0 / 1]
			0: Thumbnail, 1: Icon, 2: Details
051	Document Server List Def. Lines	*CTL	Sets the number of documents to be displayed in the document box list.
			[5 to 20 / 10 / 1]
	Signature Setting	*CTL	Selects whether the signature is added to the scanned documents with the WIM when they are transmitted by an e-mail.
100			[0 to 2 / 0 / 1/step]
			0: Setting for each e-mail
			1: Signature for all
			2: No signature
101	Set Encryption	*CTL	Determines whether the scanned documents with the WIM are encrypted when they are transmitted by an e-mail.
			[0 to 1 / 0 / 1]
			0: Not encrypted, 1:Encryption

5007	[SD Get Counter]				
5887	This SP determines whether the ROM can be updated.				
001	RTB 30 Description for SP5887 corrected	*CTL	This SP sends a text file to an SD card inserted in SD card Slot 2 (lower slot). The operation stores. The file is stored in a folder created in the root directory of the SD card called SD_COUNTER. The file is saved as a text file (*.txt) prefixed with the number of the machine. 1. Insert the SD card in SD card Slot 2 (lower slot). 2. Select SP5887 then touch [EXECUTE].		

5888	[Personal Information Protect]		
001	-	*CTL	Selects the protection level for logs. [0 to 1 / 0 / 1} 0: No authentication, No protection for logs 1: No authentication, Protected logs (only an administrator can see the logs)

5893	[SDK Application Counter]	*CTL	-				
3093	Displays the counter name of each SDK application.						
001	SDK-1						
002	SDK-2						
003	SDK-3						
004	SDK-4						
005	SDK-5						
006	SDK-5						

SP5894 RTB 2a General RTB 3

	5894	[External Charge Unit Setting]				
3	4	-				
	001	Switch Charge Mode	*ENG	[0 to 2 / 0 / 1/step]		

	[Application Invalidation]					
5895	Enables or disables the printer or scanner application. These SPs are used only when an external controller is installed in the machine.					
001	Printer	*CTL	[0 or 1 / 0 / -]			
002	Scanner	*CTL	0: Enable 1: Disable			

5907	[Plug & Play Maker/Model Name]
	Selects the brand name and the production name for Windows Plug & Play. This information is stored in the NVRAM. If the NVRAM is defective, these names should be registered again.
	After selecting, press the "Original Type" key and "#" key at the same time. When the setting is completed, the beeper sounds five times.

5913	[Switchover Permission Time]			
	Print Application Timer	*CTL	[3 to 30 / 3 / 1 second /step]	
002	Sets the amount of time to elapse while the machine is in standby mode (and the operation panel keys have not been used) before another application can gain control of the display.			

5967	[Copy Server Set Function]	*CTL	0: ON, 1: OFF
		ea of the H	a security measure that prevents image IDD. After changing this setting, you must w setting.

5974	[Cherry Server]		
3974	Specifies which version of ScanRouter, "Lite" or "Full", is installed.		
001	Cherry Server	*CTL	[0 or 1 / 0 / –] 0: Lite 1: Full

	[Device Setting]			
5985	The NIC and USB support features are built into the GW controller. Use this SP to enable and disable these features. In order to use the NIC and USB functions built into the controll board, these SP codes must be set to "1".			
	On Board NIC	[0 to 2 / 0 / 1 /step]		
		0: Disable, 1: Enable, 2: Function limitation		
001		When the "Function limitation" is set, "On board NIC" is limited only for the NRS or LDAP/NT authentication.		
		●Note		
		Other network applications than NRS or LDAP/NT authentication are not available when this SP is set to "2". Even		

		though you can change the initial settings of those network applications, the settings do not work.
002	On Board USB	[0 or 1 / 0 / 1/step] 0: Disable, 1: Enable

5987	[Mech. Counter]	
001	0: OFF / 1: ON	This SP detects that a mechanical counter device is removed. If it is detected, SC610 occurs.

5990	[SP print mode]	
3770	Prints out the SMC sheets.	
001	All (Data List)	-
002	SP (Mode Data List)	-
003	User Program	-
004	Logging Data	-
005	Diagnostic Report	-
006	Non-Default	-
007	NIB Summary	-
008	Capture Log	-
021	Copier User Program	-
022	Scanner SP	-
023	Scanner User Program	-

SP6-XXX (Peripherals)

6006	[ADF Adj.] ADF Adjustment		
	Adjusts the side-to-side and leading registration of originals with the ARDF.		
001	Side-to-Side Registration	*ENG	[-3.0 to 3.0 / 0 / 0.1 mm/step]

ď

002	Side-to-Side Registration (2nd side)		
003	Leading Edge Registration		[-5.0 to 5.0 / 0 / 0.1 mm/step]
	Adjusts the amount of paper buckle to correct original skew for the front and rear side		
005	Buckle: Duplex Front	*ENG	[-3.0 to 3.0 / 0 / 0.1 mm/step]
006	Buckle: Duplex Rear	ENG	[-2.5 to 2.5 / 0 / 0.1 mm/step]
	Adjusts the erase margin at the original trailing edge.		
007	Rear Edge Erase	*ENG	[-10 to 10 / 0 / 0.1 mm/step]

	[ADF Input Check]
6007	Displays the signals received from the sensors and switches of the ARDF. Only Bit 0 is used for ADF input check ("lutput Check Table" in this section").

é		[ADF Output Check]
	6008	Activates the electrical components for functional check.
		It is not possible to activate more than one component at the same time (*Output Check Table" in this section")

6009	[ADF Free Run]			
0009	Performs a DF free run in simplex, duplex mode or stamp mode.			
001	Free Run Simplex Motion	-		
002	Free Run Duplex Motion	-	-	
003	Free Run Stamp Motion	-		

	6010	[Stamp Position Adj.] Fax Sta	ımp Position /	np Position Adjustment	
	0010	Adjusts the horizontal positio	n of the stam	on the scanned originals.	
	60101	Stamp Position Adj.	*ENG	[-5.0 to 5.0 / 0 / 1 mm/step]	

6016	[Original Size Detection Priority] Original Size Detection Priority
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	Specifies the original size for a size detected by the original sensor, since original sensors cannot recognize all sizes.			
		*ENG	[0 or 1 / 0 / -] 0: Setting 1 1: Setting 2	
			Setting 1 Setting 2	Setting 2
	Original Size Detection Priority	NA	DLT SEF	Folio SEF 11" x 15"
001			LG SEF	Foolscap SEF
			LT SEF	US EXE 8" x 10"
			LT LEF	US EXE LEF
		EU/	DLT SEF	8K 267 x 390 mm
			LT SEF	16K 195 x 267 mm
		,	LT LEF	16K 267 x 195 mm

	601 <i>7</i>	[DF Magnification Adj.] DF Ma	ıgnification	nification Adjustment		
	0017	Adjusts the magnification in the	sub-scan d	direction for the ARDF.		
001 DF Magnification Adj. *CTL [-5.0 to 5.0		[-5.0 to 5.0 / 0 / 0.1 %/step]				

6123	[Jogger Position Adj.]		
Adjusts the jogger position.			
001	-	ENG	[-4.0 to 4.0 / 0 / 0.4 mm/step]

6128	[Punch Position: Sub Scan]		
0120	Adjusts the punching position in the sub scan direction.		
001	Domestic (Japan) 2Hole	*ENG	
002	North America 3Hole	*ENG	
003	Europe 4Hole	*ENG	[-7.5 to 7.5 / 0 / 0.5 mm/step]]
004	North Europe 4Hole	*ENG	

|--|

4120	[Punch Position: Main Scan]			
6129	Adjusts the punching position in the main scan direction.			
001	Domestic (Japan) 2Hole	*ENG		
002	North America 3Hole	*ENG		
003	Europe 4Hole	*ENG	[-2.0 to 2.0 / 0 / 0.4 mm/step]]	
004	North Europe 4Hole	*ENG		
005	North Europe 2Hole	*ENG		

6130	[Skew Correction: Buckle Adj.]		
0130	Adjusts the paper buckle for each paper size.		
001	АЗТ	*ENG	
002	B4T	*ENG	
003	A4T	*ENG	
004	A4Y	*ENG	
005	B5T	*ENG	
006	B5Y	*ENG	[504-50/0/025/]
007	DLT-T	*ENG	[-5.0 to 5.0 / 0 / 0.25 mm/step]]
800	LG-T	*ENG	
009	LT-T	*ENG	
010	LT-Y	*ENG	
011	12" x 18"	*ENG	
012	Other	*ENG	

6131	[Skew Correction Control] Not used	
0131	Selects the skew correction control for each paper size. These are only activated for B793.	

001 A3T *ENG 002 B4T *ENG 003 A4T *ENG 004 A4Y *ENG 005 B5T *ENG 006 B5Y *ENG 007 DLT-T *ENG 008 LG-T *ENG 009 LT-T *ENG 010 LT-Y *ENG 011 12" x 18" *ENG 012 Other *ENG				
003 A4T *ENG 004 A4Y *ENG 005 B5T *ENG 006 B5Y *ENG 007 DLT-T *ENG 008 LG-T *ENG 009 LT-T *ENG 010 LT-Y *ENG 011 12" x 18" *ENG	001	A3T	*ENG	
004 A4Y *ENG 005 B5T *ENG 006 B5Y *ENG 007 DLT-T *ENG 008 LG-T *ENG 009 LT-T *ENG 010 LT-Y *ENG 011 12" x 18" *ENG	002	B4T	*ENG	
005 B5T *ENG 006 B5Y *ENG 007 DLT-T *ENG 008 LG-T *ENG 009 LT-T *ENG 010 LT-Y *ENG 011 12" x 18" *ENG	003	A4T	*ENG	
006 B5Y *ENG 007 DLT-T *ENG 008 LG-T *ENG 009 LT-T *ENG 010 LT-Y *ENG 011 12" x 18" *ENG	004	A4Y	*ENG	
000 BST ENG 007 DLT-T *ENG 008 LG-T *ENG 009 LT-T *ENG 010 LT-Y *ENG 011 12" x 18" *ENG	005	B5T	*ENG	
007 DLT-T *ENG 008 LG-T *ENG 009 LT-T *ENG 010 LT-Y *ENG 011 12" x 18" *ENG	006	B5Y	*ENG	
008 LG-T *ENG 009 LT-T *ENG 010 LT-Y *ENG 011 12" x 18" *ENG	007	DLT-T	*ENG	
010 LT-Y *ENG 011 12" x 18" *ENG	008	LG-T	*ENG	
011 12" x 18" *ENG	009	LT-T	*ENG	
	010	LT-Y	*ENG	
012 Other *ENG	011	12" x 18"	*ENG	
	012	Other	*ENG	

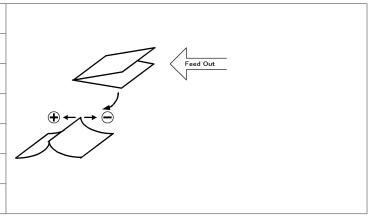
	[Jogger Fence Fine Adj]		
6132	-		ogger fences and the sides of the stack on the r B793. The adjustment is done perpendicular to
001	A3T	*ENG	
002	B4T	*ENG	
003	A4T	*ENG	
004	A4Y	*ENG	[-1.5 to 1.5 / 0 / 0.5 mm/step]
005	B5T	*ENG	+ Value: Increases distance between jogger
006	B5Y	*ENG	fences and the sides of the stack. - Value: Decreases the distance between the
007	DLT-T	*ENG	jogger fences and the sides of the stack.
008	LG-T	*ENG	
009	LT-T	*ENG	
010	LT-Y	*ENG	

011	12" x 18"	*ENG
012	Other	*ENG

	[Staple Position Adjustment]		
6133	Adjusts the staple position for each finisher (B408/B793/D372).		
0.00	+ Value: Moves the staple position to the rear side.		
	- Value: Moves the staple position to the front side.		
001	Finisher (B408/B793)	*ENG	[-3.5 to 3.5 / 0 / 1/step]
002	Finisher (D372)	*ENG	[-2.0 to 2.0 / 0 / 1/step]]

6134	[Saddle Stitch Position Adjustment] Use this SP to adjust the stapling position of the booklet stapler when paper is stapled and folded in the Booklet Finisher B793.	
User SP		
001	A3T	
002	B4T	[-3.0 to 3.0 / 0 / 0.2 mm/step]
003	A4T	+ Value: Shifts staple position toward the crease.
004	B5T	- Value: Shifts staple position away from the crease.
005	DLT-T	
006	LG-T	
007	LT-T	
008	12" x 18"	
009	Other	_

6135	[Folder Position Adj.]	
User SP	This SP corrects the folding position when paper is stapled and folded in the Booklet Finisher B793.	
001	A3T	[-3.0 to 3.0 / 0 / 0.2 mm/step]
002	B4T	+ Value: Shifts staple position toward the crease Value: Shifts staple position away from the crease.



6136	[Folding Number]		
User SP	Sets the number of times that folding is done in the Booklet Finisher B793.		
001	-	[2 to 30 / 2 / 1 time/step]	

6137	[Finisher Free Run]		
013/	These SPs are used only for B793 finisher.		
001	Free Run 1	Free run for paper edge stapling.	
002	Free Run 2	Free run for booklet stapling.	
003	Free Run 3	Shipping free run. Simulates standby conditions during shipping.	
004	Free Run 4	DFU	

6138	[FIN (TIG) INPUT Check] Finisher (B793) Input Check
	Displays the signals received from sensors and switches of the booklet finisher. ("Iutput Check Table" in this section")

6139	[FIN (KIN) INPUT Check] Finisher (B408) Input Check	
	Displays the signals received from sensors and switches of the booklet finisher. (* "lutput Check Table" in this section")	

6143	[FIN (TIG) OUPUT Check] Finisher (B793) Output Check
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Displays the signals received from sensors and switches of the booklet finisher. ("Output Check Table" in this section")

6144 [FIN (KIN) OUPUT Check] Finisher (B408) Output Check Displays the signals received from sensors and switches of the booklet finisher. ("Output Check Table" in this section")

6145	[FIN (ELB) INPUT Check] Finisher (D372) Input Check
	Displays the signals received from sensors and switches of the 500-sheet finisher. ("Iutput Check Table" in this section")

6146 [FIN (ELB) OUPUT Check] Finisher (D372) Output Check Displays the signals received from sensors and switches of the 500-sheet finisher. ("Output Check Table" in this section")

	[INPUT Check]
6150	Displays the signals received from sensors and switches of the bridge unit (D386) ("Input Check Table" in this section).

[OUTPUT Check]

Displays the signals received from sensors and switches of the brisge unit (D386) ("Output Check Table" in this section).

[INPUT Check] Displays the signals received from sensors and switches of the shift tray (D388) ("Input Check Table" in this section).

	[OUTPUT Check]
6153	Displays the signals received from sensors and switches of the shift tray (D388) (*Output Check Table" in this section).

6154 [INPUT Check]

		[OUTPUT Check]	
	6155	Displays the signals received from sensors and switches of the 1 bin tray (D414) (Utput Check Table" in this section)	
001 1 bin: Junction		1 bin: Junction Solenoid	

6157	[OUTPUT Check]
	Not used in this machine

	[INPUT Check]
6160	Displays the signals received from sensors and switches of the two-tray paper feed unit (D351), 2000 sheet LCT (D352) or 1200 sheet LCT (D353) ("Input Check Table" in this section)

[OUTPUT Check]

Displays the signals received from sensors and switches of the two-tray paper feed unit (D351), 2000 sheet LCT (D352) or 1200 sheet LCT (D353) (Unit of this section)

SP7-XXX (Data Log)

<i>74</i> 01	[Total SC Counter]					
7401	Displays the number of SC codes detected.					
001	SC Counter	*CTL	[0 to 9999 / 0 / 1/step]			

	7403	[SC History]			
		Logs the SC codes detected.			
		The 10 most recently detected SC Codes are not displayed on the screen, but can be seen on the SMC (logging) outputs.			
	001	Latest	*CTL	-	

Q

002	Latest 1
003	Latest 2
004	Latest 3
005	Latest 4
006	Latest 5
007	Latest 6
008	Latest 7
009	Latest 8
010	Latest 9

7502	[Total Paper Jam Counter]				
7502	Displays the total number of jams detected.				
001	Total Jam	* CTL	[0 to 9999 / 0 / 1 sheet/step]		

<i>7</i> 503	[Total Original Jam Counter]				
7503	Displays the total number of original jams.				
001	Original Jam counter	*CTL	[0 to 9999 / 0 / 1 original/step]		

7504	[Paper Jam Location] ON: On check, OFF: Off Check				
7504	Displays the number of jams according to the location where jams were detected. NOTE: The LCT is counted as the 3rd feed station.				
001	At Power On	*CTL			
003	Tray 1: ON	*CTL			
004	Tray 2: ON	*CTL	For details, rethe "Jam Detection" in the Appendix Jam Detection.		
005	Tray 3: ON	*CTL	The Appendix Jam Delection.		
006	Tray 4: ON	*CTL			

007	LCT: On	*CTL	
008	Bypass: ON	*CTL	
009	Duplex: ON	*CTL	
011	Vertical Transport 1: ON	*CTL	
012	Vertical Transport 2: ON	*CTL	
013	Bank Transport Sn 1: On	*CTL	
014	Bank Transport Sn 2: On	*CTL	
017	Registration: ON	*CTL	
018	Fusing Entrance: ON	*CTL	
019	Fusing Exit: ON	*CTL	
020	Paper Exit: ON	*CTL	
021	Bridge Exit: ON	*CTL	
022	Bridge Transport: ON	*CTL	
024	Junction Gate Sensor: ON	*CTL	
025	Duplex Exit: ON	*CTL	
026	Duplex Entrance: ON (In)	*CTL	
027	Duplex Entrance: ON (Out)	*CTL	
028	1 Bin Exit Sensor	*CTL	
051	Vertical Transport 1: Off	*CTL	
052	Vertical Transport 2: Off	*CTL	
053	Bank Transport 1: Off	*CTL	
054	Bank Transport 2: Off	*CTL	For details, rthe "Jam Detection" in the Appendix Jam Detection.
057	Regist Sensor	*CTL	ine Appendix Julii Delection.
058	LCT Feed Sensor: Off	*CTL	
059	Fusing Exit Sensor	*CTL	
060	Paper Exit Sensor: Off	*CTL	

061	Bridge Exit: Off	*CTL	
062	Bridge Transport: Off	*CTL	
064	Junction Gate Sensor: Off	*CTL	
065	Duplex Exit Sensor	*CTL	
066	Duplex Entrance: Off (In)	*CTL	
067	Duplex Entrance: Off (Out)	*CTL	
100	Finisher Entrance: KIN	*CTL	
101	Finisher Shift Tray Exit: KIN	*CTL	
102	Finisher Staple: KIN	*CTL	
103	Finisher Exit: KIN	*CTL	
105	Finisher Tray Lift Motor: KIN	*CTL	
106	Finisher Jogger Motor: KIN	*CTL	
107	Finisher Shift Motor: KIN	*CTL	
108	Finisher Staple Motor: KIN	*CTL	
109	Finisher Exit Motor: KIN	*CTL	
130	Finisher Entrance: TIG	*CTL	
131	Finisher Proof Exit: TIG	*CTL	
132	Finisher Shift Tray Exit: TIG	*CTL	
133	Finisher Staple Exit: TIG	*CTL	
134	Finisher Exit: TIG	*CTL	
135	Finisher Folding: TIG	*CTL	For details, rthe "Jam Detection" in the Appendix Jam Detection.
136	Finisher Folding Exit: TIG	*CTL	The Appendix Jam Delection.
137	Finisher Guide Motor: TIG	*CTL	
138	Finisher Staple Moving Motor: TIG	*CTL	
139	Finisher Punch Motor: TIG	*CTL	
140	Finisher Tray Lift Motor: TIG	*CTL	

141	Finisher Jogger Motor: TIG	*CTL	
142	Finisher Shift Roller Motor: TIG	*CTL	
143	Finisher Folding Plate Motor: TIG	*CTL	
144	Finisher Staple Motor: TIG	*CTL	
145	Finisher Exit Motor: TIG	*CTL	
146	Finisher Stack 1 Release Motor: TIG	*CTL	
147	Finisher Stack 2 Release Motor: TIG	*CTL	
148	Finisher Stopper Motor: TIG	*CTL	
160	Entrance Sensor On (ELB)	*CTL	
161	Entrance Sensor Off (ELB)	*CTL	
162	FIN Entrance (ELB)	*CTL	
163	Positioning Roller (ELB)	*CTL	
164	Front Jogger Motor (ELB)	*CTL	
165	Rear Jogger Motor (ELB)	*CTL	For details, rthe "Jam Detection" in the Appendix Jam Detection.
166	Exit Motor (ELB)	*CTL	
167	FIN Staple Shift Motor: ELB	*CTL	
168	FIN Staple Motor: ELB	*CTL	
169	FIN Tray Lift Motor: ELB	*CTL	
170	FIN Stack Height SOL: ELB	*CTL	

7505	[Original Jam Detection]		
	Displays the total number of original jams by location.		
001	At Power On	*CTL	
003	Skew Correction: On		-
004	Registration Sensor: On		
005	Original Exit Sensor: On		

053	Skew Correction: Off	
054	Registration Sensor: Off	
055	Original Exit Sensor: Off	

7504	[Jam Count by Paper Size]					
7506	Displays the number of jams according to the paper size.					
005	A4 LEF					
006	A5 LEF					
014	B5 LEF					
038	LT LEF					
044	HLT LEF					
132	A3 SEF					
133	A4 SEF					
134	A5 SEF	*CTL	[0 to 9999 / 0 / 1 sheet/step]			
141	B4 SEF					
142	B5 SEF					
160	DLT SEF					
164	LG SEF					
166	LT SEF					
172	HLT SEF					
255	Others					

7507	[Plotter Jam History]		
7307	Displays the 10 most recently	detected p	aper jams.
001	Latest		
002	Latest 1	*CTL	-
003	Latest 2		

<i>75</i> 08	[Original Jam History]		
7506	Displays the 10 most recently	detected o	riginal jams.
001	Latest		
002	Latest-1		
003	Latest-2		
004	Latest-3		
005	Latest-4	*CTL	
006	Latest-5	CIL	-
007	Latest-6		
008	Latest-7		
009	Latest-8		
010	Latest-9		

7624	Part Replacement Operation ON/OFF				
7024	Selects the PM maintenance for each part.				
001	K Drum Unit				
002	M Drum Unit	[0 or 1 / 1 -]			
003	C Drum Unit	0: Not PM maintenance 1: PM maintenance			
004	Y Drum Unit				

005	K Dev Unit
006	M Dev Unit
007	C Dev Unit
008	Y Dev Unit
009	K Developer
010	M Developer
011	C Developer
012	Y Developer
013	ITB Unit
014	Belt Cleaning Unit
015	Fusing Unit
016	PTR Unit
017	Waste Toner Bottle

<i>7</i> 801	[ROM No/ Firmware Version	on]	
255	Engine	*CTL	Displays all versions and ROM numbers in the machine.

7803	[PM Counter Display] (Page, Unit, [Color])		
	Displays the number of sheets printed for a PM counters click up based on the numbe the A3 (DLT) Double Count is activated. Tl	r of A4 (LT	T) LEF size sheets printed. Therefore,
	When a unit is replaced, the machine auto Then, the current PM counter value is auto (SP7-906-1 to 10) and is reset to "0".	,	
	The total number of sheets printed with the SP7-906-1 to 10. NOTE: The LCT is counted as the 3rd feed		eplaced can be checked with
001	Paper	*CTL	

002	Page: K Drum Unit		
003	Page: M Drum Unit		
004	Page: C Drum Unit		
005	Page: Y Drum Unit		
006	Page: K Dev Unit		
007	Page: M Dev Unit		
800	Page: C Dev Unit		
009	Page: Y Dev Unit		
010	Page: K Developer	*ENG	
011	Page: M Developer		
012	Page: C Developer		
013	Page: Y Developer		
014	Page: ITB Unit		
015	Page: Belt Cleaning Unit		
016	Page: Fusing Unit		
017	Page: PTR Unit		
018	Page: Toner Collection Bottle		
	Displays the number of revolutions of motor [0 to 9999999 / 0 / 1 revolution/step]. When a unit is replaced, the machine autor Then, the current PM counter value is autor (SP7-906-11 to 20) and is reset to "0". The unit replaced can be checked with SP7-906-11.] omatically omatically he total nu	detects that the new unit is installed. moved to the PM Counter - Previous mber of revolutions made with the last
031	Rotation: K Drum Unit		
032	Rotation: M Drum Unit	4 = -	
033	Rotation: C Drum Unit	*ENG	[0 to 999999999 / - / 1 mm/step]
034	Rotation: Y Drum Unit		

035	Rotation: K Dev Unit		
036	Rotation: M Dev Unit		
037	Rotation: C Dev Unit		
038	Rotation: Y Dev Unit		
039	Rotation: K Developer		
040	Rotation: M Developer		
041	Rotation: C Developer		
042	Rotation: Y Developer		
043	Rotation: ITB Unit		
044	Rotation: Belt Cleaning Unit		
045	Rotation: Fusing Unit		
046	Rotation: PTR Unit		
047	Measurement: Toner Collection Bottle		
	Displays the value given by the following	formula:	
	(Current revolution \div Target revolution) \times lifetime has been used up.	100. This sh	nows how much of the unit's expected
	The Rotation% counter is based on rotation the limit, the machine enters the end condition first, the machine also enters the end condition 100%.	on for that u	nit. If the print count lifetime is reached
061	Rotation (%): K Drum Unit		
062	Rotation (%): M Drum Unit		
063	Rotation (%): C Drum Unit		
064	Rotation (%): Y Drum Unit	*52.10	[0. 055 / /10//]
065	Rotation (%): K Dev Unit	*ENG	[0 to 255 / - / 1 %/step]
066	Rotation (%): M Dev Unit		
067	Rotation (%): C Dev Unit		
068	Rotation (%): Y Dev Unit		

069 Rotation (%): K Developer 070 Rotation (%): M Developer 071 Rotation (%): C Developer 072 Rotation (%): Y Developer 073 Rotation (%): Y Developer 074 Rotation (%): Belt Cleaning Unit 075 Rotation (%): Fusing Unit 076 Rotation (%): Fra Unit 077 Measurement (%): Toner Collection 078 Bottle Displays the value given by the following formula: (Current printouts * Target printouts) × 100. This shows how much of the unit's expected lifetime has been used up. The Page* counter is based on printouts, not revolutions. If the number of printouts reaches the limit, the machine enters the end condition for that unit. If the revolution count lifetime is reached first, the machine also enters the end condition, even though the Page* counter is still less than 100%. 091 Page (%): K Drum Unit 092 Page (%): K Drum Unit 093 Page (%): C Drum Unit 094 Page (%): Y Drum Unit 095 Page (%): C Dev Unit 096 Page (%): Y Dev Unit 097 Page (%): K Developer 100 Page (%): M Developer 100 Page (%): M Developer 101 Page (%): C Developer				1
071 Rotation (%): C Developer 072 Rotation (%): Y Developer 073 Rotation (%): Belt Cleaning Unit 074 Rotation (%): Fusing Unit 075 Rotation (%): Fusing Unit 076 Rotation (%): Fusing Unit 077 Measurement (%): Toner Collection Bottle Displays the value given by the following formula: (Current printouts ÷ Target printouts) × 100. This shows how much of the unit's expected lifetime has been used up. The Page% counter is based on printouts, not revolutions. If the number of printouts reaches the limit, the machine enters the end condition for that unit. If the revolution count lifetime is reached first, the machine also enters the end condition, even though the Page% counter is still less than 100%. 091 Page (%): K Drum Unit 092 Page (%): K Drum Unit 093 Page (%): C Drum Unit 094 Page (%): K Dev Unit 095 Page (%): C Dev Unit 096 Page (%): Y Dev Unit 097 Page (%): Y Dev Unit 098 Page (%): K Developer 100 Page (%): M Developer	069	Rotation (%): K Developer		
072 Rotation (%): Y Developer 073 Rotation (%): ITB Unit 074 Rotation (%): Belt Cleaning Unit 075 Rotation (%): Fusing Unit 076 Rotation (%): FTR Unit 077 Measurement (%): Toner Collection Bottle Displays the value given by the following formula: (Current printouts ÷ Target printouts) × 100. This shows how much of the unit's expected lifetime has been used up. The Page% counter is based on printouts, not revolutions. If the number of printouts reaches the limit, the machine enters the end condition for that unit. If the revolution count lifetime is reached first, the machine also enters the end condition, even though the Page% counter is still less than 100%. 091 Page (%): K Drum Unit 092 Page (%): K Drum Unit 093 Page (%): C Drum Unit 094 Page (%): Y Drum Unit 095 Page (%): C Dev Unit 096 Page (%): C Dev Unit 097 Page (%): C Dev Unit 098 Page (%): Y Developer 100 Page (%): M Developer	070	Rotation (%): M Developer		
073 Rotation (%): ITB Unit 074 Rotation (%): Belt Cleaning Unit 075 Rotation (%): Fusing Unit 076 Rotation (%): FTR Unit 077 Measurement (%): Toner Collection Bottle Displays the value given by the following formula: (Current printouts ÷ Target printouts) × 100. This shows how much of the unit's expected lifetime has been used up. The Page% counter is based on printouts, not revolutions. If the number of printouts reaches the limit, the machine enters the end condition for that unit. If the revolution count lifetime is reached first, the machine also enters the end condition, even though the Page% counter is still less than 100%. 091 Page (%): K Drum Unit 092 Page (%): M Drum Unit 093 Page (%): C Drum Unit 094 Page (%): Y Drum Unit 095 Page (%): K Dev Unit 096 Page (%): C Dev Unit 097 Page (%): C Dev Unit 098 Page (%): Y Dev Unit 099 Page (%): K Developer 100 Page (%): M Developer	071	Rotation (%): C Developer		
074 Rotation (%): Belt Cleaning Unit 075 Rotation (%): Fusing Unit 076 Rotation (%): PTR Unit 077 Measurement (%): Toner Collection Bottle Displays the value given by the following formula: (Current printouts ÷ Target printouts) × 100. This shows how much of the unit's expected lifetime has been used up. The Page% counter is based on printouts, not revolutions. If the number of printouts reaches the limit, the machine enters the end condition for that unit. If the revolution count lifetime is reached first, the machine also enters the end condition, even though the Page% counter is still less than 100%. 091 Page (%): K Drum Unit 092 Page (%): M Drum Unit 093 Page (%): C Drum Unit 094 Page (%): Y Drum Unit 095 Page (%): C Dev Unit 096 Page (%): C Dev Unit 097 Page (%): C Dev Unit 098 Page (%): Y Dev Unit 099 Page (%): K Developer 100 Page (%): M Developer	072	Rotation (%): Y Developer		
075 Rotation (%): Fusing Unit 076 Rotation (%): PTR Unit 077 Measurement (%): Toner Collection Bottle Displays the value given by the following formula: (Current printouts ÷ Target printouts) × 100. This shows how much of the unit's expected lifetime has been used up. The Page% counter is based on printouts, not revolutions. If the number of printouts reaches the limit, the machine enters the end condition for that unit. If the revolution count lifetime is reached first, the machine also enters the end condition, even though the Page% counter is still less than 100%. 091 Page (%): K Drum Unit 092 Page (%): M Drum Unit 093 Page (%): Y Drum Unit 094 Page (%): Y Drum Unit 095 Page (%): M Dev Unit 096 Page (%): C Dev Unit 097 Page (%): Y Dev Unit 098 Page (%): K Developer 100 Page (%): M Developer	073	Rotation (%): ITB Unit		
076 Rotation (%): PTR Unit 077 Measurement (%): Toner Collection Bottle Displays the value given by the following formula: (Current printouts ÷ Target printouts) × 100. This shows how much of the unit's expected lifetime has been used up. The Page% counter is based on printouts, not revolutions. If the number of printouts reaches the limit, the machine enters the end condition for that unit. If the revolution count lifetime is reached first, the machine also enters the end condition, even though the Page% counter is still less than 100%. 091 Page (%): K Drum Unit 092 Page (%): M Drum Unit 093 Page (%): C Drum Unit 094 Page (%): Y Drum Unit 095 Page (%): M Dev Unit 096 Page (%): C Dev Unit 097 Page (%): Y Dev Unit 098 Page (%): K Developer 100 Page (%): M Developer	074	Rotation (%): Belt Cleaning Unit		
Displays the value given by the following formula: (Current printouts ÷ Target printouts) × 100. This shows how much of the unit's expected lifetime has been used up. The Page% counter is based on printouts, not revolutions. If the number of printouts reaches the limit, the machine enters the end condition for that unit. If the revolution count lifetime is reached first, the machine also enters the end condition, even though the Page% counter is still less than 100%. O91 Page (%): K Drum Unit O92 Page (%): M Drum Unit O94 Page (%): C Drum Unit O95 Page (%): K Dev Unit O96 Page (%): M Dev Unit O97 Page (%): C Dev Unit O98 Page (%): Y Dev Unit O99 Page (%): K Developer 100 Page (%): M Developer	075	Rotation (%): Fusing Unit		
Displays the value given by the following formula: (Current printouts ÷ Target printouts) × 100. This shows how much of the unit's expected lifetime has been used up. The Page% counter is based on printouts, not revolutions. If the number of printouts reaches the limit, the machine enters the end condition for that unit. If the revolution count lifetime is reached first, the machine also enters the end condition, even though the Page% counter is still less than 100%. O91 Page (%): K Drum Unit O92 Page (%): M Drum Unit O93 Page (%): C Drum Unit O94 Page (%): Y Drum Unit O95 Page (%): K Dev Unit O96 Page (%): C Dev Unit O97 Page (%): C Dev Unit O98 Page (%): Y Dev Unit O99 Page (%): K Developer 100 Page (%): M Developer	076	Rotation (%): PTR Unit		
(Current printouts ÷ Target printouts) × 100. This shows how much of the unit's expected lifetime has been used up. The Page% counter is based on printouts, not revolutions. If the number of printouts reaches the limit, the machine enters the end condition for that unit. If the revolution count lifetime is reached first, the machine also enters the end condition, even though the Page% counter is still less than 100%. O91 Page (%): K Drum Unit O92 Page (%): K Drum Unit O93 Page (%): Y Drum Unit O94 Page (%): Y Drum Unit O95 Page (%): K Dev Unit O96 Page (%): C Dev Unit O98 Page (%): Y Dev Unit O99 Page (%): Y Dev Unit O99 Page (%): K Developer 100 Page (%): M Developer	077			
lifetime has been used up. The Page% counter is based on printouts, not revolutions. If the number of printouts reaches the limit, the machine enters the end condition for that unit. If the revolution count lifetime is reached first, the machine also enters the end condition, even though the Page% counter is still less than 100%. O91 Page (%): K Drum Unit O92 Page (%): M Drum Unit O93 Page (%): C Drum Unit O94 Page (%): Y Drum Unit O95 Page (%): K Dev Unit O96 Page (%): C Dev Unit O97 Page (%): C Dev Unit O98 Page (%): Y Dev Unit O99 Page (%): K Developer 100 Page (%): M Developer		Displays the value given by the following	formula:	
the limit, the machine enters the end condition for that unit. If the revolution count lifetime is reached first, the machine also enters the end condition, even though the Page% counter is still less than 100%. O91 Page (%): K Drum Unit O92 Page (%): M Drum Unit O93 Page (%): C Drum Unit O94 Page (%): Y Drum Unit O95 Page (%): K Dev Unit O96 Page (%): M Dev Unit O97 Page (%): C Dev Unit O98 Page (%): Y Dev Unit O99 Page (%): K Developer 100 Page (%): M Developer			0. This show	s how much of the unit's expected
092 Page (%): M Drum Unit 093 Page (%): C Drum Unit 094 Page (%): Y Drum Unit 095 Page (%): K Dev Unit 096 Page (%): M Dev Unit 097 Page (%): C Dev Unit 098 Page (%): Y Dev Unit 099 Page (%): K Developer 100 Page (%): M Developer		the limit, the machine enters the end condit reached first, the machine also enters the e	ion for that u	unit. If the revolution count lifetime is
093 Page (%): C Drum Unit 094 Page (%): Y Drum Unit 095 Page (%): K Dev Unit 096 Page (%): M Dev Unit 097 Page (%): C Dev Unit 098 Page (%): Y Dev Unit 099 Page (%): K Developer 100 Page (%): M Developer	091	Page (%): K Drum Unit		
094 Page (%): Y Drum Unit 095 Page (%): K Dev Unit 096 Page (%): M Dev Unit 097 Page (%): C Dev Unit 098 Page (%): Y Dev Unit 099 Page (%): K Developer 100 Page (%): M Developer	092	Page (%): M Drum Unit		
095 Page (%): K Dev Unit 096 Page (%): M Dev Unit 097 Page (%): C Dev Unit 098 Page (%): Y Dev Unit 099 Page (%): K Developer 100 Page (%): M Developer	093	Page (%): C Drum Unit		
096 Page (%): M Dev Unit *ENG [0 to 255 / - / 1 %/step] 097 Page (%): C Dev Unit *ENG [0 to 255 / - / 1 %/step] 098 Page (%): Y Dev Unit *ENG *ENG 099 Page (%): Y Dev Unit *ENG *ENG 090 Page (%): K Developer *ENG *ENG	094	Page (%): Y Drum Unit		
097 Page (%): C Dev Unit 098 Page (%): Y Dev Unit 099 Page (%): K Developer 100 Page (%): M Developer	095	Page (%): K Dev Unit		
098 Page (%): Y Dev Unit 099 Page (%): K Developer 100 Page (%): M Developer	096	Page (%): M Dev Unit	*ENG	[0 to 255 / - / 1 %/step]
099 Page (%): K Developer 100 Page (%): M Developer	097	Page (%): C Dev Unit		
100 Page (%): M Developer	098	Page (%): Y Dev Unit		
	099	Page (%): K Developer		
101 Page (%): C Developer	100	Page (%): M Developer		
	101	Page (%): C Developer		

102	Page (%): Y Developer	
103	Page (%): ITB Unit	
104	Page (%): Belt Cleaning Unit	
105	Page (%): Fusing Unit	
106	Page (%): PTR Unit	

7804	[PM Counter Reset] PM Counter Clear					
	(Unit, [Color])					
	Clears the PM counter.					
	Press the Enter key after the machine asks "Execute?", which will store the PM counter in SP7-906 (PM Counter - Previous) and reset the value of the current PM counter (SP7-803) to "0".					
001	Paper					
002	PCU: Bk					
003	PCU: M					
004	PCU: C					
005	PCU: Y					
006	PCU: All					
007	Development Unit: Bk					
008	Development Unit: M					
009	Development Unit: C					
010	Development Unit: Y					
011	Development Unit: All					
012	Developer: Bk					
013	Developer: M					
014	Developer: C					
015	Developer: Y					

7807		[SC/Jam Counter Reset]				
Clears the counters related to SC codes and paper jams.				s and paper jams.		
	001	SC/Jam Clear	-	-		

7826	[MF Error Counter] Japan Only
001	Error Total
002	Error Staple

7827 [MF Error Counter Clear] Japan Only

-	7832	[Self-Diagnose Result Display]				
'	7032	Displays the result of the diagnostics.				
	001	Diag. Result	*CTL	-		

7835	[ACC Counter]		
001	Сору АСС	*CTL	Displays the ACC exection times for each mode
002	Printer ACC	*CTL	Displays the ACC exectuion times for each mode.

7836	Total Memory Size
	Displays the memory capacity of the controller system.

	[DF Scan Glass Dust Check Counter]					
Counts the number of occurrences (0 to 65,535) when dust was detected on the sglass of the ADF or resets the dust detection counter. Counting is done only if SP4-(ADF Scan Glass Dust Check) is switched on.						
001	1 Dust Detection Counter					
002	Dust Detection Clear Counter	*CTL	[0 to 9999 / - / 1 /step]			

70.50	[Replacement Counter] Displays the PM parts replacement number.						
7 853							
001	K Drum Unit	*CTL					
002	M Drum Unit	*CTL					
003	C Drum Unit	*CTL					
004	Y Drum Unit	*CTL					
005	K Dev Unit	*CTL					
006	M Dev Unit	*CTL					
007	C Dev Unit	*CTL					
008	Y Dev Unit	*CTL					
009	K Developer	*CTL	[0 to 255 / - / 1 /step]				
010	M Developer	*CTL					
011	C Developer	*CTL					
012	Y Developer	*CTL					
013	ITB Unit	*CTL	1				
014	Belt Cleaning Unit	*CTL	1				
015	Fusing Unit	*CTL	1				
016	PTR Unit	*CTL	1				
017	Toner Collection Bottle	*CTL	1				

Coverage Range 2

[Coverage Range] Sets the color coverage threshold. Coverage rate = Coverage per page / A4 full coverage (dots) x 100 There are three coverage counters: Color 1, Color 2, and Color 3 • [A] 5% (default) is adjustable with SP7855-001. • [B] 20% (default) is adjustable with SP7855-002. [A] [B] Color1 Color2 Color3 7855 Color 200% 0% coverage **Note** • The setting value [B] must be set larger than [A]. The total numbers of printouts (BW printing plus color printing) for each coverage range are displayed with the following SPs. • Color1 counter: SP8601-021 • Color2 counter: SP8601-022 Color3 counter: SP8601-023 001 *CTL [1 to 200 / 5 / 1]Coverage Range 1 002 *CTL [1 to 200 / 20 / 1]

	[Assert Info]					
<i>7</i> 901	Records the location where a SP is used for problem analys	•	n is detected in the program. The data stored in this			
001	File Name					
002	Number of Lines	*CTL	-			
003	Location					

	[Prev. Unit PM Counter]					
7906	ment Unit					
	Displays the number of sheets printed with the previous maintenance units.					
001	Page: K Drum Unit	*ENG	[0 to 9999999 / 0 / 1 page/step]			

002	Page: M Drum Unit		
003	Page: C Drum Unit		
004	Page: Y Drum Unit		
005	Page: K Dev Unit		
006	Page: M Dev Unit		
007	Page: C Dev Unit		
008	Page: Y Dev Unit		
009	Page: K Developer		
010	Page: M Developer		
011	Page: C Developer		
012	Page: Y Developer		
013	Page: 1TB Unit		
014	Page: Cleaning Unit		
015	Page: Fusing Unit		
016	Page: PTR Unit		
017	Page: Toner Collection Bottle		
	Displays the number of revolutions fo	r motors o	clutches in the previous maintenance units.
031	Rotation: K Drum Unit		
032	Rotation: M Drum Unit		
033	Rotation: C Drum Unit		
034	Rotation: Y Drum Unit		
035	Rotation: K Dev Unit	*ENG	[0 to 9999999 / 0 / 1 mm/step]
036	Rotation: M Dev Unit		
037	Rotation: C Dev Unit		
038	Rotation: Y Dev Unit		
039	Rotation: K Developer		
	'		

040	Rotation: M Developer			
041	Rotation: C Developer			
042	Rotation: Y Developer			
043	Rotation: 1TB Unit			
044	Rotation: Cleaning Unit			
045	Rotation: Fusing Unit			
046	Rotation: PTR Unit			
047	Measurement: Toner Collection bottle			
	Displays the number of sheets printed	with the p	revio	us maintenance unit or toner cartridge.
061	Rotation (%): K Drum Unit			
062	Rotation (%): M Drum Unit			
063	Rotation (%): C Drum Unit			
064	Rotation (%): Y Drum Unit			
065	Rotation (%): K Dev Unit			
066	Rotation (%): M Dev Unit			
067	Rotation (%): C Dev Unit			
068	Rotation (%): Y Dev Unit	4-		
069	Rotation (%): K Developer	*EN	1G	[0 to 255 / 0 / 1 %/step]
070	Rotation (%): M Developer			
071	Rotation (%): C Developer			
072	Rotation (%): Y Developer			
073	Rotation (%): 1TB Unit			
074	Rotation (%): Cleaning Unit			
075	Rotation (%): Fusing Unit			
076	Rotation (%): PTR Unit			

077	Measurement (%): Toner Collection bottle		
	Displays the value given by the following formula: (Current count ÷ Yield count) x 100, where "Current count" is the current values in the counter for the part, and "Yield count" is the recommended yield.		
091	Page (%): K Drum Unit		
092	Page (%): M Drum Unit		
093	Page (%): C Drum Unit		
094	Page (%): Y Drum Unit		
095	Page (%): K Dev Unit		[0 to 255 / 0 / 1 %/step]
096	Page (%): M Dev Unit	*ENG	
097	Page (%): C Dev Unit		
098	Page (%): Y Dev Unit		
099	Page (%): K Developer		
100	Page (%): M Developer		
101	Page (%): C Developer		
102	Page (%): Y Developer		
103	Page (%): 1TB Unit		
104	Page (%): Cleaning Unit		
105	Page (%): Fusing Unit		
106	Page (%): PTR Unit		

<i>7</i> 931	[Toner Bottle Bk]			
Displays the toner bottle information for Bk.				
001	Machine Serial ID			
002	Cartridge Ver	*ENG		
003	Brand ID			

004	Area ID
005	Product ID
006	Color ID
007	Maintenance ID
008	New Product Information
009	Recycle Counter
010	Date
011	Serial No.
012	Toner Remaining
013	EDP Code
014	End History
015	Refill Information
016	Attachment: Total Counter
017	Attachment: Color Counter
018	End: Total Counter
019	End: Color Counter
020	Attachment Date
021	End Date

7020	[Toner Bottle M]			
Displays the toner bottle information for M.				
001	Machine Serial ID			
002	Cartridge Ver	*ENG		
003	Brand ID			
004	Area ID			
005	Product ID			

006	Color ID
007	Maintenance ID
008	New Product Information
009	Recycle Counter
010	Date
011	Serial No.
012	Toner Remaining
013	EDP Code
014	End History
015	Refill Information
016	Attachment: Total Counter
017	Attachment: Color Counter
018	End: Total Counter
019	End: Color Counter
020	Attachment Date
021	End Date

7000	[Toner Bottle C]			
7933	Displays the toner bottle information for C.			
001	Machine Serial ID			
002	Cartridge Ver	*ENG		
003	Brand ID		*ENG	
004	Area ID			
005	Product ID			
006	Color ID			
007	Maintenance ID			

008	New Product Information
009	Recycle Counter
010	Date
011	Serial No.
012	Toner Remaining
013	EDP Code
014	End History
015	Refill Information
016	Attachment: Total Counter
017	Attachment: Color Counter
018	End: Total Counter
019	End: Color Counter
020	Attachment Date
021	End Date

7934	[Toner Bottle Y]			
7934	Displays the toner bottle information for Y.			
001	Machine Serial ID			
002	Cartridge Ver			
003	Brand ID	*ENG		
004	Area ID			
005	Product ID			
006	Color ID			
007	Maintenance ID			
008	New Product Information			
009	Recycle Counter			

010	Date
011	Serial No.
012	Toner Remaining
013	EDP Code
014	End History
015	Refill Information
016	Attachment: Total Counter
017	Attachment: Color Counter
018	End: Total Counter
019	End: Color Counter
020	Attachment Date
021	End Date

7935	[Toner Bottle Log 1/2/3/4/5: Bk]		
001	Serial No.		
002	Attachment Date	*5510	Displays the toner bottle information log 1 for Bk
003	Attachment: Total Counter	*ENG	
004	Refill Information		
011	Serial No.	*ENG	
012	Attachment Date		
013	Attachment: Total Counter		Displays the toner bottle information log 2 for Bk.
014	Refill Information		
021	Serial No.	*ENG	
022	Attachment Date		
023	Attachment: Total Counter		Displays the toner bottle information log 3 for Bk.
024	Refill Information		

031	Serial No.	*ENG	
032	Attachment Date		Displays the toner bottle information log 4 for Bk.
033	Attachment: Total Counter		Displays the lotter bottle information log 4 for bk.
034	Refill Information		
041	Serial No.		
042	Attachment Date	*ENG	Display the tener half information less 5 for DL
043	Attachment: Total Counter		Displays the toner bottle information log 5 for Bk.
044	Refill Information		

7936	[Toner Bottle Log 1/2/3/4/5: M]		
001	Serial No.	*5.10	Displays the toner bottle information log 1 for M.
002	Attachment Date		
003	Attachment: Total Counter	*ENG	
004	Refill Information		
011	Serial No.		
012	Attachment Date	* E\ 10	Displays the toner bottle information log 2 for M.
013	Attachment: Total Counter	*ENG	
014	Refill Information		
021	Serial No.		
022	Attachment Date	*ENG	Dianton the tener bettle information less 2 for M
023	Attachment: Total Counter	ENG	Displays the toner bottle information log 3 for M.
024	Refill Information		
031	Serial No.		
032	Attachment Date	*ENG	Diamental and the second and the sec
033	Attachment: Total Counter		Displays the toner bottle information log 4 for M.
034	Refill Information		

041	Serial No.		
042	Attachment Date	*ENG	Dialogo the terror bettle information less 5 feat M
043	Attachment: Total Counter	EING	Displays the toner bottle information log 5 for M.
044	Refill Information		

7937	[Toner Bottle Log 1/2/3/4/	/5: C]		
001	Serial No.			
002	Attachment Date	*ENG	Displays the toner bottle information log 1 for C.	
003	Attachment: Total Counter	LING	Displays the lotter bottle information log 1 for C.	
004	Refill Information			
011	Serial No.			
012	Attachment Date	*ENG	Displays the toner bottle information log 2 for C.	
013	Attachment: Total Counter	ENG	Displays the loner bottle information log 2 for C.	
014	Refill Information			
021	Serial No.	* 5\10		
022	Attachment Date			
023	Attachment: Total Counter	*ENG	Displays the toner bottle information log 3 for C.	
024	Refill Information			
031	Serial No.			
032	Attachment Date	*ENG	Diagland the tenne hands information land for C	
033	Attachment: Total Counter	ENG	Displays the toner bottle information log 4 for C.	
034	Refill Information			
041	Serial No.			
042	Attachment Date	* [* [•]	Dialog de terrelogie	
043	Attachment: Total Counter	*ENG	Displays the toner bottle information log 5 for C.	
044	Refill Information			

<i>7</i> 938	[Toner Bottle Log 1/2/3/4/	/5: Y]		
001	Serial No.			
002	Attachment Date	*ENG	Displays the toner bottle information log 1 for Y.	
003	Attachment: Total Counter	EING	Displays the lotter bottle information log 1 for 1.	
004	Refill Information			
011	Serial No.			
012	Attachment Date	*ENG	Displays the tener heatle information less 2 for V	
013	Attachment: Total Counter	EING	Displays the toner bottle information log 2 for Y	
014	Refill Information			
021	Serial No.		Displays the toner bottle information log 3 for Y.	
022	Attachment Date	*ENG		
023	Attachment: Total Counter	EING		
024	Refill Information			
031	Serial No.			
032	Attachment Date	*ENG	Displays the toner bottle information log 4 for Y.	
033	Attachment: Total Counter	EING	Displays the lotter bottle information log 4 for 1.	
034	Refill Information			
041	Serial No.			
042	Attachment Date	*ENIC	Dialogo the terror bettle information to a 5 feet	
043	Attachment: Total Counter	*ENG	Displays the toner bottle information log 5 for Y.	
044	Refill Information			

7950	[Unit Replacement Date]				
7930	Displays the replacement date of each PM unit.				
001	Image Transfer Belt	4			
002	Cleaning Unit	*ENG			

003	Paper Transfer Unit
004	Fusing Unit
005	Toner Collection Bottle
006	K PCU
007	M PCU
008	C PCU
009	Y PCU

<i>7</i> 951	[Remaining Day Counter]					
7931	Displays the remaining unit life of each PM unit.					
001	Page: K Drum Unit					
002	Page: M Drum Unit					
003	Page: C Drum Unit					
004	Page: Y Drum Unit					
005	Page: K Dev Unit					
006	Page: M Dev Unit					
007	Page: C Dev Unit					
008	Page: Y Dev Unit	*ENIC	[O. 255 / 255 / 1 days/star]			
009	Page: K Developer	*ENG [0 to 255 / 255 / 1 day/ste	[0 to 255 / 255 / 1 day/ step]			
010	Page: M Developer					
011	Page: C Developer					
012	Page: Y Developer					
013	Page: ITB Unit					
014	Page: Cleaning Unit					
015	Page: Fusing Unit					
016	Page: PTR Unit					

031	Rotation: K Drum Unit		
032	Rotation: M Drum Unit		
033	Rotation: C Drum Unit		
034	Rotation: Y Drum Unit		
035	Rotation: K Dev Unit		
036	Rotation: M Dev Unit		
037	Rotation: C Dev Unit		
038	Rotation: Y Dev Unit		
039	Rotation: K Developer	*ENG	[0 to 255 / 255 / 1 day/step]
040	Rotation: M Developer		
041	Rotation: C Developer		
042	Rotation: Y Developer		
043	Rotation: ITB Unit		
044	Rotation: Cleaning Unit		
045	Rotation: Fusing Unit		
046	Rotation: PTR Unit		
047	Measurement: Toner Collection bottle		
	·		

<i>7</i> 952	[PM Yield Setting]	eld Setting]				
7932	Adjusts the unit yield of each PM unit.					
001	Rotation: ITB Unit	*CTL [0 to 99999999 / 256597000 / 1 mm/step]				
002	Rotation: Cleaning Unit	*CTL	[0 to 999999999 / 128299000 / 1 mm/step]			
003	Rotation: Fusing Unit	*CTL	[0 to 999999999 / 155595000 / 1 mm/step]			
004	Rotation: PTR Unit	*CTL	[0 to 999999999 / 192448000 / 1 mm/step]			
011	Page: ITB Unit	*CTL	[0 to 999999 / 320000 / 1 sheet/step]			
012	Page: Cleaning Unit	*CTL	[0 to 999999 / 160000 / 1 sheet/step]			

013	Page: Fusing Unit	*CTL	[0 to 999999 / 160000 / 1 sheet/step]		
014	Page: PTR Unit	*CTL	[0 to 999999 / 240000 / 1 sheet/step]		
021	Day: K Drum Unit				
022	Day: M Drum Unit				
023	Day: C Drum Unit				
024	Day: Y Drum Unit				
025	Day: K Dev Unit				
026	Day: M Dev Unit				
027	Day: C Dev Unit				
028	Day: Y Dev Unit		Adjusts the threshold day for the near end fro each PM unit.		
029	Day: K Developer	*CTL	[1 to 30 / 15 / 1 day/step]		
030	Day: M Developer		These threshold days are used for @Remote alarm		
031	Day: C Developer				
032	Day: Y Developer				
033	Day: ITB Unit				
034	Day:Cleaning Unit				
035	Day: Fusing Unit				
036	Day: PTR Unit				
037	Day: Toner Collection Botte				
038	Rotation: PCU: Bk				
039	Rotation: PCU: M		[0 to 000000000 / 0 / 1 /-t1		
040	Rotation: PCU: C		[0 to 999999999 / 0 / 1 mm/step]		
041	Rotation: PCU: Y				
042	Rotation: Development Unit: Bk		[0 to 999999999 / 0 / 1 mm/step]		

043	Rotation: Development Unit: M	
044	Rotation: Development Unit: C	
045	Rotation: Development Unit: Y	
046	Rotation: Developer: Bk	
047	Rotation: Developer: M	[0.1.000000000 / 0./1/]
048	Rotation: Developer: C	[0 to 999999999 / 0 / 1 mm/step]
049	Rotation: Developer: Y	
050	Page: PCU: Bk	
051	Page: PCU: M	[0.000000 / 0 / 1 1 / 1]
052	Page: PCU: C	[0 to 999999 / 0 / 1 sheet/step]
053	Page: PCU: Y	
054	Page: Development Unit: Bk	
055	Page: Development Unit: M	[0 to 999999 / 0 / 1 sheet/step]
056	Page: Development Unit: C	
057	Page: Development Unit: Y	
058	Page: Developer: Bk	
059	Page: Developer: M	[0.1-000000 / 0 / 1.1-1.1/1]
060	Page: Developer: C	[0 to 999999 / 0 / 1 sheet/step]
061	Page: Developer: Y	

7953	[Operation Env. Log: PCU: Bk]				
	Displays the PCU rotation distance in each specified operation environment. T: Temperature (°C), H: Relative Humidity (%)				
001	T<=5: 0<=H<30	T<=5: 0<=H<30 *CTL [0 to 99999999 / - / 1 mm/step]			

002	T<=5: 30<=H<55		
003	T<=5: 55<=H<80		
004	T<=5: 80<=H<=100		
005	5 <t<15: 0<="H<30</td"><td></td><td></td></t<15:>		
006	5 <t<15: 30<="H<55</td"><td></td><td></td></t<15:>		
007	5 <t<15: 55<="H<80</td"><td></td><td></td></t<15:>		
008	5 <t<15: 80<="H<=100</td"><td></td><td></td></t<15:>		
009	15<=T<25: 0<=H<30		
010	15<=T<25: 30<=H<55		
011	15<=T<25: 55<=H<80		
012	15<=T<25: 80<=H<=100		
013	25<=T<30: 0<=H<30		
014	25<=T<30: 30<=H<55		
015	25<=T<30: 55<=H<80		
016	25<=T<30: 80<=H<=100		
017	30<=T: 0<=H<30		
018	30<=T: 30<=H<55		
019	30<=T: 55<=H<80		
020	30<=T: 80<=H<=100		

7954	[Operation Env. Log Clear]				
	Clears the operation environment log.				
001					

SP8-xxx: Data Log2

Many of these counters are provided for features that are currently not available, such as sending color faxes, and so on. However, here are some Group 8 codes that when used in combination with others, can provide useful information.

SP Numbers	What They Do
SP8 211 to SP8 216	The number of pages scanned to the document server.
SP8 401 to SP8 406	The number of pages printed from the document server
SP8 691 to SP8 696	The number of pages sent from the document server

Specifically, the following questions can be answered:

- How is the document server actually being used?
- What application is using the document server most frequently?
- What data in the document server is being reused?

Most of the SPs in this group are prefixed with a letter that indicates the mode of operation (the mode of operation is referred to as an "application"). Before reading the Group 8 Service Table, make sure that you understand what these prefixes mean.

Prefixes	What it means		
T:	Total: (Grand Total).	Grand total of the items counted for all applications (C, F, P, etc.).	
C:	Copy application.		
F:	Fax application.	Totals (pages, jobs, etc.) executed for each application when	
P:	Print application.	the job was not stored on the document server.	
S:	Scan application.		
L:	Local storage (document server)	Totals (jobs, pages, etc.) for the document server. The L: counters work differently case by case. Sometimes, they count jobs/pages stored on the document server; this can be in document server mode (from the document server window), or from another mode, such as from a printer driver or by pressing the Store File button in the Copy mode window. Sometimes, they include occasions when the user uses a file that is already on the document server. Each counter will be discussed case by case.	

O:	Other applications (external network applications, for example)	Refers to network applications such as Web Image Monitor. Utilities developed with the SDK (Software Development Kit) will also be counted with this group in the future.
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The Group 8 SP codes are limited to 17 characters, forced by the necessity of displaying them on the small LCDs of printers and faxes that also use these SPs. Read over the list of abbreviations below and refer to it again if you see the name of an SP that you do not understand.

Key for Abbreviations

Abbreviation	What it means
/	"By", e.g. "T:Jobs/Apl" = Total Jobs "by" Application
>	More (2> "2 or more", 4> "4 or more"
AddBook	Address Book
Apl	Application
B/W	Black & White
Bk	Black
С	Cyan
ColCr	Color Create
ColMode	Color Mode
Comb	Combine
Comp	Compression
Deliv	Delivery
DesApl	Designated Application. The application (Copy, Fax, Scan, Print) used to store the job on the document server, for example.
Dev Counter	Development Count, no. of pages developed.
Dup, Duplex	Duplex, printing on both sides
Emul	Emulation
FC	Full Color
FIN	Post-print processing, i.e. finishing (punching, stapling, etc.)

Abbreviation	What it means
Full Bleed	No Margins
GenCopy	Generation Copy Mode
GPC	Get Print Counter. For jobs 10 pages or less, this counter does not count up. For jobs larger than 10 pages, this counter counts up by the number that is in excess of 10 (e.g., for an 11-page job, the counter counts up 11-10 =1)
IFax	Internet Fax
ImgEdt	Image Edit performed on the original with the copier GUI, e.g. border removal, adding stamps, page numbers, etc.
K	Black (YMCK)
LS	Local Storage. Refers to the document server.
LSize	Large (paper) Size
Mag	Magnification
MC	One color (monochrome)
NRS	New Remote Service, which allows a service center to monitor machines remotely. "NRS" is used overseas, "CSS" is used in Japan.
Org	Original for scanning
OrgJam	Original Jam
Palm 2	Print Job Manager/Desk Top Editor: A pair of utilities that allows print jobs to be distributed evenly among the printers on the network, and allows files to moved around, combined, and converted to different formats.
PC	Personal Computer
PGS	Pages. A page is the total scanned surface of the original. Duplex pages count as two pages, and A3 simplex count as two pages if the A3/DLT counter SP is switched ON.
PJob	Print Jobs
Ppr	Paper
PrtJam	Printer (plotter) Jam

Abbreviation	What it means
PrtPGS	Print Pages
R	Red (Toner Remaining). Applies to the wide format model A2 only. This machine is under development and currently not available.
Rez	Resolution
SC	Service Code (Error SC code displayed)
Scn	Scan
Sim, Simplex	Simplex, printing on 1 side.
S-to-Email	Scan-to-E-mail
SMC	SMC report printed with SP5990. All of the Group 8 counters are recorded in the SMC report.
Svr	Server
TonEnd	Toner End
TonSave	Toner Save
TXJob	Send, Transmission
YMC	Yellow, Magenta, Cyan
YMCK	Yellow, Magenta, Cyan, Black



• All of the Group 8 SPs are reset with SP5 801 1 Memory All Clear.

8 001	T:Total Jobs	*CTL	These SPs count the number of times each application is used
8 002	C:Total Jobs	*CTL	to do a job.
8 003	F:Total Jobs	*CTL	[0 to 9999999/ 0 / 1] Note: The L: counter is the total number of times the other
8 004	P:Total Jobs	*CTL	applications are used to send a job to the document server,
8 005	S:Total Jobs	*CTL	plus the number of times a file already on the document server is used.
8 006	L:Total Jobs	*CTL	

- These SPs reveal the number of times an application is used, not the number of pages processed.
- When an application is opened for image input or output, this counts as one job.
- Interrupted jobs (paper jams, etc.) are counted, even though they do not finish.
- Only jobs executed by the customer are counted. Jobs executed by the customer engineer using the SP modes are not counted.
- When using secure printing (when a password is required to start the print job), the job is counted at the time when either "Delete Data" or "Specify Output" is specified.
- A job is counted as a fax job when the job is stored for sending.
- When a fax is received to fax memory, the F: counter increments but the L: counter does not (the
 document server is not used).
- A fax broadcast counts as one job for the F: counter (the fax destinations in the broadcast are not counted separately).
- A fax broadcast is counted only after all the faxes have been sent to their destinations. If one
 transmission generates an error, then the broadcast will not be counted until the transmission has been
 completed.
- A printed fax report counts as one job for the F: counter.
- The F: counter does not distinguish between fax sending or receiving.
- When a copy job on the document server is printed, SP8022 also increments, and when a print job stored on the document server is printed, SP8024 also increments.
- When an original is both copied and stored on the document server, the C: and L: counters both increment.
- When a print job is stored on the document server, only the L: counter increments.
- When the user presses the Document Server button to store the job on the document server, only the L: counter increments.
- When the user enters document server mode and prints data stored on the document server, only the L: counter increments.
- When an image received from Palm 2 is received and stored, the L: counter increments.
- When the customer prints a report (user code list, for example), the O: counter increments. However, for fax reports and reports executed from the fax application, the F: counter increments.

8 011	T:Jobs/LS	*CTL
8 012	C:Jobs/LS	*CTL
8 013	F:Jobs/LS	*CTL
8 014	P:Jobs/LS	*CTL
8 015	S:Jobs/LS	*CTL

These SPs count the number of jobs stored to the document server by each application, to reveal how local storage is being used for input.

[0 to 9999999/ 0 / 1]

The L: counter counts the number of jobs stored from within the document server mode screen at the operation panel.

8 016	L:Jobs/LS	*CTL
8 017	O:Jobs/LS	*CTL

- When a scan job is sent to the document server, the S: counter increments. When you enter document server mode and then scan an original, the L: counter increments.
- When a print job is sent to the document server, the P: counter increments.
- When a network application sends data to the document server, the O: counter increments.
- When an image from Palm 2 is stored on the document server, the O: counter increments.
- When a fax is sent to the document server, the F: counter increments.

8 021	T:Pjob/LS	*CTL	
8 022	C:Pjob/LS	*CTL	These SPs reveal how files printed from the document
8 023	F:Pjob/LS	*CTL	server were stored on the document server originally.
8 024	P:Pjob/LS	*CTL	[0 to 9999999/ 0 / 1] The L: counter counts the number of jobs stored from
8 025	S:Pjob/LS	*CTL	within the document server mode screen at the
8 026	L:Pjob/LS	*CTL	operation panel.
8 027	O:Pjob/LS	*CTL	

- When a copy job stored on the document server is printed with another application, the C: counter increments.
- When an application like DeskTopBinder merges a copy job that was stored on the document server with a print job that was stored on the document server, the C: and P: counters both increment.
- When a job already on the document server is printed with another application, the L: counter increments
- When a scanner job stored on the document server is printed with another application, the S: counter increments. If the original was scanned from within document server mode, then the L: counter increments.
- When images stored on the document server by a network application (including Palm 2), are printed with another application, the O: counter increments.
- When a copy job stored on the document server is printed with a network application (Web Image Monitor, for example), the C: counter increments.
- When a fax on the document server is printed, the F: counter increments.

8 031	T:Pjob/DesApl	*CTL	These SPs reveal what applications were used to output documents from the document server.	
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8 032	C:Pjob/DesApl	*CTL	
8 033	F:Pjob/DesApl	*CTL	[0 to 9999999/ 0 / 1]
8 034	P:Pjob/DesApl	*CTL	The L: counter counts the r
8 035	S:Pjob/DesApl	*CTL	within the document serve operation panel.
8 036	L:Pjob/DesApl	*CTL	operation paties.
8 037	O:Pjob/DesApl	*CTL	

The L: counter counts the number of jobs printed from within the document server mode screen at the operation panel.

- When documents already stored on the document server are printed, the count for the application that started the print job is incremented.
- When the print job is started from a network application (Desk Top Binder, Web Image Monitor, etc.)
 the L: counter increments.

8 041	T:TX Jobs/LS	*CTL	These SPs count the applications that stored files on the
8 042	C:TX Jobs/LS	*CTL	document server that were later accessed for transmission over the telephone line or over a network
8 043	F:TX Jobs/LS	*CTL	(attached to an e-mail, or as a fax image by I-Fax).
8 044	P:TX Jobs/LS	*CTL	[0 to 9999999/ 0 / 1] Note: Jobs merged for sending are counted
8 045	S:TX Jobs/LS	*CTL	separately.
8 046	L:TX Jobs/LS	*CTL	The L: counter counts the number of jobs scanned from within the document server mode screen at the
8 047	O:TX Jobs/LS	*CTL	operation panel.

- When a stored copy job is sent from the document server, the C: counter increments.
- When images stored on the document server by a network application or Palm2 are sent as an e-mail, the O: counter increments.

8 051	T:TX Jobs/DesApl	*CTL
8 052	C:TX Jobs/DesApl	*CTL
8 053	F:TX Jobs/DesApl	*CTL
8 054	P:TX Jobs/DesApl	*CTL
8 055	S:TX Jobs/DesApl	*CTL
8 056	L:TX Jobs/DesApl	*CTL

These SPs count the applications used to send files from the document server over the telephone line or over a network (attached to an e-mail, or as a fax image by I-Fax). Jobs merged for sending are counted separately.

[0 to 9999999/ **0** / 1]

The L: counter counts the number of jobs sent from within the document server mode screen at the operation panel.

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• If the send is started from Desk Top Binder or Web Image Monitor, for example, then the O: counter increments.

	T:FIN Jobs		*CTL	[0 to 9999999/ 0 / 1]	
8 061	These SPs total the finishing methods. The finishing method is specified by the application.			s. The finishing method is specified by the	
	C:FIN Jobs		*CTL	[0 to 9999999/ 0 / 1]	
8 062	These SPs to	-	ethods for	copy jobs only. The finishing method is specified	
	F:FIN Jobs		*CTL	[0 to 9999999/ 0 / 1]	
8 063	These SPs total finishing methods for fax jobs only. The finishing method is specified by the application.				
	Note: Finish	ing features fo	or fax jobs	are not available at this time.	
	P:FIN Jobs		*CTL	[0 to 9999999/ 0 / 1]	
8 064	These SPs total finishing methods for print jobs only. The finishing method is specified by the application.				
	S:FIN Jobs		*CTL	[0 to 9999999/ 0 / 1]	
8 065	These SPs total finishing methods for scan jobs only. The finishing method is specified by the application. Note: Finishing features for scan jobs are not available at this time.				
	L:FIN Jobs		*CTL	[0 to 9999999/ 0 / 1]	
8 066	These SPs total finishing methods for jobs output from within the document server mode screen at the operation panel. The finishing method is specified from the print window within document server mode.				
	O:FIN Jobs		*CTL	[0 to 9999999/ 0 / 1]	
8 067	These SPs total finishing methods for jobs executed by an external application, over the network. The finishing method is specified by the application.				
8 06x 1	Sort	Number of jobs started in Sort mode. When a stored copy job is set for Sort and then stored on the document server, the L: counter increments. (See SP8 066 1)			

8 06x 2	Stack	Number of jobs started out of Sort mode.
8 06x 3	Staple	Number of jobs started in Staple mode.
8 06x 4	Booklet	Number of jobs started in Booklet mode. If the machine is in staple mode, the Staple counter also increments.
8 06x 5	Z-Fold	Number of jobs started In any mode other than the Booklet mode and set for folding (Z-fold).
8 06x 6	Punch	Number of jobs started in Punch mode. When Punch is set for a print job, the P: counter increments. (See SP8 064 6.)
8 06x 7	Other	Reserved. Not used.

	T:Jobs/PGS	*CTL	[0 to 9999999/ 0 / 1]		
8 071	These SPs count the number of jobs broken down by the number of pages in the job, regardless of which application was used.				
	C:Jobs/PGS	*CTL	[0 to 9999999/ 0 / 1]		
8 072	These SPs count and calco	ulate the nur	mber of copy jobs by size based on the number		
	F:Jobs/PGS	*CTL	[0 to 9999999/ 0 / 1]		
8 073	These SPs count and calculate the number of fax jobs by size based on the number of pages in the job.				
	P:Jobs/PGS	*CTL	[0 to 9999999/ 0 / 1]		
8 074	These SPs count and calculate the number of print jobs by size based on the number of pages in the job.				
	S:Jobs/PGS		[0 to 9999999/ 0 / 1]		
8 075	These SPs count and calculate the number of scan jobs by size based on the of pages in the job.				
	L:Jobs/PGS	*CTL	[0 to 9999999/ 0 / 1]		
8 076	These SPs count and calculate the number of jobs printed from within the document server mode window at the operation panel, by the number of pages in the job.				
8 077	O:Jobs/PGS	*CTL	[0 to 9999999/ 0 / 1]		

	These SPs count and calculate the number of "Other" application jobs (Web Image Monitor, Palm 2, etc.) by size based on the number of pages in the job.			
8 07x 1	1 Page	8 07x 8	21 to 50 Pages	
8 07x 2	2 Pages	8 07x 9	51 to 100 Pages	
8 07x 3	3 Pages	8 07x 10	101 to 300 Pages	
8 07x 4	4 Pages	8 07x 11	301 to 500 Pages	
8 07x 5	5 Pages	8 07x 12	501 to 700 Pages	
8 07x 6	6 to 10 Pages	8 07x 13	701 to 1000 Pages	
8 07x 7	11 to 20 Pages	8 07x 14	1001 to Pages	

- For example: When a copy job stored on the document server is printed in document server mode, the appropriate L: counter (SP8076 0xx) increments.
- Printing a fax report counts as a job and increments the F: counter (SP 8073).
- Interrupted jobs (paper jam, etc.) are counted, even though they do not finish.
- If a job is paused and re-started, it counts as one job.
- If the finisher runs out of staples during a print and staple job, then the job is counted at the time the error occurs.
- For copy jobs (SP 8072) and scan jobs (SP 8075), the total is calculated by multiplying the number of sets of copies by the number of pages scanned. (One duplex page counts as 2.)
- The first test print and subsequent test prints to adjust settings are added to the number of pages of the copy job (SP 8072).
- When printing the first page of a job from within the document server screen, the page is counted.

8 111	T:FAX TX Jobs	*CTL	[0 to 9999999/ 0 / 1]		
	These SPs count the total number of jobs (color or black-and-white) sent by fax, either directly or using a file stored on the document server, on a telephone line.				
	Note: Color fax sending is not available at this time.				
	F: FAX TX Jobs	*CTL	[0 to 9999999/ 0 / 1]		
8 113	These SPs count the total number of jobs (color or black-and-white) sent by fax directly on a telephone line.				
	Note: Color fax sending is not available at this time.				
8 11x 1	B/W				

- These counters count jobs, not pages.
- This SP counts fax jobs sent over a telephone line with a fax application, including documents stored
 on the document server.
- If the mode is changed during the job, the job will count with the mode set when the job started.
- If the same document is faxed to both a public fax line and an I-Fax at a destination where both are available, then this counter increments, and the I-Fax counter (8 12x) also increments.
- The fax job is counted when the job is scanned for sending, not when the job is sent.

8 121	T:IFAX TX Jobs	*CTL	[0 to 9999999/ 0 / 1]		
	These SPs count the total number of jobs (color or black-and-white) sent, either directly or using a file stored on the document server, as fax images using I-Fax.				
	Note: Color fax sending is not available at this time.				
8 123	F: IFAX TX Jobs	*CTL	[0 to 9999999/ 0 / 1]		
	These SPs count the number of jobs (color or black-and-white) sent (not stored on the document server), as fax images using I-Fax.				
	Note: Color fax sending is not available at this time.				
8 12x 1	B/W				
8 12x 2	Color				

- These counters count jobs, not pages.
- The counters for color are provided for future use; the color fax feature is not available at this time.
- The fax job is counted when the job is scanned for sending, not when the job is sent.

8 131	T:S-to-Email Jobs	*CTL	[0 to 9999999/ 0 / 1]
	These SPs count the total number of jobs (color or black-and-white) scanned and attached to an e-mail, regardless of whether the document server was used or not.		
8 135	S: S-to-Email Jobs	*CTL	[0 to 9999999/ 0 / 1]
	These SPs count the number of jobs (color or black-and-white) scanned and attached to e-mail, without storing the original on the document server.		
8 13x 1	B/W		
8 13x 2	Color		

8 13x 3 ACS

- These counters count jobs, not pages.
- If the job is stored on the document server, after the job is stored it is determined to be color or blackand-white then counted.
- If the job is cancelled during scanning, or if the job is cancelled while the document is waiting to be sent, the job is not counted.
- If the job is cancelled during sending, it may or may not be counted, depending on what stage of the process had been reached when the job was cancelled.
- If several jobs are combined for sending to the Scan Router, Scan-to-Email, or Scan-to-PC, or if one job is sent to more than one destination. each send is counted separately. For example, if the same document is sent by Scan-to-Email as well as Scan-to-PC, then it is counted twice (once for Scan-to-Email and once for Scan-to-PC).

	T:Deliv Jobs/Svr	*CTL	[0 to 9999999/ 0 / 1]		
8 141	These SPs count the total number of jobs (color or black-and-white) scanned and sent to a Scan Router server.				
	S: Deliv Jobs/Svr	*CTL	[0 to 9999999/ 0 / 1]		
8 145	These SPs count the number of jobs (color or black-and-white) scanned in scanner mode and sent to a Scan Router server.				
8 14x 1	B/W				
8 14x 2	Color				
8 14x 3	ACS				

- These counters count jobs, not pages.
- The jobs are counted even though the arrival and reception of the jobs at the Scan Router server cannot be confirmed.
- If even one color image is mixed with black-and-white images, then the job is counted as a "Color" job.
- If the job is cancelled during scanning, or if the job is cancelled while the document is waiting to be delivered, the job is not counted.
- If the job is cancelled during sending, it may or may not be counted, depending on what stage of the process had been reached when the job was cancelled.
- Even if several files are combined for sending, the transmission counts as one job.

	T:Deliv Jobs/PC	*CTL	[0 to 9999999/ 0 / 1]			
8 151	These SPs count the total number of jobs (color or black-and-white) scanned and sent to a folder on a PC (Scan-to-PC).					
	Note: At the present time, 8 151 and 8 155 perform identical counts.					
	S:Deliv Jobs/PC	*CTL	[0 to 9999999/ 0 / 1]			
8 155	These SPs count the total number of jobs (color or black-and-white) scanned and sent with Scan-to-PC.					
8 15x 1	B/W					
8 15x 2	Color					
8 15x 3	ACS					

- These counters count jobs, not pages.
- If the job is cancelled during scanning, it is not counted.
- If the job is cancelled while it is waiting to be sent, the job is not counted.
- If the job is cancelled during sending, it may or may not be counted, depending on what stage of the process had been reached when the job was cancelled.
- Even if several files are combined for sending, the transmission counts as one job.

8 161	T:PCFAX TX Jobs	*CTL	These SPs count the number of PC Fax transmission
8 163	F:PCFAX TX Jobs	*CTL	jobs. A job is counted from when it is registered for sending, not when it is sent. [0 to 9999999 / 0 / 1] Note: At the present time, these counters perform identical counts.

• This counts fax jobs started from a PC using a PC fax application, and sending the data out to the destination from the PC through the copier.

8 171	T:Deliv Jobs/WSD	*CTL	These SPs count the pages scanned by WS.	
8 175	S:Deliv Jobs/WSD	*CTL	[0 to 9999999/ 0 / 1]	
-001	B/W			
-002	Color			
-003	ACS			

8 181	T:Scan to Media Jobs	*CTL	These SPs count the scanned pages in a media by the	
8 185	S:Scan to Media Jobs	*CTL	scanner application. [0 to 9999999/ 0 / 1]	
-001	B/W			
-002	Color			
-003	ACS			

8 191	T:Total Scan PGS	*CTL	
8 192	C:Total Scan PGS	*CTL	These SPs count the pages scanned by each
8 193	F:Total Scan PGS	*CTL	application that uses the scanner to scan images.
8 195	S:Total Scan PGS	*CTL	[0 to 9999999/ 0 / 1]
8 196	L:Total Scan PGS	*CTL	

- SP 8 191 to 8 196 count the number of scanned sides of pages, not the number of physical pages.
- These counters do not count reading user stamp data, or reading color charts to adjust color.
- Previews done with a scanner driver are not counted.
- A count is done only after all images of a job have been scanned.
- Scans made in SP mode are not counted.

Examples

- If 3 B5 pages and 1 A3 page are scanned with the scanner application but not stored, the S: count is 4.
- If both sides of 3 A4 sheets are copied and stored to the document server using the Store File button in the Copy mode window, the C: count is 6 and the L: count is 6.
- If both sides of 3 A4 sheets are copied but not stored, the C: count is 6.
- If you enter document server mode then scan 6 pages, the L: count is 6.

	T:LSize Scan PGS	*CTL	[0 to 9999999/ 0 / 1]		
8 201	These SPs count the total number of large pages input with the scanner for scan and copy jobs. Large size paper (A3/DLT) scanned for fax transmission are not counted.				
	Note: These counters are displayed in the SMC Report, and in the User Tools display.				
8 203	F: LSize Scan PGS	*CTL	[0 to 9999999/ 0 / 1]		

8 211	T:Scan PGS/LS	*CTL	These SPs count the number of pages scanned into the
8 212	C:Scan PGS/LS	*CTL	document server . [0 to 9999999 / 0 / 1]
8 213	F:Scan PGS/LS	*CTL	The L: counter counts the number of pages stored from
8 215	S:Scan PGS/LS	*CTL	within the document server mode screen at the operation panel, and with the Store File button from
8 216	L:Scan PGS/LS	*CTL	within the Copy mode screen

- Reading user stamp data is not counted.
- If a job is cancelled, the pages output as far as the cancellation are counted.
- If the scanner application scans and stores 3 B5 sheets and 1 A4 sheet, the S: count is 4.
- If pages are copied but not stored on the document server, these counters do not change.
- If both sides of 3 A4 sheets are copied and stored to the document server, the C: count is 6 and the L: count is 6.
- If you enter document server mode then scan 6 pages, the L: count is 6.

	ADF Org Feeds		*CTL	[0 to 9999999/ 0 / 1]
8 221	These SPs count the number of pages fed through the ADF for front and back sid scanning.			
8 221 1	Front	Number of front sides fed for scanning: With an ADF that can scan both sides simultaneously, the Front side count is the same as the number of pages fed for either simplex or duplex scanning. With an ADF that cannot scan both sides simultaneously, the Front side count is the same as the number of pages fed for duplex front side scanning. (The front side is determined by which side the user loads face up.)		
8 221 2	Back	Number of rear sides fed for scanning:		

With an ADF that can scan both sides simultaneously, the Back count is the same as the number of pages fed for duplex scanning.
With an ADF that cannot scan both sides simultaneously, the Back count is the same as the number of pages fed for duplex rear-side scanning.

- When 1 sheet is fed for duplex scanning the Front count is 1 and the Back count is 1.
- If a jam occurs during the job, recovery processing is not counted to avoid double counting. Also, the pages are not counted if the jam occurs before the first sheet is output.

	Scan PGS/Mode	*CTL	[0 to 9999999/ 0 / 1]		
8 231	These SPs count the number work load on the ADF.	hese SPs count the number of pages scanned by each ADF mode to determine work load on the ADF.			
8 231 1	Large Volume		able. Large copy jobs that cannot be loaded in the tone time.		
8 231 2	SADF	Selecto	able. Feeding pages one by one through the ADF.		
8 231 3	Mixed Size	Selectable. Select "Mixed Sizes" on the operation pane			
8 231 4	Custom Size	Selectable. Originals of non-standard size.			
8 231 5	Platen	Book mode. Raising the ADF and placing the original directly on the platen.			
8 231 6	Mixed 1 side/2 side	Simplex and Duplex mode.			

- If the scan mode is changed during the job, for example, if the user switches from ADF to Platen mode, the count is done for the last selected mode.
- The user cannot select mixed sizes or non-standard sizes with the fax application so if the original's page sizes are mixed or non-standard, these are not counted.
- If the user selects "Mixed Sizes" for copying in the platen mode, the Mixed Size count is enabled.
- In the SADF mode if the user copies 1 page in platen mode and then copies 2 pages with SADF, the Platen count is 1 and the SADF count is 3.

	T:Scan PGS/Org *CTL [0 to 9999999/ 0 / 1]				
8 241		SPs count the total number of scanned pages by original type for all jobs, less of which application was used.			
8 242	C:Scan PGS/Org	*CTL	[0 to 9999999/ 0 / 1]		
0 242	These SPs count the number of pages scanned by original type for Copy jobs.				

	F:Scan PGS/C	n PGS/Org *CTL [0 to 9999999/ 0 / 1]							
8 243	These SPs coun	These SPs count the number of pages scanned by original type for Fax jobs.							
	S:Scan PGS/C	Scan PGS/Org		[0 to 9999999/ 0 / 1]					
8 245	These SPs coun	t the number o	f pages scanr	ned by original	type for Scan	jobs.			
	L:Scan PGS/O	rg	*CTL	[0 to 9999999/ 0 / 1]					
8 246	server mode sc	These SPs count the number of pages scanned and stored from within the docum server mode screen at the operation panel, and with the Store File button from vithe Copy mode screen							
		8 241	8 242	8 243	8 245	8 246			
8 24x 1: Tex	ct	Yes	Yes	Yes	Yes	Yes			
8 24x 2: Text/Photo		Yes	Yes	Yes	Yes	Yes			
8 24x 3: Photo		Yes	Yes	Yes	Yes	Yes			
8 24x 4: GenCopy, Pale		Yes	Yes	No	Yes	Yes			
8 24x 5: Map		Yes	Yes	No	Yes	Yes			
8 24x 6: No	rmal/Detail	Yes	No	Yes	No	No			
8 24x 7: Fine/Super Fine		Yes	No	Yes	No	No			
8 24x 8: Binary Ye		Yes	No	No	Yes	No			
8 24x 9: Grayscale Yes		Yes	No	No	Yes	No			
8 24x 10: Color Yes		No	No	Yes	No				
8 24x 11: C	ther	Yes	Yes	Yes	Yes	Yes			

• If the scan mode is changed during the job, for example, if the user switches from ADF to Platen mode, the count is done for the last selected mode.

8 251	T:Scan PGS/ImgEdt	*CTL	These SPs show how many times Image Edit features
8 252	C:Scan PGS/ImgEdt	*CTL	have been selected at the operation panel for each application. Some examples of these editing features
8 255	S:Scan PGS/ImgEdt	*CTL	are:
8 256	L:Scan PGS/ImgEdt	*CTL	Erase> Border Erase> Center

			Image Repeat
			Centering
			Positive/Negative
8 257	O:Scan PGS/ImgEdt	*CTL	[0 to 9999999/ 0 / 1]
			Note: The count totals the number of times the edit features have been used. A detailed breakdown of exactly which features have been used is not given.

The L: counter counts the number of pages stored from within the document server mode screen at the operation panel, and with the Store File button from within the Copy mode screen.

8 261	T:Scan PGS/ColCr	*CTL	-	
8 262	C:Scan PGS/ ColCr	*CTL	-	
8 265	S:Scn PGS/Color	*CTL	-	
8 266	L:Scn PGS/ColCr	*CTL	-	
8 26x 1	Color Conversion			
8 26x 2	Color Erase	These SPs	show how many times color creation features	
8 26x 3	Background	have been selected at the operation panel.		
8 26x 4	Other			

8 281	T:Scan PGS/TWAIN	*CTL	These SPs count the number of pages scanned using a
8 285	S:Scan PGS/TWAIN	*CTL	TWAIN driver. These counters reveal how the TWAIN driver is used for delivery functions. [0 to 9999999 0 1] Note: At the present time, these counters perform identical counts.
8 291	T:Scan PGS/Stamp	*CTL	These SPs count the number of pages stamped with the

8 291	T:Scan PGS/Stamp	*CTL	These SPs count the number of pages stamped with the	
8 293	F:Scan PGS/Stamp	*CTL	stamp in the ADF unit. [0 to 9999999/ 0 / 1]	
8 295	S:Scan PGS/Stamp	*CTL	The L: counter counts the number of pages stored from within the document server mode screen at the operation panel, and with the Store File button from within the Copy mode screen	

	T:Scan PGS/Size	*CTL	[0 to 9999999/ 0 / 1]			
8 301	These SPs count by size the total number of pages scanned by all applications. Use these totals to compare original page size (scanning) and output (printing) page size [SP 8-441].					
	C:Scan PGS/Size	*CTL	[0 to 9999999/ 0 / 1]			
8 302	These SPs count by size the total number of pages scanned by the Copy application. Use these totals to compare original page size (scanning) and output (printing) page size [SP 8-442].					
	F:Scan PGS/Size	*CTL	[0 to 9999999/ 0 / 1]			
8 303	· · · · · · · · · · · · · · · · · · ·		f pages scanned by the Fax application. Use (scanning) and output page size [SP 8-443].			
	S:Scan PGS/Size	*CTL	[0 to 9999999/ 0 / 1]			
These SPs count by size the total number of pages scanned by the Scan of Use these totals to compare original page size (scanning) and output page 8-445].						
	L:Scan PGS/Size	*CTL	[0 to 9999999/ 0 / 1]			
8 306	These SPs count by size the total number of pages scanned and stored from within the document server mode screen at the operation panel, and with the Store File button from within the Copy mode screen. Use these totals to compare original page size (scanning) and output page size [SP 8-446].					
8 30x 1	A3					
8 30x 2	A4					
8 30x 3	A5					
8 30x 4	B4					
8 30x 5	B5					
8 30x 6	DLT	-				
8 30x 7	LG					
8 30x 8	LT					
8 30x 9	HLT					
8 30x 10	Full Bleed					

8 30x 254	Other (Standard)
8 30x 255	Other (Custom)

8 311	T:Scan PGS/Rez	*CTL	[0 to 9999999/ 0 / 1]		
	These SPs count by resolution setting the total number of pages scanned by applications that can specify resolution settings.				
	S: Scan PGS/Rez	*CTL	[0 to 9999999/ 0 / 1]		
8 315	These SPs count by resolution setting the total number of pages scanned by applications that can specify resolution settings. Note: At the present time, SP8-311 and SP8-315 perform identical counts.				
8 31x 1	1200dpi <				
8 31x 2	600dpi to 1199dpi				
8 31x 3	400dpi to 599dpi				
8 31x 4	200dpi to 399dpi				
8 31x 5	< 199dpi				

- Copy resolution settings are fixed so they are not counted.
- The Fax application does not allow finely-adjusted resolution settings so no count is done for the Fax application.

8 381	T:Total PrtPGS	*CTL	
8 382	C:Total PrtPGS	*CTL	These SPs count the number of pages printed by the customer. The counter for the application used for
8 383	F:Total PrtPGS	*CTL	storing the pages increments.
8 384	P:Total PrtPGS	*CTL	[0 to 9999999/ 0 / 1] The L: counter counts the number of pages stored from
8 385	S:Total PrtPGS	*CTL	within the document server mode screen at the
8 386	L:Total PrtPGS	*CTL	operation panel. Pages stored with the Store File button from within the Copy mode screen go to the C: counter.
8 387	O:Total PrtPGS	*CTL	

• When the A3/DLT double count function is switched on with SP5104, 1 A3/DLT page is counted as 2.

- When several documents are merged for a print job, the number of pages stored are counted for the application that stored them.
- These counters are used primarily to calculate charges on use of the machine, so the following pages are not counted as printed pages:
 - Blank pages in a duplex printing job.
 - Blank pages inserted as document covers, chapter title sheets, and slip sheets.
 - Reports printed to confirm counts.
 - All reports done in the service mode (service summaries, engine maintenance reports, etc.)
 - Test prints for machine image adjustment.
 - Error notification reports.
 - Partially printed pages as the result of a copier jam.

	LSize PrtPGS	*CTL	[0 to 9999999/ 0 / 1]		
8 391	These SPs count pages printed on paper sizes A3/DLT and larger.				
	Note : In addition to being displayed in the SMC Report, these counters are also displayed in the User Tools display on the copy machine.				

8 401	T:PrtPGS/LS	*CTL	
8 402	C:PrtPGS/LS	*CTL	These SPs count the number of pages printed from the document server. The counter for the application used
8 403	F:PrtPGS/LS	*CTL	to print the pages is incremented. The L: counter counts the number of jobs stored from
8 404	P:PrtPGS/LS	*CTL	within the document server mode screen at the
8 405	S:PrtPGS/LS	*CTL	operation panel. [0 to 9999999/ 0 / 1]
8 406	L:PrtPGS/LS	*CTL	[

- Print jobs done with Web Image Monitor and Desk Top Binder are added to the L: count.
- Fax jobs done with Web Image Monitor and Desk Top Binder are added to the F: count.

8 411	Prints/Duplex	*CTL	counted pages p	counts the amount of paper (front/back d as 1 page) used for duplex printing. Last printed only on one side are not counted.
8 421	T:PrtPGS/Dup (Comb	*CTL	[0 to 9999999/ 0 / 1]

	These SPs count by binding and combine, and n-Up settings the number of pages processed for printing. This is the total for all applications.					
	C:PrtPGS/Dup Comb		*CTL	[0 to 9999999/ 0 / 1]		
8 422	These SPs count by binding and combine, and n-Up settings the number of pages processed for printing by the copier application.					
	F:PrtPGS/Dup Comb		*CTL	[0 to 9999999/ 0 / 1]		
8 423	These SPs count by bin processed for printing			ne, and n-Up settings the number of pages ation.		
	P:PrtPGS/Dup Comb		*CTL	[0 to 9999999/ 0 / 1]		
8 424	These SPs count by bin processed for printing	_		ne, and n-Up settings the number of pages olication.		
	S:PrtPGS/Dup Comb		*CTL	[0 to 9999999/ 0 / 1]		
8 425	These SPs count by bin processed for printing	_		ne, and n-Up settings the number of pages oplication.		
	L:PrtPGS/Dup Comb		*CTL	[0 to 9999999/ 0 / 1]		
8 426	These SPs count by binding and combine, and n-Up settings the number of pages processed for printing from within the document server mode window at the operation panel.					
	O:PrtPGS/Dup Comb		*CTL	[0 to 9999999/ 0 / 1]		
8 427	These SPs count by binding and combine, and n-Up settings the number of pages processed for printing by Other applications					
8 42x 1	Simplex> Duplex					
8 42x 2	Duplex> Duplex					
8 42x 3	Book> Duplex					
8 42x 4 Simplex Combine						
8 42x 5 Duplex Combine						
8 42x 6	2>	2 pag	ges on 1 si	de (2-Up)		
8 42x 7	4> 4 pages on 1 side (4-Up)			de (4-Up)		
8 42x 8	6>	6 pag	ges on 1 si	de (6-Up)		

8 42x 9	8>	8 pages on 1 side (8-Up)
8 42x 10	9>	9 pages on 1 side (9-Up)
8 42x 11	16>	16 pages on 1 side (16-Up)
8 42x 12	Booklet	
8 42x 13	Magazine	

- These counts (SP8 421 to SP8 427) are especially useful for customers who need to improve their compliance with ISO standards for the reduction of paper consumption.
- Pages that are only partially printed with the n-Up functions are counted as 1 page.
- Here is a summary of how the counters work for Booklet and Magazine modes:

Booklet		Mag	azine
Original Pages	Count	Original Pages	Count
1	1	1	1
2	2	2	2
3	2	3	2
4	2	4	2
5	3	5	4
6	4	6	4
7	4	7	4
8	4	8	4

	T:PrtPGS/ImgEdt	*CTL	[0 to 9999999/ 0 / 1]			
8 431	These SPs count the total number of pages output with the three features below, regardless of which application was used.					
	C:PrtPGS/ImgEdt	*CTL	[0 to 9999999/ 0 / 1]			
8 432	These SPs count the total num copy application.	These SPs count the total number of pages output with the three features below with the copy application.				
8 434	P:PrtPGS/ImgEdt	*CTL	[0 to 9999999/ 0 / 1]			

	These SPs count the total number of pages output with the three features below with the print application.					
	L:PrtPGS/ImgEdt		*CTL	[0 to 9999999/ 0 / 1]		
8 436 These SPs count the total number of page window at the operation panel with the total number of page window at the page				ges output from within the document server mode e three features below.		
	O:PrtPGS/ImgEdt		*CTL	[0 to 9999999/ 0 / 1]		
8 437 These SPs count the total number of Other applications.			ber of po	ges output with the three features below with		
8 43x 1	Cover/Slip Sheet Total number of covers or slip sheets inserted. The count for cover printed on both sides counts 2.					
8 43x 2	Series/Book	The number of pages printed in series (one side) or printed as a book with booklet right/left pagination.				
8 43x 3	User Stamp	The number of pages printed where stamps were applied, including page numbering and date stamping.				

0.441	T:PrtPGS/Ppr Size	*CTL	[0 to 9999999/ 0 / 1]			
8 441	These SPs count by print pa	per size th	ne number of pages printed by all applications.			
	C:PrtPGS/Ppr Size	*CTL	[0 to 9999999/ 0 / 1]			
8 442	These SPs count by print pa application.	per size th	ne number of pages printed by the copy			
8 443	F:PrtPGS/Ppr Size	*CTL	[0 to 9999999/ 0 / 1]			
0 443	These SPs count by print paper size the number of pages printed by the fax application.					
	P:PrtPGS/Ppr Size	*CTL	[0 to 9999999/ 0 / 1]			
8 444	These SPs count by print paper size the number of pages printed by the printer application.					
	S:PrtPGS/Ppr Size	*CTL	[0 to 9999999/ 0 / 1]			
8 445	These SPs count by print paper size the number of pages printed by the scanner application.					
8 446	L:PrtPGS/Ppr Size	*CTL	[0 to 9999999/ 0 / 1]			

	These SPs count by print paper size the number of pages printed from within the document server mode window at the operation panel.					
0.447	O:PrtPGS/Ppr Size	*CTL	[0 to 9999999/ 0 / 1]			
8 447	These SPs count by print pap	oer size the	e number of pages printed by Other applications.			
8 44x 1	A3					
8 44x 2	A4					
8 44x 3	A5					
8 44x 4	B4					
8 44x 5	B5					
8 44x 6	DLT					
8 44x 7	LG					
8 44x 8	LT					
8 44x 9	HLT					
8 44x 10	Full Bleed					
8 44x 254	Other (Standard)					
8 44x 255	Other (Custom)					

• These counters do not distinguish between LEF and SEF.

0.451	PrtPGS/Ppr Tray		*CTL	[0 to 9999999/ 0 / 1]	
8 45 1 These SPs count		he num	ne number of sheets fed from each paper feed station.		
8 451 1	Bypass	Вура	ss Tray		
8 451 2	Tray 1	Copier			
8 451 3	Tray 2	Copi	er		
8 451 4	Tray 3	Pape	r Tray Unit (O	ption)	
8 451 5	Tray 4	Paper Tray Unit (Option)			
8 451 6	Tray 5	LCT (Option)		

8 451 7	Tray 6	Currently not used.
8 451 8	Tray 7	Currently not used.
8 451 9	Tray 8	Currently not used.
8 451 10	Tray 9	Currently not used.

	T:PrtPGS/Ppr Type	*CTL	[0 to 9999999/ 0 / 1]			
8 461	 These SPs count by paper type the number pages printed by all applications. These counters are not the same as the PM counter. The PM counter is based on feed timing to accurately measure the service life of the feed rollers. However, these counts are based on output timing. Blank sheets (covers, chapter covers, slip sheets) are also counted. During duplex printing, pages printed on both sides count as 1, and a page printed on one side counts as 1. 					
0.440	C:PrtPGS/Ppr Type	*CTL	[0 to 9999999/ 0 / 1]			
8 462	These SPs count by paper type	the numb	er pages printed by the copy application.			
8 463	F:PrtPGS/Ppr Type	*CTL	[0 to 9999999/ 0 / 1]			
8 403	These SPs count by paper type the number pages printed by the fax application.					
8 464	P:PrtPGS/Ppr Type	*CTL	[0 to 9999999/ 0 / 1]			
0 404	These SPs count by paper type the number pages printed by the printer application.					
	L:PrtPGS/Ppr Type	*CTL	[0 to 9999999/ 0 / 1]			
8 466	These SPs count by paper type the number pages printed from within the document server mode window at the operation panel.					
8 46x 1	Normal					
8 46x 2	Recycled					
8 46x 3	x 3 Special					
8 46x 4	Thick					
8 46x 5	Normal (Back)					
8 46x 6	Thick (Back)	Thick (Back)				

8 471	PrtPGS/Mag	*CTL	[0 to 9999999/ 0 / 1]			
0 47 1	These SPs count by magnification rate the number of pages printed.					
8 471 1	< 49%					
8 471 2	50% to 99%					
8 471 3	100%					
8 471 4	101% to 200%					
8 471 5	201% <					

- Counts are done for magnification adjusted for pages, not only on the operation panel but performed remotely with an external network application capable of performing magnification adjustment as well
- Magnification adjustments done with printer drivers with PC applications such as Excel are also counted.
- Magnification adjustments done for adjustments after they have been stored on the document server are not counted.
- Magnification adjustments performed automatically during Auto Reduce/Enlarge copying are
 counted.
- The magnification rates of blank cover sheets, slip sheets, etc. are automatically assigned a rate of 100%.

8 481	T:PrtPGS/TonSave	*CTL	
8 484	P:PrtPGS/TonSave	*CTL	
	These SPs count the number of pages printed with the Toner Save feature switched on.		
	Note: These SPs return the same results as this SP is limited to the Print application.		
	[0 to 9999999/ 0 / 1]		

8 491	T:PrtPGS/Col Mode	*CTL	These SPs count the number of pages
8 492	C:PrtPGS/Col Mode	*CTL	printed in the Color Mode by each
8 493	F:PrtPGS/Col Mode	*CTL	application.

Я

8 496	L:PrtPGS/Col Mode	*CTL	
8 497	O:PrtPGS/Col Mode	*CTL	
8 49x 1	B/W		
8 49x 2	Single Color		
8 49x 3	Two Color		
8 49x 4	Full Color		

8 501	T:PrtPGS/Col Mode	*CTL	These SPs count the number of pages
8 504	P:PrtPGS/Col Mode	*CTL	printed in the Color Mode by the print
8 057	O:PrtPGS/Col Mode	*CTL	application.
8 50x 1	B/W		
8 50x 2	Mono Color		
8 50x 3	Full Color		
8 50x 4	Single Color		
8 50x 5	Two Color		

8 511	T:PrtPGS/Emul		*CTL	[0 to 9999999/ 0 / 1]
0.511	These SPs count by printer emulation mode the total number of pages printer		mode the total number of pages printed.	
8 514	P:PrtPGS/Emul		*CTL	[0 to 9999999/ 0 / 1]
0 3 1 4	These SPs count l	oy printe	er emulation	mode the total number of pages printed.
8 514 1	RPCS			
8 514 2	RPDL			
8 514 3	PS3			
8 514 4	R98			
8 514 5	R16			
8 514 6	GL/GL2			
8 514 7	R55			

8 514 8	RTIFF	
8 514 9	PDF	
8 514 10	PCL5e/5c	
8 5 1 4 1 1	PCL XL	
8 514 12	IPDL-C	
8 514 13	BM-Links	Japan Only
8 5 1 4 1 4	Other	

- SP8 511 and SP8 514 return the same results as they are both limited to the Print application.
- Print jobs output to the document server are not counted.

8 521	T:PrtPGS/FIN	*CTL	[0 to 9999999 / 0 / 1]	
0 321	These SPs count by finishing m	ode the to	tal number of pages printed by all applications.	
	C:PrtPGS/FIN	*CTL	[0 to 9999999 / 0 / 1]	
8 522	These SPs count by finishing rapplication.	mode the t	otal number of pages printed by the Copy	
	F:PrtPGS/FIN	*CTL	[0 to 9999999 / 0 / 1]	
8 523	These SPs count by finishing mode the total number of pages printed by the Fax application.			
	NOTE: Print finishing options	for receive	ed faxes are currently not available.	
	P:PrtPGS/FIN	*CTL	[0 to 9999999 / 0 / 1]	
8 524	These SPs count by finishing mode the total number of pages printed by the Print application.			
	S:PrtPGS/FIN	*CTL	[0 to 9999999 / 0 / 1]	
8 525	These SPs count by finishing mode the total number of pages printed by the Scanner application.			
	L:PrtPGS/FIN	*CTL	[0 to 9999999 / 0 / 1]	
8 526	These SPs count by finishing mode the total number of pages printed from within the document server mode window at the operation panel.			
8 52x 1	Sort			

8 52x 2	Stack
8 52x 3	Staple
8 52x 4	Booklet
8 52x 5	Z-Fold
8 52x 6	Punch
8 52x 7	Other

U Note

- If stapling is selected for finishing and the stack is too large for stapling, the unstapled pages are still counted.
- The counts for staple finishing are based on output to the staple tray, so jam recoveries are counted.

8 531	0.1	* CTI	This SP counts the amount of staples used by the machine	
0 33 1	Staples	CIL	[0 to 9999999 / 0 / 1]	

	T:Counter	*CTL	[0 to 9999999 / 0 / 1]	
8 581	These SPs count the total output broken down by color output, regardless of the application used. In addition to being displayed in the SMC Report, these counters are also displayed in the User Tools display on the copy machine.			
8 581 1	Total			
8 581 2	Total: Full Color			
8 581 3	B&W/Single Color			
8 581 4	Development: CMY			
8 581 5	Development: K			
8 581 6	Copy: Color			
8 581 7	Copy: B/W	Copy: B/W		
8 581 8	Print: Color	Print: Color		
8 581 9	Print: B/W	Print: B/W		
8 581 10	Total: Color			

8 581 11	Total: B/W		
8 581 12	Full Color: A3		
8 581 13	Full Color: B4 JIS or Smal	ler	
8 581 14	Full Color Print		
8 581 15	Mono Color Print		
8 581 16	Full Color GPC		
8 581 17	Twin Colour Mode Print		
8 581 18	Full Colour Print (Twin)		
8 581 19	Mono Colour Print (Twin)		
8 581 20	Full Colour Total (CV)		
8 581 21	Mono Colour Total (CV)		
8 581 22	Full Colour Print (CV)		
	C:Counter *CTL [0 to 9999999/ 0 / 1]		
8 582	C:Counter	*CTL	[0 to 9999999/ 0 / 1]
8 582			[0 to 9999999/ 0 / 1] copy application broken down by color output.
8 582			
	These SPs count the total o		
8 582 1	These SPs count the total of B/W		
8 582 1 8 582 2	These SPs count the total of B/W Single Color		
8 582 1 8 582 2 8 582 3 8 582 4	These SPs count the total of B/W Single Color Two Color Full Color	putput of the	copy application broken down by color output.
8 582 1 8 582 2 8 582 3	These SPs count the total of B/W Single Color Two Color Full Color F:Counter	*CTL	copy application broken down by color output.
8 582 1 8 582 2 8 582 3 8 582 4	These SPs count the total of B/W Single Color Two Color Full Color F:Counter These SPs count the total of	*CTL	copy application broken down by color output.
8 582 1 8 582 2 8 582 3 8 582 4 8 583 1	These SPs count the total of B/W Single Color Two Color Full Color F:Counter These SPs count the total of B/W	*CTL	copy application broken down by color output.
8 582 1 8 582 2 8 582 3 8 582 4	These SPs count the total of B/W Single Color Two Color Full Color F:Counter These SPs count the total of	*CTL	copy application broken down by color output.
8 582 1 8 582 2 8 582 3 8 582 4 8 583 1	These SPs count the total of B/W Single Color Two Color Full Color F:Counter These SPs count the total of B/W	*CTL	copy application broken down by color output.

8 584 1	B/W
8 584 2	Mono Color
8 584 3	Full Color
8 584 4	Single Color
8 584 5	Two Color

8 586	L:Counter	*CTL	[0 to 9999999/ 0 / 1]		
	These SPs count the total of	output of the	local storage broken down by color output.		
8 582 1	B/W				
8 582 2	Single Color				
8 582 3	Two Color				
8 582 4	Full Color				

	O:Counter	*CTL	[0 to 9999999/ 0 / 1]	
8 591	These SPs count the totals for A3/DLT paper use, number of duplex pages printed, and the number of staples used. These totals are for Other (O:) applications only.			
8 591 1	A3/DLT			
8 591 2	Duplex			

	Coverage Counter	*CTL	[0 to 9999999/ 0 / 1]
8 601	These SPs count the total or printing mode.	coverage fo	or each color and the total printout pages for each
8 601 1	B/W		
8 601 2	Color		
8 601 11	B/W Printing Pages		
8 601 12	Color Printing Pages		
8 601 21	Coverage Counter 1		
8 601 22	Coverage Counter 2		

8 617	SDK Apli Counter	*CTL	[0 to 9999999/ 0 / 1]		
8017	These SPs count the total printout pages for each SDK applicaion.				
8 617 1	SDK-1				
8 617 2	SDK-2				
8 617 3	SDK-3				
8 617 4	SDK-4	-			
8 617 5	SDK-5				
8 617 6	SDK-6				

8 631	T:FAX TX PGS	*CTL	[0 to 9999999/ 0 / 1]		
	These SPs count by color mode the number of pages sent by fax to a telephone number.				
8 633	F:FAX TX PGS	*CTL	[0 to 9999999/ 0 / 1]		
	These SPs count by color mode the number of pages sent by fax to a telephone number.				
8 63x 1	B/W				
8 63x 2	Color				

- If a document has color and black-and-white pages mixed, the pages are counted separately as B/W or Color.
- At the present time, this feature is provided for the Fax application only so SP8631 and SP8633 are the same.
- The counts include error pages.
- If a document is sent to more than one destination with a Group transmission, the count is done for each destination.
- Polling transmissions are counted but polling RX are not.
- Relay, memory, and confidential mailbox transmissions and are counted for each destination.

	T:IFAX TX PGS	*CTL	[0 to 9999999/ 0 / 1]		
8 641	These SPs count by color mode the number of pages sent by fax to as fax images using I-Fax.				

	F:IFAX TX PGS	*CTL	[0 to 9999999/ 0 / 1]	
8 643	These SPs count by color mode the number of pages sent by Fax as fax images using I-Fax.			
8 64x 1	B/W			
8 64x 2	Color			

- If a document has color and black-and-white pages mixed, the pages are counted separately as B/W or Color.
- At the present time, this feature is provided for the Fax application only so SP8641 and SP8643 are
 the same.
- The counts include error pages.
- If a document is sent to more than one destination with a Group transmission, the count is done for each destination.
- Polling transmissions are counted but polling RX are not.
- Relay, memory, and confidential mailbox transmissions and are counted for each destination.

	T:S-to-Email PGS	*CTL	[0 to 9999999/ 0 / 1]		
8 651	These SPs count by color mode the total number of pages attached to an e-mail for both the Scan and document server applications.				
	S:S-to-Email PGS	*CTL	[0 to 9999999/ 0 / 1]		
8 655	These SPs count by color mode the total number of pages attached to an e-mail for the Scan application only.				
8 65x 1	B/W				
8 65x 2	Color				



- The count for B/W and Color pages is done after the document is stored on the HDD. If the job is cancelled before it is stored, the pages are not counted.
- If Scan-to-Email is used to send a 10-page document to 5 addresses, the count is 10 (the pages are sent to the same SMTP server together).
- If Scan-to-PC is used to send a 10-page document to 5 folders, the count is 50 (the document is sent to each destination of the SMB/FTP server).
- Due to restrictions on some devices, if Scan-to-Email is used to send a 10-page document to a large number of destinations, the count may be divided and counted separately. For example, if a 10-page

document is sent to 200 addresses, the count is 10 for the first 100 destinations and the count is also 10 for the second 100 destinations, for a total of 20.).

	T:Deliv PGS/Svr	*CTL	[0 to 9999999/ 0 / 1]		
8 661	These SPs count by color mode the total number of pages sent to a Scan Router server by both Scan and LS applications.				
8 665	S:Deliv PGS/Svr	*CTL	[0 to 9999999/ 0 / 1]		
	These SPs count by color mode the total number of pages sent to a Scan Router server by the Scan application.				
8 66x 1	B/W				
8 66x 2	Color				

U Note

- The B/W and Color counts are done after the document is stored on the HDD of the Scan Router server.
- If the job is canceled before storage on the Scan Router server finishes, the counts are not done.
- The count is executed even if regardless of confirmation of the arrival at the Scan Router server.

8 671	T:Deliv PGS/PC	*CTL	[0 to 9999999/ 0 / 1]		
	These SPs count by color mode the total number of pages sent to a folder on a PC (Scanto-PC) with the Scan and LS applications.				
	S:Deliv PGS/PC	*CTL	[0 to 9999999/ 0 / 1]		
8 675	These SPs count by color mode the total number of pages sent with Scan-to-PC with the Scan application.				
8 67x 1	B/W				
8 67x 2	Color				

8 681	T:PCFAX TXPGS	*CTL	These SPs count the number of pages sent by PC Fax
8 683	F:PCFAX TXPGS	*CTL	These SPs are provided for the Fax application only, so the counts for SP8 681 and SP8 683 are the same. [O to 9999999/ 0 / 1]

• This counts pages sent from a PC using a PC fax application, from the PC through the copier to the destination.

• When sending the same message to more than one place using broadcasting, the pages are only counted once. (For example, a 10-page fax is sent to location A and location B. The counter goes up by 10, not 20.)

8 69	1	T:TX PGS/LS	*CTL	These SPs count the number of pages sent from the
8 69	2	C:TX PGS/LS	*CTL	document server. The counter for the application that was used to store the pages is incremented.
8 69	3	F:TX PGS/LS	*CTL	[0 to 9999999/ 0 / 1]
8 69	4	P:TX PGS/LS	*CTL	The L: counter counts the number of pages stored from within the document server mode screen at the
8 69	5	S:TX PGS/LS	*CTL	operation panel. Pages stored with the Store File button from within the Copy mode screen go to the C:
8 69	6	L:TX PGS/LS	*CTL	counter.



- Print jobs done with Web Image Monitor and Desk Top Binder are added to the count.
- If several documents are merged for sending, the number of pages stored are counted for the application that stored them.
- When several documents are sent by a Fax broadcast, the F: count is done for the number of pages sent to each destination.

	TX PGS/Port	*CTL	[0 to 9999999/ 0 / 1]			
8 701		mber of pages sent by the physical port used to send them. For original is sent to 4 destinations via ISDN G4, the count for ISDN				
8 701 1	PSTN-1					
8 701 2	PSTN-2					
8 701 3	PSTN-3					
8 701 4	ISDN (G3,G4)					
8 701 5	Network					

8 711	T:Scan PGS/Comp	*CTL	[0 to 9999999/ 0 / 1]
0.715	S:Scan PGS/Comp	*CTL	[0 to 9999999/ 0 / 1]
8 715	These SPs count the number of p	ages sent b	by each compression mode.
8 7 1 5 1	JPEG/JPEG2000		

8 715 2	TIFF(Multi/Single)	
8 715 3	PDF	
8 715 4	Other	
8 715 5	PDF/Comp	

8 721	T:Deliv PGS/WSD	*CTL	[0 to 0000000 / 0 / 1]		
8 725	S: Dvliv PGS/WSD	*CTL	[0 to 9999999/ 0 / 1]		
0 / 23	These SPs count the number of pages scanned by each scanner mode.				
x 1	B/W	-			
x 2	Color	-			

8 731	T:Scan PGS/Media	*CTL	[0 to 9999999/ 0 / 1]
	S:Scan PGS/Media	*CTL	[0 10 9999999 0/ 1]
8 735	These SPs count the number of pages scanned and saved in a meia by each scanned.		
x 1	B/W	-	
x 2	Color	-	

8 741	RX PGS/Port	*CTL	[0 to 9999999/ 0 / 1]		
0 / 4 1	These SPs count the num	nber of pages received by the physical port used to receive them			
8 741 1	PSTN-1				
8 741 2	PSTN-2				
8 741 3	PSTN-3				
8 741 4	ISDN (G3,G4)				
8 741 5	Network				

8 77 1 Dev Counter	*CTL	[0 to 9999999/ 0 / 1]
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	These SPs count the frequency of use (number of rotations of the development rollers) for black and other color toners.
8 <i>77</i> 11	Total
8 771 2	К
8 771 3	Υ
8 771 4	М
8 771 5	С

	Toner Bottle Inf	[0 to 9999999/ 0 / 1]		
8 781		lay the number of already replaced toner bottles. tly, the data in SP7-833-011 through 014 and the data in SP8-781-001 re the same.		
8 781 1	Toner: BK	The number of black-toner bottles		
8 781 2	Toner: Y	The number of yellow-toner bottles		
8 781 3	Toner: M	The number of magenta-toner bottles		
8 781 4	Toner: C	The number of cyan-toner bottles		

8 791	LS Memory Remain	*CTL	This SP displays the percent of space available on the document server for storing documents. [0 to 100 / 0 / 1]	
	Toner Remain	*CTL	[0 to 100/0/1]	
	Toner Kemam	CIL	[0.0.100/ 0/ 1]	
8 801	These SPs display the percent of toner remaining for each color. This SP allows the to check the toner supply at any time.			
	Note: This precise method of measuring remaining toner supply (1% steps) is better than other machines in the market that can only measure in increments of 10 (10% steps).			
8 801 1	К			
8 801 2	Υ			
8 801 3	М			
8 801 4	С			

	Coverage Count: 0-10%	*ENG	[0 to 9999999/ 0 / 1]		
8 851	These SPs display the number of scanned sheets on which the coverage of each color is from 0% to 10%.				
8 851 11	0 to 2%: BK	8 851 31	5 to 7%: BK		
8 851 12	0 to 2%: Y	8 851 32	5 to 7%: Y		
8 851 13	0 to 2%: M	8 851 33	5 to 7%: M		
8 851 14	0 to 2%: C	8 851 34	5 to 7%: C		
8 851 21	3 to 4%: BK	8 851 41	8 to 10%: BK		
8 851 22	3 to 4%: Y	8 851 42	8 to 10%: Y		
8 851 23	3 to 4%: M	8 851 43	8 to 10%: M		
8 851 24	3 to 4%: C	8 851 44	8 to 10%: C		

	Coverage Count: 11-20%	*ENG	[0 to 9999999/ 0 / 1]	
8 861	These SPs display the number of scanned sheets on which the coverage of each cold is from 11% to 20%.			
8 861 1	ВК			
8 861 2	Υ			
8 861 3	М			
8 861 4	С			

	Coverage Count: 21-30%	*ENG	[0 to 9999999/ 0 / 1]	
8 871	ets on which the coverage of each color			
8 871 1	ВК			
8 871 2	Υ			
8 871 3	М			
8 871 4	С			

	Coverage Count: 31%-	*ENG	[0 to 9999999/ 0 / 1]		
8 881	These SPs display the number of scanned sheets on which the coverage of each is 31% or higher.				
8 881 1	ВК				
8 881 2	Υ				
8 881 3	М				
8 881 4	С				

8 891	Page/Toner Bottle	*ENG	[0 to 9999999/ 0 / 1]		
0 091	These SPs display the amount of the remaining current toner for each color.				
8 891 1	BK				
8 891 2	Υ				
8 891 3	М				
8 891 4	С				

8 901	Page/Toner_prev1		[0 to 9999999/ 0 / 1]		
0 901	These SPs display the amount of the remaining previous toner for each color.				
8 901 1	ВК				
8 901 2	Y				
8 901 3	М				
8 901 4	С				

8 91 1	Page/Toner_prev2	*ENG	[0 to 9999999/ 0 / 1]		
These SPs display the amount of the remaining 2nd previous toner for e					
8 9 1 1 1	ВК				
8 911 2	Υ				
8 911 3	М				

8 9 1 1 4 C

8 921	Coverage Count: Total	*CTL	[0 to 9999999/ 0 / 1]		
0 921	Displays the total coverage and total printout number for each color.				
8 921 1	BK (%)				
8 921 2	Y (%)				
8 921 3	M (%)				
8 921 4	C (%)				
8 921 11	Coverage /P: Bk				
8 921 12	Coverage /P: Y				
8 921 13	Coverage /P: M				
8 921 14	Coverage /P: C				

	Machine Status	*CTL	[0 to 9999999/ 0 / 1]		
8 941	These SPs count the amount of time the machine spends in each operation mode. These SPs are useful for customers who need to investigate machine operation for improvement in their compliance with ISO Standards.				
8 941 1	Operation Time	Engine operation time. Does not include time while controller is saving data to HDD (while engine is not operating).			
8 941 2	Standby Time	Engine not operating. Includes time while controller saves data to HDD. Does not include time spent in Energy Save, Low Power, or Off modes.			
8 941 3	Energy Save Time	Includes time while the machine is performing background printing.			
8 941 4	Low Power Time	Includes time in Energy Save mode with Engine on. Includes time while machine is performing background printing.			
8 941 5	Off Mode Time	Includes time while machine is performing background printing. Does not include time machine remains powered off with the power switches.			
8 941 6	SC	Total time when SC errors have been staying.			

8 941 7	PrtJam	Total time when paper jams have been staying during printing.
8 941 8	OrgJam	Total time when original jams have been staying during scanning.
8 941 9	Supply PM Unit End	Total time when toner end has been staying

8 951	AddBook Register		*CTL		
8 931	These SPs count the number of events when the machine ma			anages data registration.	
8 951 1	User Code	User cod	e registration	s.	
8 951 2	Mail Address	Mail add	lress registrat	ions.	
8 951 3	Fax Destination	Fax desti	nation registr	ations.	
8 951 4	Group	Group de	estination reg	istrations.	[0 to 9999999/ 0 / 1]
8 951 5	Transfer Request	Fax relay destination registrations for relay TX.			
8 951 6	F-Code	F-Code box registrations.			
8 951 7	Copy Program	Copy application registrations with the Program (job settings) feature.			
8 951 8	Fax Program	Fax application registrations with the Program (job settings) feature.			
8 951 9	Printer Program	Printer application registrations with the Program (job settings) feature.		[0 to 255 / 0 / 255]	
8 951 10	Scanner Program	Scanner application registrations with the Program (job settings) feature.			

8 999	Adomin. Counter List		[0 to 9	999999/0/1]
0 777	Displays the total coverage and	oer for each color.		
8 999 1	Total			
8 999 2	Copy: Full Color			
8 999 3	Copy: BW			

8 999 4	Copy: Single Color	
8 999 5	Copy: Two Color	
8 999 6	Printer Full Color	
8 999 7	Printer BW	
8 999 8	Printer Single Color	
8 999 9	Printer Two Color	
8 999 10	Fax Print: BW	
8 999 12	A3/DLT	
8 999 13	Duplex	
8 999 14	Coverage: Color (%)	
8 999 15	Coverage: BW (%)	
8 999 16	Coverage: Color Print Page (%)	
8 999 17	Coverage: BW Print Page (%)	
8 999 101	Transmission Total: Color	
8 999 102	Transmission Total: BW	
8 999 103	FAX Transmission	
8 999 104	Scanner Transmission: Color	
8 999 105	Scanner Transmission: BW	ı

SP9-XXX: Others

9511	Skew Origin Set	*CTL			
001	M: Skew Motor				
002	C: Skew Motor	These SPs reset the skew correction value (SP2-119-00 -003) to "0".			
003	Y: Skew Motor	,			

Input Check Table

When entering the Input Check mode, 8 digits display the result for a section. Each digit corresponds to a different device as shown in the table.

Bit No.	7	6	5	4	3	2	1	0
Result	0 or 1							

Copier

	-	Reading			
5803	Description	0	1		
5803 1	5803 1 2nd Tray Size Detection		See table 2 following this table.		
5803 2	1st Tray Set Detection	Set	Not set		
5803 3	1st Tray Paper Height Sensor 1	See table 1 follo	owing this table.		
5803 4	1st Tray Paper Height Sensor2	See table 1 following	g this table.		
5803 5	2st Tray Paper Height Sensor 1	See table 1 following	g this table.		
5803 6	2st Tray Paper Height Sensor2	See table 1 following this table.			
5803 7	1st Tray Paper End Detection	No paper	Paper remaining		
5803 8	2nd Tray Paper End Detection	No paper	Paper remaining		
5803 9	1st Tray Upper Limit Sensor	Not upper limit	Upper limit		
5803 10	2nd Tray Upper Limit Sensor	Not upper limit	Upper limit		
5803 11	Bypass Paper Width Detection	See table 3 following this table.			
5803 12	Bypass Paper End Detection	No paper	Paper remaining		
5803 13	Bypass Paper Length Detection	See table 3 following this table.			
5803 16	Exit Sensor	Paper detected	Paper not detected		
5803 17	Tray Full Exit Sensor	Paper not full	Paper full		
5803 18	Fusing Exit Sensor	Paper not detected	Paper detected		

			_
5803 19	Fusing Entrance Sensor	Paper detected	Paper not detected
5803 20	1 st Feed Sensor	Paper detected	Paper not detected
5803 21	2 nd Feed Sensor	Paper detected	Paper not detected
5803 22	Duplex Exit Sensor	Paper detected	Paper not detected
5803 23	Registration Sensor	Paper detected	Paper not detected
5803 24	Duplex Entrance Sensor	Paper detected	Paper not detected
5803 25	Junction Sensor	Paper detected	Paper not detected
5803 26	2nd Tray Set Detection	Set	Not set
5803 30	Toner End Sensor: Bk	Toner end	Toner remaining
5803 31	Toner End Sensor: M	Toner end	Toner remaining
5803 32	Toner End Sensor: C	Toner end	Toner remaining
5803 33	Toner End Sensor: Y	Toner end	Toner remaining
5803 34	Drum Phase Sensor: Bk	Actuator not detected	Actuator detected
5803 35	Drum Phase Sensor: M	Actuator not detected	Actuator detected
5803 36	Drum Phase Sensor: C	Actuator not detected	Actuator detected
5803 37	Drum Phase Sensor: Y	Actuator not detected	Actuator detected
5803 38	Interlock Release Detection 1	Front door open	Fron door closed
5803 39	Interlock Release Detection 2	Front door open	Fron door closed
5803 40	Right Door	Closed	Open
5803 41	Duplex Cover	Closed	Open
5803 42	Toner Collection Bottle Set	Set	Not set
5803 43	Toner Collection Full Sensor	Not full	Full
5803 46	ITB New Unit Detection	Not new	New
			

5803 50	Airflow Fan: Front: Lock	Normal	
5803 51	Airflow Fan: Rear: Lock	Normal	
5803 52	Fusing Exit Fan: Lock	Normal	Lock
5803 53	2nd Duct Fan: Lock	Normal	Lock
5803 54	3rd Duct Fan: Lock	Normal	Lock
5803 55	Paper Exit Fan:Lock	Nor	mal
5803 58	Feed Motor Cooling Fan: Lock	Nor	mal
5803 60	ITB Contact Motor Position	Not contact	Contact
5803 61	Paper Transfer Contact Motor Position	Not contact	Contact
5803 62	Toner Relay Motor: Lock	Normal	Lock
5803 63	ITB Drive Motor: Lock	Normal	Lock
5803 64	K Drum/Development Drive Motor: Lock	Normal	Lock
5803 65	M Drum/Development Drive Motor: Lock	Normal	Lock
5803 66	C Drum/Development Drive Motor: Lock	Normal	Lock
5803 67	Y Drum/Development Drive Motor: Lock	Normal	Lock
5803 68	Fusing Exit Motor:Lock	Normal	Lock
5803 80	HVPS:TTS:SC Detection	SC detected	No SC
5803 81	HVPS:CB:SC Detection	SC detected	No SC
5803 82	HVPS:D:SC Detection	SC detected	No SC
5803 83	Fusing Destination Detection: DOM	Set	Not set
5803 84	Fusing Destination Detection: NA	Set	Not set
5803 85	Fusing Destination Detection: EU	Set	Not set
5803 86	Fusing Destination Detection: TWN	Set	Not set
5803 87	Fusing New Unit Detection	New	Not new
5803 88	Fusing Unit Generation Detection 1	-	-
5803 89	Fusing Unit Generation Detection2	-	-

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5803 90	Zero-cross Signal	-	-
5803 94	GAVD Open/Close Detection	Closed (LD5V ON)	Open (LD5V OFF)
5803 100	Keycard: Set	Set	Not set
5803 101	Mechanical Counter Bk: Set	Set	Not set
5803 102	Mechanical Counter FC: Set	Set	Not set
5803 103	Key Counter: Set	Set	Not set
5803 110	IOB Version	-	-
5803 200	Scanner HP Sensor	Not HP	HP
5803 201	Platen Cover Sensor	Open	closed

Table 1: Paper Height Sensor

0: Deactivated, 1: Activated (actuator inside sensor)

Remaining paper	Paper height sensor 1	Paper height sensor 2
Full	0	0
Nearly full	1	0
Near end	1	1
Almost empty	0	1

Table 2: Paper Size Switch (Tray 2)

Switch 1 is used for tray set detection.

0: Pushed, 1: Not pushed

Мо	Switch Location			
North America	Europe/Asia	4 (bit0)	3 (bit1)	2 (bit2)
11" x 17" SEF ^{*1} (A3 SEF)	A3 SEF ^{*1} (11" x 17" SEF)	0	0	1
8.5" x 14" SEF ^{*2}	B4 SEF ^{*2}	0	0	0

(B4 SEF)	(8.5" x 14" SEF)			
A4 SEF	A4 SEF	1	1	0
8.5" x 11" SEF	8.5" x 11" SEF	1	1	1
B5 SEF	B5 SEF	0	1	1
11" x 81/2" LEF ^{*3} (A4 LEF)	A4 LEF ^{*3} (11" x 81/2" LEF)	1	0	0
10.5" x 7.25" LEF ^{*4} (B5 LEF)	B5 LEF ^{*4} (10.5" x 7.25" LEF)	0	1	0
A5 LEF	A5 LEF	1	0	1

 $^{^*}$ 1: The machine detects either 11" x 17" SEF or A3 SEF, depending on the setting of SP 5-181-003.

Table 3: Paper Size (By-pass Table)

0: ON, 1: OFF

Ву	By-pass Paper Size Sensor			1l- C	NIA	ELL/ACIA
bit3	Bit2	Bit1	BitO	Length Sensor	NA	EU/ASIA
1	1	1	1	1	HLT SEF	A6 SEF
0	1	1	1	1	HLT SEF	A6 SEF
0	0	1	1	1	HLT SEF	A5 SEF
1	0	1	1	1	HLT SEF	A5 SEF
1	0	0	1	0	LT/LG SEF*1	A4 SEF
1	0	0	1	1	LT/LG SEF*1	A5 LEF
1	1	0	1	0	LT/LG SEF*1	A4 SEF
1	1	0	1	1	LT/LG SEF*1	A5 LEF
1	1	0	0	0	DLT SEF	A3 SEF

^{*2:} The machine detects either 8.5" x 14" SEF or B4 SEF, depending on the setting of SP 5-181-004.

^{*3}: The machine detects either 11" x 81/2" LEF or A4 LEF, depending on the setting of SP 5-181-002.

^{*4:} The machine detects either B5 LEF or 10.5" x 7.25" LEF, depending on the setting of SP 5-181-005.

By-pass Paper Size Sensor			Innath Canan	NIA	ELL/ACIA	
bit3	Bit2	Bit1	BitO	Length Sensor	NA	EU/ASIA
1	1	0	0	1	LT LEF	A4 LEF
1	1	1	0	0	DLT SEF	A3 SEF
1	1	1	0	1	LT LEF	A4 LEF

 $^{^{\}star}$ 1: The paper size (LT or LG) can be selected with SP1-007-001.

Table 4: APS Original Size Detection

Original Siz	Lei	ngth Sen	sor	Width	Sensor	SP4-301	
Metric version	Metric version Inch version		L2	L1	W1	W2	display
А3	11" x 1 <i>7</i> "	0	0	0	0	0	00011111
B4	10" x 14"	0	0	0	0	Х	00011110
F4 8.5" x 13", 8.25" x 13", or 8" x 13" SP 5 1 26 controls the size that is detected	8.5″ x 14″	0	0	0	Х	Х	00011100
A4 LEF	8.5" x 11"	Х	Х	Х	0	0	00000011
B5 LEF	-	Х	Х	Х	0	Х	00000010
A4 SEF	11" x 8.5"	Х	0	0	Х	Х	00001100
B5 SEF	-	Х	Х	0	Х	Х	00000100
A5 LEF/ SEF	5.5" x 8.5", 8.5" x 5.5"	Х	Х	Х	Х	Х	00000000

ADF (B802)

6007	Description	Reading	
	Description	0	1

6007 1	Original Length 1 (B5 Detection Sensor)	Paper not detected	Paper detected
6007 2	Original Length 2 (A4 Detection Sensor)	Paper not detected	Paper detected
6007 3	Original Length 3 (LG Detection Sensor)	Paper not detected	Paper detected
6007 4	Original Width S	Paper not detected	Paper detected
6007 5	Original Width M	Paper not detected	Paper detected
6007 6	Original Width L	Paper not detected	Paper detected
60077	Original Width LL	Paper not detected	Paper detected
6007 9	Original Detection	Paper not detected	Paper detected
6007 10	Rear Edge Detection	Paper not detected	Paper detected
6007 11	Skew Correction	Paper not detected	Paper detected
6007 13	Registration Sensor	Paper not detected	Paper detected
6007 14	Exit Sensor	Paper not detected	Paper detected
6007 15	Feed Cover	ADF cover close	ADF cover open
6007 16	Lift Up	ADF cover close	ADF cover open

1000-Sheet Booklet Finisher (B793)

6138	Description	Reading		
		0	1	
6138 1	Interference Escape Sensor (Stapler Safety Sensor)	Not interfered	Interfered	
6138 2	Staple Moving HP Sensor (Staple Unit HP Sensor)	Not home position	Home position	
6138 3	Stuck Relay 1 Release HP Sensor (Stopper S HP Sensor)	Not home position	Home position	
6138 4	Exit Junction Gate HP Sensor (Stack Feed Out HP Sensor)	Home position	Not home position	

/100	B	Reading		
6138	Description	0	1	
6138 5	Jogger HP Sensor (Jogger Fence HP Sensor)	Not home position	Home position	
6138 6	Staple Tray Paper Sensor (Staple Tray Paper Sensor)	Paper not detected	Paper detected	
61387	Rear Edge Fence HP Sensor (Paper Stack Stopper HP Sensor)	Not home position	Home position	
6138 8	Saddle Stitch Exit Sensor	Paper detected	Paper not detected	
6138 9	Stuck Relay2 Roller HP Sensor (Clamp Roller HP Sensor)	Home position	Not home position	
6138 10	Folder Tray Full Sensor 1 (Bottom Tray HP 1 Sensor)	Full	Not full	
6138 11	Folder Tray Full Sensor 2 (Bottom Tray HP 2 Sensor)	Not full	Full	
6138 12	Folder Plate HP Sensor (Fold Plate HP Sensor)	Not home position	Home position	
6138 13	Saddle Stitch Arrival Sensor (Fold Unit Entrance Sensor)	Paper not detected	Paper detected	
6138 14	Folder Cam HP Sensor (Fold Plate Cam HP Sensor)	Not home position	Home position	
6138 15	Staple Exit Sensor (Stapler Tray Exit Sensor)	Paper detected	Paper not detected	
6138 16	Shift Tray Paper Sensor (Shift Tray Paper Position Sensor)	Shift tray not detected	Shift tray detected	
6138 17	Shift Tray Full	Full	Nor full	
6138 18	Shift Roller HP Sensor	Not home position	Home position	
6138 20	Entrance Sensor	Paper detected	Paper not detected	

6138	Description	Reading		
0138	Description	0	1	
	(Finisher Entrance Sensor)			
6138 21	Shift Exit Sensor (Shift Tray Exit Sensor)	Paper not detected	Paper detected	
6138 22	Proof Exit Sensor (Proof Tray Exit Sensor)	Paper detected	Paper not detected	
6138 23	Exit Guide Plate HP Sensor	Not home position	Home position	
6138 24	Proof Full Sensor (Proof Tray Full Sensor)	Not full	Full	
6138 25	Upper Cover Sensor	Open	Close	
6138 26	Door SW (Front Door Switch)	Close	Open	
6138 27	Clincher Timing Sensor	Enco	der	
6138 28	Clincher HP Sensor	Home position	Not home position	
6138 29	Driver Timing Sensor	Enco	der	
6138 30	Staple Near End	Staple remaining	Staple near end	
6138 31	Self Priming	Staple detected	Staple not detected	
6138 32	Driver HP Sensor	Home position	Not home position	
6138 33	Punch Registration Detection HP Sensor	Not home position	Home position	
6138 34	Punch Moving HP Sensor (Punch Movement HP Sensor)	Not home position	Home position	
6138 35	Punch HP Sensor (Punch HP Sensor)	Home position	Not home position	
6138 36	Punch Pulse Count Sensor (Punch Encoder Sensor)	Encoder		
6138 37	Punch Chad Full Sensor (Punch Hopper Full Sensor)	Not full	Full	

6138	Description	Reading	
	Description	0	1
6138 38	Punch Registration Detection Sensor (Paper Position Sensor)	Paper detected	Paper not detected

1000-Sheet Finisher (B408)

6139	D:r	Bit Description	Read	ling
0139	DIT	Description	0	1
6139 1	Entra	nce Sensor	Paper detected	Paper not detected
6139 2		Exit Sensor er Tray Exit Sensor)	Paper not detected	Paper detected
61393		e Entrance Sensor ler Tray Entrance Sensor)	Paper detected	Paper not detected
6139 4	Staple Moving HP Sensor (Stapler HP Sensor)		Not home position	Home position
6139 5	Jogger HP Sensor (Jogger Fence HP Sensor)		Not home position	Home position
61396	Stack	Feed-out Belt HP Sensor	Home position	Not home position
61397	Stapl	e Tray Paper Sensor	Paper not detected	Paper detected
61398	Staple Rotation Sensor (Staple Rotation HP Sensor)		Not home position	Home position
61399	Stapl	e Sensor	Staple detected	Staple not detected
6139 10	Stapl	e READY Detection	Staple detected	Staple not detected
6139 11	Exit Guide Plate HP (Exit Guide Plate HP Sensor)		Not home position	Home position
6139 12	Shift HP Sensor		Not home position	Home position
6139 13	Pape	r Sensor	Output tray not detected	Output tray detected

6139	Bit	Description	Reading		
	DIT		0	1	
	(Stack Height Sensor)				
6139 14	Tray Lower Sensor (Lower Tray Lower Limit Sensor)		Lower limit	Not lower limit	
6139 15	Proof Full Sensor (Paper Limit Sensor)		Not full	Full	

500-Sheet Finisher (D372)

/1/5	Description	Reading	
6145		0	1
6145 1	Entrance Sensor	Paper detected	Paper not detected
6145 2	Hitroll HP Sensor	Paper not detected	Paper detected
6145 3	Front Jogger HP Sensor (Front Jogger Fence HP Sensor)	Home position	Not home position
6145 4	Rear Jogger HP Sensor (Rear Jogger Fence HP Sensor)	Home position	Not home position
6145 5	Staple Tray Paper Sensor	Paper detected	Paper not detected
6145 6	Staple Moving HP Sensor	Not HP	НР
61457	Stack Feed-out Belt HP	Not HP	HP
6145 8	Shift Tray Paper Sensor	Paper detected	Paper not detected
6145 9	Upper Cover Sensor	HP	Not HP
6145 10	Staple Rotation Sensor	HP	Not HP
6145 11	Staple Near End	HP	Not HP
6145 12	Self Priming	HP	Not HP
6145 13	Shift Tray Limit Sensor	Not full	Full

Bridge Unit (D386)

6150 Description	December	Reading	
	0	1	
6150 1	Bridge: Exit Sensor	Paper detected	Paper not detected
61502	Bridge: Feed Sensor	Paper detected	Paper not detected
61503	Bridge:Set Sensor	Set	Not Set
6150 4	Bridge: Exit Cover Detection	Closed	Open
61505	Bridge: Feed Cover Detection	Closed	Open

Internal Shift Tray (D388)

6152 Description	December	Reading	
	0	1	
6152 1	Shift:Set Sensor	Set	Not Set
6152 2	Shift: Position Sensor	Tray position: front	Tray position: rear

1 Bin Tray (D414)

6154	Description	Reading	
		0	1
61541	1 bin: Set Sensor	Set	Not Set
61542	1 bin: Paper Sensor	Paper detected	Paper not detected

One or Two-Tray PFU (D387/D351)/ LCIT 2000 (D352)/ LCIT 1200 (D353)

6160	Description	Reading	
0100		0	1
61601	Bank: Tray3: Feed Sensor	Paper not detected	Paper detected

61602	Bank: Tray4: Feed Sensor	Paper not detected	Paper detected
61603	Bank: Tray5: Feed Sensor	Paper not detected	Paper detected
61604	Bank: Tray3: Relay Sensor	Paper not detected	Paper detected
61605	Bank: Tray4: Relay Sensor	Paper not detected	Paper detected
61606	Bank: Tray5: Relay Sensor	Paper not detected	Paper detected
61607	Bank: Feed Cover Detection	Closed	Open
6160 11	Bank: Palau: Paper Supply Switch	Closed	Open
6160 12	Bank: Palau: Slide Switch	Closed	Open

Output Check Table

Copier

5804	Display	Description
5804 5	Drum/Dev Motor: K: 154mm/s	Drum/Development Drive Motor-M: 154 mm/s
58047	Drum/Dev Motor: K: 77mm/s	Drum/Development Drive Motor-M: 77 mm/s
5804 12	Drum/Dev Motor: M: 154mm/s	Drum/Development Drive Motor-Y: 154 mm/s
5804 14	Drum/Dev Motor: M: 77mm/s	Drum/Development Drive Motor-Y: 77 mm/s
5804 19	Drum/Dev Motor: C: 154mm/s	Drum/Development Drive Motor-Y: 154 mm/s
5804 21	Drum/Dev Motor: C: 77mm/s	Drum/Development Drive Motor-Y: 77 mm/s
5804 26	Drum/Dev Motor: Y: 154mm/s	Drum/Development Drive Motor-Y: 154 mm/s
5804 28	Drum/Dev Motor: Y: 77mm/s	Drum/Development Drive Motor-Y: 77 mm/s
5804 33	Fusing Exit Motor: 154mm/s	Fusing/Paper Exit Motor: 154 mm/s
5804 35	Fusing Exit Motor: 77mm/s	Fusing/Paper Exit Motor: 77 mm/s
5804 37	Toner Relay Motor	Toner Transport Motor
5804 42	Image Transfer Motor: 154mm/s	ITB Drive Motor: 154 mm/s

5804 44	Image Transfer Motor: 77mm/s	ITB Drive Motor: 77 mm/s
5804 52	Feed Motor: 242mm/s	Paper Feed Motor: 242 mm/s
5804 55	Feed Motor: 154mm/s	Paper Feed Motor: 154 mm/s
5804 56	Feed Motor: 115mm/s	Paper Feed Motor: 115mm/s
5804 57	Feed Motor: 77mm/s	Paper Feed Motor: 115mm/s
5804 62	Regist Motor: 154mm/s	Registration Motor: 154 mm/s
5804 64	Regist Motor: 77mm/s	Registration Motor: 77 mm/s
5804 69	Duplex Feed Motor: CW: 154mm/s	Duplex/By-pass Motor: CW: 154 mm/s
580471	Duplex Feed Motor: CW: 77mm/s	Duplex/By-pass Motor: CW: 77 mm/s
580476	Duplex Feed Motor: CCW: 154mm/s	Duplex/By-pass Motor: CCW:
5804 78	Duplex Feed Motor: CCW: 77mm/s	Duplex/By-pass Motor: CCW: 77 mm/s
5804 83	Duplex Reverse Motor: CW: 154mm/s	Duplex Inverter Motor: CW: 154 mm/s
5804 85	Duplex Reverse Motor: CW: 77mm/s	Duplex Inverter Motor: CW: 77 mm/s
5804 90	Duplex Reverse Motor: CCW: 154mm/s	Duplex Inverter Motor: CCW: 154 mm/s
5804 92	Duplex Reverse Motor: CCW: 77mm/s	Duplex Inverter Motor: CCW: 77 mm/s
5804 95	ITB Contact Motor	Image Transfer Belt Contact Motor
5804 96	Paper Transfer Contact Motor	Paper Transfer Contact Motor
5804 97	1 st Tray Lift Motor: Up	Tray Lift Motor 1: Lift Up
5804 98	1 st Tray Lift Motor: Down	Tray Lift Motor 1: Lift Down
5804 99	2ndTray Lift Motor: Up	Tray Lift Motor 2: Lift Up
5804 100	2nd Tray Lift Motor: Down	Tray Lift Motor 2: Lift Down
5804 104	Polygon Moter: LL	Polygon Motor: LL

5804 105	Polygon Moter: L	Polygon Motor: L
5804 107	, 5	, ,
	Polygon Moter: HH	Polygon Motor: HH
5804 110	Air Flow Fan: Front	Ventilation Fan - Front
5804 111	Air Flow Fan:Rear	Ventilation Fan - Rear
5804 112	Fusing Fan:H	Fusing Fan: High Speed
5804 113	Fusing Fan:L	Fusing Fan: Low Speed
5804 114	PSU Cooling Fan	PSU Fan 1: High Speed
5804 115	2nd Duct Fan: H	Duct Fan 2: High Speed
5804 117	3rd Duct Fan: H	Duct Fan 3: High Speed
5804 119	Paper Exit Fan:H	Paper Exit Fan: High Speed
5804 123	Feed Motor Cooling Fan: Lock	Feed Motor Cooling Fan: Lock
5804 126	Development Clutch: Bk	Development Clutch-K
5804 127	Development Clutch: M	Development Clutch-M
5804 128	Development Clutch: C	Development Clutch-C
5804 129	Development Clutch: Y	Development Clutch-Y
5804 130	Toner Bottle Clutch: Bk	Toner Bottle Clutch-K
5804 131	Toner Bottle Clutch: M	Toner Bottle Clutch-M
5804 132	Toner Bottle Clutch: C	Toner Bottle Clutch-C
5804 133	Toner Bottle Clutch:Y	Toner Bottle Clutch-Y
5804 134	Toner Supply Pump: Bk	Toner Supply Clutch: Bk
5804 135	Toner Supply Pump: M	Toner Supply Clutch: M
5804 136	Toner Supply Pump: C	Toner Supply Clutch: C
5804 137	Toner Supply Pump: Y	Toner Supply Clutch: Y
5804 138	1 st Paper Feed Clutch	Paper Feed Clutch 1
5804 139	2st Paper Feed Clutch	Paper Feed Clutch 2
5804 140	Bypass Feed Clutch	By-pass Feed Clutch

5804 141	Bypass Pickup Solenoid	Bypass Pickup Solenoid
5804 142	Feed Tray Lock Solenoid	Tray Lock Solenoid
5804 143	TD Sensor Shutter Solenoid	ID Sensor Shutter Solenoid
5804 144	Exit Junction Solenoid	Junction Gate 1 Solenoid
5804 161	PCL: Bk	-
5804 162	PCL: M	-
5804 163	PCL: C	-
5804 164	PCL: Y	-
5804 165	TD Sensor Power Supply	TD Sensor:Bk
5804 166	HST Sensor:Bk	TD Sensor: M
5804 167	HST Sensor: M	TD Sensor: C
5804 168	HST Sensor: C	TD Sensor: Y
5804 169	HST Sensor: Y	Toner End Sensor: Bk
5804 170	Toner End Sensor: Bk	Toner End Sensor: M
5804 171	Toner End Sensor: M	Toner End Sensor: C
5804 172	Toner End Sensor: C	Toner End Sensor: Y
5804 173	Toner End Sensor: Y	ID Sensor: Front
5804 174	TM Sensor: Front	ID Sensor: Center
5804 175	TM Sensor: Center	ID Sensor: Rear
5804 176	TM Sensor: Rear	ID Sensor: M
5804 177	TM Sensor: M	ID Sensor: C
5804 178	TM Sensor: C	ID Sensor: Y
5804 179	TM Sensor: Y	Paper Feed Motor 2: 115 mm/s (Optional Paper Feed Unit)
5804 183	PP:Charge AC:Y:154 mm/s	-
5804 184	PP:Charge AC:Y:77 mm/s	-

5804 186	PP:Development:K	-
5804 187	PP:Development:M	-
5804 188	PP:Development:C	-
5804 189	PP:Development:Y	-
5804 190	PP:Separation	-
5804 192	RFID ON/OFF: K	-
5804 193	RFID ON/OFF: Y	-
5804 194	RFID ON/OFF: C	-
5804 195	RFID ON/OFF: M	-
5804 196	RFID COM ON:K	-
5804 197	RFID COM ON: Y	-
5804 198	RFID COM ON: C	-
5804 199	RFID COM ON: M	-
5804 202	Scanner Lamp	-
5804 216	LD1: K	-
5804 218	LD1: M	-
5804 220	LD1: C	-
5804 222	LD1: Y	-
5804 224	PP:ITB:K	PP: Image Transfer Roller: K
5804 225	PP:ITB:M	PP: Image Transfer Roller: M
5804 226	PP:ITB:C	PP: Image Transfer Roller: C
5804 227	PP:ITB:Y	PP: Image Transfer Roller: Y
5804 228	PP:PTR:+	PP: Paper Transfer Roller:+
5804 229	PP:PTR:-	PP: Paper Transfer Roller:-
5804 231	HVPS: ChargeDC: K	-
5804 232	HVPS: ChargeDC: C	-

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5804 233	HVPS: ChargeDC: M	-
5804 234	HVPS: ChargeDC: Y	-
5804 239	HVPS: ChargeAC: K: 154mm/s	-
5804 241	HVPS: ChargeAC: K: 77mm/s	-
5804 246	HVPS: ChargeAC: M: 154mm/s	-
5804 248	HVPS: ChargeAC: M: 77mm/s	-
5804 253	HVPS: ChargeAC: C: 154mm/s	-
5804 255	HVPS: ChargeAC: C: 77mm/s	-

ARDF (B802)

6008	Display	Description
6008 3	Feed Motor Forward	Feed Motor-Forward rotation
6008 4	Feed Motor Reverse	Feed Motor-Reverse rotation
6008 5	Relay Motor Forward	Transport Motor- Forward rotation
6008 6	Relay Motor Reverse	Transport Motor- Forward rotation
6008 9	Feed Clutch	-
6008 10	Feed Solenoid	Pick-up Solenoid
6008 11	Inverter Solenoid	-
6008 12	Stamp	Stamp Solenoid

1000-Sheet Booklet Finisher (D372)

6143	Display	Description
6143 1	Shift Motor	Shift Tray Motor
6143 2	Entrance Motor	-
61433	Staple Relay Motor	Stapler Unit Motor

ock Solenoid	
ction Gate SOL 1	Proof Tray Gate Solenoid
ction Gate SOL 2	Staple Tray Gate Solenoid
der Roller Rotation Motor	Fold Roller Motor
ole Motor	Staple Fold Motor
Guide Plate Motor	-
t Relay Motor	Upper Transport Motor
y Motor	Shift Tray Motor
ck Feed-out Motor	Positioning Roller Solenoid
ck Relay1 Motor	Upper Clamp Roller Motor
ck Relay1 Release Motor	Upper Retraction Motor
r Edge Fence Drive Motor	Bottom Fence Lift Motor
der Plate Motor	-
e Roller Oscillating Motor	Lower Retraction Motor
ole Moving Motor	Staple Unit Driver Motor
ger Motor	Jogger Motor
ch Registration Moving Motor	Paper Position Sensor Slide Motor
ch Motor	-
ch Moving Motor	Punch Movement Motor
	tion Gate SOL 1 tion Gate SOL 2 ler Roller Rotation Motor Ole Motor Guide Plate Motor Relay Motor K Relay Motor K Relay I Motor K Relay I Release Motor T Edge Fence Drive Motor I Reller Oscillating Motor Ole Moving Motor Ch Registration Moving Motor Ch Motor

1000-Sheet Finisher (B408)

6144	Display	Description
61441	Relay Up Motor	Upper Transport Motor
61442	Relay Down Motor	Lower Transport Motor
61443	Exit Motor	-

61444	Proof Junction Gate SOL	Tray Junction Gate Solenoid
61445	Tray Up Motor	Lower Tray Lift Motor
61446	Jogger Motor	Jogger Fence Motor
61447	Staple Moving Motor	Stapler Motor
61448	Staple Motor	Stapler Hammer
61449	Staple Junction Gate SOL	Stapler Junction Gate Solenoid
6144 10	Positioning Roller Solenoid	Positioning Roller Solenoid
6144 11	Stack Feed-out Motor	-
6144 12	Shift Motor	-
6144 13	Exit Guide Plate Motor	-

500-Sheet Finisher (D372)

6146	Display	Description
61461	Carry Motor	Transport Motor
61462	Hitroll Motor	Positioning Roller Arm Motor
61463	Front Jogger Motor	Front Fence Motor
61464	Rear Jogger Motor	Rear Fence Motor
61465	Staple Moving Motor	Stapler Movement Motor
61466	Stack Feed-out Motor	Feed-Out Belt Motor
61467	Tray Motor	Tray Lift Motor
61468	Staple Motor	Stapler Motor
61469	Stopper Solenoid	Stack Depressor Solenoid

Bridge Unit (D386)

1	6151	Display	Description

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6151 1	Bridge: Feed Motor: Current Selection	Bridge: Feed Motor: Current switching signal
6151 2	Bridge: Feed Motor:Reset	Bridge: Feed Motor:Reset
61513	Bridge: Feed Motor:Enable	Bridge: Feed Motor:Enable
6151 4	Bridge: Feed Motor:230mm/s	Bridge: Feed Motor: 230mm/s
6151 5	Bridge: Feed Motor:205mm/s	Bridge: Feed Motor: 205mm/s
61517	Bridge: Feed Motor: 154mm/s	Bridge: Feed Motor:154mm/s
61518	Bridge: Feed Motor: 77mm/s	Bridge: Feed Motor: 77mm/s
6151 11	Bridge: Junction Solenoid	Bridge: Junction Solenoid

Shift Tray (D388)

6153	Display	Description
6153 1	Shift: Lift-up Motor	-

1 Bin Tray (D414)

6155	Display	Description
6155 1	1 bin: Junction Solenoid	-

One or Two-Tray PFU (D387/D351)/ LCIT 2000 (D352)/ LCIT 1200 (D353)

6161	Display	Description
61617	Bank1: Feed Motor:242mm/s	Feed Motor:242mm/s (D351/ D352/D387)
616111	Bank1: Feed Motor:154mm/s	Feed Motor:154mm/s (D351/D352/D387)
6161 12	Bank1: Feed Motor:115mm/s	Feed Motor:115mm/s (D351/D352/D387)
6161 13	Bank1: Feed Motor:77mm/s	Feed Motor:77mm/s

		(D351/D352/D387)
6161 17	Bank2: Feed Motor:242mm/s	Feed Motor:242mm/s (D353)
6161 21	Bank2: Feed Motor:154mm/s	Feed Motor:154mm/s (D353)
6161 22	Bank2: Feed Motor:115mm/s	Feed Motor:115mm/s (D353)
6161 23	Bank2: Feed Motor:77mm/s	Feed Motor:77mm/s (D353)
6161 25	Bank1:Tray Lock Solenoid	Tray Lock Solenoid (D351/D352 or D387)
6161 26	Bank2:Tray Lock Solenoid	Tray Lock Solenoid (D353)
6161 30	Bank:Tray3: PU Solenoid	Pick-up Solenoid (D351/D352 or D387)
616131	Bank:Tray4: PU Solenoid	Pick-up Solenoid (D351/D353)
6161 32	Bank:Tray5: PU Solenoid	Pick-up Solenoid (D353)
6161 35	Bank:Tray3: Feed Clutch	Pick-up Solenoid (D351/D352 or D387)
616136	Bank:Tray4: Feed Clutch	Pick-up Solenoid (D351/D353)
6161 37	Bank:Tray5: Feed Clutch	Pick-up Solenoid (D353)

Test Pattern Printing

Printing Test pattern: SP2-109

Some of these test patterns are used for copy image adjustments but most are used primarily for design testing.



- Do not operate the machine until the test pattern is printed out completely. Otherwise, an SC occurs.
- 1. Enter the SP mode and select SP2-109-003.
- 2. Enter the number for the test pattern that you want to print and press [#].
- 3. When you want to select the single color of Magenta, Yellow or Cyan for printing a test pattern, select the color with SP2-109-005 (2: Magenta, 3: Yellow, 4: Cyan).
- 4. When you want to change the density of printing a test pattern, select the density with SP2-109-006 to -009 for each color.



• If you select "0" with SP2-109-006 to -009, the color to be adjusted to "0" does not come up on a test pattern.

- 5. When you are prompted to confirm your selection, touch "Yes" to select the test pattern for printing.
- 6. Touch "Copy Window" to open the copy window, then select the settings for the test print (paper size etc.).



- If you want to use black and white printing, touch "Black & White" on the LCD. If you want to use color printing, touch "Full Colour" on the LCD.
- 7. Press the "Start" key to start the test print.
- 8. After checking the test pattern, touch "SP Mode" on the LCD to return to the SP mode display.
- 9. Reset all settings to the default values.
- 10. Touch "Exit" twice to exit SP mode.

No.	Pattern	No.	Pattern
0	None	11	Independent Pattern (1-dot)
1	Vertial Line (1 dot)	12	Independent Pattern (2-dot)
2	Vertial Line (2dot)	13	Independent Pattern (4-dot)
3	Horizontal Line (1dot)	14	Triming Area
4	Horizontal Line (2dot)	16	Tooth Check (Horizontal)
5	Grid Vertical Line	17	Band (Horizontal)
6	Grid Horizontal Line	18	Band (Vertical)
7	Grid Pattern Small	19	Checker Flag Pattern
8	Grid Pattern Large	20	Grayscale (Vertical Margin)
9	Argyle Pattern Small	21	Grayscale (Horizontal Margin)
10	Argyle Pattern Large	23	Full Dot Pattern

Printer Service Mode

SP1-XXX (Service Mode)

1001	Bit Swi	Bit Switch			
001	Bit Swi	itch 1	0	1	
	bit 0	DFU	-	-	
	bit 1	DFU	-	-	
	bit 2	DFU	-	-	
	bit 3	No I/O Timeout	0: Disable	1: Enable	
		Enable: The MFP I/O Timeout setting will have no effe	ect. I/O Timeouts will never occur.		
	bit 4	SD Card Save Mode	0: Disable	1: Enable	
	Enable: Print jobs will be saved to an SD Card i Function" in the System Maintenance Reference				
	bit 5	DFU	-	-	
	bit 6	DFU	-	-	
	bit 7	[RPCS,PCL]: Printable area frame border	0: Disable	1: Enable	
Enable: The machine prints all RPCS and PCL jobs printable area.			ith a border on	the edges of the	

1001	Bit Swit	Bit Switch				
002	Bit Swit	rch 2	0	1		
	bit 0	DFU	-	-		
	bit 1	DFU	-	-		
	bit 2	Applying a collation Type	Shift Collate	Normal Collate		
		A collation type (shift or normal) will be applied to all jobs that do not already have a 'Collate Type' configured.				

	U Note			
	• If #5-0 is enabled, this Bit Switch has no effect.			
bit 3	[PCL5e/c,PS]: PDL Auto Switching	0: Enable	1: Disable	
	Disable: The MFPs ability to change the PDL processor mid-job.			
	Some host systems submit jobs that contain both PS and PCL5e/c. If Auto PDL switching is disabled, these jobs will not be printed properly.			
bit 4	DFU	-	-	
bit 5	DFU	-	-	
bit 6	DFU	-	-	
bit 7	DFU	-	-	

1001	Bit Swit	Bit Switch				
003	Bit Swit	rch 3	0	1		
	bit 0	bit 0 DFU		-		
	bit 1	DFU	-	-		
	bit 2	[PCL5e/c]: Legacy HP compatibility	0: Disable	1: Enable		
			ses the same left margin as older HP models such as HP4000/HP8000. ords, the left margin defined in the job (usually " <esc>*r0A") will be chang *r1A"</esc>			
	bit 3	DFU	-	-		
	bit 4	DFU	-	-		
	bit 5			-		
	bit 6			-		
bit 7 DFU		DFU	-	-		

1001	Bit Switch			
004	Bit Switch 4 DFU	-	-	

1001	Bit Switch
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005	Bit Swi	tch 5	0	1	
		Show "Collate Type", "Staple Type" and "Punch Type" buttons on the operation panel.	Disable	Enable	
	bit 0	If enabled, users will be able to configure a Collate Type, Staple Type, and Punch Type from the operation panel. The available types will depend on the device and configured options.			
		After enabling the function, the settings will appear u	ınder:		
		"User Tools > Printer Features > System"			
	bit 1	DFU	-	-	
	bit 2	DFU	-	-	
	bit 3	[PS] PS Criteria	Pattern3	Pattern 1	
		Change the number of PS criterion used by the PS in job is PS data or not. Pattern3: includes most PS commands.	terpreter to det	ermine whether a	
		Pattern 1 : A small number of PS tags and headers			
	bit 4	Increase max number of the stored jobs to 1000 jobs.	Disable (100)	Enable (1000)	
		Enable: Changes the maximum number of jobs that of Type settings to 1000. The default is 100.	can be stored o	n the HDD via Job	
	bit 5	Face-up output	Disable	Enable	
		Enable: All print jobs will be output face-up in the destination tray.			
	bit 6	DFU	-	-	
	bit 7	DFU	-	-	

1001	Bit Switch			
006	Bit Switch 6 DFU	-	-	

1001	Bit Switch		
007	Bit Switch 7 DFU	-	-

1001	Bit Switch					
008	Bit Swi	tch 8	0	1		
	bit 0	DFU	-	-		
	bit 1	DFU	-	-		
	bit 2	DFU	-	-		
	bit 3	[PCL,PS]: Allow BW jobs to print without requiring User Code	Disable	Enable		
		Enable: BW jobs submitted without a user code will be printed even if usercode authentication is enabled. • Note • Color jobs will not be printed without a valid user code.				
bit 4 DFU		DFU	-	-		
	bit 5 DFU		-	-		
	bit 6	[PS]: Orientation Auto Detect Function	Enable	Disable		
		Disable: Automatically chooses page orientations of Portrait) based on the content printed on the page.	PostScript jobs	(Landscape or		
	bit 7	[PDF]: Orientation Auto Detect Function	Enable	Disable		
		Automatically chooses page orientations of PDF jobs the content printed on the page.	(Landscape or	Portrait) based on		

1003 [Clear Setting]	
1003 1	Initialize Printer System
1003 1	Initializes settings in the "System" menu of the user mode.
1003 3 Delete Program	

1004 [Print Summary]		[Print Summary]
	1004 1	Print Summary
		Prints the service summary sheet (a summary of all the controller settings).

1006	[Sample/Locked Print]	*CTL	0 : Linked, 1: On
1006 1	enabled or disabled in accord	ance with	er. When you select "0," the document server is Copy Service Mode SP5-967. When you select ardless of Copy Service Mode SP5-967.

	[Data Recall]		
Recalls a set of gamma settings. This can be either a setting, or c) the current setting.		be either a) the factory setting, b) the previous	
11011	Factory		
1101 2	Previous	- *CTL	
11013	Current		
1101 4	ACC		

	1102	[Resolution Setting]
Selects the printing mode (resolution) for the printer gamma adju-		Selects the printing mode (resolution) for the printer gamma adjustment.
1102 1 2400x600 Photo , 1800x600 Photo, 600 x 600 Photo, 2400 600x600 Text		2400x600 Photo , 1800x600 Photo, 600 x 600 Photo, 2400x600 Text, 1800x600, Text, 600x600 Text

1103	[Test Page]
1103	Prints the test page to check the color balance before and after the gamma adjustment.
1103 1	Color Gray Scale
1103 2 Color Pattern	

	1104	[Gamma Adjustment]		
	1104	Adjusts the printer gamma for the mode selected in the "Mode Selection" menu.		
1104 1 Black: Highlight *CTL [0 to 30 / 15 / 1/step]		[0 to 30 / 15 / 1/step]		

11042	Black: Shadow
11043	Black: Middle
11044	Black: IDmax
1104 21	Cyan: Highlight
1104 22	Cyan: Shadow
1104 23	Cyan: Middle
1104 24	Cyan: IDmax
1104 41	Magenta: Highlight
1104 42	Magenta: Shadow
1104 43	Magenta: Middle
1104 44	Magenta: IDmax
110461	Yellow: Highlight
1104 62	Yellow: Shadow
1104 63	Yellow: Middle
1104 64	Yellow: IDmax

	[Save Tone Control Value]	
1105	Stores the print gamma adjusted with the "Gamma Adj." menu item as the current setting. Before the machine stores the new "current setting", it moves the data currently stored as the "current setting" to the "previous setting" memory storage location.	
1105 1	Save Tone Control Value	

1106	[Toner Limit]		
1100	Adjusts the maximum toner amount for image development.		
1106 1	Toner Limit Value	*CTL	[100 to 400 / 260 / 1 %/step]

Scanner SP Mode

SP1-xxx (System and Others)

1004	[Compression Type]		
1004	Selects the compression type for binary picture processing.		
1004 1	Compression Type	*CTL	[1 to 3 / 1 / 1/step] 1: MH, 2: MR, 3: MMR

	[Erase margin]				
Creates an erase margin for all edges of the scanned image.			the scanned image.		
	If the machine has scanned the edge of the original, create a margin. This SP is activated only when the machine uses TWAIN scanning.				
1005 1	Range from 0 to 5 mm	*CTL	[0 to 5 / 0 / 1 mm/step]		

1009	[Remote scan disable]	*CTL	[0 or 1 / 0 / -] 0: enable, 1: disable	
1009 1	Enable or disable remote scan.			

1010	[Non Display Clear Light PDF]	*CTL	[0 or 1 / 0 / -] 0: Display, 1: No display	
1010 1	Enable or disable remote scan.			

Additional scanner SPs

SP2-XXX (Scanning-image quality)

	[Compression Level (Gray-scale)]				
2021	Selects the compression ratio for grayscale processing mode (JPEG) for the three settings that can be selected at the operation panel.				
2021 1	Level 3 (Middle Image Quality)	4	[5 to 95 / 40 / 1 /step]		
2021 2	Level 2 (High Image Quality)	*CTL	[5 to 95 / 50 / 1 / step]		

2021 3	Level 4 (Low Image Quality)	[5 to 95 / 30 / 1 /step]
2021 4	Level 1 (Highest Image Quality)	[5 to 95 / 60 / 1 /step]
2021 5	Level 5 (Lowest Image Quality)	[5 to 95 / 20 / 1 /step]

	[Compression ratio of ClearLight PDF]				
2024	Selects the compression ratio for clearlight PDF for the two settings that can be selected at the operation panel.				
2024 1	Compression Ratio (Normal image)	*CTL	[5 to 95 / 25 / 1 /step]		
2024 2	Compression Ratio (High comp image)	CIL	[5 to 95 / 20 / 1 /step]		

MEMO

